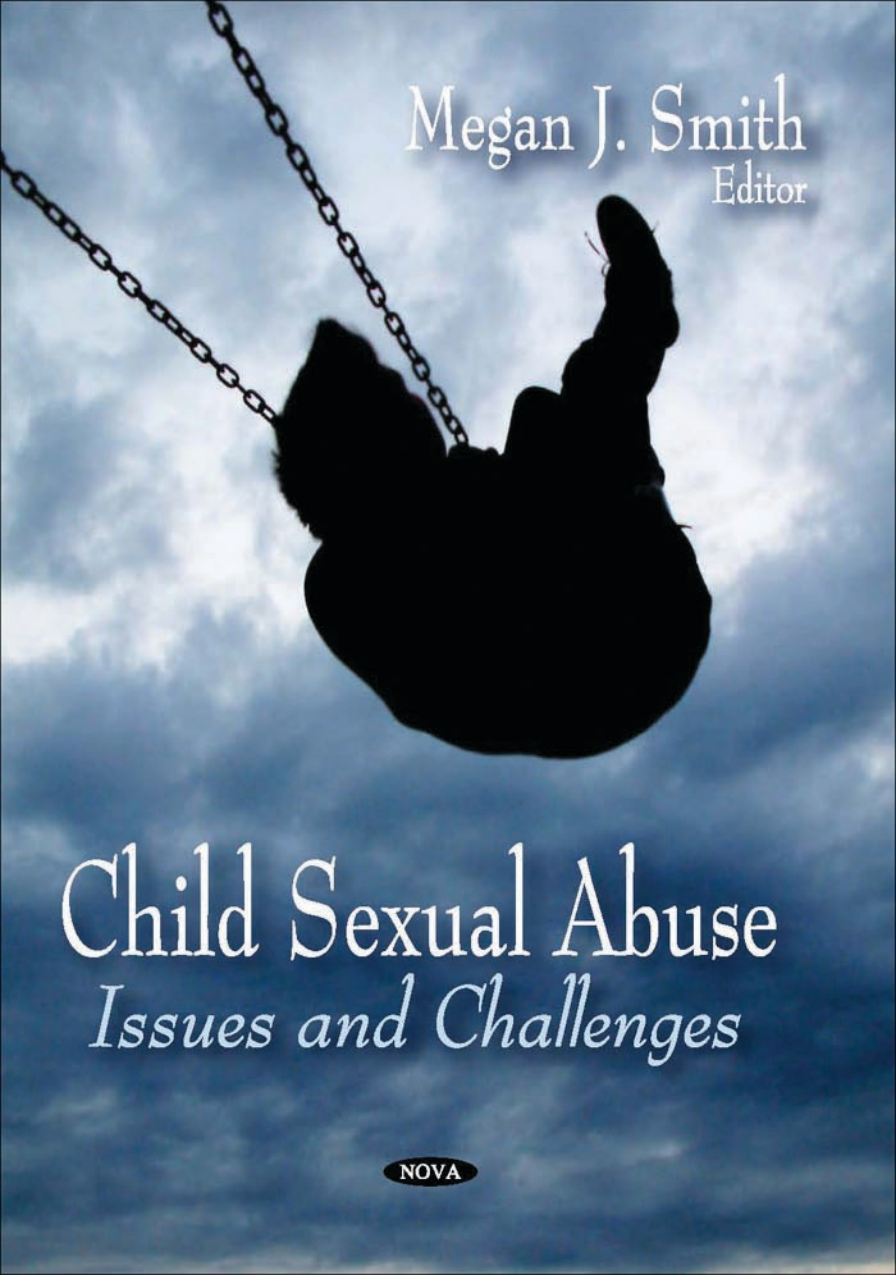
Megan J. Smith
Editor
Child Sexual Abuse
Issues and Challenges
NOVA

CHILD SEXUAL ABUSE: ISSUES AND CHALLENGES

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MEGAN J. SMITH
EDITOR

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PREFACE

Accurate statistics on the prevalence of child and adolescent sexual abuse are difficult to collect because of problems of underreporting and the lack of one definition of what constitutes such abuse. However, there is general agreement among mental health and child protection professionals that child sexual abuse is not uncommon and is a serious problem which has become more widely spread with the internet. This new book presents recent and significant research from around the globe.

Chapter 1 - As more children have come into contact with the legal system as victims of childhood sexual abuse, researchers and scholars have attempted to identify methods that may validate their statements in the event that there is no physical or other corroborating evidence. Criterion-Based Content Analysis (CBCA) is one method that was developed to serve this goal. Although most work with CBCA has focused on children who are deliberately lying, less work has examined CBCA's ability to distinguish true reports from another type of false report, false memories. In the present chapter, the author provides evidence showing that this second type of false report is also of paramount concern to the legal system, and then review the evidence showing that while CBCA may have some limited usefulness in identifying truth and lies, it does not appear to distinguish true from false memories.

Chapter 2 - Childhood sexual abuse (CSA) is associated with increased risk for a myriad of psychological consequences in adulthood, including increased rates of mood and anxiety disorders, risk-taking behaviors, family conflict, and marital dissolution. Equally important, however, are the developmental consequences that have been linked to CSA, including earlier onset of puberty (e.g., menarche), sexual activity, and earlier childbearing, at least in women. In this chapter the authors: 1) review recent findings on developmental correlates of CSA; 2) discuss potential evolutionary origins of the link between CSA and development within a broad meta-theoretical framework of human child development; and 3) describe how this framework can add to our understanding of potential psychological and biological mechanisms that govern the relation between CSA and other childhood experiences on individual variation in reproductive development.

Chapter 3 - Women with histories of child sexual abuse (CSA) are at risk for additional sexual trauma and disrupted interpersonal functioning. To date, however, little empirical attention has focused on CSA survivors' risk for nonviolent, unwanted sexual interactions with romantic partners or how such interactions impact adult sexual functioning. In the present study, women with CSA histories were expected to report more frequent sexual compliance with and post refusal sexual persistence from current romantic partners compared

to other women. Both compliance and persistence, in turn, were expected to predict poorer sexual satisfaction. A sample of 173 young women in exclusive heterosexual relationships anonymously completed self-report measures of these constructs. About 24% of the sample reported CSA. As expected, past CSA predicted greater sexual compliance with partners and more frequent partner use of manipulation to persist in sexual contact after women's stated refusals. CSA, sexual compliance, and partner sexual manipulation each independently and negatively predicted women's sexual satisfaction. A more comprehensive understanding of the effects of CSA on adult sexual functioning may require broader conceptualizations of possible revictimization experiences that encompass both forcible assault and nonviolent, unwanted sexual encounters.

Chapter 4 - Some survivors of child sexual abuse (CSA) live with continued disruption, disorientation and a diminished sense of self. Women living with addictions after experiencing sexual abuse in their childhood worked in groups to untangle life stories that had been silenced for too long. Using participatory action processes and principles helped to facilitate the women's transition, enabling them to recognise how past abuse experiences continued to impact on their lives. Women experienced the group work as helpful, empowering, supportive and practical. The process used in this research is an available and accessible tool for workers and CSA survivors. It has demonstrably shifted women to increase their self-determination, personal agency and assisted them to reclaim their sense of identity.

The information in this chapter is an outcome of research with women using their actual life experiences. It shows how the participatory group process using "Look, Think and Act" as a problem solving approach can help participants to make sense of current situations and begin to see how their emotional history impacts their current life choices. This chapter highlights the best practices that the authors uncovered in group facilitation with CSA survivors.

Talking in a group about sexual abuse can foreground painful and shameful past experiences. Establishing quality group processes creates a safe space for reflection, consciousness-raising and interpretation that enables reshaping and actioning that shifts the participants' life trajectory. Trust develops, enabling participants to gain confidence and courage about the issues/questions/topics they are prepared to work through. A climate of open acceptance, mutuality and non-judgemental presence promotes sharing and eliminates the sense of difference and isolation that characterises the CSA survivor's life. Hearing the narratives of others and sharing these stories increases the sense of personal validation and self-belief each participant feels. Giving voice to one's experiences improves clarity about the past and the ongoing impacts of CSA, and importantly it enables participants to develop a vision for a preferred future and action changes that will enable them to transition to a life with which they are more content.

Chapter 5 - Childhood sexual abuse (CSA) is associated with childhood and adult-onset psychopathology. The authors describe some methods of incorporating CSA in twin and molecular genetic studies of psychopathology, drawing from the existing literature and posing future methodological avenues. The classical twin method, using monozygotic (MZ) and dizygotic (DZ) twin data partitions individual differences into genetic, twin-shared and individual-specific environmental influences. Within this context, the authors discuss methods for examining the environmental overlap between CSA and psychopathology and for measuring whether heritable influences on psychopathology vary across individuals exposed and not exposed to CSA. The authors also review findings from cotwin-control studies, which

allow control for familial background, where authors have demonstrated that the member of a twin pair who has experienced CSA is significantly more likely to also report other psychopathology, when compared to their unexposed cotwin. In addition to methods for assessing unmeasured genotype x measured environmental interactions using twin moderator models, tests of measured genotype x measured environment interaction, with childhood maltreatment as the environmental component, which have underscored the possible role of genotype (e.g. in the monoamine oxidase A gene) on the association between CSA and psychopathology, are also discussed, along with their strengths and caveats. Avenues for future research, including the study of epigenetic change and refinement of measures of CSA are presented.

Chapter 6 - Sexual abuse of pupils by teachers in schools is now a cultural and social issue because it appears acceptable in some cultures. Some of the victims of sexual abuse are sometimes shunned by the society or even harassed by perpetrators' wives for having love relationships with their husbands. This study is one of the first of its kind that explains and explores the overlap of cultural conditions and other circumstances with child sexual abuse by teachers in Zimbabwean schools.

Objectives: This study sought to determine: (a) cultural beliefs about sexual abuse of pupils in Zimbabwean schools; and (b) the challenges faced by pupils sexually abused by teachers in schools.

Method: Data on sexual abuse perpetrators charged for improper association with pupils were collected from the perpetrators' files in six regional offices. Five cases of child sexual abuse including cases whereby perpetrators were charged 'lobola' (bride price) by the victims' parents and charged by the Public Service Commission were used to illustrate the role of culture in sexual abuse of pupils by teachers in Zimbabwe. Data on five cases were collected from the perpetrators' files and used to illustrate the nature of relationship between child sexual abuse by teachers and culture. Some of the cases used in this study illustrate the nature of treatment that some pupils experienced at the hands of perpetrators' wives in schools.

Results: Culture appears to play a pivotal role in sexual abuse of pupils in schools. It appears from the cases that some victims of sexual abuse experience trauma at the hands of perpetrators' wives. The study found that victims were sometimes assaulted, verbally abused, humiliated publicly and ostracized by the perpetrators' wives and the society for having such love relationships. The victims involved do not seem to have the capacity to understand these manipulation and inappropriate activities that they are subjected to by the perpetrators. Evidence from the five cases examined show that most victims lack emotional support from the school and society.

Conclusion: Culture appears to be closely linked to child sexual abuse by teachers in Zimbabwean schools.

Chapter 7 - Evidence for the association between childhood sexual abuse (CSA) and later misuse of substances covers a wide range of licit and illicit drugs and spans multiple stages of involvement, including increased likelihood of use, higher probability of early initiation, and elevated risk for onset of substance use disorders (SUDs). Contributions to this literature represent a variety of approaches to addressing the association of CSA to alcohol and drug-related problems, which is complicated by the fact that many of the same factors that elevate risk for CSA exposure also increase risk for substance use problems. Methods for disentangling direct effects of CSA events on substance use outcomes from the effects of risk

factors that are frequently present in families in which CSA exposures occurs (e.g., parental drug or alcohol problems) include measurement and adjustment for potentially confounding factors and the use of co-twin designs. Findings across methodological approaches provide support for CSA-specific risk for substance use outcomes, despite the significant contribution of family background factors to overall risk. In combination with the critical information about treatment presentation and response provided by clinical population-based studies, these investigations represent important steps for modeling the pathways from CSA to substance use outcomes and for informing intervention efforts with this high-risk population.

Chapter 8 - Child sexual abuse (CSA), particularly within an individual's family of origin, has been implicated as a risk factor for a wide variety of adult psychiatric diagnoses and behavioral problems, including borderline personality disorder (BPD), dissociative identity disorder, depressive disorders, anxiety disorders, alcoholism, eating disorders, somatization disorder, sexual dysfunction, and suicide attempts. While biogenetic factors are almost certainly a significant factor in predisposing a victim to one or another of these conditions, two questions arise. First, what psychosocial variables may also influence the type of adult psychiatric problems suffered by a CSA victim? Second, why do some individuals who appear to have suffered severe abuse develop no psychiatric problems at all, while others who seem to have had relatively minor abuse develop several disorders?

Studies that examine psychosocial variables in CSA tend to focus on factors such as who the perpetrator was, what type of abuse was suffered, the severity and frequency of the abuse, and whether the social welfare or criminal justice system became involved. Occasionally, the response of non-abusive relatives to CSA victims is examined. Most results of such studies have been disappointing regarding finding links between specific disorders and these variables.

In the opinion of the author, investigators often ignore contextual factors in the family, both during the abuse and at other times, that may influence the effect of the abuse. Clearly, most of the victim's interactions with perpetrators and bystanders alike occur at times when abuse is not occurring, and these other parts of such relationships may also have profound effects on the victim's later socialization and self image. In interpersonal and systems-oriented individual psychotherapy, the victim's entire relationships with both the perpetrator and other key members of his or her family of origin are explored in detail. The effects of contextual factors have high clinical salience. Due to their staggering complexity and intermittent nature, they are difficult to study using statistical techniques. Qualitative research using series of case studies that examine the entire family context of CSA may be more helpful in uncovering relationships between psychosocial variables and specific psychopathology. An illustrative case example is presented.

Chapter 9 - Endometriosis is a purely feminine disease. It is due to the growth –mainly in the pelvis - of endometrial-like tissue out of the uterine cavity under the stimulation of ovarian hormones. Symptoms are pelvic pain both cyclical -mainly dysmenorrhea-, and acyclical, and hypofertility.

The lesions of endometriosis are palpable by vaginal examination and visible with laparotomy or laparoscopy. They can also be recognized by MRI or ultra-sonography. Their organic nature cannot thus be questioned. Consequently it is difficult to attribute their aggravation to a psychological disturbance and even less their initiation. However, the authors were struck by the discovery of long-lasting emotional traumatisms and very often of sexual

abuse which have occurred in their childhood or their adolescence, in half of the authors endometriotic patients, after thorough questionning.

Many physio-pathological assumptions can explain these “psycho-somatic” phenomena.

The development of endometriosis seems to be narrowly dependent on the status of immunological defences. However it is now known that the level of these defences is function of the mental state, perhaps by means of the neuro-peptide Y secretion.

In addition the development of pelvic lesions is regarded as secondary to the arrival of endometrial cells in the peritoneal cavity via the tubes in a retrograde fashion, at the time of the menstruations. Antiphysiologic tubal contractions can increase this transfer. And it is well known that mood disturbances are accompanied by disorders of the autonomic nervous system which command tubal motility.

The knowledge of psychological factors influences primarily the relation between the patient and the doctor which ceases being limited to advise a local treatment and instead takes also into account the totality of the person.

Moreover once the patient feels understood she feels reassured and can more easily accept psychological help without the fear of being regarded as a hypochondriac. But the doctor must take care not to assign all the disorders of his patient to her old traumas.

Chapter 10 – This research concerns peri-traumatic pathologies amongst the under fifteen’s who have been sexually abused. The authors argument concentrates on the symptoms of phobia.

The aim is to do a structured analysis of clinical interviews conducted on recently sexually abused minors. The medical-psychological service is a forensic service available in French University Hospital Centers (CHU- Centre Hospitalier Universitaire).

The main disorder amongst sexually abused children is the peri-trauma phobic dimension. It tends towards a paranoid clinical expression as emphasized by B. Brusset in 1999. The threat of psychic breakdown increases the necessity for rapid help for children. The phychic breakdown can sometimes be in the form of dysmorphophobia or in extreme cases depersonalization crisis (more or less transitional).

Chapter 11 - Corporal punishment has become a very controversial issue to eliminate in African schools and even worldwide. The controversy appears to be due to the parallels between what happens at home and in schools (Dubanoski, Inaba & Gerkewicz, 1983; Korbin, 1980; O’Brien & Lau, 1995; Shumba, 2003a & b; Zindi, 1995). Some child–rearing practices within the home mandate parents to use corporal punishment when disciplining their own children but the laws and regulations within the schools bar teachers from using corporal punishment. In some cases parents believe that the African child cannot learn in the school without being beaten. As such, there is no doubt that teachers, parents and pupils hold various myths and beliefs on why teachers use corporal punishment in schools. If anything, the authors do not support the use of corporal punishment in African schools. It is against this background that this article sought to explore issues and challenges on why corporal punishment is still difficult to eliminate in African schools in the new millennium. Both local and international literature has been used to examine this issue.

Chapter 12 - This research concerns peri-traumatic pathologies amongst the under fifteen’s who have been sexually abused. The authors argument concentrates on the symptoms of phobia.

The aim is to do a structured analysis of clinical interviews conducted on recently sexually abused minors. The medical-psychological service is a forensic service available in French University Hospital Centers (CHU- Centre Hospitalier Universitaire).

Patients: Seventy-nine children of all ages and sex all show signs of Acute Stress Disorders with reference to DSM IV (Post Traumatic Stress Disorder and Acute Stress Disorder).

Method: The authors use the semi-directive clinical interview technique. Analysis of the data follows the protocol of a semiological frequency structure. This study doesn't involve any factorial or correlational analysis. All results are given in percent.

Results: Four dominant peri-traumatic characteristics appear in our research:

A Symptomatology of Cognitive Efficiency: Relates to knowledge and to learning and not to intelligence or to cognitive process.

Behavioural and Conduct Disorders: The main disorder is an inhibition of the psycho-social bound. This inhibition sometimes gives way to anxious feelings with self or hetero aggressive assaults.

A Phobic Domination: Phobia is the most important syndrome. It does not simply signify the expression of neurotic disorders but suggests limited psychic functioning where paranoid anxieties dominate.

A Somatoform Aspect: The body symptomatology tends to confirm the identity disorders and alterations of the mental representation process of the sexual traumatism.

Conclusion: The main disorder amongst sexually abused children is the peri-trauma phobic dimension. It tends towards a paranoid clinical expression as emphasized by B. Brusset in 1999. The threat of psychic breakdown increases the necessity for rapid help for children. The phychic breakdown can sometimes be in the form of dysmorphophobia or in extreme cases depersonalization crisis (more or less transitional).

Chapter 13 - The term 'sexual offence' covers a wide range of punishable behaviour and those who commit sexual offences form a highly heterogeneous group (Righthand & Welch, 2001). Within a forensic clinical setting, offenders are commonly categorized based on the characteristics of the offence they committed. Recently however, it has been argued that knowledge gained in developmental criminology regarding the progression of criminal careers of various types of 'ordinary' offenders, could also provide valuable insights for distinguishing between various types of sex offenders. (Lussier, 2005). In this chapter the authors will analyze the criminal careers of adolescent sexual offenders with particular attention paid to the connection between sexual offences and other crimes. This study is based on a longitudinal dataset comprised of police registrations and covers a prospective period of 10 years.

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Expert Commentary

PERSPECTIVES ON AWARENESS WORK IN THE FIELD OF SEXUAL ABUSE OF CHILDREN IN DIGITAL MEDIA

Per A. Godejord
Department of Computer Science, Nesna University College, Nesna, Norway

INTRODUCTION

The last decade has seen a rapid development and growth in the use of computer-based communication and information sharing. Internet or “the Net” as it’s sometimes called, has proven to be perhaps the most popular mass communication medium in the world. As with the phone and the television most of the society has readily adopted the technology, and its spread internationally and its penetration into almost every corner of the educational system and family life, as well as work, is often described as a "revolution”. As one of the first countries outside the United States to be connected to the ARPANET, Norway has quickly developed its use of Internet from a purely researchers tool to being second on the list of European countries where Internet is used daily by its population. Children and young people, in particular, have readily embraced the new communication medium and they utilize it in quite a number of ways. A wide array of digital tools is enabling kids to express themselves, to create their own identities, and to personalize the media they use. Their creativity seems limitless and includes such various forms as mp3 lists, online game characters, digital movies, and blogs. Just take a look at www.youtube.com and see how kids place themselves in full view of the whole world, or check web sites like the Norwegian “www.deiligst.no” (Delicious. no), where teenage girls and boys asks to be evaluated by their peers on their looks and bodies. Also blogging is all the rage and writing your inner most thoughts online instead of in the old diary book, might seem quite fun.

The problem with blogging is that children reveal more online than parents know, and they do it because they think that blogs are only read by their friends. No one ever told them that everything placed on the Net is visible for everyone. There are also similar problems with YouTube and sites like “Deiligst.no”.

Children's creativity is something that should be supported, but also directed. But who`s going to do it? The obvious answer is the parents, with the support of teachers. But if they are going to be able to do so, both parents and teachers have to learn how to navigate in the digital media world of our kids. And they have to be made aware of the dark sides of Internet.

Since the fall of 2002, the Department of Computer Science, Nesna University College in Norway, has been working with a project called "Getting involved".[1] The project was a part of the undergraduate course in Computer Science, and the course Social Informatics. The main focus of the project was to try to fight the constant sexual abuse of children on the Internet with information and awareness projects directed both towards the computer students of Nesna University College and towards the local computer industry and local primary, secondary and upper secondary level schools.

A secondary focus was to get the students more involved in the various topics contained in Social Informatics, by using case study teaching. Our hope was that using case study teaching would liberate the students from their preconceived notion that Social Informatics was tedious and not practicable. This commentary will focus on the main objective.

TERMINOLOGY

The terms "Internet" and "digital media" as used in this commentary encompass the terms "world wide web" and "cyberspace". The communication that is of concern here is what is accessed via chat rooms. The term "children" or "young people" is applied to people under 16 years of age. "Sexual abuse" is used in this commentary to describe both the activities by grownups to induce children in talking about sex with them in chat rooms, meet them for sex and the distribution and use of Child pornography. The term "Child pornography" is defined as any visual depiction, including any photograph, film, video, picture, or computer or computer-generated image or picture, whether made or produced by electronic, mechanical, or other means, of sexually explicit conduct, where children are engaged, or made to look like they are engaged, in sexual activity. The term is in Norway often replaced with the term "abusive material", so as to underline the fact that this material is not pornography as such. "Grooming" is a term describing the activity by a grown up to gain the trust of a child with the intent of abusing it sexually.

SEXUAL ABUSE OF CHILDREN IN DIGITAL MEDIA

The Internet gives everyone the opportunity to be anonymous. You may be of any race, sex or conviction and create your own "world". No one can see you and this "invisibility" is just what makes the Internet a useful arena for grownups who wants to engage children in sexual activities. We see this quite clearly on chat sites for children, where not every nickname supposedly belonging to a 12 year old boy is just that.[2]

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[1] Godejord, Per A.: "*Fighting child pornography: Exploring didactics and student engagement in social informatics*", Journal of the American Society for Information Science and Technology Volume 58, Issue 3, 2007. Pages 446-451.

[2] Hansen, Astri-Aas: "*Children who meets abuser online*", Save the Children Norway, 2004.

Most children have been told not to meet, or to get into cars of strangers. And some have also been told not to divulge personal information on the Internet so as not to fall prey to grownups with evil intentions. Research done by Save the Children Norway reveals that children claim to be anonymous on Internet,[3] but despite of this most of them still gives their e-mail address and telephone number to people they are chatting with on the Internet. Children also believe that if they can speak to a person from the Chat on the phone, it will be safer. According to some of the children that were interviewed by researchers from Save the Children Norway using the phone will quickly divulge whether the person is 14 or 40.

Despite this there are a number of children in Norway who have been sexually abused by grownups that they first met on the Internet. The abuser have managed to develop trust in the child, and then suggested a meeting either at the abusers own home or some other secluded place.

Sexual abuse might not only be the grooming of a child, leading on to sexual activities, but also the distributing of what is normally called "child pornography". The term is somewhat inadequate as this has nothing to do with pornography, but is pictures, films or sound depicting criminal offense. The term "abusive material" has therefore replaced the old term in reports and lectures done by the Police, Save the Children Norway and other institutions working within the field of sexual abuse of children in digital media in Norway. Once a photo of a child being sexually abused is placed on the Internet it will exist in "cyberspace" forever. It is therefore also important to educate both grownups and young people that for every curious click on such material, the abuse continues.

PROJECT GETTING INVOLVED: AN EXAMPLE OF CREATING AWARENESS BY THE USE OF PROJECT BASED TEACHING

There are several ways of fighting sexual abuse of children, and creating awareness among the population is one way. As an educational institution Nesna University College has pledge itself to fight sexual abuse of children by creating awareness among its informatics and teacher education students.

Information and computer technology has traditionally been conceived as a course closely connected to the natural and logical-mathematical sciences. Social informatics deviates from this point of view, and the late Dr. Rob Kling of Indiana University gave the following definition (Rob, Kling, 2000): "Social Informatics (SI) refers to the body of research and study that examines social aspects of computerization – including the roles of information technology in social and organizational change, the uses of information technologies in social contexts, and the ways that the social organization of information technologies is influenced by social forces and social practices."

In 2002 and 2003 Nesna University College had two courses of Social Informatics, SI-1 which was taught during the first year of the undergraduate course in Computer Science and SI-2 which was taught during the third, and last, year. Many of the computer students dreaded

[3] Save the Children Norway: *"Everyone is lying on the Internet – and everyone knows it. Young persons and the Internet"*, Save the Children Norway, 2003.

the course in Social Informatics. "This is just about Marx. No practical computer stuff", was one of many negative comments by computer students.

If the students felt the course unimportant and uninspiring - would they learn anything? In 2003 the Department of Computer Science decided to rebuild the course and make it more practical, with one topic as the main ethical theme. The example we chose was child porn on the Internet. We believed that this would be a much more inspiring and interesting topic for the students, instead of the normal topics of software piracy and “What is ethics?”

SI-2 was then organized into the following main topics:

1. Computers and Law
2. Computers and Organizations
3. Technological change

The main topics were then developed into several smaller topics.

The example of sexual abuse of children and the Internet was the glue that kept all the topics in Social Informatics together.

The students worked with different cases ranging from Computer Forensics to problems concerning the introduction of Information and Computer Technology (ICT) in an organization, privacy legislation vs. penal legislation and the different tasks performed by the Administrative Computing Services within an organization. While all the different cases were linked to the project, the main work consisted of writing reports at the requests of Save the Children Norway and the National Criminal Investigation Service. In 2005 the students completed a report on the possible use of Freenet and anonymous proxies as tools for distributing images and films of sexual abuse of children, at the request from the National Criminal Investigation Service. Save the Children Norway and INTERPOL also expressed an interest in the report and copies were distributed to these two organizations as well.

The reports gave both Save the Children Norway and the National Criminal Investigation Service new knowledge, and this fact seemed to be a major factor in raising the motivation of the Computer Science students in completing the course in Social Informatics.

In the second half of 2005 we involved the Teacher students from the ICT-specialization for Teachers course “ICT and Learning. The reason for this was to create awareness of the problem of sexual abuse in digital media also in this part of our education and spread that awareness into local schools. In 2006 we started cooperation with the Department of Media and Information Technology at the University of Zielona Gora and their Master students joined the students at “ICT and Learning” in a common task, exploring communication between participants claiming to be grownups and what these grown up users perceived to be children between the age of sexual consent on various Chat sites on the Internet.

Let’s take a closer look at two examples of a typical assignment in Social Informatics at Nesna University College. The first example is a task that was given to our Bachelor students in Informatics and the second was a task given to the Teacher Education students in “ICT and Learning”.

In 2005 our informatics students were given an assignment from the Norwegian representative at INTERPOL concerning Freenet. Three students groups chose to work with this assignment.

Freenet is free software, developed for the Windows and Unix/Linux platforms, which makes it possible to publish and obtain information on the Internet anonymously. Freenet is a decentralized peer-to-peer distributed data store aiming to provide electronic freedom of speech through strong anonymity. Users contribute to Freenet by giving bandwidth and a portion of their hard drive (called the "data store") for storing files. Unlike other peer-to-peer file sharing networks, Freenet does not let the user control what is stored in the data store. Instead, files are kept or deleted depending on how popular they are, with the least popular being discarded to make way for newer or more popular content. Files in the data store are encrypted to enable Freenet users to deny any knowledge of the content stored on their computers. The same technology which allows the anonymous to communicate with a large group without the publisher's identity being revealed can also allow illegal material such as child pornography to be shared with anyone. This makes Freenet ideal as an example of the problems of social control vs. individual privacy. According to the Freenet developers, the system is used for the distribution of censored information all over the world including countries such as China and the Middle East.[4]

If this is true we might readily agree that such use of Freenet is laudable. One might of course discuss how effective the system as a tool for promoting democracy trough spreading of uncensored information is, for instance in China, or if this is just another good idea but without any significant impact. But that would be outside the scope of this paper.

Freenet's founders argue that only with true anonymity comes true freedom of speech, and that what they view as the beneficial uses of Freenet outweigh its negative uses.

Through this assignment we discussed with the students the various problems concerning society’s rights to protect itself and its citizens, and the right to individual privacy. We also discussed the possibilities of misuse, and the students discovered several instances of Freenet links pointing to what was “advertised” as child pornography. Due to Norwegian penal code and the rules for doing student assignments in this project, the students were prohibited from checking if the material really contained child pornography, and the possible misuse of Freenet had to be based on assumptions and analysis of available information.

Despite the drawback of not being able to verify all the information that was collected, the Computer Science classes of 2003 and 2005 have provided both the Save the Children Norway and the National Criminal Investigation Service (including INTERPOL) with reports on various topics such as secure chat, camera phones and possible abuse, Freenet and proxies as tools for sexual abuse, and so on. The responses from both the Save the Children Norway and the National Criminal Investigation Service have been enormously positive, and both organizations have declared that the reports contributed new knowledge on how information technology could be used by abusers and victims in cases of sexual abuse.

In 2006 our students at “ICT and Learning” were given the task to explore how grownups communicated with children on Chat. The students were given three Chat sites and logged on using nick names that indicated that they were girls of the age of 12 to 15. They were to do three Chatting sessions – one in the morning, one in the afternoon and one in the evening and then document their experience by taking screen captures and making individual reports. The reports did not only describe what happened on the Chat but also discussed their experiences in regard to reports made by Save the Children Norway of how grownups groom children

[4] The Freenet Project, http://freenetproject.org, 2006.

online in order to either meet them for sex or making the children undress in front of a web camera, or just talk "dirty" with the abuser.

At the same time master students at the department of media and information technology, university of Zielona Gora, Poland, also did this task, but with some variations.

The students in Norway found that half of their contacts on Chat where more or less recognizable as grownups by the way they communicated, and without exceptions they wanted to have sex with what they assumed were pre-teen girls.

All student works are printed and publicized in the internal pamphlet series of Nesna University College and are freely available as downloadable pdf-documents from our web sites. This, and the fact that the Teacher Education students are placed in schools during their studying, have created a growing interested among both surrounding schools in the area and schools in other places in Norway. We are now constantly being asked to give lectures to parents and teachers about the dangers of Internet to children. Most parents and teachers who have attended our lectures comment on the new insights they have gained regarding how they need to take an active interest in children's use of information technology, in order to protect the children from sexual abuse in this environment.

CHALLENGES AND POSSIBILITIES IN USING EDUCATION AS A TOOL FOR AWARENESS WORK

The subject of sexual abuse of children is extremely sensitive and still considered taboo by some. With Project Getting Involved we want to make students and other people aware of two things:

- You should refrain from viewing materials on Internet that depicts sexual activities with children, as every click on such material continues the abuse of the child involved.
- Teachers and parents have to understand that it is their job to make children aware of the dangers of Internet.

In doing so we have had to be careful not to over dramatize the dangers, nor raise an accusing finger at people who doesn't want to know too much about this difficult topic, or parents who for some reason does not take an interest in Internet and computers.

It is important to show parents and teachers alike that Internet is a positive tool for both learning and fun, and that the negative effects can be controlled by parents themselves.

It is not unproblematic to introduce materials that might provoke strong feelings and make it an integrated part of a course. We have to be absolutely sure that all materials used in a course are not against the law. In Project Getting Involved, all students work where closely watched and the work itself was within pre-defined rules. No students were allowed to actively search for illegal materials, nor enter web sites that might contain such materials. This of course made some of the assignments harder to do, but so far the students have solved that problem by collecting and analyzing general information gathered from the Net.

We were also concerned with the possibilities of students that where themselves former victims of sexual abuse, and students who where abusers – either directly or as users of child

porn. Nesna University College has both a social worker and a psychologist at the student's disposal, and we therefore felt that we had the expertise at hand if needed. We were also prepared to spend an extra amount of time with the students talking to them about sexual abuse, and the importance of having knowledge in order to fight this problem.

The ordinary student of Norwegian higher education have spent 12 years in school (primary, secondary and upper secondary level), the typical male student have served for six to twelve months in the National Service and some of the students also have experience from different line of work, prior to applying for higher education. Most of the students are therefore mature grownups, and some are already parents themselves. These factors make it easier to introduce offensive materials as a part of Social Informatics, and the reactions from the ordinary student have so far been that of anger and a strong dedication to help fight Child Pornography.

This however is no guarantee that students who themselves have been victims of sexual abuse, will cope with having to work with this theme and thereby re-living the horror of the abuse. Since the project started in 2002 we have had two instances of students whose reactions to the project were based on this kind of experience. Both were taken care of and given special follow ups and both were able to continue working within the project.

By using project-based teaching in order to create awareness in students and teachers, we may reach both parents and children, through our students – either as parents themselves or as "awareness agents" in schools or at work. In an increasingly globalized world, we should also strive to make both Computer education and Teacher Education more global, with global ethical themes[5] that are recognizable and relevant both nationally and internationally. To fight sexual abuse of children in digital media using project based teaching in relevant fields of education, is just such an example of a global ethical theme.

CONCLUSION

The battle against sexual abuse of children in digital media must be fought at several levels and "battlefields" at the same time. Creating new laws to protect our children online is one way of conducting this fight. Another example is the Norwegian Child Sexual Abuse Anti Distribution Filter (CSAADF). When an internet user types an address in his/her browser or clicks a link to an URL that is in the filter, the ISP redirects the browser to a specific page instead of the desired address – the so called "stop-page". This contains information about what kind of content the user tried to access, links to Norwegian legislation and contact information for the police. Norwegian police chose to display a page with information about the filter instead of a 404-error, because they want the public to know that the police have evaluated the site in question, and found it to be illegal to distribute. This sends a signal, they hope, that the police have the technical ability to limit the distribution of child abuse material, and hopefully lower demand and thus prevent future abuse of children.[6]

[5] Kirkwood, Toni Fuss: *Our Global Age Requires Global Education: Clarifying Definitional Ambiguities*, Social Studies, 2001, Vol. 92 Issue 1, p10.

[6] The National Criminal Investigation Service, Norway, 2006.

The Swedish and Danish national police have also adopted the filter. The Scandinavian police forces on a national level share all the information about illegal sites, and check them according to local legislation.

Among all the different ways of protecting children, awareness work is perhaps a method that in the end has the possibility to reach a large number of people. Sexual abuse of children is an unpleasant problem to focus on, and it is therefore important that educational institutions and other governmental institutions take a lead in the work of creating awareness among the population. The CSAADF is an example of one way of creating awareness in those who are surfing the Internet. At Nesna University College we will continue to use project based teaching to create awareness in our students, and motivate them to spread this awareness both at home and at work.

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REFERENCES

Godejord, Per A.: **"**Fighting child pornography: Exploring didactics and student engagement in social informatics", *Journal of the American Society for Information Science and Technology*, Volume 58, Issue 3, 2007. Pages 446-451.

Hansen, Astri-Aas: *Children who meet abuser online*. Save the Children *N*orway, 2004.

Kirkwood, Toni Fuss: Our Global Age Requires Global Education: Clarifying Definitional Ambiguities, *Social Studies*. 2001, Vol. 92 Issue 1, p10.

Save the Children Norway: *Everyone is lying on the Internet – and everyone knows it. Young persons and the Internet*. Save the Children Norway, 2003.

The Freenet Project. (2006). *What is Freenet?* Retrieved from http:// freenetproject.org/ whatis.html

The National Criminal Investigation Service, 2006.

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Short Communication

CHILDHOOD SEXUAL ABUSE: THE BOTSWANA PERSPECTIVES

Amos A. Alao [*] ***and Maithamako B. Molojwane*** [†]
Careers and Counselling Centre, University of Botswana, Gaborone, Botswana

ABSTRACT

The African Child, particularly the female child is in constant threat of sexual abuse for many reasons. Some of the reasons are neglect by parents, exploitation by older males, family poverty and a variety of situations which include crime rate, war or oppression.

In some African countries, underage female children have been forced into marriage, resulting in physical and emotional damage, and sometimes resulting in HIV and other sexually transmitted diseases.

Botswana, like any other African country has its own incidence of childhood sexual abuse, which has now become a global phenomenon. This paper explores the magnitude of childhood sexual abuse in Botswana through cases reported to the Botswana Police, and those handled by Resource Centres, namely Child line and the SOS Children Village. While it is true that it is sometimes difficult to determine the extent of childhood sexual abuse for a number of reasons, such as the consequences of blame, shame or guilt to mention a few, nevertheless, its monitoring in any community is helpful to ascertain its prevalence so that appropriate measures and interventions could be taken.

The forms of childhood sexual abuse investigated in this paper were, incest, defilement and rape. It is observed that the incidence of sexual abuse were in this order: rape, followed by defilement and incest. More cases of defilement and incest were reported to Resource Centres compared to the Law of Enforcement Agency. The factors reported as being responsible for child sexual abuse in Botswana were socio-economic factors exposing the victims to abuse such as drinking depots in the villages where young girls easily fall victims.

[*] E-mail: alaoaa@mopipi.ub.bw
[†] molojwane@mopipi.ub.bw

INTRODUCTION

Abuse in general, could be perpetrated based on a number of factors some of which are human, environmental and situational. Sexual abuse, a non-consensual relationship may be an indication of an attempt to exert control over the other, to humiliate or satisfy sexual urges of the perpetrator. Whatever reason is advanced to any form of abuse, it is unacceptable because of its negative effect on the victim. Forcing one into a sexual relationship the other party does not want by force, could lead to humiliation or stigma especially when others become aware of the incident. There is also the possibility of the victim's inability to have normal sexual relationship with partner in future because of fear.

Psychological, emotional and sometimes financial pressure in addition to fear of social consequences may sometimes compel victims to come out or report incidents of sexual abuse. The perpetrator of sexual abuse can be across various demographic variables, ranging from adults to those in authority over the victim and even peers of the victim.

CONSEQUENCES OF SEXUAL ABUSE ON THE VICTIM

The effects of sexual abuse on the victim are many and varied, some of which range from reproductive health consequences, including sex-related diseases, such as HIV and other sexually transmitted diseases.

Gold, Swingle, Hill and Elfant (1998) noted that childhood sexual abuse has been observed to go beyond the peripheral characteristics of abuse such as frequency, duration, age at on set, number of perpetuators and type of abuse. While all factors are considered important, many studies reduce childhood sexual abuse to absence or presence of penetration, which over-simplifies the abusive experience and implies that penetration constitutes the single most severe aspect of it (Gold, Swingle, Hill and Elfant (1998).

According to the studies of Cole and Putnam (1992) the often serious and damaging psychological sequaelae associated with childhood sexual abuse, includes depression, anxiety, relationship difficulties, low self-esteem, suicidal behaviour, substance abuse, sexual dysfunction and personality disorders (as cited in Schreider & Lyddon, 1998). The personality disorders included in the list of effects of childhood sexual abuse are antisocial, histrionic, narcissistic dependant, avoidant and especially borderline behaviours (Sullins, 1998).

CONCEPT OF SEXUAL ABUSE

The degree of specificity of sexual abuse definitions has been observed to vary widely from state to state. Definitions written into civil laws and criminal statutory definitions have also been observed to lack uniformity, while there are wide variations in the penalty structures and in the upper age limit of the child victim. The definition of sexual abuse of C. Henry Kempe which attempts to explain sexual activities of children within their social and cultural contexts, notes that: "sexual abuse is the involvement of dependent developmentally immature children and young people in sexual activities they cannot fully understand, to

which they cannot give informed consent and which violates the social taboos of the culture and are against the law" (Good-Year Smith, 1993).

Under the Botswana Laws, Cap 80:01, rape is defined as follows:

141.Rape: "Any male person who has unlawful carnal knowledge of a woman or girl, without her consent, or with her consent if the consent is obtained by force or means of threats or intimidation of any kind, by fear of bodily harm, or by means of false representations as to the nature of the act, or, or in the case of a married woman, by personating her husband, is guilty of an offence termed rape."

Other definitions of sexual abuse under the Botswana law, related to the forms of abuse under consideration, namely, defilement and incest are as follows:

Defilement: (Defilement of girls under 16 years of age).

147 (1). Any person who unlawfully or carnally knows any girl under the age of 16 years is guilty of an offence and is liable to imprisonment for life, with or without corporal punishment.

(2). Any person who attempts to have unlawful carnal knowledge of any girl under the age of 16 years is guilty of an offence and is liable to imprisonment for a term not exceeding 14 years, with or without corporal punishment.

(3). It shall be a sufficient defense to any charge under this section if it appears to the court before whom the charge is brought that the person so charged had reasonable cause to believe and did in fact believe that the girl was of or above the age of 16years or was his wife.

148. Defilement of idiots and imbeciles: Any person who, knowing a woman or girl to be an idiot or imbecile, has or attempts to have unlawful carnal knowledge of her under circumstances not amounting to rape, but which prove that the offender knew at the time of the commission of the offence that the woman or girl was an idiot or imbecile is guilty of an offence and is liable to imprisonment for a term not exceeding 14 years, with or without corporal punishment.

Incest: (Incest by males)

168.(1). Any male person who has any carnal knowledge of a female person, who is to his knowledge his grand-daughter, daughter, sister, or mother, is guilty of an offence and is liable to imprisonment for a term not exceeding five years. Provided that if it is alleged in the indictment or summons and proved that the female person is under the age of 13 years, the offender should be liable to imprisonment for life.

(2). It is immaterial that the carnal knowledge was had with consent of the female person.

(3). If any male person attempts to commit any such offence as aforesaid he is guilty of an offence.

(4). On the conviction before any court of any male person of an offence under this section, or of an attempt to commit the same, against any female under the age of 21 years, it shall be in the power of the court to divest the offender of all authority over such female, and, if the offender is the guardian of such

female, to remove the offender from such guardianship, and in any such case to appoint any person or persons to be the guardian or guardians of such female during her minority or any less period.

Provided that the high court may at any time vary or rescind the order by the appointment of any other person as such guardian, or in any other respect.

Incest by females

169. Any female person of or above the age of 16 years who with her consent permits her grand-father, father, brother, or son to carnal knowledge of her knowing him to be her grand-father, father, brother, or son as the case may be, is guilty of an offence and is liable to imprisonment for a term not exceeding five years.

LITERATURE REVIEW

Garcia – Moreno (2003) noted that sexual abuse of children and young adolescents is wide spread in all societies. The World Health Organization (WHO) estimates that overall prevalence is 25% for girls and 8% for boys, although these figures differ with the population studied and definitions used. Finkelhor (1994) observed that boys and girls between ages seven and thirteen years are at greatest risk.

Saewyc, Magae, and Pettingell (2004) found childhood sexual abuse to be associated with adolescent pregnancy. Brady, Gallagher, Berger et. al (2002) and Lindergren, Hanson & Hammett et.al (1998) found childhood sexual abuse to be associated with HIV infection.

Anderson, Ho.foster, Matthis et al. (2004) found that the victim of childhood sexual may demonstrate the tendency to force someone else to have sex. Johnson (2004) reported other adverse effects of childhood sexual abuse to include (mental and physical effects) emotional problems such as depression, anxiety, sexualized behaviour, binge eating in woman and substance abuse. Johnson (2004) also noted that victims of childhood sexual abuse have reported guilt, anxiety, depression, feelings of worthlessness and powerlessness, inability to distinguish sexual from affectionate behaviour, difficulty in maintaining appropriate personal boundaries and the inability to refuse unwanted sexual advances.

In a study of childhood forcible sexual abuse and victim – perpetrator relationship among a sample of secondary school students in the Northern Province of South Africa. Madu and Peltzer (2006) reported that an overall prevalence rate of childhood forcible sexual abuse was 16.4%; 8.8% for males, 15.7% for females. 9.9% were kissed sexually by force, 6.8% were touched sexually by force and 6.1% were victims oval/anal/vaginal intercourse using force. The majority of the perpetrators were acquaintances or relatives of the victims.

Finkelhor and Browne (1986) indicate the effects of forcible sexual abuse and other forms of childhood sexual abuse on victims to include traumatic sexualisation (such as increase in salience of sexual issues and confusion about sexual identity and norms) stigmatization (such as shame, guilt, low esteem and suicide, betrayal (such as grief, depression and extreme dependency and powerlessness (such as anxiety, fear and lower sense of efficiency).

In a study conducted Child line (2005), on factors contributing to the girl child sexual abuse in Botswana. Focused interview were conducted with ninety-five (95) key informants on child sexual abuse. The findings revealed that:

a) With reference to poverty and child abuse, 22% of the key informants indicated that low income and poor housing were important factors associated with child sexual abuse. Poor shelter which may lead to over crowding within the poor population encouraged early exposure of children to sexual activities because children share the same bedrooms with parents.
b) Fifteen (15%) of the informants associated the problem of child sexual abuse with the decline of family patterns such as more frequent divorce, increase in single-parent families leading to high rate of step fathers and mothers co-habiters, which has exposed some children to abuse.
c) Sixteen percent (16%) indicated poor parenting and neglect as a factor in child sexual abuse as the discipline of children by parents in Botswana has changed from the known traditional method, to a style that may not produce responsible adults.
d) Thirteen percent (13%) of the key informants reported that children from emotionally barren and abusive homes could be drawn into "sex rings" which offer companionship and reward not available at home.
e) Ten percent (10%) of the informants indicated children from dysfunctional families where there is lack of harmony are less likely to resist sexual advances by a family member or someone outside the family who offers them sex in exchange for emotional attachment.

Four percent (4%) of the informants implicated drug and alcohol abuse as a factor in child sexual abuse.

Methodology

A retrospective study approach was utilized to determine the nature and extent of child sexual abuse in Botswana in the last five years. The sources of information included Resource Centres identified to be dealing with issues related to child sexual abuse and from the law enforcement agency namely the Botswana Police to which such cases are reported. The Resource Centres consulted were the Childline and the SOS Children Village. The statistics on child sexual abuse was sought from the Commissioner of Police. The areas of sexual abuse under focus were rape, defilement and incest. The reported cases in each are noted during the under investigation.

In addition to the Police report on childhood sexual abuse in the country, a questionnaire was designed to collect information from two Resource Centres, namely the Childline and the SOS village, on the trend (reported cases) of rape, defilement and incest between 2003 and 2006. The questionnaire also sought information on the:

a) referral of victims by the law enforcement agency to Resource Centres for rehabilitation.
b) nature of intervention provided to victims by Resource Centres and
c) assessment of the adequacy of staffing in Resource Centres to handle child sexual abuse cases.

The Resource Centres

The Child-line

The Child-line Botswana is a non-governmental and non-profit making organization. The Organization was founded by Doreen Khama and Fay Smith in 1990. It was recommended that Child-line be formed under a notorial deed of trust and interested members of the public were invited to become trustees. Child-line was officially opened on the 17th October 1990 and is run by qualified social workers who offer both telephonic and walk in services.

The mission of Childline based in Gaborone (the capital of the nation) is primarily to help abused children and addresses other related child welfare issues through nurturing and intervention strategies like education, counseling, case work and alternative care programmes.

The SOS Village

SOS Botswana is Child-Welfare Organization whose main aim is to provide a home and family for abandoned and orphaned children. It offers a residential care and it has also adopted a family model where children are grouped on smaller family units headed by SOS mothers.

The organization gives children an opportunity to grow, prepares children to be independent and to be self supportive. SOS Children's Village Botswana does not abandon children when they reach the age of 18 years; it reintegrates them back into the society. Here children are either taken back to their families if the family situation has improved during reconstruction service or given plots in the villages. The SOS acquires these plots for the 18years+ children and builds each one a small house with one bedroom, a small kitchen, toilet and bathroom and allows him / her to move on with his / her life.

SOS Botswana also has a program where follow-ups of former SOS children are made.

CHILHOOD SEXUAL ABUSE REPORTS

Rape

Table 1 indicates that the most common sexual abuse in Botswana is rape, followed by defilement and incest (which is not significant). In 2003, the trend of rape seems to be about three times higher for age 18 years and above, compared to age range 11-17 years. While rape cases between ages 11-17 years was about six and a half times higher compared to those age ten and below.

In 2004, the reported rape cases for ages 18 years and above was about twice of those in the age range 11-18 years, while about the same trend (about six and a half higher times) for ages 11-17 years compared to ages 10 years and under were maintained.

In 2005, the incidents of rape for age range 18 years above was about three times higher compared to age range 11-17 years. Incidents of rape cases for ages 11-17 years was between 4 to 5 times higher compared to age range 10 years and below.

Table 1. Reports of Incidents of Child Sexual Abuse (2003-2005) from the Botswana Police

	2003	2004	2005	2006
Rape		63	61	Records not available yet.
Under 10 years	49	418	294	"
11-17 years	316	911	987	"
18 years upwards	923	(1392)	(1342)	"
(TOTAL)	(1288)			
Defilement				
Under 10 years	33	14	23	"
11-16 years	230	100	266	"
(TOTAL)	(263)	(114)	(289)	"
Incest				
Under 10 years	1	0	0	"
11-17 years	1	0	1	"
18 years upwards	1	0	2	"
(TOTAL)	(3)	(0)	(3)	

The trend of incidents of rape for the different age groups over the period under review seems not to have shown any significant change except for the rape incidents for age group 11-17 years which dropped from (418) in 2004 to (294) in 2005. Over-all the highest incident of rape was recorded in 2004. Statistics are yet not available for the year 2006.

Defilement

Defilement seems to be more common among the age range 11-16 years compared to the age range ten years below. The ratio of defilement for the years 2003, 2004 and 2005 for the age range 11-16 years and 10 years below, were about 6.9 to 1, 7.1 to 1 and 11.6 to 1, respectively. It is significant to note that there was decline in defilement (to about half) in 2004 for the two age groups under consideration and in the overall incidents in the country in general.

Incest

The number of incidents reported to the police were minimal, three incidents, in 2003, none in 2004 and three in 2005.

The total incidents of sexual abuse handled by Child-line was summarized in Table 2. In this table, the incidents of sexual abuse handled were in this order; defilement (35 cases), rape (21 cases) and incest (14 cases) in 2005. The order in 2006 was rape (23 cases) defilement (13 cases) and incest (1 case).

The figures for 2003 and 2004 were not available at the time of data collection.

The data in Table 3 indicate figures for 2006 only, where 26 girls from Tlokweng S.O.S. Chidren Village and 17 girls from Francistown S.O.S. Children Village were sexually abused The abuses were reported to be mainly by family friends, customers in a “Chibuku depot” (drinking depot).

Table 2. Reports of incidents of child sexual abuse(2005-2006) reported to the Childline

Rape	(Total)	2005 21	2006 23
Defilement	(Total)	35	13
Incest	(Total)	14	1

Table 3. Reports of child sexual abuse at the S.O.S Village

	2006		
			Total
10-17 years	Tlokweng Village 26 girls	Francistown 17 girls	43 girls

NATURE OF INTERVENTIONS PROVIDED

The Law Enforcement Agency

As expected, the main focus of intervention of child sexual abuse by law enforcement agents is prosecution and referral for rehabilitation where applicable. While some forms of support may be provided by the law enforcement agency to the victims of child sexual abuse, the effective rehabilitation and support is better provided by Resource Centres with personnel in the helping profession.

Resource Centres

Whereas it is helpful to know the extent of child sexual abuse, the age group mostly abused and the factors which lead to abuse, it is equally important to have adequate resource centres to handle incidents of sexual abuse. This study has revealed the need for increased personnel to handle various aspects of child sexual abuse in Botswana. To begin with, few resource centres are available to provide support to the sexually abused in the country. The few available need to be adequately staffed to respond to a variety of concerns on child sexual abuse. This need was visible in the two Resource Centres namely the Child-line and the S.O.S village that responded to the questionnaire of child-sexual abuse in Botswana. There is need for staff with specialization in different areas of the helping profession to be employed in such Resource Centres as this need became apparent from the list of staff and their area of specialization in each Resource Centre.

SERVICES PROVIDED

The services provided by the Resource Centres consulted include counseling and therapeutic assistance, supportive counseling for parents and families of the victim of sexual abuse and a place of safety.

However, face to face interview for victims who reside outside the location of the resource centres was reported to be more difficult to achieve. It was noticed from the response that more staff would be needed to assist such victims.

It is apparent that Botswana like any other country has to confront the problem of child sexual abuse. There is need to keep proper records of child sexual abuse reported, as this would enable each community to know the number and the magnitude of this incidence and the prevailing factors associated with the incidence.

RECOMMENDATIONS

One option to assist victims of childhood sexual abuse is to provide on-line counseling services for such victims as an immediate intervention of support. It would be helpful if Resource Centres are equipped with facilities for on-line counselling.

There is need for more financial support for the few Resource Centres that provide services in child sexual abuse, so that a variety of support services could be made available to the victims of childhood sexual abuse through employment of adequate staff and procurement of other needed equipment.

There is also the need for professionals in the different helping areas in the country to volunteer their time and assist Resource Centres providing services for the victims of sexual abuse, to complement the efforts of the Resource Centres.

Finkelhor, Hotaling, Lewis and Smith, (1990) noted that the early identification of sexual abuse victims appears crucial to reduction of suffering, enhancement of psychological development and healthier adult functioning. It is thus important to identify early, victims of child sexual abuse in Botswana, and provide them with appropriate assistance.

It is imperative to take positive actions to reduce or eliminate this form of non-consensual sexual relationship because of its risk factors and the physical and mental consequences on the victim.

There is the need for more public awareness on the issue of child abuse, prevention programmes need to be put in place, victims are to be encouraged to disclose previous or recent abuse, so that necessary support could be provided.

REFERENCES

Anda, R.F., Chapman, D.P, Felitti V.J, et. al. (2002) The adverse childhood experiences and risk of paternity in teen pregnancy. *Obstet Gynecol;* 100(1): 37-45.

Anderson, N, Ho-Foster A, Matthis J, et al. (2004) National cross sectional study of views on sexual violence and risk of HIV infection and AIDS among South African school pupils. *BMJ* ;329(7472):952.

Brady, S., Gallagher, D., Berger J, et al. (2002) Physical and sexual abuse in the lives of HIV-positive women enrolled in a primary medicine health maintenance organization. AIDS Patient Care STDs;16 (3):12125.

Childline (2005) Child sexual abuse study funded by the Canadian International Development Agency (CIDA), Gaborone, Botswana.

Finkelhor, D., Hotaling, G., Lewis, I.A., & Smith, C. (1990). Sexual abuse in a national survey of adult men and women. *Child Abuse & Neglect,* 14, 19-28.

Finkelhor, D. (1994) Current information on the scope and nature of child sexual abuse. *Future Child* 1994;4(2):31-53

Fontana, V. (1982). Prevalence, characteristics, and risk factors: Dealing with sexual child abuse: sexual abuse of children. *National Committee for the Prevention of Child Abuse.*

Fontes, L. A. (1995). *Sexual abuse in nine North American cultures: Treatment and prevention*. London; Sage Publications.

Garcia-Moreno C. (2003) Relationship violence experiences of young people: an overview and some findings from the WHO VAW Study. *Non-consensual Sexual Experiences of Young People in Developing Countries: A Consultative Meeting,* New Delhi, India, September 22-25.

Gold, S., Swingle, J., Hill, E. and Elfant, A. (1998). Acts of childhood sexual abuse; An empirically derived typology. *Journal of Family Violence*, Vol. 13, No.3.

Goodyear-Smith, F. (1993). *First do no harm: the sexual abuse industry.* New Zealand, Benton-Guy Publishing.

Johnson CF. (2004) Child sexual abuse. *Lancet*; 364 (9432):462-70.

Lindergren M.L., Hanson I.C., Hammett T.A., et al. Sexual abuse of children: intersection with the HIV epidemic. *Pediatrics* 1998;102(4):E46.

Madu, S.N. & Peltzer, K. (2000). Risk factors and child sexual abuse among secondary school students in the Northern Province (South Africa). *Child Abuse and Neglect*: *The International Journal,* 24(2), 259-268.

Omaar R, de Waal A. (1994) Crimes Without Punishment: Sexual Harassment and Violence Against Female Students in Schools and Universities in Africa. London, UK: African Rights.

Saewyc E, Magee L, Pettingell S. (2004) Teenage pregnancy and associated risk behaviours among sexual abused adolescents. *Perspect Sex Reprod Health* 2004:36(3):98-105;

Schreiber, R. & Lyddon, W. (1998). Parental bonding and current psychological functioning among childhood sexual abuse survivors. *Journal of Counselling Psychology*, 45,358-362.

Sullins, C. (1998). Suspected repressed childhood sexual abuse: Gender effects on diagnosis and treatment. *Psychology of Women Quarterly*, 22, 403-418.

RESEARCH AND REVIEW STUDIES

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Chapter 1

CREDIBLE BUT INACCURATE: CAN CRITERION-BASED CONTENT ANALYSIS (CBCA) DISTINGUISH TRUE AND FALSE MEMORIES?

Sarah Kulkofsky
Texas Tech University
Lubbock, Texas USA

ABSTRACT

As more children have come into contact with the legal system as victims of childhood sexual abuse, researchers and scholars have attempted to identify methods that may validate their statements in the event that there is no physical or other corroborating evidence. Criterion-Based Content Analysis (CBCA) is one method that was developed to serve this goal. Although most work with CBCA has focused on children who are deliberately lying, less work has examined CBCA's ability to distinguish true reports from another type of false report, false memories. In the present chapter, I provide evidence showing that this second type of false report is also of paramount concern to the legal system, and then review the evidence showing that while CBCA may have some limited usefulness in identifying truth and lies, it does not appear to distinguish true from false memories.

INTRODUCTION

Since the 1970's, childhood sexual abuse has received increasing societal attention. Due to the greater recognition of the prevalence and problems associated with sexual abuse, child protection agencies, law enforcement, and the judiciary have instituted a number of reforms designed to aid the identification and successful prosecution of sexual abuse cases. Child sexual abuse can create unique problems for investigators. Often, the only witness to an act of sexual abuse is the child-victim, and in many cases, there is no corroborating physical

evidence. Therefore, quite frequently the only evidence available is the child's account of what happened. Thus, in many cases, investigators and fact finders (i.e., judges and juries) must determine whether the child's statement is a truthful account without the aid of any corroboration. In the past, clinical lore suggested that children *never* lie about or invent stories of childhood sexual abuse (e.g., Faller, 1984; Goodwin, Sahd, & Rada, 1982). However, growing evidence suggests that children sometimes do falsely report being the victim of sexual abuse (Ceci & Bruck, 1995; Jones & McGraw, 1987; Faller, 1991). In other words, investigators cannot assume that simply because a child makes an allegation of abuse, the abuse *must* have happened. Therefore, investigators and researchers alike have sought to develop methods to assess the validity of children's statements.

Statement Validity Assessment (SVA), particularly the Criterion-Based Content Analysis (CBCA) component of SVA (Undeutsch, 1982, 1984, 1989), is one tool designed to assess the validity of children's reports of childhood sexual abuse. The premise of CBCA is that characteristics of the child's statement are informative of the truthfulness of that statement. A number of studies have been conducted using CBCA that suggest it may have some (albeit limited) usefulness as a tool for assessing true versus fabricated reports of childhood sexual abuse (see Vrij, 2005 for a recent review). Much of the past research and reviews on CBCA have looked at intentionally fabricated reports (i.e., deliberate lies). However, in the present chapter, I examine the ability of CBCA to distinguish between true and a different type of fabricated report, namely false beliefs that an event that did not happen actually did. These types of fabricated reports are often termed *false memories*. To date, CBCA's ability to distinguish true from false memories has received little attention (however, see Ruby & Brigham, 1997 for a brief discussion of this issue); and yet, it is imperative to answer this question in order to truly assess the validity of CBCA as a tool for the criminal justice system.

In the first section of this paper I provide a brief overview of the development and components of the CBCA method (for a more detailed review see Undeutsch, 1989) followed by a brief discussion of the research conducted thus far to test the method's validity (for more complete reviews of CBCA see Horowitz, 1991; Lamb, Sternberg, Esplin, Hershkowitz, & Orback, 1997; Ruby & Brigham, 1997; Vrij, 2005). In the next section, I discuss the concept of statement validity and distinguish between two important components of validity: *credibility* and *accuracy*. I discuss threats to the accuracy of child's report, and discuss a situation in which a child might be credible but at the same time inaccurate, namely, when a child is reporting a false memory. Next, I discuss the characteristics of false memory narratives and show that contrary to what might be expected based on CBCA assumptions, false memories contain many of the same characteristics of true memories. Finally, I provide a review of the limited studies that have explicitly examined the ability of CBCA to distinguish true from false memories. Although the number of studies is few, they suggest that CBCA cannot adequately distinguish between true and false memories, which calls into question the usefulness of CBCA as a forensic tool.

AN OVERVIEW OF CBCA

The idea that the characteristics of a witness' statement can elucidate the truthfulness of that statement is a relatively new concept in the Americas, but it has a rather long tradition in Europe. Such methods are particularly prevalent in Germany where the courts mandated that an expert witness *must* testify to the likelihood of the truthfulness of a child witness' statements if the case rests primarily or exclusively on a child's uncorroborated testimony. The German courts found that expert psychiatrists or psychologists have "other and better resources than the persons acting as fact finders" to assess the truthfulness of the child's report (Undeutsch, 1989, p. 104). SVA represents a formal means to make these assessments. In addition to CBCA, SVA also includes a structured interview designed to elicit a high quality narrative from the child as well as the Statement Validity Checklist designed to examine other aspects surrounding the child's statement that may influence the likelihood that the statement is true or false (Raskin & Esplin, 1991a; Raskin & Yuille, 1989; Steller, 1989). While proponents of SVA argue that all three components are crucial to make validity assessments, CBCA is considered the central component of SVA, and much of the empirical research on SVA has focused primarily on CBCA (Ruby & Brigham, 1997). Indeed, in practical applications, SVA decisions are often equivalent to decisions made solely by CBCA (Grumpert & Lindbald, 1999).

CBCA is based on the "Undeutsch hypothesis" which states, "truthful, reality-based accounts differ significantly and noticeably from unfounded, falsified, or distorted stories" (Undeutsch, 1982, p. 44). Steller and Kohenken (1989) as well as Raskin and Yuille (1989) provided the first formal standardized description of CBCA appropriate in the context of the American legal system. In CBCA, experts code the witness's statement for the presence of specific contents, such as the presence of peripheral details or mentions of the perpetrator's state of mind. As it was originally presented, CBCA contained 19 specific criteria outlined in Table 1. Since the criteria were originally introduced, they have undergone a number of changes and refinements. For example, Raskin and Esplin (1991a) suggested that the final criterion (offense-specific elements) is more appropriate for the validity checklist than CBCA. More recently, Lamb and colleagues (Lamb et al., 1997) further refined the analysis to 14 criteria (marked as such in Table 1). Research on CBCA, then, often contains a varying number of assessment criteria; some studies use the full 19, others 18 (all but offense-specific elements), others 14 (as proposed by Lamb and colleagues), while others exclude additional characteristics that are not applicable in the particular context of the study (e.g., in a study where children are asked to describe a non-sexual staged event, referencing sexually themed incidents outside the specific incident would not be appropriate).

While research often contains a varying number of criteria, the original conceptualization of CBCA includes five basic "types" of criteria: general characteristics, specific contents, peculiarities of content, motivation-related content, and details characteristic of the offense. *General characteristics* include elements, such as logical structure or a large quantity of details, which are coded for the entire statement (e.g., overall, does the statement have a logical structure). *Specific contents* refer to narrative elements, such as contextual embedding (that is, situating the narrative in time and place), that are more likely to be present in accounts based on actual memories, compared to accounts that are fabricated. *Peculiarities of content* include concrete details expected to be observed in true statements of childhood

sexual abuse. For example, the criterion, "accurately reporting details misunderstood" refers to the fact that children may misinterpret sexual acts although they may accurately report them for example, by misinterpreting an adult's orgasm as the adult being in pain. *Motivation-related content* refers to items that a liar would likely not include in his or her report if he or she were trying to seem credible, such as making spontaneous corrections. The final criteria refers to the presence of *offense-specific elements* which are likely to occur in cases like the one being described, but may not be part of general knowledge (Raskin & Yuille, 1989; Steller & Kohenken, 1989). For example, the most common pattern in sexual abuse is of gradual escalation from non-sexual touching to sexual contact, a pattern that may not be widely known to the public at-large (Yuille, 1988). The refined criteria proposed by Lamb and colleagues dropped most of the motivational criteria and the offense-specific elements. The removal of these elements represented both concerns about reliability in coding these items as well as the fit of the criteria with the "Undeutsch hypothesis," which is essentially a memory hypothesis (Anson, Glding, & Gully, 1993; Horowitz, Lamb, Esplin, Boychuck, Krispin, & Reiter-Lavery, 1997; Lamb, et al., 1997).

Table 1. Content Criteria for Evaluating Statements

General Characteristics
1) Logical structure and coherence
2) Unstructured production with spontaneous digressions
3) Quantity of details, especially regarding time, place, persons, and events
Specific Contents
4) Embedding of events in temporal and spatial context
5) Descriptions of interactions
6) Reproduction of conversation
7) Unexpected complications or interruptions
Peculiarities of Content
8) Unusual details that are meaningful
9) Superfluous or peripheral details
10) Accurately reported details misunderstood
11) References to other sexually toned events occurring outside the specific incident
12) References to one's feelings or thoughts during the incident
13) Attributions of thoughts, feelings, or motivations of the perpetrator
Motivation-Related Content[1]
14) Spontaneous corrections or additions
15) Admitting lack of memory*
16) Raising doubts about one's own testimony*
17) Self-deprecation*
18) Pardoning the perpetrator*
Offense-Specific Elements
19) Details characteristic of the offense*

Adapted from Lamb et al. (1997) and Raskin & Yuille (1989).

[1] Lamb et al. refer to this category as "Miscellaneous Indicators".

* Items not included in Lamb et al. (1997) refinement of CBCA.

Each of the CBCA criteria are expected to appear more often in true reports than in false reports, thus every instance that a criterion appears in a child's report increases the likelihood that the report is valid (Raskin & Yuille, 1989; Steller & Kohenken, 1989). For example, a report that includes reproductions of dialogue, superfluous details, spontaneous corrections and mentions of the perpetrator's state of mind would be more likely to be considered true than a statement that did not include these characteristics. However, the absence of characteristics is not indicative that the report is necessarily a lie. In this way, CBCA may be most appropriately conceptualized as a "truth validator" rather than a "lie detector."

RESEARCH SUPPORTING CBCA

Two types of studies have been used to assess CBCA: field studies that examine children's reports in actual sexual abuse cases, and laboratory analogue studies. In field studies, statements from children in actual sexual abuse cases are obtained. Based on the facts of the case (e.g. if the case resulted in a conviction or judicial dismissal), cases are classified as highly probable (i.e., the abuse likely occurred) or highly improbable (i.e., the abuse likely did not occur). Then, the CBCA criteria are applied by coders who are unaware of the status of the case to look for differences in CBCA scores for highly probable versus improbable cases. While this method has high external validity, it has been criticized for the obvious limitation that it is often impossible to know with absolute certainty the truth of the child's statement (e.g., Wells & Loftus, 1991). Often, the factors that are used to establish truth, such as convictions or confessions, are not independent of the quality of the child's statement. That is, if the child has a poor-quality statement, as would be assessed by CBCA, the alleged perpetrator may be less likely to confess and the case may be less likely to end in conviction, regardless of whether or not the child was actually telling the truth.

In contrast, laboratory analogue studies allow researchers to know with complete certainty the veracity of the child's statement. These methods have been criticized because the events that children are asked to recall differ in important ways from childhood sexual abuse (Undeutsch, 1982; 1989). Laboratory studies often lack the emotional and cognitive elements that are typical of sex crimes and therefore lack ecological validity. However, many researchers have noted that the Undeutsch hypothesis, which states reality-based accounts should differ from false accounts, is not restricted to children's statements of sexual abuse and should apply more broadly (e.g., Landry & Brigham, 1992; Ruby & Brigham, 1998; Sporer, 1997; Steller, 1989; Vrij, Akehurst, Soukara, & Bull, 2002). Furthermore, Steller (1989) has suggested that laboratory studies may be useful especially when the events studied maintain many of the basic psychological variables that characterize a sexual abuse experience, in particular, direct involvement, negative emotional tone, and loss of control.

Field Studies

Initially, field studies showed strong support for CBCA. For example, Raskin and Esplin (1991b) classified 40 statements from children between 3 to 15 years of age involved in sexual abuse investigations as either confirmed or doubtful. Confirmed statements were

classified on the basis of confessions and/or definitive physical evidence. Doubtful statements were classified on the basis of continual denial by the alleged perpetrator and a recantation on the part of the child or lack of prosecution. Raskin and Esplin (1991b) then evaluated the statements on the 19 CBCA criteria, assigning a score of zero is the criteria was absent, one if it was present, and two if it was strongly present (thus the possible range of scores was 0-38). Overall, their findings showed tremendous differences in CBCA scores between the confirmed and doubtful statements. The mean CBCA score for confirmed statements was 24.8 compared to 3.6 for doubtful statements. Furthermore, there was no overlap in the distribution of scores. Similar results were also obtained in a field study by Boychuck (1991).

As noted above, these field studies are criticized on the ground that the factors used to classify the cases are not independent of the child's statement. Furthermore, by only selecting a sample of highly doubtful and highly probable cases, the sample may not reflect the full range of actual sexual abuse cases (Wells & Loftus, 1991). Lamb and associates (Lamb, Sternberg, Esplin, Hershkowitz, Orbach, & Hovav, 1997) attempted to address this issue in a field study by using independent measures (such as medical records and DNA evidence) to assess the likelihood of abuse, by assigning likelihood scores on a continuum (e.g., 1 = highly doubtful, 5 = highly likely), and by sampling a greater variety of cases. Although they found statistically significant mean differences in CBCA scores of probable and improbable events, the differences were not as extreme as reported by Raskin and Esplin (1991b) nor were their results as clear-cut. The distribution of scores overlapped, and several of the criteria were not significantly different between groups. In fact, there were even some nonsignificant trends in the opposite direction, whereby unlikely accounts showed more evidence of criteria than plausible accounts. Furthermore, the overlap in scores was not the result of plausible cases receiving low scores, but rather some implausible cases receiving relatively high scores. Because Lamb et al., (1997) did not sample only those cases that were highly plausible and highly implausible; their sample is likely more representative of the population of cases at large. In a similar study, Craig and associates (Craig, Schibe, Raskin, Kircher, & Dodd, 1999) also found overlap in the CBCA scores of plausible and implausible cases. Therefore, while the evidence from field studies shows differences between plausible and implausible allegations of abuse on CBCA measures, these differences may not be extreme enough to be utilized for predictive purposes in actual cases.

Laboratory Analogue Studies

Steller, Wellershaus, and Wolfe (1988; cited by Steller, 1989) attempted to address the CBCA question in a laboratory analogue study that included important psychological elements of sexual abuse cases (direct involvement, negative affect, loss of control). Primary school students participated in a "story-telling contest" where they were asked to describe two events: one that happened to them and one that did not (the validity of the events was obtained by interviewing the children's parents). The events included in the study were: giving a blood sample, receiving an injection, undergoing an operation, having dental work done, suffering from an accident requiring medical treatment, being beaten up by another child, or being attacked by a dog or other animal. The children's reports were rated on 18 of the 19 CBCA criteria (criteria 19 was not included) by trained undergraduates. Steller, et al. (1988) found some limited support for CBCA, but only in the medical-related events. For

medical topics, 11 of the 18 criteria differed significantly between true and untrue reports. In contrast, unstructured production, attribution of the perpetrator's mental state, and all motivation-related criteria failed to differ significantly in the true versus the false stories. Although this study provides some evidence that CBCA can distinguish between true and fabricated reports, it does show that the method is limited and may not apply in all situations.

A number of other investigators have confirmed that CBCA scores can distinguish between true and false reports in laboratory analogue studies (e.g., Akehurst., Kohenken, & Hofer, 2001; Colwell, Hiscock, & Memon, 2002; Landry & Brigham, 1992; Tye, Amato, Honts, Kevitt, & Peters, 1999) although, taken as a whole, the laboratory studies tend to provide less support for CBCA than field studies (Vrij, 2005). Nonetheless, Vrij (2005) notes that in most studies the results are in the expected direction, and CBCA provides more promise than many non-verbal forms of deception detection (e.g., Ekman & O'Sullivan, 1991, Vrij, 2004).

One exception to this overall pattern of findings was found by Ruby and Brigham (1998). In their study, adult speakers provided two accounts of true and false events that were considered negative, emotional, and characterized by a loss of control (e.g., having a close family member die from AIDS). The transcripts of these accounts were rated by 119 raters that had taken part in a 45-minute session on CBCA on 15 CBCA criteria (accurately reported details misunderstood, attribution of the accused mental state, and pardoning the accused were excluded as they were deemed specific to children's reports of sexual abuse). Overall, CBCA scores did not distinguish between the true and fabricated transcripts, with only 47% of transcripts being accurately classified. While this study has been criticized for the possibility that the relatively short training session was not adequate for raters to properly learn the technique (Vrij, 2005), this study further highlights some of the limitations of the CBCA method.

In a qualitative review of all published CBCA studies, Vrij (2005) reported that, based on discriminate analyses, the accuracy rate for CBCA is roughly 70 percent. This accuracy rate was reported to be roughly equivalent for both truthful and false statements although previous authors suggested that there might be a CBCA "truth bias" whereby truthful statements are more accurately classified than false statements (e.g., Ruby & Brigham, 1997). These findings suggest that CBCA is at least better than chance at detecting truthful from false statements. However, a number of conditions that reduce the ability of CBCA to discriminate truthful from false statements have been identified, including, age, verbal ability (Santtila, Roppola, Runitti, & Nemi, 2000), social skills (Vrij, et al., 2002), being coached on CBCA criteria (Vrij, et al., 2002; 2004), and reporting events viewed live versus on videos (Akehurst, et al., 2001).[1]

Though it has shown some limited promise in discriminating true versus fabricated reports, there are a number of weaknesses with the CBCA method and its discriminate ability is far from perfect. Therefore, some researchers have suggested that CBCA may be more appropriately used as an assessment tool early in an investigation (e.g., to decide if a child's report is credible enough to warrant further investigative efforts), rather than as the basis for expert testimony in the courts (Lamb, et al., 1997; Vrij, 2005).

[1] See Landry and Brigham (1997) for a more detailed discussion of other issues that may compromise the CBCA method.

STATEMENT VALIDITY: CREDIBILITY VERSUS ACCURACY

While the research cited above provides (albeit cautioned) support for limited use of CBCA in forensic contexts, this research has primarily examined its ability to detect statements that are truthful from statements that are intentional lies. In all of the previously mentioned laboratory studies, children and adults who provided false statements knew that the statements that they were giving were false. However, statement validity is not based solely on distinctions between truth telling versus lying. Indeed, an individual may intend to tell the truth, yet, due to errors of memory may erroneously report incorrect information (e.g., Kohenken, 1989; Loftus, Korf, & Schooler, 1989; Ruby & Brigham, 1997).

Kohenken (1989) makes the distinction between accuracy and credibility in assessing the validity of a witnesses report. While both an inaccurate and a not credible witness would be considered unreliable, different reasons explain their lack of reliability. According to Kohenken (1989), accuracy refers to the degree to which information presented in the witness's report matches what happened during the event, while credibility refers to the degree to which the witness is motivated to tell the truth. This distinction also reflects the distinction made in the courts whereby credibility is narrowly defined as a characteristic of the witness that lead to judgments as to whether the witness is reporting what he or she believes to be the truth (Ceci, Bruck, & Rosenthal, 1995; Poole & Lindsay, 1998). Therefore, hypothetically, it is possible that a child may be quite inaccurate but at the same time quite credible; in other words, children may come to believe that they are telling the truth, when in fact they are not.

Therefore, the bulk of the research investigating the ability of CBCA to examine truthful from untruthful statements has only examined situations where the child's report lacks *both* credibility and accuracy. However, the goal of CBCA is not to distinguish credible from not credible witnesses, but rather to verify the truthfulness of the child's statement (Undeutsch, 1989). If such a credible but inaccurate witness could exist, then CBCA must be able to distinguish these cases from true reports as well as those where the witness lacks both accuracy and credibility. Otherwise, CBCA would only function to delineate the sincerity of the witness, yet would provide no information about the truthfulness of the account.

Indeed, a large body of research on children's memory and suggestibility provides ample evidence that under a variety of conditions children may come to believe events to be true that are in actuality not (for a detailed review of this literature see Bruck & Ceci, 1995; Ceci & Bruck, 1993, 1995). Providing misleading post-event information, repeated questioning, repeatedly thinking about a non-event, asking children to speculate about what might have happened, and inducing stereotypes are, among others, some of the factors that induce children to provide inaccurate reports (Bruck, Ceci, & Melnyk, 1997; Ceci & Bruck, 1995).

Do these inaccurate reports actually reflect false memories, or rather are these factors simply techniques that bias children into reporting what they think the interviewer wants to hear? While it is difficult to know with absolute certainty whether or not children's false reports reflect genuine memory errors, there is some evidence that suggests that they are. For example, Leichtman and Ceci (1995) presented preschool children with a stereotype and misleading suggestions consistent with the erroneous belief that a classroom visitor, Sam Stone, had soiled a teddy bear and ripped a book. When asked if Sam Stone had soiled a teddy bear or ripped a book about 70 percent of 3-4 year olds initially claimed that he did and

about 45 percent claimed to have actually *seen* Sam Stone do these misdeeds. Most importantly, a full 21 percent of the children maintained that they had seen it happen even after being gently challenged by the interviewer (e.g., "You didn't really see that did you?"). Furthermore, the children often gave elaborate, emphatic, and detailed accounts of what Sam Stone had done. These findings led Leichtman and Ceci (1995) to conclude that at least some of the children came to believe that Sam Stone had soiled the teddy bear and ripped the book.

In another series of studies Ceci and colleagues (Ceci, Crotteau-Huffman, & Smith, 1994; Ceci, Loftus, Leichtman, & Bruck, 1994) asked children to repeatedly imagine true and false events (e.g., "You got your finger caught in a mousetrap and had to go to the hospital"). In one study (Ceci, Crotteau-Huffman, et al., 1994), over the course of ten weekly interviews, children were presented with the events and were told that not all of the events may have actually happened to them, but were asked to think about it as if they had. In the tenth interview, a new interviewer asked the children to provide a free narrative of the true and false events. Children often readily assented to the false events across the interviews, and the authors suggest that many of these children actually came to believe that the event had actually happened. As anecdotal evidence in support of this claim, the authors note how after the completion of the study ABC correspondent John Stossel came to interview many of the children who participated in the study. One child had already been told by his parents that the events had never happened before his interview with John Stossel; however when asked if he ever had his finger caught in a mousetrap, the child maintained that it had happened. Although both Stossel and the boy's parents tried to dissuade him from this belief, the child remained insistent that he in fact had gotten his finger caught in a mousetrap. This child appears to be representative of other children from this study; 27 percent refused to accept the researchers debriefing insisting they remembered the fictitious event occurring.

In a follow-up study (Ceci, Loftus, et al., 1994), children completed a similar procedure, except this time, the interviewer told the child that the events actually had happened, and in this study, children's assent rates grew across the interview sessions. In the final interview, a new interviewer told the children that the first interviewer had made some mistakes and told them some events had happened that had not. While children's assents to the false items decreased in the final interview, they failed to fall back to their initial baseline levels, which would be expected if their reports were based solely on demand characteristics. That is, if the children were simply assenting to the false events because they thought this was what the interviewer wanted to hear, they would not continue assenting when a new interviewer who acknowledged that the first interviewer made some errors asked them if the event happened.

While not conclusive, these studies provide evidence that, as a result of suggestive influences, children come to falsely believe events that have not happened in reality have occurred. It is true that not all children who come to give false reports as a result of suggestive interviewing techniques may actually have false memories. Children may simply be responding to the coercive nature of the interviewing context or trying to please the interviewer rather than actually relaying false beliefs (Bruck, Ceci, & Melnyk, 1997; Goodman & Schaaf, 1997). For the sake of clarity, in this chapter, children's false reports as a result of suggestive techniques will be referred to as false memories to distinguish these reports from false reports that occur when children are intentionally told to lie. However, the fact that not all of these reports may truly be false memories in the sense that they reflect false beliefs must be kept in mind.

It is important to note that the effects of suggestive questioning are not limited to irrelevant and peripheral details of unemotional events, but also include central details to negative and painful events, such as doctor's office and emergency room visits (Bruck, et al., 1995; 2000; Burgwyn-Bales, Baker-Ward, Gordon, & Ornstein, 2001) and other forms of bodily touching (Poole & Lindsay, 1995; White, Leichtman, & Ceci, 1997). However, one may still question whether these results are generalizable to cases of childhood sexual abuse.

Current estimates suggest that anywhere from 2-35% of all allegations of sexual abuse are false (Jones & McGraw, 1987; Faller, 1991). The authors of these papers tend to cite lower percentages (2-8%) of false accusations, however, in these cases false accusations are narrowly defined as only those cases that involve deliberate lying. As both Ceci and Bruck (1995) and Poole and Lindsay (1998) have noted, when "honest mistakes" (which can be just as damaging as deliberate lies) are included the percentages rise considerably. Furthermore, these rates also tend to be higher in contentious custody and divorce cases (Everson & Boat, 1989; Green, 1986; Jones & McGraw, 1987). While these numbers indicate that false allegations do occur, they do not necessarily provide evidence of false memories of sexual abuse. There are multiple reasons that a child may falsely report sexual abuse, including misunderstanding the situation, misreporting the wrong perpetrator, deliberate lies designed to obtain freedom from restrictive parents, or being coached to tell lies to gain custody (e.g., a mother telling her children to lie that her ex-husband had sexually abused them in order to gain full custody of the children). Furthermore, even if a child has been interviewed in a highly suggestive manner, this does not necessarily mean that the child's report is inaccurate. Indeed, just as suggestive interviewing techniques can negatively affect a child's report; they are also quite good at eliciting accurate information if the suggestions are not misleading (Ceci & Bruck, 1995; White et al., 1997).

Case studies provide some evidence that false memories of childhood sexual abuse can happen. The 1980's and 90's saw a number of high-profile child sexual abuse cases generally revolving around child care centers or nursery schools with multiple victims and often multiple alleged perpetrators (Ceci & Bruck, 1995; Garven, Wood, Malpass, & Shaw, 1998; Nathan & Snedeker, 1995). These cases were also characterized by aggressive and overzealous investigations that included the children being subjected to repeated coercive and highly suggestive interviews. In many of these cases, the children reported a number of bizarre and heinous acts that included (but were not limited to): human and animal sacrifices, serious physical assaults (such as being raped with forks and knives), cannibalism, and other ritualistic acts. However, no physical proof of these violent and bizarre acts was ever recovered and most of the defendants were either acquitted or released on appeal. Despite the lack of evidence, many of the children still adamantly maintained that their memories were true and that the events in question did happen (Nathan & Snedeker, 1995). Whether these children actually suffered *any* abuse by the alleged perpetrators is still a matter of much debate; however, the lack of any evidence for their claims, coupled with the suggestive and coercive nature of many of their interviews, suggests that at least *some* of their reports are false. Given the children's maintenance that the events did indeed happen, these cases suggest that it is possible, especially when a number of suggestive techniques have been used, for children to develop false memories of childhood sexual abuse.

Thus, both laboratory studies as well as actual case studies show that children can come to believe and report events that did not happen. These children are not lying; rather they sincerely believe they are telling the truth. These children are credible witnesses but not

accurate witnesses. It is therefore important for the CBCA method to not only distinguish between true memories and lies, but also between true memories and false memories, if it is to be a valid investigative tool.

Characteristics of False Memories and the CBCA Criteria

If CBCA is to distinguish between true and false memories, then it must be assumed that the characteristics of true and false memories vary along the same lines that true memories and intentional deceit differ. In particular, we must assume that false memories are less logically structured and coherent than true memories (criterion 1) and that they are told in a highly rehearsed style with little digression or spontaneous corrections or additions (criteria 2 and 14). False memories must contain fewer details (both central and peripheral), are not embedded in time and space, and do not include descriptions of interactions or conversations (criteria 3,4,5,6,9). Furthermore, false memories should not include reference to one's own or other's thoughts, feelings, or motivations (criteria 12 and 13). False memories of childhood sexual abuse are also not likely to include unexpected complications or interruptions, references to sexually toned events outside of the incident, unusual details that are meaningful, and accurately reported details that are misunderstood (criteria 7, 8, 10). In sum, false memories are more likely to be illogical and incoherent tales lacking rich details and emotional contexts told in a highly rehearsed and scripted style; that is, false memories should result in lower quality narrative accounts when compared to true memories.

Are these assumptions supported by the empirical literature? Research on children's false memories shows that rather than being skeletal, illogical, and unemotional accounts, children can provide highly detailed and believable accounts of past events that did not actually occur. Consider the following example of a child's fictional account in the "mousetrap study" (Ceci, Crotteau-Huffman, et al., 1994):

> My brother Colin was trying to get Blowtorch (an action figure) from me, and I wouldn't let him take it from me, so he pushed me into the woodpile where the mousetrap was. And then my finger got caught in it. And then we went to the hospital, and my mommy, daddy, and Colin drove me there, to the hospital, because it was far away. And the doctor put a bandage on this finger (indicating)." (pp. 399-400).

Ceci and Bruck (1995) further report that this child goes on to explain that his father was in the basement collecting firewood at the time of the accident and that he initially went to the basement to ask his father to make his lunch.

In this short excerpt, we see no evidence that this false memory would differ from a true account. The child's story is a logical and plausible account of how he might have gotten his finger caught in a mousetrap. His account is unstructured; he first describes how his finger was caught in the mousetrap and then later goes onto describe why he initially went to the basement in the first place. He provides a number of details including where he was (near the woodpile), who was there (Colin, daddy, and then later mommy and the doctor), and what happened. The account is embedded in a temporal (around lunchtime) and spatial (in the basement) context. The account includes an interaction between himself and his brother as well as himself and a doctor. He also offers some peripheral information (the hospital was far

away). Furthermore, we see a complication arising in his story. While he originally went to the basement to ask his dad to make him lunch, his brother interrupted him trying to get his action figure. Indeed, if we considered this statement within the CBCA framework, we see some evidence of seven different CBCA criteria (1, 2, 3, 4, 5, 7, and 9). Based on decision rules postulated by Landry and Bringham (1992) and Yuille (1988) this statement could be considered valid.

Indeed, children's false memory reports may be indistinguishable from true statements. Both Ceci, Loftus, et al. (1994) and Leichtman and Ceci (1995) had legal and psychological experts watch videos of children's true and false reports and attempt to classify the true and false events. In both cases, the professionals were no better than chance at distinguishing true from false memories. Furthermore, Bruck and colleagues (Bruck, Ceci, & Hembrooke, 2002) systematically compared children's true and false narratives. In this study, children were repeatedly and suggestively interviewed about two true and two false events (in each condition one event was positively valenced and one was negatively valenced). Children's subsequent narratives were then coded for a number of characteristics including number of spontaneous utterances, contradictory statements, narrative cohesion, and aggressive or improbable details. While this study did not examine CBCA per se, it did examine many elements of high quality narratives that are also present in CBCA criteria (for example, contradictions may be evidence of lack of logical structure). Bruck et al. (2002) found that false narratives contained more spontaneous details, more temporal markers, more elaborations, and more aggressive details than true narratives. Furthermore, there was no difference between true and false memories in terms of contradictions or dialogue. In a similar study, Powell and associates (Powell, Jones, & Campbell, 2003) found that, like Bruck et al. (2002), false narratives were similar to true narratives in number of details, structure, and quality. Furthermore, Principe and Ceci (2002) found that false narratives were actually *more* elaborate than children's true narratives, and further Kulkofsky and colleagues (Kulkofsky, Wang, & Ceci, in press) found that increases in narrative quality were associated with *decreases* in accuracy.

Thus, counter to assumptions based on CBCA criteria, the research suggests that children's false memory narratives are coherent, detailed accounts that often contain many of the CBCA criteria. Admittedly, clear evidence for those CBCA criteria that specifically address the context of sexual abuse (e.g., sexually toned events outside of the specific event) is still lacking. However, this may simply be a function of studies of false memories never including sexual abuse scenarios. Given the quality and conviction of children's false memory narratives it would be surprising if false sexual abuse narratives that were based on false memories of abuse would not include at least some of the CBCA elements. Thus, because children's false narratives often resemble true narratives, we may conclude that CBCA cannot distinguish true from false memories. However, the above-cited studies do not explicitly examine CBCA criteria in false memory reports. Rather, they simply examine the overall quality of children's false reports. It may be that when CBCA is systemically applied, certain characteristics of the narratives may emerge that can adequately distinguish between true and false memories. Therefore, in order to make valid claims about CBCA's ability to distinguish true memories from false memories, the CBCA criteria must be applied to both true and false memory accounts. I now turn to the handful of studies that have done just that.

CBCA AND FALSE MEMORIES

As noted in the introduction, the ability of CBCA to distinguish true from false memories opposed to true memories and lies has received little attention. However, recently a small number of studies in both the field and the lab have begun to explicitly examine this question.

Field studies on false memories are quite rare given, as stated above, that it is quite difficult to establish the absolute veracity of a child's statement in many cases. However, there is one reported single case study where a child provided a false account after receiving misleading suggestions. In this case, (see Hershkowitz, 2001 for full case details) a 10-year-old girl was taking a shortcut home when a man approached her and exposed himself to her. Because she feared that she would be in trouble for taking the shortcut, she did not tell anyone what had happened. However, over the following days, she discussed with a couple of friends what they would do if they were "sexually abused" and both agreed they would tell someone. The child then decided that she should tell her mother; however, to avoid being challenged about the delay in reporting, she decided to report the experience as if it had happened that day. After school, she took the same short-cut home and passed the spot where the incident occurred, which evidently upset her. When she arrived home she was crying uncontrollably.

Once she arrived home, her mother began asking her a series of suggestive questions (e.g., "Did somebody hit you?" "Did somebody try to kidnap you?") The child affirmed that someone had touched her and confirmed that her privates had been touched. The mother then decided to examine the child herself and saw what she believed to be a man's pubic hair in the child's vagina. The mother then called the authorities and the child was subsequently immediately interviewed where she recounted that she had been taking a shortcut when a man, whose face she could not see, lifted her from behind and threw her on a stone fence, pulled off her pants and underwear, and forcefully penetrated her. Two days later the child was interviewed a second time and recanted this account providing the account of what actually happened (as presented here). Medical evidence further supported the claim that the child was not forcibly penetrated.

Hershkowitz (2001) submitted the child's original false account to a CBCA analysis. Her account included seven CBCA criteria, which suggested that her false allegation appeared to be plausible. This led Hershkowitz (2001) to conclude that suggestive influences (in this case the mother's series of suggestive questioning as well as the mother's belief that there was a man's pubic hair in the child's vagina) can inhibit the ability of CBCA to discriminate between true and false accounts. Furthermore, Hershkowitz (2001) suggests that this is especially true when the account is situated within the context of a real event (in this case the exposure incident).

While this child was apparently suggestible as most broadly defined (Ceci & Bruck, 1995), this case likely does not represent a case of false memory. The child recanted the account within two days of the events, and, by her own admission, even when she gave her initial statement she knew it was not the truth (Hershkowitz, 2001). However, this case study provides evidence from the field that suggestive interviews, even mildly suggestive interviews, can impair the ability of CBCA to discriminate true from false accounts – even if these interviews do not produce actual false memories.

Laboratory based research provides further evidence of CBCA's inability to distinguish true from false memories. Crotteau-Huffman (1994) examined CBCA's ability to

discriminate true from false memories that were developed as a result of repeatedly thinking about a false event. The children in this study were those from Ceci, Crotteau-Huffman, et al. (1994) cited above (the "Mousetrap study") who repeatedly thought about true and false events over a ten-week period. The transcripts of the children's final interviews were then sent to CBCA experts for analysis. The experts rated the children's narratives on 18 CBCA criteria on a 3-point scale (0 = absent, 1 = present, 2 = strongly present); however the experts were not asked to make an overall decision as to the veracity of the statement. Crotteau-Huffman (1994) found that while the mean difference in true and false stories was statistically significant, there was much overlap in their distributions. In fact, nearly an equal number of true and false stories were at the median CBCA score. Crotteau-Huffman then used a median split to calculate hit rates (scores that were at or above the median CBCA score were classified as true based on CBCA criteria while scores below the median classified as false based on CBCA criteria). Based on this method, 74 percent of the narratives that were actually true and 46 percent of narratives that were actually false were correctly classified. While accuracy rates for the true narratives were similar to hit rates published in other CBCA studies (e.g., Vrij, 2005), over half of the false stories were incorrectly classified as true. This high false positive rate is especially alarming given the concern in American courts for avoiding "Type I" errors; that is, in the American justice system it is considered far worse to wrongfully convict an innocent individual than to let a guilty individual go free.

Further, Crotteau-Huffman also had naïve undergraduates read the transcripts and classify them as either true or false. The hit rates of these naïve raters were 73% for the true stories and 63% for the false stories. In other words, the CBCA experts were no better at classifying the true from false accounts than undergraduate students who had no knowledge of the CBCA methodology. In fact, in terms of the false narratives the undergraduates may have even performed better.

In a similar study, Stromwell, Bengtsson, Leander, and Granhag (2004) had children either repeatedly imagine or experience a doctor's exam over the course of four weeks. Children were then interviewed about the event in a Cognitive Interview style interview. The Cognitive Interview is a widely used methods designed to improve memory and lead to a more exhaustive free recall (Kohenken, Milne, Memon, & Bull, 1999). Although the authors do not suggest that the children actually formed false memories about the imagined event, given that repeatedly thinking about a non-event is one factor often associated with the development of false memories (e.g., Hyman & Pentland, 1996; Ceci, Crotteau-Huffman, et al., 1994; Ceci, Loftus, et al., 1994), it is possible that some children eventually developed false beliefs that the event had occurred. Indeed, there were no significant differences in CBCA scores for real versus imagined events. A discriminate analysis with CBCA score as a predictor led to a 54% correct classification; 44% of real events were correctly classified while 64% of imagined events were correctly classified.

The results from both Crotteau-Huffman (1994) and Stromwell, et al., (2004) suggest that CBCA cannot effectively discriminate between true and false memories. However, one may argue that because the final interviews did not conform to the specific interviewing techniques outlined in the SVA procedure, the statements were not of a high enough quality to make useful CBCA classifications. Crotteau-Huffman (1994) notes that none of the experts commented that the statements were of too poor a quality to provide proper ratings, and the Cognitive Interview method employed by Stromwell et al. (2004) has previously been shown to elicit statements of a high enough quality to distinguish between true accounts and lies in

adults (Kohenken, Schimossek, Aschermann, & Hofer, 1995). However, based on these two studies, this alternative explanation that CBCA will be able to distinguish between true and false memories when the statement is obtained in a SVA structured interview remains.

A third study, addresses this alternative. Erdmann, Volbert, and Bohm (2004) examined the role of repeated suggestive interviews on children's CBCA scores in a final non-suggestive interview. Children experienced four interviews about one true and two false personal events (one positive and one negative event) as verified by the child's parent. The interviews included a number of suggestive questioning techniques such as offering possible details (e.g., "You probably got bruised from that, didn't you?"), encouraging the child to speculate what happened even if the child did not remember, and displaying mildly negative responses to the child's denial that the event happened (e.g., "You don't remember? But you remembered the other stories so well"). The children were then given a fifth interview by a new interviewer who was an experienced forensic psychologist and interviewed the children in a SVA style interview. Two CBCA experts then examined the children's reports for the presence of CBCA criteria.

Like the interviews in Crotteau-Huffman's (1994) and Stromwell et al.'s (2004) studies, the SVA interview also did not produce statements that allowed CBCA to distinguish between true and false accounts. Only two criteria were more evident in true than in false reports: quantity of details and pardoning the perpetrator. The overall mean differences were small and some criteria showed a nonsignificant tendency to be present in the false rather than the true accounts. Furthermore, discriminate analysis showed that inclusion of all criteria did not lead to a significant discriminate function; 66 percent of true events were correctly classified and 77 percent of false events were correctly classified.

CONCLUSION

Given the need to assess the veracity of children's statements in legal contexts, some authors have strongly supported the CBCA method as a means to accomplish this goal (e.g., Honts, 1994). If CBCA is to be a useful tool, it must be able to predict the veracity of a child's report when the child is credible yet inaccurate. As I have shown, there is little evidence that this is the case. Although CBCA may show some limited promise as a tool that may distinguish whether or not children believe they are telling the truth, there is little evidence to suggest that CBCA can distinguish between true and false memories. False memory narratives are often highly elaborate, detailed, and coherent accounts that provide a plausible explanation of what could have occurred. As such, they may be likely to contain many of the CBCA criteria. The limited number of empirical studies that have investigated CBCA's ability to distinguish between true and false memories show little evidence that CBCA can distinguish between these narratives, or at best, is no better than an uninformed rater is.

One question that remains is whether the child must be reporting a *false memory* for a narrative obtained in a highly suggestive context to resemble a true memory in terms of CBCA criteria. Ceci and colleagues have often claimed that children's false reports obtained in suggestive contexts appear so convincing is because these children have come to believe the event in question actually happened (e.g., Ceci & Bruck, 1995; Ceci, Crotteau-Huffman,

et al., 1994; Ceci, Loftus, et al., 1994; Leichtman & Ceci, 1995). In this review, I have adopted the view that children's false reports in these contexts are false memories. It is the children's beliefs about the veracity false reports that I suggest distinguish these reports from those obtained in standard lying paradigms. In other words, I propose that CBCA cannot distinguish between true and false memory reports as well as it can when children are intentionally lying versus telling the truth, because children in the false memory studies are intending to tell the truth.

However, explicit false beliefs may not be the only explanation for these findings. Indeed, it has been argued that children's reports include suggested elements because the child is trying to be compliant with the interviewer (e.g., Goodman & Schaaf, 1997). Some authors have suggested that social factors then may explain these false reports while cognitive factors may explain actual false memories (e.g., Bruck, et al., 1997; Bruck & Melnyk, 2004). It is possible then, that these social factors may influence the quality of children's reports such that they may provide convincing accounts without actually changing their beliefs about what happened. Hershkowitz's (2001) case study hints to this, but it is difficult to generalize from a single case study. To compliment this case study, in another field study Hershkowitz (1999) compared interviewer utterances and children's responses in twelve cases of unlikely and twelve cases of likely sexual abuse. Hershkowitz found that when children described probable events they gave longer and richer responses to open-ended prompts than to more focused prompts; however, this pattern was not evident in children who provided implausible events. In contrast, there was a tendency for suggestive prompts to yield richer responses from these children. Hershkowitz (1999) proposes that this finding might reflect children's tendency to elaborate on the interviewers' suggestion in the absence of memories to decode. Other authors have also proposed that children's false narratives are often elaborate and embellished because they are not constrained by the reality of the experience (Principe & Ceci, 2002). Thus, suggestive interviewing techniques may improve children's CBCA scores by giving them the opportunity to elaborate on interviewers' suggestions without the constraint of reality-based reports. Furthermore, these interviews may differ from other situations where children are simply told to tell a lie because suggestive interviews may provide more structure and details that the children can incorporate into their reports to create a more plausible and detailed narrative compared with children who are producing lies on their own.

Future research should systematically examine the difference in children's suggested reports compared to true reports and deliberate lies. By systematically comparing narratives in this manner, researchers may discover if there are aspects of the suggestive interview that provide structure and coherence to children's reports absent in deliberate lies. Furthermore, the false narratives of children who likely hold false beliefs and those who do not may be compared. For example, researchers may initially collect the free narratives of children who falsely assent to an event in a suggestive interview, and then gently challenge the children or increase the incentives for truth telling. This procedure may then distinguish between children who hold false beliefs (i.e., those who maintain their accounts when challenged) versus those who report misinformation for other reasons (i.e., those who recant when gently challenged). The free narratives of children who maintain their reports may then be compared to the narratives of children who recant the account to examine differences between children who hold false beliefs. Differences between groups would elucidate the degree to which children's narratives must reflect actual false beliefs in order to resemble true narratives.

The present review paints a bleak picture for distinguishing true from false memories. As we have seen, there are a number of similarities between true and false memories in terms of narrative quality and structure. This is further supported by research showing that both memory types have been shown to have the same neurological underpinnings (Cabeza, Rao, Wagner, Mayer, & Schacter, 2001; Schacter, et al., 1996). However, researchers have identified some differences that may distinguish true from false memories. For example, Schooler, et al. (1986) found that descriptions of events following suggestions were longer, contained more hedges (e.g., "I think it was…"), more references to cognitive operations, and fewer sensory details compared to descriptions of events that actually occurred.

These findings suggest that the reality-monitoring framework (Johnson, Hashroudi, & Lindsay, 1993; Johnson & Raye, 1981) may be fruitful avenue for further exploration. The reality-monitoring framework proposes that individuals distinguish the source of their memories (e.g., whether the memory is of something that was actually experienced versus only imagined) based on characteristics of the memory. In particular, memories that include sensory information and contextual details are more likely to be attributed to experience while memories that include a great deal of cognitive operations are more likely to be attributed to imagination or other internal processes. Sporer (1997) extended this framework to suggest that others may also use reality-monitoring principles to determine if someone else's statement was based on actual experience, and developed a method somewhat similar to CBCA but based on reality-monitoring. This method has been found to distinguish true reports from deliberate lies (see Masip, Sporer, Garrido, & Herrero, 2005 for review). Furthermore, while Stromwell et al. (2004) found that CBCA scores did not distinguish between true and imagined events, reality-monitoring ratings did. Further research utilizing reality-monitoring ratings in other contexts, for example with repeated suggestive interviews is warranted. While reality-monitoring ratings may capture differences between some children's true and false memories, it is still possible that when the child has a vivid and detailed false "recollection" of a past non-event, even a reality-monitoring test will not distinguish the false memory from true memories. Indeed, failures in reality or source monitoring are often cited as an explanation for the development of false memories (Ceci, Loftus, et al., 1994; Lindsay & Johnson, 1989; Zaragoza & Lane, 1994).

Based on the extant literature, what can we conclude about assessing the validity of children's reports? First, it is clear that under certain circumstances, particularly when interviewed in a highly suggestive manner, children can make claims about events that did not happen. It is likely that children may make these claims about childhood sexual abuse, especially when interviewed in a highly coercive manner, in addition to more benign topics. There is also evidence that these false reports reflect actual false memories, rather than deliberate lies on the part of the child. More importantly, children's narratives about these false events are often cohesive, complex, and detailed accounts that appear highly credible. Given this, the CBCA method provides little use in distinguishing true memories from false memories. Coupling this conclusion with the fact that even when distinguishing between true accounts and deliberate lies, CBCA is hardly offers perfect discriminate ability, CBCA may offer little utility to child protective services, law enforcement, and the courts as a means to establish the validity of a child's statement.

REFERENCES

Akehurst, L., Kohenken, G., & Hofer, E. (2001). Content credibility of accounts derived from live and video presentations. *Legal and Criminological Psychology, 6,* 65-83.

Anson, D.A., Glding, S.L., & Gully, K.J. (1993). Child sexual abuse allegations: Reliability of criteria-based content analysis. *Law and Human Behavior, 17(3),* 331-341.

Boychuck, T.D. (1991). *Criteria-based content analysis of children's statements of sexual abuse: A field based validation study.* Unpublished doctoral dissertation, Arizona State University, Tempe.

Bruck, M. & Ceci, S.J. (1995). Amicus brief for the case of *State of NewJersey v. Michaels* presented by committee of concerned social scientists. *Psychology, Public Policy, and Law, 2,* 272-322.

Bruck, M., Ceci, S.J., Francoeur, E. & Barr, R.J. (1995). "I hardly cried when I got my shot!": Influencing children's reports about a visit to their pediatrician. *Child Development, 66,* 193-208.

Bruck, M., Ceci, S.J., & Francoeur, E. (2000). Children's use of anatomically detailed dolls to report genital touching in a medical examination: Developmental and gender comparisons. *Journal of Experimental Psychology: Applied, 6,* 74-83.

Bruck, M., Ceci, S.J., & Hembrooke, H. (2002). The nature of children's true and false memories. *Developmental Review, 22,* 520-554.

Bruck, M., Ceci, S.J., & Melnyk, L. (1997). External and internal sources of variation in the creation of false reports in children. *Learning and Individual Differences, 9,* 289-316.

Bruck, M. & Melnyk, L. (2004). Individual differences in children's suggestibility: A review and synthesis. *Applied Cognitive Psychology, 18,* 947-996.

Burgwyn-Bales, E., Baker-Ward, L., Gordon, B.N., & Ornstein, P.A. (2001). Children's memory for emergency medical treatment after one year: The impact of individual difference variables on recall and suggestibility. *Applied Cognitive Psychology, 15,* S25-S48.

Cabeza, R., Rao, S.M., Wagner, A.D., Mayer, A.R., Schacter, D.L.(2001). Can medial temporal lobe regions distinguish true from false? An event-related functional MRI of veridical and illusory recognition memory. *Proceedings of the National Academy of Sciences, 98,* 4805-4810.

Ceci, S.J. & Bruck, M. (1993). Suggestibility of the child witness: A historical review and synthesis. *Psychological Bulletin, 113,* 403-439.

Ceci, S.J. & Bruck, M. (1995). *Jeopardy in the courtroom: A scientific study of children's testimony.* Washington, D.C.: American Psychological Association

Ceci, S.J., Bruck, M., & Rosenthal, R. (1995). Children's allegations of sexual abuse: Forensic and scientific issues: A reply to commentators. *Psychology, Public Policy, and Law, 1,* 494-520.

Ceci, S.J., Crotteau-Huffman, M.L., & Smith, E. (1994). Repeatedly thinking about a non-event: Source misattributions among preschoolers. *Consciousness and Cognition, 3,* 388-407.

Ceci, S.J., Loftus, E.F., Leichtman, M.D., & Bruck, M. (1994). The possible role of source misattributions in the creation of false beliefs among preschoolers. *International Journal of Clinical and Experimental Hypnosis, 62,* 304-320.

Colwell, K., Hiscock, C.K., & Memon, A. (2002). Interviewing techniques and the assessment of statement credibility. *Applied Cognitive Psychology, 16,* 287-300.

Craig, R.A., Scheibe, R., Raskin, D.C., Kircher, J.C., & Dodd, D.H. (1999). Interviewer questions and content analysis of children's statements of sexual abuse. *Applied Developmental Science, 3,* 77-85.

Crotteau-Huffman, M.L. (1994). *Can criteria-based content analysis discriminate between accurate and false reports of preschoolers?: A validation attempt.* Unpublished Master's Thesis, Cornell University, Ithaca NY.

Ekman, P. & O'Sullivan, M. (1991). Who can catch a liar? *American Psychologist, 46,* 913-920.

Erdmann, K., Volbert, R., & Bohm, C. (2004). Children report suggested events even when interviewed in a non-suggestive manner: What are the implications for credibility assessment? *Applied Cognitive Psychology, 18,* 589-611.

Everson, M. & Boat, B. (1989). False allegations of sexual abuse by children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29,* 736-742.

Faller, K.C. (1984). Is the child victim of sexual abuse telling the truth? *Child Abuse and Neglect, 8,* 471-481.

Faller, K.C. (1991). Possible explanations for child sexual abuse allegations in divorce. *American Journal of Orthopsychiatry, 61,* 86-91.

Garven, S., Wood, J.M., Malpass, R.S., & Shaw, J.S. (1998). More than suggestion: The effects of interviewing techniques from the McMartin Preschool Case. *Journal of Applied Psychology, 83,* 347-359.

Goodman, G.S. & Schaaf, J.M. (1997). Over a decade of research on Children's eyewitness testimony: What have we learned? Where do we go from here? *Applied Cognitive Psychology, 11,* S5-S20.

Green, A.H. (1986). True and false allegations of sexual abuse in child custody disputes. *Journal of the American Academy of Child Psychiatry, 25,* 449-456.

Grumpert, C.H. & Lindbald, F. (1999). Expert testimony on child sexual abuse: A qualitative study of the Swedish approach to statement analysis. *Expert Evidence, 7,* 279-314.

Hershkowitz, I. (2001). A case study of child sexual false allegation. *Child Abuse & Neglect, 25,* 1397-1411.

Hershkowitz, I. (1999). The dynamics of interviews involving plausible and implausible allegations of child sexual abuse. *Applied Developmental Science, 3,* 86-91.

Honts, C.R. (1994). Assessing children's credibility: Scientific and legal issues in 1994. *North Dakota Law Review, 70,* 879-902.

Horowitz, S.W., Lamb, M.E., Esplin, P.W., Boychuck, T.D., Krispin, O., & Reiter-Lavery, L. (1997). Reliability of criteria-based content analysis of child witness statements. *Legal and Criminological Psychology, 2,* 11-21.

Hyman, I. E., Jr., & Pentland, J. (1996). The role of mental imagery in the creation of false childhood memories. *Journal of Memory and Language, 35,* 101-117.

Johnson, M.K., Hashtroudi, S., & Lindsay, D.S. (1993). Source monitoring. *Psychological Bulletin, 114,* 3-28.

Johnson, M.K. & Raye, C.L. (1981). Reality monitoring. *Psychological Review, 88,* 67-85.

Jones, D.P.H. & McGraw, J.M. (1987). Reliable and fictitious accounts of sexual abuse to children. *Journal of Interpersonal Violence, 2,* 27-45.

Kohenken, G. (1989). Behavioral correlates of statement credibility: Theories, paradigms, and results. In H. Wegener, F. Leosel, & J. Haisch (Eds.) *Criminal behavior and the justice system: Psychological perspectives.* (pp. 271-289).

Kohenken, G. Milne, R., Memon, A., & Bull, R. (1999). The cognitive interview: a meta-analysis. *Psychology, Crime, & Law, 5,* 3-28.

Kohenken, G., Schimossek, E., Aschermann, E., & Hofer, E. (1995). The cognitive interview and the assessment of the credibility of adults' statements. *Journal of Applied Psychology, 80,* 671-684.

Kulkofsky, S., Wang, Q., & Ceci, S.J. (in press). Do better stories make better memories? Narrative quality and memory accuracy in preschool children. *Applied Cognitive Psychology.*

Lamb, M.E., Sternberg, K.J., Esplin, P.W., Hershkowitz, I. & Orbach, Y. (1997). Assessing the credibility of children's allegations of sexual abuse: A survey of recent research. *Learning and Individual Differences, 9,* 175-194.

Lamb, M.E., Sternberg, K.J., Esplin, P.W., Hershkowitz, I., Orbach, Y., & Hovav, M. (1997). Criterion-based content analysis: A field validation study. *Child Abuse and Neglect, 21(3),* 255-264.

Landry, K.L. & Brigham, J.C. (1992). The effect of training in criteria-based content analysis on the ability to detect deception in adults. *Law and Human Behavior, 16,* 663-675.

Leichtman, M.D. & Ceci, S.J. (1995). The effects of stereotypes and suggestions on preschoolers' reports. *Developmental Psychology, 31(4),*568-578.

Lindsay, D.S. & Johnson, M.K. (1989). The eyewitness suggestibility effect and memory for source. *Memory and Cognition, 17,* 349-358.

Loftus, E.F., Korf, N.L., & Schooler, J.W. (1989). Misguided memories: Sincere distortions of reality. In J.C. Yuille (Ed.) *Credibility Assessment.* Boston: Kluwer Academic.

Masip, J., Sporer, S., Garrido, E., & Herrero, C. (2005). The detection of deception with the reality monitoring approach: A review of the empirical evidence. *Psychology, Crime, & Law, 11(1),* 99-122.

Nathan, D. & Snedeker M. (1995). *Satan's Silence: Ritual abuse and the making of a modern American witch hunt*. New York: Harper's Collins.

Poole, D.A. & Lindsay, D.S. (1995). Interviewing preschoolers: Effects of nonsuggestive techniques, parental coaching, and leading questions on reports of non-experienced events. *Journal of Experimental Child Psychology, 60,* 129-154.

Poole, D.A. & Lindsay, D.S. (1998). Assessing the accuracy of young children's reports: Lessons from the investigation of child sexual abuse. *Applied & Preventive Psychology, 7,* 1-26.

Powell, M.B., Jones, C.H., & Campbell, C. (2003). A comparison of preschoolers' recall of experienced versus non-experienced events across multiple interviewers. *Applied Cognitive Psychology, 17,* 935-952.

Principe, G.F. & Ceci, S.J. (2002). "I saw it with my own ears": The effects of peer conversation on preschoolers' reports of nonexperienced events. *Journal of Experimental Child Psychology, 83,* 1-25.

Raskin, D.C. & Esplin, P.W. (1991a). Statement validity assessment: Interview procedures and content analysis of children's statements of sexual abuse. *Behavioral Assessment, 13,* 265-291.

Raskin, D.C. & Esplin, P.W. (1991b). Assessment of children's statements of sexual abuse. In J. Doris (Ed.) *The suggestibility of children's recollections.* (pp. 153-164). Washington, D.C.: American Psychological Association.

Ruby, C.L. & Brigham, J.C. (1997). The usefulness of the criteria-based content analysis technique in distinguishing between truthful and fabricated allegations. *Psychology, Public Policy, and Law, 3,* 705-737.

Ruby, C.L. & Brigham, J.C. (1998). Can criteria-based content analysis distinguish between true and false statements of African-American speakers? *Law and Human Behavior, 22(4),* 369-388.

Santilla, P., Roppola, H., Runtti, M., & Nemi, P. (2000). Assessment of child witness statements using criteria-based content analysis (CBCA): The effects of age, verbal ability, and interviewer's emotional style. *Psychology, Crime, & Law, 6,* 159-179.

Schacter, D.L., Reiman, E., Curran, T., Yun, L.S., Bandy, D., McDermott, K.B., et al., (1996). Neuroanatomical correlates of veridical and illusory recognition memory: Evidence from position emission tomography. *Neuron, 17(2),* 267-274.

Schooler, J.W., Gerhard, D., & Loftus, E.F. (1986). Qualities of the unreal. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 12,* 171-181.

Sporer, S.L. (1997). The less traveled road to truth: Verbal cues in deception detection in accounts of fabricated and self-experienced events. *Applied Cognitive Psychology, 11,* 373-397.

Steller, M. (1989). Recent developments in statement analysis. In. J.C. Yuille (Ed.) *Credibility Assessment*. (pp. 135-154). Boston: Kluwer Academic.

Steller, M. & Koehnken, G. (1989). Criteria-based statement analysis. In D.C. Raskin (Ed.) *Psychological methods in criminal investigation and evidence.* (pp. 217-245).

Steller, M., Wellershaus, P., & Wolfe, T. (1988, June). *Empirical validation of Criteria-Based Content Analysis.* Paper presented at the NATO Advanced Study Institute on Credibility Assessment, Maratea, Italy.

Stromwell, L.A., Bengtsson, L., Leander, L., & Granhag, P.A. (2004). Assessing children's statements: The impact of a repeated experience on CBCA and RM ratings. *Applied Cognitive Psychology, 18,* 653-668.

Tye, M.C., Amato, S.L., Honts, C.R., Kevitt, M.K., & Peters, D. (1999). The willingness of children to lie and the assessment of credibility in an ecologically relevant laboratory setting. *Applied Developmental Science, 3,* 92-109.

Undeutsch, U. (1982). Statement reality analysis. In A. Trankell (Ed.) *Reconstruction the past: The role of psychologists in criminal trials.* (pp. 27-56).

Undeutsch, U. (1984). Courtroom evaluation of eyewitness testimony. *International Review of Applied Psycholgy, 33,* 51-67.

Undeutsch, U. (1989). The development of statement reality analysis. In J.C. Yuille (Ed.) *Credibility Assessment* (pp. 101-119). Boston: Kluwer Academic.

Vrij, A. (2004). Why professionals fail to catch liars and how they can improve. *Legal and Criminological Psychology, 9,* 159-181.

Vrij, A. (2005). Criteria-based content analysis: A qualitative review of the first 37 studies. *Psychology, Public Policy, and Law, 11(1),* 3-41.

Vrij, A., Akehurst, L., Soukara, S., & Bull, R. (2002). Will the truth come out? The effects of deception, age, status, coaching, and social skills on CBCA scores. *Law and Human Behavior, 26(3),* 261-283.

Vrij, A., Akehurst, L., Soukara, S., & Bull, R. (2004). Let me inform you how to tell a convincing story: CBCA and reality monitoring scores as a function of age, coaching, and deception. *Canadian Journal of Behavioural Science, 36(2),* 113-126.

Wells, G.L. & Loftus, E.F. (1991). Is this child fabricating? Reactions to a new assessment technique. n J. Doris (Ed.) *The suggestibility of children's recollections.* (pp. 168-171). Washington, D.C.: American Psychological Association.

White, T.L., Leichtman, M.D., & Ceci, S.J. (1997). The good, the bad, and the ugly: Accuracy, inaccuracy, and elaboration in preschoolers' reports about a past event. *Applied Cognitive Psychology, 11,* S37-S54.

Yuille, J.C. (1988). The systematic assessment of children's testimony. *Canadian Psychology, 29(3),* 246-262.

Zaragoza, M. & Lane, S. (1994). Source misattributions and the suggestibility of eyewitness memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 20,* 934-945.

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Chapter 2

DEVELOPMENTAL CONSEQUENCES OF CHILDHOOD SEXUAL ABUSE

Jacob M. Vigil
University of North Florida, USA
David C. Geary
University of Missouri-Columbia, USA

ABSTRACT

Childhood sexual abuse (CSA) is associated with increased risk for a myriad of psychological consequences in adulthood, including increased rates of mood and anxiety disorders, risk-taking behaviors, family conflict, and marital dissolution. Equally important, however, are the developmental consequences that have been linked to CSA, including earlier onset of puberty (e.g., menarche), sexual activity, and earlier childbearing, at least in women. In this chapter we: 1) review recent findings on developmental correlates of CSA; 2) discuss potential evolutionary origins of the link between CSA and development within a broad meta-theoretical framework of human child development; and 3) describe how this framework can add to our understanding of potential psychological and biological mechanisms that govern the relation between CSA and other childhood experiences on individual variation in reproductive development.

From a biological standpoint, rape and other forms of sexual exploitation are among the most stressful life-experiences that a human can endure. This is because rape circumvents the individual's mate-choice and reduces opportunity–and inherent motivation–to procreate with a more optimal reproductive partner, for instance, in terms of physical health that may be compromised by the experience or in terms of interpersonal qualities, such as social reputation (Thornhill & Palmer, 2000). The biological costs of these experiences are compounded further in women, due to the risk of conception and burden of gestation and post-natal investment (Alexander, 1987; Geary, 2000). Rape experiences may be particularly traumatizing to women due to potential or perceived reductions in the ability to attract future

mates (Thornhill & Palmer, 2000); this is likely to be particularly true if a child results from the assault.

Given the biological costs of rape, it is not surprising that childhood sexual abuse (CSA) is associated with increased risk for a myriad of psychological consequences in adulthood. For example, CSA has been linked to increased rates of depressive and anxiety-related disorders (Goodwin, Fergusson, & Horwood, 2005; Libby et al., 2005), co-morbidity and poorer prognosis of other forms of psychological impairment (e.g., lower remission of borderline personality symptoms; Zanarini, Frankenburg, Hennen, Reich, & Silk, 2006), and higher instances of physical health-related problems during adulthood (e.g., symptoms of cardiac disease; Goodwin & Stein, 2004). Childhood sexual abuse is also associated with increased risk-taking behaviors (e.g., substance use, unprotected sex), less future time perspective during adolescence (Bailey & McCloskey, 2005; Johnson, Rew, & Sternglanz, 2006), and more fragile family and marital relationships and less experienced fulfillment from these relationships as an adult (Dennerstein, Guthrie, & Alford, 2004; Dube et al., 2005; Liang, Williams, & Siegal, 2006). Other studies suggest that CSA may exacerbate the trauma felt by other negative life-experiences (e.g., witnessing violence; Goldberg & Garno, 2005; Kendler, Kuhn, & Prescott, 2004) and may actually increase the rate of exposure to additional traumatic events throughout the life-span (Raghaven & Kingston, 2006). At the physiological level, CSA victims show greater autonomic arousal (e.g., increased heart-rate) to laboratory stressors (e.g., public speaking tasks) and appear to evidence physical differences in brain structures (smaller antigulate cortex and caudate nucleus volumes) than women without a history of abuse (Cohen et al., 2006; Heim et al., 2000). Collectively, these findings suggest that CSA is a corollary risk-factor, which may play a unique role in the risk for many forms of psychological and physical disturbances, especially in women.

Emerging research also suggests that CSA may contribute to permanent alterations in normal child development, such as the rate at which children physically mature (e.g., age at puberty) and timing when children start engaging in adult behaviors and begin having families themselves. Studies that have approached CSA from a developmental perspective point toward a convergent trend, that is, maturational precocity (Trickett & Putnam, 1993). In one of the first studies to document this phenomenon, Herman-Giddens, Sandler, and Friedman (1988) discovered a higher than expected incidence of secondary sex characteristics prior to age 8 among a sample of 105 sexually abused girls. More recently, a clinical sample of 22 sexually abused girls was found to be more likely to report an earlier age at menarche onset and older self-reported subjective age than did demographically matched and non-abused, same-age classmates (Turner, Runtz, & Galambos, 1999). Similar findings have been reported in larger community samples (Brown, Cohen, Chen, Smailes, & Johnson, 2004; Romans, Martin, Gendall, & Herbison, 2003).

Related studies suggest that childhood sexual abuse is also linked to precocious sexual behaviors. For example, Hotte and Rafman (1992) found that child incest victims sought out sexual contact from older children and adults, engaged in more exhibitionism, and elicited more signs of eroticized behaviors than did a control group of children from “dysfunctional” (i.e., with conflicted families) but non-sexually abusive family backgrounds. Earlier sexualization and general promiscuity have been reported comparing sexually abused girls with non-abused controls (Dubowitz, Black, Harrington, & Verschoore, 1993; Friedrich, 1993; Hibbard & Hartman, 1992; for a description of typical and age appropriate sexual behaviors, see Sandnabba, Santtila, Wannas, & Krook, 2003), whereas other researchers have

described CSA as a risk factor for teenage pregnancy (Herman & Hirschman, 1981; Herrenkohl, Herrenkohl, Egolf, & Russo, 1998). Collectively, these findings suggest that CSA victims physically mature and initiate reproductive activities earlier than do other girls. In order to examine why and how CSA may affect reproductive heterochrony (the timing of events) it is important to understand potential mechanisms that may have evolved to adjust the timing of expression of reproductive maturation in the social contexts in which the individual is situated and through this influence the timing of the transition from childhood into adulthood.

EVOLUTION OF HUMAN CHILDHOOD

The study of the transition from one stage of development into another and the biological and social factors that influence these sequelae is referred to as life history theory (Charnov, 1993; Ellis, 2004; Geary, 2000, 2002; Stearns, 1992). From a life-history perspective, reproductive milestones such as age when individuals experience puberty and age at first childbearing signify the individual's reproductive debut and can therefore be used to examine normal variation in the length of the childhood segment of the lifespan. Individual differences in human life-history traits are only partially influenced by heredity; typical heritability estimates range from .51 for age of menarche to .21 for age at first childbirth (Kirk et al., 2001; see also, de Bruin et al., 2001; Kim & Smith, 1998; and Rowe, 2002). Therefore, at least half of the variance associated with reproductive maturation is attributable to variation in individual experiences, including nutritional, ecological, and social factors. And while each of these factors may play a role in the expression of reproductive heterochrony, this chapter focuses on evolved plasticity in maturational timing associated with early social experiences, including CSA.

For over 150 years, comparative scientists have noted that humans' period of physical (somatic) growth is substantially longer than that of other mammalian and non-human primate species (Leigh, 2001). When compared to our closest extant, relatives (chimpanzees, *Pan troglodytes*; bonobos, *Pan paniscus*), humans exhibit a marked delay in absolute weight gain between ages 5 and 10 years (Kaplan, Hill, Lancaster, & Hurtado, 2000). In other words, humans have a period in their lifespan-childhood-that is comparatively unique (Leigh, 2001). Corollary theoretical issues center on: How and why childhood evolved? What is the evolutionary function of childhood? How is this evolutionary adaptation expressed in the here and now? And for the present treatment, how might CSA effect this expression?

Most evolutionary biologists agree that intense social competition (e.g., over resource control) was probably a major selection force that resulted in many unique human traits (e.g., cognitive capacities), including prolonged development (Alexander, 1987, 1989; Geary & Flinn 2001; Leigh, 2001). According to this perspective, human ancestors evolved the competencies (e.g., tool use) that greatly facilitated the ability to modify and extract resources from the ecology–essentially resulting in a form of "ecological dominance" (Alexander, 1989). Geary (2002) explained that "With the achievement of ecological dominance, natural selection becomes a struggle with other humans for access to and control of the social (e.g. competition for mates), biological (e.g. food), and physical (e.g. territory) resources that covary with survival and reproductive outcomes" (p.63).

REPRODUCTIVE POTENTIAL AND CHILD DEVELOPMENT

Childhood is one proposed evolutionary response to intense social competition. It is during this period of the lifespan when social and ecologically-related (e.g., hunting) skills are accrued, practiced, and refined (Alexander, 1987; Geary, 2002, 2004; Grotuss, Bjorklund, & Csinady, 2007; Kaplan et al., 2000; see also Johnston, 1982). From a life-history perspective, childhood is the segment of the lifespan when the physical, behavioral, and psychological traits that allow individuals to survive and compete over mates as adults are accrued and refined (Geary, 2002). For example, the tendency for developing boys to form large same-sex groups and engage in inter-group competition (e.g., sporting competition) may be an artifact of evolved selection pressures for coalitional warfare throughout human evolutionary history (Geary, Byrd-Craven, Hoard, Vigil, & Numtee, 2003). In any event, individual traits and skills that are refined during childhood contribute to *reproductive potential*. Reproductive potential is the individuals' ability to develop the somatic (i.e., physical), cognitive, and behavioral competencies needed to compete with others for social status and resource control, and to compete over mates in adulthood. For instance, both men's and women's mate choices are influenced by phenotypic indicators of healthiness (e.g., fecundity), social and parental competence, and the potential to be trusted as a long-term, committed mate, among other traits (for a review, see Geary, Vigil, & Byrd-Craven, 2004). In theory, individuals should be sensitive to opportunity to enhance the development of these features prior to actual mating and parenthood.

Thus, during childhood individuals are *acquiring* reproductive potential, whereas in adulthood, individuals *expend* this potential on attracting mates and parental obligations (Alexander, 1989). In other words, the long period of childhood in humans may allow individuals to accrue reproductive potential (e.g., parenting skills) which is then spent to compete over quality mates and invest in children in adulthood (Alexander, 1987; Geary 2002; Geary et al., 2004). A related hypothesis is that actual timing of the transition from childhood to adulthood–individual's reproductive debut–may partially function to *optimize* the ability to advertise the social and other (e.g., physical vitality) competencies needed, among other things, to compete for attractive mates. In theory, the ability to accrue reproductive potential during childhood is related to an interaction between the individual's inherent characteristics (e.g., physical attractiveness), the family environment (e.g., wealth), and wider contextual factors (e.g. relative community wealth). For example, a relatively long childhood (developmental latency) may only be beneficial if the family facilitates the acquisition of reproductive potential *and* when contextual circumstances demand added potential for the individual to compete as a preferred mate or to be a successful parent in adulthood.

PHENOTYPIC PLASTICITY AND MATURATIONAL TIMING

From a life history perspective, the timing of the individual's reproductive debut is predicted to vary as a function of cost-benefit trade-offs associated with accelerating or delaying reproductive activities in order to further enhance reproductive potential during childhood. That is, the developmental process should include sensitivity to proximate triggers

(e.g., hormonal changes) that slow down or speed up maturation according to the individual's traits and experiences, and to trigger maturational processes (e.g., menarche onset) when the ability to accrue reproductive potential begins to decline. In short, one's reproductive debut occurs when the potential costs of delay, such as death and having fewer children, outweigh the potential benefits (e.g., increased social status) of further delay.

For women, developmental delay is also associated with the cost of reduced fecundity (conceiving and carrying to term) with increased age (Mosher, 1988) and a shorter overall reproductive lifespan. These costs create a selective (i.e., fitness) advantage to earlier age at reproduction (Kirk et al., 2001). However, if individuals are able to aggregate *additional* competencies and resources (e.g., formal education) throughout development, relative to their peers, a longer childhood provides substantial benefits by allowing increases in reproductive competitiveness (Geary, 2000; Lancaster, 1994). Conversely, if individuals are not able to add to, or are otherwise *restricted* from obtaining additional reproductive competencies, the potential costs of maturational delay (e.g., decreased fertility) are greater than the potential benefits (for a related discussion on the learning costs associated with developmental heterochrony, see Johnston, 1982). In this sense, delay or acceleration of maturation is contextually plastic in order to allow individuals to modify their social competitiveness (Cairns, Gariepy, & Hood, 1990); specifically, by enhancing the ability to advertise either physical (e.g., healthiness and overall fertility) or culturally attractive (e.g., material resources, social status) characteristics. In other words, everyone reaches a point in their life when investing in reproductive potential results in diminishing returns and creates a net cost. This point marks the transition from childhood to adulthood and is predicted to be triggered by a combination of individual and environmental traits that signal diminishing returns to delayed reproduction and investing in reproductive potential.

SOCIAL INFLUENCES ON REPRODUCTIVE DEVELOPMENT

One central component of this model is that developmental periods and processes have evolved in humans such that the timing of life history events is potentially influenced (within biological constraints) by familial and other contextual factors that affect the ability to increase reproductive potential during childhood, within these contexts. Specifically, individual experiences that influence the ability to attract preferred (i.e., healthy and investing) mates are hypothesized to influence the timing of events that indicate reproductive debut, such as age at puberty (e.g., menarche in girls), age at first sexual initiation, and age at first childbirth. Examples of social factors that are related to the timing of these life history traits are shown in Table 1.

The pattern of relations described in Table 1 suggest that women's reproductive debut–marked by pubertal onset, sexual responsibility, and reproduction–is influenced by personal (e.g., educational proficiency), familial (e.g., father absence), peer (e.g., norms for sexual behavior), and other (e.g., local life expectancy) social experiences that directly influence children's ability (or lack thereof) to accrue reproductive potential. For example, paternal investment may contribute to later social competitiveness (Geary, 2000), and thus may be one proximate factor that delays reproductive maturation. In this sense, parents passively inhibit their child's reproductive development (e.g., age of menarche) by providing culturally

important resources (e.g., socio-political guidance, social status, material resources, etc.) that can add to children's later attractiveness as a mate or their later ability to invest in their own children.

Table 1. Social Correlates of Three Life History Traits

Menarche

1. In addition to CSA, adolescent depressive symptomology is associated with an earlier age at menarche (Kim & Smith, 1998).
2. Menarcheal onset is also related to various familial dynamics, including intra-familial conflict (Kim & Smith, 1998, 1999; Moffit, Caspi, Belsky, & Silva, 1992; Wierson, Long, & Forehand, 1993), paternal care-giving (Ellis, McFadyen-Ketchum, Dodge, Pettit, & Bates, 1999), father absence (Draper & Harpending, 1982; Ellis et al., 1999; Moffitt et al., 1992; Romans et al., 2003; Wierson et al., 1993), parental education (Hulanicka, 1999), parental psychopathology (Ellis, 2002), and number of siblings (Hoier, 2003).
3. Other social correlates of age at menarche include exposure to unrelated males (Ellis, 2002); exposure is related to earlier menarche.

Age at first sexual intercourse

1. Age at menarche appears to be a strong predictor of heterosexual sequelae from "handholding" to age at first intercourse (French & Dishion, 2003; Hoier, 2003; Lam, Shi, Ho, Stewart, & Fan, 2002; Kim & Smith, 1998, 1999; Wyatt, Durvasula, Guthrie, Lefranc, & Forge, 1999). Age at first sexual intercourse is also related to self-reported depression (Kaltiala-Heino, Kosunen, & Rimpela, 2003; Kim & Smith, 1998), subjective feelings of physical maturity and perceptions of autonomy from parents (Rosenthal, Smith, & de Visser, 1999), general delinquency behaviors (French & Dishion, 2003), and educational (e.g., English) proficiency (Schvaneveldt, Miller, Berry, & Lee, 2001).
2. Familial correlates of age of first sexual intercourse include stability of intact nuclear (i.e., biological) families (Wu & Thomson, 2001; Wyatt et al., 1999), parental education (Furstenberg, Morgan, Moore, & Peterson, 1987; Pedersen, Samuelsen, & Wichstrom, 2003), and parental academic expectations (Schvaneveldt et al., 2001).
3. Age at first sex appears to also be greatly influenced by peer norms (Furstenberg et al., 1987; Rowe & Rodgers, 1994).

Age of first childbirth

1. Some reported personal correlates of early child bearing include low self-esteem (Herrenkohl et al., 1998), early sexual activity (Hayward, Grady, & Billy, 1992), and general socio-economic disadvantage (Geronimus, 1991; see also Mangold, 1983).
2. Interestingly, several authors have stressed the influence of local mortality rates on the timing of women's first child birth, with high mortality risks associated with earlier age at first childbirth (Wilson & Daly,
3. 1997; see also Bereczkei & Csanaky, 2001).

WHY IS CSA EXPERIENCED AS TRAUMA?

From a life-history approach, children and adolescents are predicted to express distress (e.g., vis-à-vis anxiety and related behavioral symptoms) when they experience a specific event (e.g., victimization) or set of circumstances (e.g., poverty) that decrease or impede the ability to accrue reproductive potential (for related points, see Hulanicka, 1999; and Kloep, 1995; for an alternative view, see Comings, Muhleman, Johnson, & MacMurray, 2002). In this sense, negative childhood experiences are stressful (in part) because they signal reduced opportunity to accrue reproductive potential and hence restricted reproductive options (i.e., potential mating partners) in adulthood. From this perspective, CSA may then be interpreted as *a psychological trauma that lowers victims' own perception of their reproductive potential, thereby reducing the biological benefits of delayed maturation in some girls*. In order to understand these potential sequelae, one must take a closer look at men's mate preferences, and thus the specific social criteria by which women's reproductive potential is evaluated.

Paternity Uncertainty and Men's Mate Preferences

Mate preferences focus on culturally-specific (e.g., educational attainment) and species-typical (e.g., health indicators) traits that are correlated with the reproductive potential (i.e., potential genetic and behavioral contribution to fertility or parenting) or at least the perceived potential of members of the opposite sex (Geary et al., 2004). As previously mentioned, men and women prefer healthy, socially competent, and trusting parenting partners, though some members of both sexes engage in extra-pair copulations when the benefit of doing so outweighs the potential cost. Because men with phenotypic indicators of "good (healthy) genes" (e.g., more attractive, socially dominant) are often poorer investors (or cease their investment upon copulation) than those without such indicators (see Gangestad & Simpson, 2000), some women appear to be psychologically and behaviorally attentive to the relationship with their primary social partner, and thus maintain his investment in her and her children, while simultaneously attending to the cues of a more physically attractive and presumably better fit man at the time of ovulation (Geary et al., 2004).

A female reproductive strategy which entailed obtaining "good genes" through extra-pair copulation, while exploiting the higher investment of a committed pair-bonded partner (referred to as cuckoldry) was probably a recurrent evolutionary problem for men (i.e., resulted in fitness losses; for a related discussion on the biological benefits of polyandrous mating strategies, see Shropshire, 2003). If so, men's sensitivity to (potential) cues of women's sexual restrictiveness would have co-evolved, thus helping to ensure that their paternal investment was directed toward their own offspring (Gangestad & Simpson, 1990; Geary, 1998; Maccoby, 1991; Stewart, Stinnett, & Rosenfeld, 2000; Trivers, 1972). Research on human mate choices shows that women's sexual history is an extremely important characteristic of men's long-term mate preferences; attraction to potential marriage partners declines severely for women with more than one previous sexual partner (Kenrick, Sundie, Nicastle, & Stone, 2001). In other words, experiential histories of sexual promiscuity may be perceived by men as a reliable indicator of potential or future infidelity in women today and

throughout human evolution (Thornhill & Palmer, 2000), and should therefore influence men's mate preferences (Geary et al., 2004).

Psychologically, women may be sensitive to their sexual history (whether obliged through consent, or not), because of the potential for others' knowledge of this history to influence their desirability as a potential mate. As in adult rape, CSA circumvents females' mate choice, and may circumvent victims' prospective mate's perceived future fitness vis-à-vis cuckoldry risks. Thus, one prediction is that CSA may negatively affect women's perception of their attractiveness as a potential marriage partner. This hypothesis is consistent with a recent review by Beitchman and colleagues (1992) which found that post-pubescent molestation was associated with greater psychological trauma than pre-pubescent molestation (after taking duration of abuse into account). The perception of limited reproductive potential may then reduce the biological benefits of delayed maturation, for instance, by signaling a reduced ability, or at least the perception of reduced ability, to attract high-status, high-investing mates. Because self-esteem is comprised from both objective and subjective evaluations (Brase & Guy, 2003, see also Barker & Galambos), even the perception of lost chastity may lower women's sense of self-worth.

Emerging research is consistent with these hypotheses. For example, qualitative studies suggest that women experience a distinct fear of being *viewed* as promiscuous by potential sexual partners (Mitchell & Wellings, 1998). This may be why women that were sexually abused as children often associate these experiences with feelings of shame, guilt, acute vulnerability, and internal fragmentation, and describe such feelings in the most powerful language, such as having endured "wounds of the soul" (McEvoy & Daniluk, 1995). Likewise, clinical researchers have long observed the negative impact of CSA on women's cognitive and social appraisals of self-worth, appreciation of their body image, and general self-esteem (e.g., Conte & Berliner, 1988; Russell, 1997; Trickett & Putnam, 1993). Childhood sexual abuse has been linked to increased depressive symptoms in female adults (e.g., Hunter, 1991), adolescents (Koverola, Pound, Heger, & Lytle, 1993; Meyerson, Long, Miranda, & Marx, 2002; Moyer, Dipietro, Berkowitz, & Stunkard, 1997), prepubertal children (Dubowitz et al., 1993), and even girls as young as 4 years old (Hibbard & Hartman, 1992). In one particularly well-designed study, Hotte and Rafman (1992) found that CSA incest victims had significantly lower self-esteem compared to a control group of similarly "dysfunctional" children with non-CSA family backgrounds. And, though the direction of causality between low self-esteem and CSA experience cannot be determined with certainty, autobiographical accounts by CSA survivors often describe severe declines in subjective wellness immediately following their molestation experience (e.g., Russell, 1997).

Thus, CSA is predicted to negatively influence women's self-image, especially as related to traits that are commonly assessed in potential mates by men. According to modern evolutionary theory, women's mate value is greatly influenced by indicators of fertility, including physical attractiveness and youthfulness (e.g., Buss, 2007; Geary et al., 2004; Li, Bailey, Kenrick, & Linsenmeier, 2002), which may be particularly sensitive traits by which women qualify their sense of worth. For example, Brase and Guy (2003) found that women's self-assessed mate-value (as measured by characteristics such as physical attractiveness that are preferred in potential relationship partners) significantly declines with age, while efforts to enhance perceived mate-value (e.g., cosmetic enhancements) increased with age. The tendency to base self-evaluations (e.g., reported self-esteem) on physical attractiveness is especially salient during adolescence (Bolognini, Plancherel, Bettschart, & Halfon, 1996;

Tiggemann, Gardiner, & Slater, 2000; Thornton & Ryckman, 1991), when females become increasingly prepared (e.g., physically) to expend their reproductive potential on attracting mates. From this perspective, CSA is predicted to negatively affect women's subjective evaluation of their physical appearance, and even more so than other aspects of their self-image (e.g., intellectual aptitude) that are not as highly valued or are less observable by men in terms of mate choice.

EMPIRICAL ASSESSMENT OF CSA FROM A LIFE-HISTORY PERSPECTIVE

In summary, this model leads to the prediction that CSA reduces girls' subjective evaluation of their ability to accrue reproductive potential by creating a subjective sense of lost chastity in some victims. Childhood experiences that include CSA may be *perceived* (by the women and potential mates) as an indication of prior promiscuity, which may reduce the woman's subjective feelings of her own value as a long-term and committed mate. Childhood molestation may also signify reduced parental investment (e.g., failure to protect the child from harm) and hence additional cues of lower opportunity to enhance reproductive potential. Biologically, these experiences may dampen the perceived benefits of accruing additional reproductive competitiveness and thus accelerate maturational processes. A related hypothesis is that CSA may also psychologically signify the cessation of childhood, by representing the process by which reproductive potential begins to be expended (i.e., through sexual activity). In either event, CSA and other childhood experiences that signal reduced reproductive potential are predicted to accelerate maturational processes in women.

We recently examined these hypotheses using a survey method among a community sample of 623 women (ages 18-56, mean age = 26 years) from diverse socio-economic (annual income was less than $10,000/yr) and ethnic backgrounds (40% European American, 27% African American, 21%, Latin American, 8% Asian or American Indian, and 4% other). Based on a life-history framework, our first goal was to examine three specific hypotheses (Vigil, Geary, & Byrd-Craven, 2005). First, childhood experiences that include CSA were hypothesized to result in earlier: (a) Age of menarche onset, (b) Age at first sexual experience, and (c) Age at first childbirth. In addition, adult victims of CSA were expected to report an earlier (d) Age at subjective desire to have children, and (e) Age at perceived readiness to take on parental responsibilities. In essence, CSA was expected to result in a maturational shift such that each of these physiological, behavioral, and psychological life-history traits were expressed at an earlier age than those of their peers who did not experience CSA. Second, we sought to explore the relation between CSA and women's subjective perception of self-worth, specifically, evaluations of physical appearance. We predicted that adult victims would (1) report more negative evaluations of their physical appearance than non-abused participants, and (2) evaluate their physical appearance more negatively than other aspects of their self-image. Third, we predicted that heterochronic variation in victims' reproductive delay (e.g., age-lapse from menarche to first childbirth) would be associated with additional childhood experiences that covary with reproductive potential, such as early family (e.g., extent of father involvement) and childhood community characteristics (e.g., SES). In other words, the addition of positive (socially preferred) or negative (less preferred)

childhood experiences and the social demands of the wider community were expected to moderate the extent to which CSA experiences may have affected women's reproductive timing.

The survey included items designed to assess parental SES (e.g., income, education, property holdings), childhood community SES (e.g., average income of wage-earners in the neighborhood), and various family dynamics, including whether or not participants were encouraged to go to college by their parents (this implies parental support for reproductive delay and accumulation of reproductive potential), extent of father involvement (e.g., time spent with father), number of siblings, and degree of family discord (e.g., parent-parent and parent-child). The survey also included items designed to assess childhood peer relations (e.g., number and ease at making friends) and self-assessments (e.g., in terms of looks, intelligence, talents, kindness) as a teenager and as an adult, as well as the age of onset of each of the life-history traits (i.e., age at menarche, first sex, first desire and readiness for children, and first childbirth). The mean ages for the life history traits were 13 years at menarche, 16 years at the age of first consensual sex, 19 years at the age when participants first "desired" to have children, 21 years at the age when they first "felt ready" to have children, and 19 years at first childbirth.

Overall, 24% (n = 152) of the women reported having been "sexually abused before age 14 years". Across the abused and non-abused samples, CSA victims reported significantly earlier ages for each of the life-history traits. For example, the CSA victims reported an average age at menarche 7 months earlier than non-abused participants; the age at first consensual sexual intercourse was 20 months earlier; and the age at first childbirth was 17 months earlier. The CSA victims also reported lower childhood community SES, lower parental wealth and education, a lower likelihood of receiving parental encouragement to go college, less father involvement, a greater number of siblings, and having experienced more family discord as a child. Unsurprisingly (and consistent with the current model), each of these background characteristics were associated with many of the life-history traits. For example, the amount of time spent with father during childhood was correlated with later ages at menarche, first sex, first desire for children, and first childbirth (*r*s ranged from .13 to .20). However, once father involvement and the remaining family, peer, and community variables were statistically controlled, CSA remained a significant predictor of earlier age of expression of each of the life-history traits, independent of other childhood background factors.

Likewise, and consistent with our second hypothesis, we found that CSA victims were more likely to devalue their self-evaluated looks as adults compared to their peers who did not experience CSA, and to do so more than for self-evaluated intelligence, kindness, and perceived talents. This pattern emerged after controlling for correlations across the self-image traits, indicating a unique relation between CSA experience and lower self-assessments of physical attractiveness. A similar pattern emerged for participants' teenage assessments such that CSA was related to lower self-evaluated looks as a teenager, but only after controlling for the age at first sexual intercourse. This finding suggests that some girls may base their self-evaluations on their recent sexual activity and perceived attractiveness to boys; increased sexually activity as a teenager was related to higher evaluations of physical attractiveness.

Finally, we conducted a series of cluster analyses to determine if there were distinct life-history patterns within the CSA group. We focused on the three reproductive traits that were most likely to have been recalled with the greatest accuracy: age at menarche, age at first (consensual) sexual intercourse, and age at first childbirth. This three cluster solution

provided a nice representation of women with distinct reproductive trajectories. On the basis of each cluster's average reproductive delay (time-lapse from menarche to first childbirth), the groups were distinguished as "early maturers" (average reproductive delay = 4.9 years), "moderate maturers" (average delay = 5.3 years), and "late maturers" (average delay = 10.4 years). The CSA groups also differed in early background characteristics. For example, when compared to the late maturers, the early maturers reported significantly less time spent with their father, having younger mothers, and experiencing developmental histories that did not include parental encouragement to pursue higher education. Thus, these findings suggest that CSA victims are most likely to experience hastened maturation (and hence a shorter childhood segment of the lifespan) when they have been simultaneously exposed to additional childhood factors (e.g., limited paternal investment) that may signal reduced opportunity to enhance reproductive potential (Vigil et al., 2005).

PROTECTIVE FACTORS

At the same time, our study found that childhood histories that included more paternal involvement and parental support for pursuing culturally important goals, such as education, essentially buffered the life history impact of CSA experiences. These findings may be particularly noteworthy given that the late maturers reported a reproductive delay that was twice as long as the early maturing victims. In fact, the CSA group that reported the highest levels of family resources and paternal investment (the late maturers) reported a reproductive delay of over 3 years longer than the non-abused participants, as a whole. From a life history perspective, early childhood family and community characteristics provide the individual with an experiential gage to assess one's reproductive potential and opportunity to enhance this potential, relative to their peers. Increased availability of parental investment may then provide biological incentives to delay reproductive debut, given the individual's unique set of circumstances (e.g., normative community criteria to be a perceived as an attractive mate).

To further examine these conceptual relations, we conducted follow-up analyses of the same population of women to assess the respective influence of community SES and parental investment behaviors on women's reproductive trajectories (Vigil & Geary, 2006); specifically, we tested two main hypotheses. The first hypothesis was that childhood community wealth moderated the relation between early family dynamics (e.g., paternal involvement) and women's reproductive delay. In theory, parents increase levels of investment in children in proportion to the level of social competition that these children are likely to face as adults. Increased parental provisioning (e.g., the presence of a father-caregiver) was therefore predicted to have a stronger effect on children's reproductive delay for women that grew up in more socially competitive (higher SES) communities. Second, we tested the hypothesis that parental investment evolved (and presently functions) to increase children's social competitiveness (Geary, 2000). More precisely, we predicted that parental investment in children's social status (approximated by participant's adult education and current wealth) mediated the relation between participants' early family dynamics (e.g., extent of father involvement) and individual variation in maturational timing.

Consistent with hypotheses, we found that childhood community income moderated the relation between the time spent with father as a child and women's age at first childbirth. In

other words, parents appear to increase their investment in concordance with the relative social demands of the wider community. In turn, increased levels of parental investment (e.g., in the form of father involvement) seems to have a greater effect on maturational timing of children reared in higher rather than lower SES communities. We also found support for the hypothesis that participants' obtained (adult) social status mediates the relation between early family dynamics (e.g., degree of father involvement, parental encouragement to go to college) and women's age at first childbirth. Thus, it appears from these studies that parental investment in children's social competitiveness in and of itself (independent of family discord, for example) modulates the present-day expression of reproductive heterochrony, and hence the length of individual's "childhood" segment of the lifespan.

PRACTICAL IMPLICATIONS OF DEVELOPMENTAL RESEARCH ON CSA

Collectively, these studies are uncovering the dynamic consequences of CSA and other early experiences on life-history development and on the potential underlying psychological and biological *mechanisms*. In particular, these studies highlight the role of parental investment–in the form of early social experiences (e.g., frequency of contact with fathers) and offering practical, societal guidance (e.g., on educational opportunities)–on the pattern of expression of women's reproductive development. From a life-history perspective, children are equipped with experiential receptors (sort of like psychological antenna) that are sensitive to specific cues of their environment and of themselves. The types of environmental cues that children focus on signal the social competitiveness (e.g., average education level) of one's local community. Self-reflective motivations focus on the potential to develop personal qualities that are important for attracting mates and for child rearing in this community context, that is, in relation to the reproductive potential of one's immediate peers. Parents facilitate their children's reproductive competitiveness by providing objective cues of increased investment, in the form of relational (e.g., offering reliable emotional support, physical protection, and logistical guidance) and material support (e.g., family wealth). Individuals then weigh (i.e., implicitly evaluate) these early experiences in relation to the experiences of their peers and adjust their reproductive maturation and behavior accordingly; when resources that increase social status are obtainable during childhood, reproductive development is delayed, but when such resources are less obtainable, reproductive development is accelerated.

This research opens up the possibility of several lines of potential prevention measures that may be taken to help reduce the "risk" of earlier maturation. For example, these findings support the possibility that simply informing (e.g., via school or community programs) children of their wider and longer-term cultural opportunities, for instance, in terms of opportunities to pursue various forms of education and skilled training, may be an effective strategy for reducing the prevalence of teenage pregnancy. Adolescent pregnancy is associated with poorer overall social well-being than childbearing in the 20s, and research suggests that this sequelae of events is largely driven by the individual's cultural goals (e.g., to pursue higher education or not, see Geronimus, 1991). Unfortunately, many children do not have access to culturally successful family members or are not otherwise provided practical guidance on how to effectively increase one's social status. Therefore, informing children of

their cultural opportunities may provide the type of key information that psychologically triggers the biological incentive to delay maturation processes in some girls. Of course, informing children may be only one component, with other components involving guidance through the steps needed to actually achieve higher status (e.g., preparation for college).

Similar attention may be directed toward the essential role of fatherhood on children's reproductive development. From a life-history perspective, fathers that are willing to provide physical protection and logistical support (i.e., material resources and wealth) to their family should be most effective at delaying their daughter's reproductive development. In theory, having access to additional family resources such as having investing aunts, uncles, and grandparents may help to reduce the likelihood of early reproduction. Psychologically, childhood experiences that include, for example, increased levels of spending time and receiving gifts from additional family sources, may trigger the proximate mechanisms (e.g., hormones) that delay maturation. From the current perspective, children that have access to a wider net of dependable and culturally successful family members are predicted to be most likely to be self-motivated to pursue culturally competitive goals, themselves, and to experience a longer childhood segment of their lifespan.

FUTURE RESEARCH ON THE DEVELOPMENTAL IMPACT OF CSA

We would like to conclude with a brief discussion on the many exciting directions that lay ahead for future research on the impact of early childhood experiences on fundamental (e.g., reproductive) processes of development. As a whole, the current state of research suggests that early (childhood) psychological experiences impact the biological processes that initiate maturation (e.g., pubertal onset); see also Belsky, Steinberg, and Draper (1991), Belsky (2007), and Ellis (2004). In this chapter, we described a set of conceptual mechanisms (i.e., implicit cost-benefit assessments of the timing of reproductive debut, depending on contextual factors of one's local community) that may process individual variation in early social experiences and timing of reproductive development. The next logical step for this research is to begin to investigate the proximate mechanisms (e.g., in terms of memory schemas and neuroendocrine substrates and their physiological effects) that regulate maturational processes.

For example, the current treatment suggests the possibility that the relation between early psychological experiences (e.g., availability of father involvement) and reproductive development (e.g., timing of menarche) is sequentially mediated in part by changes in affective responses, psychological future-time orientation, neuroendocrine (e.g., serotonin, cortisol) regulation, and the accumulation of adipose tissue (a physical catalyst of pubertal onset). This speculative model helps to explain why CSA and other forms of childhood abuse (experiences that are perceived to reduce the individual's social competitiveness) are associated with increased expression of sadness and anxiety-related symptoms (e.g., Goldberg & Garno, 2005; Kendler et al., 2004), less future-time perspective (e.g., time spent planning for long-term goals), and increased risk-taking behaviors (e.g., Johnson et al., 2006). Increased risk-taking and general behavioral autonomy from care-givers may help to explain why CSA victims are exposed to more additional lifetime traumatic events than non-victims (Raghaven & Kingston, 2006). With respect to autonomy, a follow-up analysis of our sample

suggested that girls' relationship with their father, and presumably monitoring by fathers, was associated with delayed onset of sexual behavior, independent of CSA or age of menarche (Byrd-Craven, Geary, Vigil, & Hoard, 2007).

In any event, at the physiological level, early childhood distress may result in changes in endocrine functioning, such as decreased brain serotonin (5-hydroxytryptamine, 5-HT) and basal cortisol levels (Cowen, 2002; Miller, Chen, & Zhou, 2007). For example, Steiger et al. (2001) found that women reporting abuse as children (the authors combined CSA and physical abuse) displayed decreased 5-HT levels compared to non-abused women. A similar pattern is often found for cortisol activity; women that have been exposed to repeated stressors (e.g., economic poverty) tend to exhibit blunted cortisol reactivity compared to controls (e.g., Burk, Fernald, Gertler, Adler, 2005).

Though speculative, one possibility is that changes in serotonin and endocrine regulation may trigger alterations in the mechanisms that initiate puberty, including changes in body fat composition. In our studies we have found that childhood weight (specifically being overweight) is an independent predictor of earlier age at menarche. These results are consistent with other studies indicating a strong relation between high body fat composition and earlier onset of puberty (Koziel & Jankowska, 2002; Moffit et al., 1992). According to Frisch (1975, 1983), a minimum level of fatness (e.g., adipose tissue), about 17 percent of total body weight, is necessary for the onset of menarche. Likewise, menstrual functioning appears to cease (e.g., amenorrhea) as a result of significant weight loss (reductions of about 10-15 percent) and in association with excessive weight gain, suggesting a critical range of fat as a percentage of body weight for reproductive functioning (Frisch, 1983).

For decades, pharmacological research has noted the mood alleviating and appetitive suppressive effects of serotonin-specific drug administration (e.g., Luque & Rey, 1999; Wirth, 2001). Research on eating behaviors suggests that weight cycling (e.g., due to binge eating) is associated with alterations in subjective affect (e.g., Womble et al., 2001, see also Barker & Galambos, 2003). These findings open up the possibility that serotonergic activity mediates the relation between mood and appetite, and reproductive functioning. Dye and Blundell (1997) found support for this hypothesis and demonstrated that women increase their food intake–particularly through carbohydrate consumption–during the follicular phase of their menstrual cycle (when 5-HT levels are low and when women are most likely to report low mood). The authors elaborated on these findings by suggesting that carbohydrate consumption provided a self-medicating replenishment of serotonin. This hypothesis is in keeping with findings showing that depression (e.g., associated with pre-menstrual syndrome) is accompanied with increased desire for consumption of carbohydrates, followed by immediate improvements in mood (see Wurtman, 1993).

Increased carbohydrate consumption as a result of decreased serotonin levels may be sufficient to accrue the proportion of adipose tissue necessary to trigger earlier pubertal onset. For instance, Moyer et al. (1997) found a significant association between CSA and eating behaviors symptomatic of binge eating compared to controls matched on body mass indices. Moyer's findings also suggested that the relation between CSA and binge eating behaviors was strongly influenced by victims' depression and negative self-esteem scores. In another example, Silva, Santos, and Brandao (2003) performed an experiment whereby a serotonergic agonist (gepirone) was given to rats housed in either an isolated (maladaptive) or social treatment condition. In this study, drug administration resulted in increased weight gain only in the isolated, but not group-housed condition, suggesting an interaction between adverse

experiential circumstances and overeating behaviors. In humans, a similar phenomenon may be operating such that childhood distress may result in alterations in, for example, serotenergic regulation, which may then produce changes in macronutrient intake behaviors (e.g., increased carbohydrate consumption) and/or metabolic functioning (e.g., break-down and retention of different types of carbohydrates), and eventually, trigger the endocrine changes that initiate puberty (e.g., menarche onset; Dyrenfurth, 1983; Susman, Nottelmann, Dorn, Inoff-Germain, & Chrousos, 1989; see also Hlinak, 1986).

Alternative explanations have focused on the possibility that CSA in particular may result in earlier maturation due to exposure to the pheromones of unrelated males (Ellis, 2002; for a review on pheromone-induced reproductive effects in non-human mammals, see Vandenbergh, 1983). In non-human mammals, pheromonal exposure has been shown to affect an array of changes in reproductive behaviors, including the rate of spontaneous abortions, post-partum amenorrhea, and timing of menarche onset (e.g., Colmenares & Gomendio, 1988; Vandenbergh, Whitsett, & Lombardi, 1975; Vandenbergh, 1983; Widowski, Ziegler, Elowson, & Snowdon, 1990; see also Dellovade, Hunter, & Rissman, 1995). In humans, experimental studies have shown that, for example, the pheromones of other women induce ovulation (e.g., Stern & McClintock, 1998). In one study, Ellis and Garber (2000) found that girls with stepfathers tend to experience earlier puberty, and that pubertal timing was more related to the duration of exposure to non-related men (e.g., stepfathers) than to time-lapse since biological fathers' absence. These findings suggest that father absence may affect reproductive development, in part, by increasing exposure to unrelated males.

However, these results cannot rule out the possibility that other factors associated with exposure to stepfathers or mother's boyfriend may result in early menarche (e.g., family conflict). In other words, while a pheromonal mechanism may moderate the relation between certain childhood experiences (e.g., CSA and father absence) and reproductive timing, it does not appear to account for other factors (e.g., familial conflict and parental education) that have been shown to influence reproductive behaviors. One way to discern whether or not CSA victims are maturing earlier as a result of pheromonal exposure may be to examine the reproductive development of incest and non-incest CSA victims while controlling for severity of abuse; earlier maturation among non incest victims would, of course, provide support for the pheromone hypothesis.

Finally, in an attempt to understand the association between CSA and pubertal precocity, Herman-Giddens and colleagues (1988) suggested that physical stimulation of reproductive organs may precipitate the hormones that trigger puberty. In their study, they found that precocious development of secondary sex characteristics was most evident among children that suffered more severe instances of abuse, according to physical examinations (e.g., in cases where there was clear aberration of victims' hymen). Again, comparative studies are consistent with this type of mechanism. For instance, Dellovade et al. (1995) found that female musk shrews (*Suncus murinus*) exhibited significant increases in the number of gonadotropin-releasing hormone (GnRH) containing neurons immediately following copulation, and more so than females exposed to male urine, and presumably male pheromones, alone (see also Widowski et al., 1990).

In any event, we hope that the current treatment provides a backdrop for clinicians and developmentalists who are interested in developmental consequences of CSA. These consequences may be particularly salient for women given the biological and social costs

(e.g., decreased reproductive potential) of sexual victimization. Likewise, an understanding of these costs may be essential to help interpret why women report more psychological distress from (nonviolent) heterosexual CSA experiences than males, on average (Elliot, Mok, & Briere, 2004; Wellman, 1993). Whereas female CSA victims tend to experience greater depression, negative self-esteem, and attenuated perceptions of attractiveness than do male victims, the reverse is generally found for males who have experienced physical abuse (Friedrich, Urquiza, & Beilke, 1986; Meyerson et al., 2002; see also Beitchman et al., 1992). The implications of these findings carry particular importance given that the vast majority of childhood sexual abuse victims are women, as evidenced by the proportion of reported cases (e.g., Dube & Hebert, 1988). From a developmental perspective, these girls face a significant risk for permanent alterations in their reproductive trajectories which may have subsequent and multigenerational effects on the families (e.g., children) of these women.

REFERENCES

Alexander, R. D. (1987). *The biology of moral systems*. Hawthorne, NY: Aldine de Gruyter.

Alexander, R. D. (1989). Evolution of the human psyche. In P. Mellars & C. Stringer (Eds.), *The human revolution: Behavioural and biological perspectives on the origins of modern humans* (pp. 455-513). Princeton, NJ: Princeton University Press.

Bailey, J. A., & McCloskey, L. A. (2005). Pathways to adolescent substance use among sexually abused girls. *Journal of Abnormal Child Psychology, 33*, 39-53.

Barker, E. T., & Galambos, N. L. (2003). Body dissatisfaction of adolescent girls and boys: Risk and resource factors. *Journal of Early Adolescents, 23*, 141-165.

Beitchman, J. H., Zucker, K. J., Hood, J. E., DaCosta, G. A., Akman, D., & Cassavia, E. (1992). A review of the long-term effects of child sexual abuse. *Child Abuse & Neglect, 16*, 101-118.

Belsky, J. (2007). Experience in childhood and the development of reproductive strategies. *Acta Psychologica Sinica, 39*, 454-468.

Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development, 62*, 647-670.

Bereczkei, T., & Csanaky, A. (2001). Stressful family environment, mortality, and child socialisation: Life-history strategies among adolescents and adults from unfavourable social circumstances. *International Journal of Behavioral Development, 25*, 501-508.

Bolognini, M., Plancherel, B., Bettschart, W., & Halfon, O. (1996). Self-esteem and mental health in early adolescence: Development and gender differences. *Journal of Adolescence, 19*, 233-245.

Brase, G. L., & Guy, E. C. (2003). The demographics of mate value and self-esteem. *Personality and Individual Differences, 36*, 471-484.

Brown, J., Cohen, P., Chen, H., Smailes, E., & Johnson, J. G. (2004). Sexual trajectories of abused and neglected youths. *Journal of Developmental & Behavioral Pediatrics, 25*, 77-82.

Burke, H. M., Fernald, L. C., Gertler, P. J., Adler, N. E. (2005). Depressive symptoms are associated with blunted cortisol stress responses in very low-income women. *Psychosomatic Medicine, 67*, 211-216.

Buss, D. M. (2007). The evolution of human mating. *Acta Psychologica Sinica, 39*, 502-512.

Byrd-Craven, J., Geary, D. C., Vigil, J. M., & Hoard, M. K. (2007). One mate or two? Life history traits and reproductive variation in low-income women. *Acta Psychological Sinica, 39*, 469-480.

Cairns, R. B., Gariepy, J., & Hood, K. E. (1990). Development, microevolution, and social behavior. *Psychological Review, 97*, 49-65.

Charnov, E. L. (1993). *Life history invariants: Some explorations of symmetry in evolutionary ecology*. New York: Oxford University Press.

Colmenares, F., & Gomendio, M. (1988). Changes in female reproductive condition following male take-overs in a colony of hamadryas and hybrid baboons. *Folia Pimatol, 50*, 157-174.

Comings, D. E., Muhleman, D., Johnson, J. P., & MacMurray, J. P. (2002). Parent-daughter transmission of the androgen receptor gene as an explanation of the effect of father absence on age of menarche. *Child Development, 73*, 1046-1051.

Conte, J. R., & Berliner, L. (1988). The impact of sexual abuse on children: Empirical findings. In L. E. Walker (Ed.), *Handbook on sexual abuse of children: Assessment and treatment issues* (pp. 72-93). New York: Springer.

Cohen, R. A., Grieve, S., Hoth, K. F., Paul, R. H., Sweet, L., Tate, D., et al. (2006). Early life stress and morphometry of the adult anterior cingulated cortex and caudate nuclei. *Biological Psychiatry, 59*, 975-982.

Cowen, P. J. (2002). Cortisol, serotonin and depression: All stressed out? *British Journal of Psychiatry, 180*, 99-100.

Grotuss, J., Bjorklund, D. F., & Csinady, A. (2007). Evolutionary developmental psychology: Developing human nature. *Acta Psychologica Sinica, 39*, 439-453.

de Bruin, J. P., Bovenhuis, H., van Noord, P. A. H., Pearson, P. L., van Arendonk, J. A. M., te Velde, E. R., Kuurman, W. W., & Dorland, M. (2001). The role of genetic factors in age at natural menopause. *Human Reproduction, 16*, 2014-2018.

Dellovade, T. L., Hunter, E., & Rissman, E. F. (1995). Interactions with males promote rapid changes in gonadotropin-releasing hormone immunoreactive cells. *Behavioral Neuroendocrinology, 62*, 385-395.

Dennerstein, L., Guthrie, J. R., & Alford, S. (2004). Childhood Abuse ans its association with mid-aged women's sexual functioning. *Journal of Sex and Marital Therapy, 30*, 225-234.

Draper, P., & Harpending, H. (1982). Father absence and reproductive strategy: An evolutionary perspective. *Journal of Anthropological Research, 38*, 255-273.

Dube, R., & Hebert, M. (1988). Sexual abuse of children under 12 years of age: A review of 511 cases. *Child Abuse & Neglect, 12*, 321-330.

Dube, S. R., Anda, R. F., Whitfield, C. L., Brown, D. W., Felitti, V. J., Dong, M., et al. (2005). Long-term consequences of childhood sexual abuse by gender of victim. *American Journal of Preventative Medicine, 28*, 430-438.

Dubowitz, H., Black, M., Harrington, D., Verschoore, A. (1993). A follow-up study of behavior problems associated with child sexual abuse. *Child Abuse & Neglect, 17*, 743-754.

Dye, L., & Blundell, J. E. (1997). Menstrual cycle and appetite control: Implications for weight regulation. *Human Reproduction, 12*, 1142-1151.

Dyrenfurth, I. (1987). Endocrine aspects of menarche and menopause – milestones in the women's life cycle. In S. Golub (Ed.), *Menarche*, Lexington Books, Lexington, MA.

Elliot, D. M., Mok, D. S., & Briere, J. (2004). Adult sexual assault: Prevalence, symptomatology, and sex differences in the general population. *Journal of Traumatic Stress, 17*, 203-211.

Ellis, B. J. (2002). Of fathers and pheromones: Implications of cohabitation for daughters' pubertal timing. In A. Booth, & C. Ann (Eds.), *Just living together: Implications of cohabitation on families, children, and social policy*. The Pennsylvania state university family studies symposia series. (pp. 161-172). Mahwah, NJ, US: Lawrence Erlbaum Associates, Publishers.

Ellis, B. J. (2004). Timing of pubertal maturation in girls: An integrated life history approach. *Psychological Bulletin, 130*, 920-958.

Ellis, B. J., & Garber, J. (2000). Psychosocial antecedents of variation in girls' pubertal timing: Maternal depression, stepfather presence, and marital and family stress. *Child Development, 71*, 485-501.

Ellis, B. J., McFadyen-Ketchum, S., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1999). Quality of early family relationships and individual differences in the timing of pubertal maturation in girls: a longitudinal test of an evolutionary model. *Journal of Personality and Social Psychiatry, 77*, 387-401.

French, D. C., & Dishion, T. J. (2003). Predictors of early initiation of sexual intercourse among high-risk adolescents. *Journal of Early Adolescence, 23*, 295-315.

Friedrich, W. N. (1993). Sexual victimization and sexual behavior in children: A review of recent literature. *Child Abuse and Neglect, 17*, 59-66.

Friedrich, W. N., Urquiza, A. J., & Beilke, R. L. (1986). Behavior problems in sexually abused young children. *Journal of Pediatric Psychology, 11*, 47-57.

Frisch, R. E. (1975). Demographic implications of the biological determinants of female fecundity. *Social Biology, 22*, (1), 17-22.

Frisch, R. E. (1983). Fatness, menarche, and fertility. In Sharon Golub (Ed.), *Menarche*. Lexington Books, Lexington, MA.

Furstenberg, F. F., Morgan, S. P., Moore, K. A., & Peterson, J. L. (1987). Race differences in the timing of adolescent intercourse. *American Sociological Review, 52*, 511-518.

Gangestad, S. W., & Simpson, J. A. (1990). Toward an evolutionary history of female sociosexual variation. *Journal of Personality, 58*, 69-96.

Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Tade-offs and strategic pluralism. *Behavioral and Brain Sciences, 23*, 573-644.

Geary, D. C. (1998). *Male, Female: The Evolution of Human Sex Differences*. Washington, DC: American Psychological Association.

Geary, D. C. (2000). Evolution and proximate expression of human paternal investment. *Psychological Bulletin, 126*, 55-77.

Geary, D. C. (2002). Sexual selection and human life history. *Advances in Child Development and Behavior, 30*, 41-101.

Geary, D. C. (2004). *The origin of mind: Evolution of brain, cognition, and general intelligence*. Washinton, DC: American Psychological Association.

Geary, D. C., Byrd-Craven, J., Hoard, M, K., Vigil, J., & Numtee, C. (2003). Evolution and development of boys' social behavior. *Developmental Review, 23*, 444-470.

Geary, D. C., & Flinn, M. V. (2001). Evolution of human parental behavior and the human family. *Parenting: Science and Practice, 1*, 5-61.

Geary, D. C., Vigil, J., & Byrd-Craven, J. (2004). Evolution of human mate choice. *Journal of Sex Research, 41*, 27-42.

Geronimus, A. T. (1991). Teenage childbearing and social and reproductive disadvantage: The evolution of complex questions and the demise of simple answers. *Family Relations, 40*, 463-471.

Goldberg, J. F., & Garno, J. L. (2005). Development of posttraumatic stress disorder in adult bipolar patients with histories of severe childhood abuse. *Journal of Psychiatric Research, 39*, 595-601.

Goodwin, R. D., Fergusson, D. M., & Horwood, L. J. (2005). Childhood abuse and familial violence and he risk of panic attacks and panic disorder in young adulthood. *Psychological Medicine, 35*, 881-890.

Goodwin, R. D., & Stein, M. B. (2004). Association between childhood trauma and physical disorders among adults in the United States. *Psychological Medicine, 34*, 509-520.

Hamilton, R. D. (1964). The genetical evolution of social behavior: II. *Journal of Theoretical Biology, 7*, 17-52.

Hayward, M. D, Grady, W. R., & Billy, J. O. (1992). The influence of socioeconomic status on adolescent pregnancy. *Social Science Quarterly, 73*, 750-772.

Heim, C., Newport, J. D., Heit, S., Yolanda, P., Wilcox, M., Bonsal, R., et al. (2000). Pituitary-adrenal and autonomic responses to stress in women after sexual and physical abuse in childhood. *Journal of the American Medical Association, 284*, 592-597.

Herman, J., & Hirschman, L. (1981). Families at risk for father-daughter incest. *American Journal of Psychiatry, 138*, 967-970.

Herman-Giddens, M. E., Sandler, A. D., & Friedman, N. E. (1988). Sexual precocity in girls: An association with sexual abuse? *American Journal of Diseases of Children, 142*, 431-433.

Herrenkohl, E. C., Herrenkohl, R. C., Egolf, B. P., & Russo, M. J. (1998). The relationship between early maltreatment and teenage parenthood. *Journal of Adolescence, 21*, 291-303.

Hibbard, R. A., & Hartman, G. L. (1992). Behavioral problems in alleged sexual abuse victims. *Child Abuse & Neglect, 16*, 755-762.

Hlinak, Z. (1986). Estradiol plus progesterone treatment and precopulatory behavior in prepubertally ovariectomized female rats: Dose-response relationships. *Hormones and Behavior, 20*, 263-269.

Hoier, S. (2003). Father absence and age at menarche. *Human Nature: An Interdisciplinary Biosocial Perspective, 14*, 209-233.

Hotte, J. & Rafman, S. (1992). The specific effects of incest on prepubertal girls from dysfunctional families. *Child Abuse and Neglect, 16*, 273-283.

Hulanicka, B. (1999). Acceleration of menarcheal age of girls from dysfunctional families. *Journal of Reproductive and Infant Psychology, 17*, 119-132.

Hunter, J. A. (1991). A comparison of the psychosocial maladjustment of adult males and females sexually molested as children. *Journal of Interpersonal Violence, 6*, 205-217.

Johnson, R. J., Rew, L., & Sternglanz, R. W. (2006). The relationship between childhood sexual abuse and sexual heath practices of homeless adolescents. *Adolescence, 41*, 221-234.

Johnston, T. D. (1982). Selective costs and benefits in the evolution of learning. *Advances in the Study of Behavior, 12*, 65-106.

Kaltiala-Heino, R., Kosunen, E., & Rimpela, M. (2003). Pubertal timing, sexual behaviour and self-reported depression in middle adolescence. *Journal of Adolescence, 26*, 531-545.

Kaplan, H., Hill, K., Lancaster, J., & Hurtado, A. M. (2000). A theory of human life history evolution: Diet, intelligence, and longevity. *Evolutionary Anthropology, 10*, 223-236.

Kendler, K. S., Kuhn, J. W., & Prescott, C. A. (2004). Childhood sexual abuse, stressful life events and risk for major depression. *Psychological Medicine, 34*, 1475-1482.

Kenrick, D. T., Sundie, J. M., Nicastle, L. D., & Stone, G. O. (2001). Can one ever be too wealthy or too chaste? Searching for nonlinearities in mate judgment. *Journal of Personality and Social Psychology, 80*, 462-471.

Kim, K., &, Smith, P. K. (1998). Childhood stress, behavioural symptoms and mother-daughter pubertal development. *Journal of Adolescence, 21*, 231-240.

Kim, K., & Smith, P. K. (1999). Family relations in early childhood and reproductive development. *Journal of Reproductive and Infant Psychology, 17*, 133-148.

Kirk, K. M., Blomberg, S. P., Duffy, D. L., Heath, A. C., Owens, I. P., & Martin, N. G. (2001). Natural selection and quantitative genetics of life history-traits in Western women: A twin study. *Evolution, 55*, 423-435.

Kloep, M. (1995). Concurrent and predictive correlates of girls' depression and antisocial behavior under conditions of economic crisis and value change: The case of Albania. *Journal of Adolescence, 18*, 445-458.

Koverola, C., Pound, J., Heger, A., & Lytle, C. (1993). Relationship of child sexual abuse to depression. *Child Abuse and Neglect, 17*, 393-400.

Koziel, S., & Jankowska, E. A. (2002). Effect of low versus normal birthweight on menarche in 14-year-old Polish girls. *Journal of Pediatrics: Child Health, 28*, 268-271.

Lam, T. H., Shi, H. J., Ho, L. M., Stewart, S. M., & Fan, S. (2002). Timing of pubertal maturation and heterosexual behavior among Hong Kong Chinese adolescents. *Archives of Sexual Behavior, 31*, 359-366.

Lancaster, J. B. (1994). Human sexuality, life histories, and evolutionary ecology. In A. S. Rossi (Ed.), *Sexuality across the life course* (pp.39-62). Chicago, IL: University of Chicago Press

Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeier, J. A. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology, 82*, 947-955.

Liang, B., Williams, L. M., Siegal, J. A. (2006). Relational outcomes of childhood sexual trauma in female survivors. A longitudinal study. *Journal of Interpersonal Violence, 21*, 42-57.

Libby, A. M., Orton, H. D., Novins, D. K., Beals, J., Manson, S. M., & AI-SUPERPFP Team. (2005). Childhood physical and sexual abuse and subsequent depressive and anxiety disorders for two American Indian tribes. *Psychological Medicine, 35*, 329-340.

Leigh, S. R. (2001). Evolution of human growth. *Evolutionary Anthropology, 10*, 223-236.

Luque, C. A., & Rey, J. A. (1999). Sibutramine: A serotonin-norepinephrine reuptake-inhibitor for the treatment of obesity. *Annals of Pharmacotherapy, 33*, 968-978.

Maccoby, E. E. (1991). Different reproductive strategies in males and females. *Child Development, 62*, 676-681.

Mangold, W. D. (1983). Age of mother and pregnancy outcome in the 1981 Arkansas Birth Cohort. *Social Biology, 30*, 205-210.

Meyerson, L. A., Long, P. J., Miranda, R., & Marx, B. P. (2002). The influence of child abuse, physical abuse, family environment, and gender on the psychological adjustment of adolescents. *Child Abuse and Neglect, 26*, 387-405.

McEvoy, M., & Daniluk, J. (1995). Wounds of the soul: The experiences of aboriginal women survivors of sexual abuse. *Canadian Psychology, 36*, 221-235.

Miller, G. E., Chen, E., & Zhou, E. S. (2007). If it goes up, must it come down? Chronic stress and the hypothalamic-pituitary-adrenocortical axis in humans. *Psychological Bulletin, 133*, 25-45.

Mitchell, K., & Wellings, K. (1998). First sexual intercourse: Anticipation and communication. Interviews with young people in England. *Journal of Adolescence, 21*, 717-726.

Moffitt, T. E., Caspi, A., Belsky, J., & Silva, P. A. (1992). Childhood experience and the onset of menarche: A test of a sociobiological model. *Child Development, 63*, 47-58.

Mosher, W. D. (1988). Fecundity and infertility in the United States. *American Journal of Public Health, 78*, 181-182.

Moyer, D. M., Dipietro, L., Berkowitz, R. I., & Stunkard A. J. (1997). Childhood sexual abuse and precursors of binge eating in an adolescent female population. *International Journal of Eating Disorders, 21*, 23-30.

Pedersen, W., Samuelsen, S. O., & Wichstrom, L. (2003). Intercourse debut age: Poor resources, problem behavior, or romantic appeal? A population-based longitudinal study. *Journal of Sex Research, 40*, 333-345.

Raghaven, C., & Kingston, S. (2006). Child sexual abuse and posttraumatic stress disorder: The role of age at first use of substances and lifetime traumatic events. *Journal of Traumatic Stress, 19*, 269-278.

Romans, S. E., Martin, J. M., Gendall, K., & Herbison, G. P. (2003). Age of Menarche: The role of some psychosocial factors. *Psychological Medicine, 35*, 933-939.

Rosenthal, D. A., Smith, A. M., & de Visser, R. (1999). Personal and social factors influencing age at first sexual intercourse. *Archives of Sexual Behavior, 28*, 319-333.

Rowe, D. C. (2002). On genetic variation in menarche and age at first sexual intercourse: A critique of the Belsky-Draper hypothesis. *Evolution and Human Behavior, 23*, 365-372.

Rowe, D. C., & Rodgers, J. L. (1994). A social contagion model of adolescent sexual behavior: explaining race differences. *Social Biology, 41*, 1-18.

Russell, D. E. (1997). *Behind Closed Doors in White South Africa: Incest Survivors Tell Their Stories*. St. Martin's Pres, New York, NY.

Sandnabba, N. K., Santtila, P., Wannas, M., & Krook, K. (2003). Age and gender specific sexual behaviors in children. *Child Abuse & Neglect, 27*, 579-605.

Schvaneveldt, P. L., Miller, B. C., Berry, E. H., & Lee, T. R. (2001). Academic goals, achievement, and age at first sexual intercourse: Longitudinal, bidirectional influences. *Adolescence, 36*, 767-787.

Shropshire, W. O. (2003). An economic approach to the evolution of male-female exchange. *Human Nature, 14*, 235-266.

Silva, R. C. B., Santos, N. R., & Brandao, M. L. (2003). Influence of housing conditions on the effects of serotonergic drugs on feeding behavior in non-deprived rats. *Neuropsychobiology*, *47*, 98-101.

Stearns, S. C. (1992). *The evolution of life histories*. New York: Oxford University Press.

Steiger, H., Gauvin, L., Isreal, M., Koerner, B., Ng Ying Kin, N. M. K., Paris, J., & Young, S. N (2001). Association of serotonin and cortisol indices with childhood abuse in bulimia nervosa. *Archives of General Psychiatry*, *58*, 837-843.

Stern, K., & McClintock, M. K. (1998). Regulation of ovulation by human pheromones. *Nature*, *392*, 177-179.

Stewart, S., Stinnett, H., & Rosenfeld, L. B. (2000). Sex differences in desired characteristic of short-term and long-term relationship partners. *Journal of Social and Personal Relationships*, *17*, 843-853.

Susman, E. J., Nottelmann, E. D., Dorn, L. D., Inoff-Germain, G., & Chrousos, G. P. (1989). Physiological and behavioral aspects of stress in adolescence. In G. P. Chrousos, D.L. Loriaux, & P.W. Gold (Eds.), *Mechanisms of physical and emotional stress* (pp.341-352). New York: Plenum Press.

Thornhill, R., & Palmer, C. (2000). *A natural history of rape: Biological bases of sexual coercion*. Cambridge, MA: MIT Press.

Thornton, B., & Ryckman, R. M. (1991). Relationship between physical attractiveness, physical effectiveness, and self-esteem: A cross-sectional analysis among adolescents. *Journal of Adolescence*, *14*, 85-98.

Tiggemann, M., Gardiner, M., & Slater, A. (2000). "I would rather be a size 10 than have straight A's": A focus group study of adolescent girls' wish to be thinner. *Journal of Adolescence, 23*, 645-659.

Trickett, P. K., & Putnam, F. W. (1993). The impact of child sexual abuse on females: Toward a developmental, psychobiological integration. *Psychological Science*, *4*, 81-87.

Trivers, R. L. (1972). Parental investment and sexual selection. In B. Campbell (Ed.), *Sexual selection and the decent of man*, 1871-1971 (pp.136-179). Chicago: Aldine.

Turner, P. K., Runtz, M. G., & Galambos, N. L. (1999). Sexual abuse, pubertal timing, and subjective age in adolescent girls: A research note. *Journal of Reproductive and Infant Psychology*, *17*, 111-118.

Vandenbergh, J. G., Whitsett, J. M., & Lombardi, J. R. (1975). Partial isolation of a pheromone accelerating puberty in female mice. *Journal of Reproduction and Fertility*, *43*, 515-523.

Vandenbergh, J. G. (1983). Pheromonal regulation of puberty. In Vandenbergh (Ed.), *Pheromones and reproduction in mammals*, pp.95-112. New York: Academic Press.

Vigil, J. M. & Geary, D. C. (2006). Parrenting and community background and variation in women's life-history development. *Journal of Family Psychology*, *20*, 597-604.

Vigil, J. M., Geary, D. C., & Byrd-Craven, J. (2005). A life history assessment of early childhood sexual abuse in women. *Developmental Psychology*, *41*, 553-561

Wellman, M. M. (1993). Child sexual abuse and gender differences: Attitudes and prevalence. *Child Abuse and Neglect*, *17*, 539-547.

Widowski, T. M., Ziegler, T. E., Elowson, A. M., & Snowdon, C. T. (1990). The role of males in the stimulation of reproductive function in female cotton-top tamarins, *Saguinus o. Oedipus*. *Animal Behaviour*, *40*, 731-741.

Wierson, M., Long, P. J., & Forehand, R. L. (1993). Toward a new understanding of the early menarche: The role of environmental stress in pubertal timing. *Adolescence*, *28*, 913-924.

Wilson, M., & Daly, M. (1997). Life expectancy, economic inequality, homicide, and reproductive timing in Chicago neighbourhoods. *British Medical Journal*, *314*, (7089), 1271-1274.

Wirth, A. (2001). Long-term weight loss with sibutramine: A randomized controlled trial. *Journal of the American Medical Association*, *286*, 1331-1339.

Womble, L. G., Williamson, D. A., Martin, C. K., Zucker, N. L., Thaw, J. M., Netemeyer, R., Lovejoy, J. C., & Greenway, F. L. (2001). Psychosocial variables associated with binge eating in obese males and females. *International Journal of Eating Disorders*, *30*, 217-221.

Wu, L. L., & Thomson, E. (2001). Race differences in family experience and early sexual initiation: Dynamic models of family structure and family change. *Journal of Marriage and Family*, *63*, 682-696.

Wurtman, J. J. (1993). Depression and weight gain: The serotonin connection. *Journal of Affective Disorders*, *29*, 183-192.

Wyatt, G., Durvasula, R. S., Guthrie, D., LeFranc, E., & Forge, N. (1999). Correlates of first intercourse among woman in Jamaica. *Archives of Sexual Behavior*, *28*, 139-157.

Zanarini, M. C., Frankenburg, F. R., Hennen, J., Reich, D. B., & Silk, K. R. (2006). Prediction of the 10-year course of borderline personality disorder. *American Journal of Psychiatry*, *163*, 827-832.

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Chapter 3

CHILDHOOD SEXUAL ABUSE PREDICTS WOMEN'S UNWANTED SEXUAL INTERACTIONS AND SEXUAL SATISFACTION IN ADULT ROMANTIC RELATIONSHIPS

Jennifer Katz and Vanessa Tirone
SUNY College at Geneseo; Department of Psychology
Geneseo, NY 14454, USA

ABSTRACT

Women with histories of child sexual abuse (CSA) are at risk for additional sexual trauma and disrupted interpersonal functioning. To date, however, little empirical attention has focused on CSA survivors' risk for nonviolent, unwanted sexual interactions with romantic partners or how such interactions impact adult sexual functioning. In the present study, women with CSA histories were expected to report more frequent sexual compliance with and post refusal sexual persistence from current romantic partners compared to other women. Both compliance and persistence, in turn, were expected to predict poorer sexual satisfaction. A sample of 173 young women in exclusive heterosexual relationships anonymously completed self-report measures of these constructs. About 24% of the sample reported CSA. As expected, past CSA predicted greater sexual compliance with partners and more frequent partner use of manipulation to persist in sexual contact after women's stated refusals. CSA, sexual compliance, and partner sexual manipulation each independently and negatively predicted women's sexual satisfaction. A more comprehensive understanding of the effects of CSA on adult sexual functioning may require broader conceptualizations of possible revictimization experiences that encompass both forcible assault and nonviolent, unwanted sexual encounters.

INTRODUCTION

Revictimized women endure sexual abuse in childhood and subsequently experience additional sexual trauma across later developmental stages. Unfortunately, female child sexual abuse (CSA) victims have been shown to be 2-3 times more likely than others to be revictimized in adulthood [e.g., Arata, 2002; Messman-Moore & Brown, 2004]. A CSA history predicts elevated risk for both violent and nonviolent forms of revictimization among women [Irwin, 1999]. Furthermore, women with histories of child sexual abuse often report difficulties with interpersonal functioning, including problems within adult romantic relationships [e.g., DiLillo & Long, 1999; Mullen, Martin, Anderson, Romans, & Herbison, 1994]. To our knowledge, however, researchers have not yet focused on CSA as related to risk for nonviolent, unwanted sexual interactions with romantic partners or the effects of such interactions on women's sexual functioning. Traumatic sexual experiences clearly exert a toll on women's sexual health and identity development [e.g., Meston, Rellini, & Heiman, 2006]. However, our focus here was on the potentially more insidious effects of unwanted sexual interactions with partners on sexual functioning, which already may be compromised among CSA survivors. Accordingly, in the present chapter, we studied past CSA as a predictor of unwanted sexual interactions within adult romantic relationships. We expected that CSA would directly predict poorer sexual satisfaction as well as indirectly erode sexual satisfaction by increasing the frequency with which women experience unwanted sexual interactions with partners. The primary questions we sought to answer were:

1) Are women with CSA histories at elevated risk for experiencing nonviolent yet unwanted sexual interactions with romantic partners?
2) Do these nonviolent, unwanted encounters negatively affect sexual functioning above and beyond the effects of past CSA?

CHILD SEXUAL ABUSE AND ADULT SEXUAL SATISFACTION

Childhood sexual abuse (CSA) was defined in this chapter as unwanted sexual contact or penetration before the age of 14 [Bremner, Vermetten, & Mazure, 2000]. CSA is, unfortunately, relatively common, although prevalence rates vary somewhat across countries, samples, and operational definitions. In general, studies have suggested that between 27% [Finkelhor, Hotaling, Lewis, & Smith, 1990], and 33% of women in the general U.S. population have experienced CSA [Loeb, Williams, Carmona, Rivkin, Wyatt, Chin et al., 2002] with similar rates reported by researchers outside of the U.S. [e.g., Najam, Dunne, Purdi, Boyle, & Coxeter, 2005].

CSA may increase risk for difficulties in sexual functioning later in life. Abuse may produce negative outcomes because developmentally inappropriate sexual experiences are stressful and can distort children's understandings about power, intimacy, and sexuality. More specifically, Finkelhor and Browne [1985] posited that CSA may lead to traumagenic dynamics that "alter children's cognitive and emotional orientation toward the world and create trauma by distorting children's self-concept, world view, and affective capacities" [p. 531]. One such dynamic, traumatic sexualization, seems particularly relevant for

understanding the effects of past CSA on adult sexual satisfaction. A developmentally inappropriate introduction to sexual activity may affect women's sexual self-perceptions, so that sexual encounters may evoke feelings of guilt, shame, and other emotions that conflict with or reduce sexual pleasure and inhibit sexual functioning generally. Additionally, from a conditioning perspective, sexual stimuli may be associated with anxiety, fear, or a sense of being out of control. Such feelings could reduce pleasure from later sexual encounters. Furthermore, women with CSA histories may avoid distress during sexual interactions by detaching emotionally from sexual interactions [as reviewed by Loeb et al., 2002]. Therefore, diverse theoretical perspectives support the hypothesis that past CSA may impact adult sexual functioning.

Sexual satisfaction with the current romantic partner was the primary index of sexual functioning in the present research. Previous CSA researchers have defined sexual satisfaction in a variety of ways, including the absence of sexual dysfunction, number of orgasms reported, degree of partner enjoyment, and frequency of intercourse [Wyatt, Newcomb, & Riederle, 1993]. In the present study, however, sexual satisfaction refers to women's subjective feelings of enjoyment and pleasure derived specifically from sexual interactions with a particular partner. High sexual satisfaction is present, for example, when a woman perceives her partner's sexual desires and attitudes as compatible with her own and when she experiences their sexual interactions as enjoyable and arousing [Hudson, Harrison, & Crosscup, 1981].

Past findings regarding CSA and sexual satisfaction have been somewhat mixed. Several researchers have reported that CSA is related to more frequent sexual encounters but does not directly affect reports of sexual satisfaction per se [e.g., Bartoi & Kinder, 1998; Najam et al., 2005; Meston, Heiman, & Trapnell, 1999]. In contrast, other studies of sexual satisfaction have reported negative effects of CSA on sexual satisfaction [e.g., Gold, 1986; Tsai, Feldman-Summers, & Edgar, 1979; see also Polusny & Follette, 1995]. In an implicit computerized word association task, women with sexual abuse histories showed no relationship between positive affect (e.g., enjoyable) and sexual words such as "lovemaking" , although a control group of non-abused women showed a significant positive relationship between positive affect and these sexual words [Meston & Heiman, 2000]. Furthermore, Meston et al. [2006] found that women with sexual abuse histories reported significantly higher levels of negative affect related to sexuality (anger, fear, disgust) than other women. Despite these mixed findings, because of the pervasive effects of CSA on interpersonal and social functioning generally, it was expected that past CSA would predict diminished sexual satisfaction with current partners among women in romantic relationships.

Hypothesis 1: Women with CSA histories, compared to other women, were expected to be report less sexual satisfaction in interactions with current romantic partners.

UNWANTED SEXUAL INTERACTIONS

Many women in samples unselected for childhood abuse report enduring unwanted sexual interactions with sexual partners, both consensual and coercive. Almost 80% of adolescent and college aged women report experiencing unwanted sexual activity, broadly defined, often from boyfriends [Smith, White, & Holland, 2003]. As they age, young women

may continue to be at particular risk for unwanted sexual experiences. About 34% of women in a nationally representative sample reported unwanted sexual intercourse with spouses or other male romantic partners [Basile, 2002]. Despite the prevalence of unwanted, nonviolent sexual activity within romantic relationships, little research has been done to identify risk factors for such interactions. This subject is of particular importance because engaging in unwanted sex with a romantic relationship partner, even when pressure is exerted by the partner, often is viewed as socially acceptable [e.g., Oswald & Russell, 2006]. Furthermore, unwanted advances by dates or boyfriends are not often viewed as threatening and are more likely to generate indirect, rather than direct resistance by young women [VanZile-Tamsen, Testa, & Livingston, 2005].

Revictimization, or sexual trauma following past CSA, is generally conceived of in terms of sexual assault, typically defined in terms of forcible rape. In addition, past research reveals an evident "penetration preoccupation"; that is, unwanted sexual encounters involving penile penetration generally have been prioritized in past revictimization studies, although attempted rape is sometimes included as well. Our focus here, however, was on whether CSA may also increase risk for unwanted, nonviolent sexual interactions, both consensual and coercive, regardless of whether such interactions culminate in sexual penetration.

One type of unwanted sexual interaction common in romantic relationships occurs due to sexual compliance. Sexual compliance involves consensual involvement in sexual activity for reasons other than sexual desire or the pursuit of erotic pleasure [Impett & Peplau, 2003]. A sexually compliant person may prioritize a partner's sexual interest and willingly consent to unwanted sexual encounters due to feelings of obligation or fears of losing their partner [Shotland & Hunter, 1995]. Sexual compliance is related to an anxious attachment orientation in general and to worry about relationships in particular [Gentzler & Kerns, 2004]. Compliant sexual behavior is particularly common among young women, compared to men, in romantic relationships, and such behavior may be seen as a type of sacrifice or investment in the relationship [Impett & Peplau, 2003; O'Sullivan & Allgeier, 1998].

A CSA survivor may be at particular risk for sexually compliant interactions with partners. The sexual abuse of a child teaches the child to submit, often passively, to others' sexual advances. According to Judith Herman, a CSA survivor learns to be closely attuned to the wishes of others, which decreases her ability to assert opposition. "The idea of saying no to the emotional demands of a parent, spouse, lover, or authority figure may be practically inconceivable" [1992; p. 112]. Sexual submission may have ensured safety and continued affection from the abuser in a manner that was adaptive during childhood; in contrast, submission may no longer be adaptive during adult sexual interactions with male peers. In addition, women with CSA histories are more likely than other women to anticipate a negative partner response to her assertions during sexual negotiations [Quina, Harlow, Morokoff, Burkholder, & Delter, 2000]. Concerns about negative reactions to refusal may increase risk for compliance among women with CSA histories. Furthermore, women with more severe CSA histories are at risk for engaging in sex to regulate their emotions. In one study, CSA history was related to reports of engaging in sex in order to seek love or attention or in order to prevent feelings of sadness or loneliness [e.g., Myers, Wyatt, Loeb, Carmona, Warda, Longshore, et al., 2006]. Therefore, involvement in sexual interactions without desire may be more common among CSA survivors than other women.

Importantly, in past studies, measures of sexual compliance, which occurs in the absence of explicit partner pressure for sex, and sexual coercion, which occurs when partners exert

psychological pressure, have not been clearly differentiated [e.g., Gentzer & Kerns, 2004]. In the current research, we sought to clearly distinguish between compliance and coercion. Compliance was operationally defined in terms of consensual but unwanted sexual interactions in the absence of partner pressure, whereas sexual coercion was operationally defined in terms of partner post refusal sexual persistence. Post refusal sexual persistence (PRSP) has been defined by Struckman-Johnson, Struckman-Johnson, and Anderson [2003] as continued sexual pressure exerted by a partner after being asked to stop. They argue that such behaviors can be considered forms of sexual coercion because they occur after the recipient has expressed resistance to the sexual interaction. The partner is coercive in that he ignores the resistance and continues with his sexual pursuit.

Struckman-Johnson et al. [2003] conceptualize the different types of persistent sexual pressure across a continuum of four categories, with the first four as nonviolent: sexual arousal (e.g., "persistent kissing and touching"), emotional manipulation and deception (e.g., "threatening to break up with you"), exploitation of the intoxicated (e.g., "purposefully getting you drunk") and physical force, threats or harm (e.g., "threatening physical harm"). Struckman-Johnson et al. [2003] reported that 78% of the women in their college student sample reported experiencing at least one PRSP tactic since age 16. Women were significantly more likely than men to report experiencing nonviolent PRSP interactions. Specifically, more women reported persistent kissing and touching, repeated request, being told lies, being intoxicated by the perpetrator, and being taken advantage of while intoxicated. Furthermore, among the most recent incidents of PRSP, 38% of those who had experienced another person's PRSP had been with a partner, steady date, or fiancé, and 48% reported that the most recent incident resulted in sexual penetration.

Post-refusal sexual persistence has not yet been examined in the context of a couple relationship or as related to CSA. However, other research on sexual coercion suggests that, in a romantic relationship, arousal and psychological pressure are exerted much more often than other forms of coercion by intimate partners, who can obtain sexual access without resorting to physical force or substances [Abbey, BeShears, Clinton-Sherrod, & McAuslan, 2004; Ramisetty-Mikler, Caetano, & McGrath, 2007]. For example, Testa and Livingston [1999] found that 93% of sexual coercion acts reported by women involved men known to them, most commonly, boyfriends and dating partners. In that same study, 68% of coerced penetration by a current or previous partner involved psychological pressure whereas only 29% involved force, intoxication, or both. Research focused specifically on women with a history of CSA has revealed that such women are at risk for becoming intimately involved with sexually aggressive men [Testa, VanZile, & Livingston, 2005]. Accordingly, it was expected that women with CSA histories would be at greater risk for PRSP in their current romantic relationships.

Hypothesis 2: Women with CSA histories, compared to other women, would be more likely to report engaging in unwanted sexual interactions with a current dating partner. Such interactions include compliance (consensual unwanted activity in the absence of sexual desire, without explicit partner pressure) as well as post refusal sexual persistence (partner continual use of tactics to obtain sexual contact, possibly leading to penetration, despite the women's stated refusals).

CSA and Unwanted Sexual Experiences: Additive Effects on Sexual Functioning?

Unwanted sexual experiences may negatively impact sexual functioning even among women who have not suffered from CSA. More specifically, the pleasurable component of sexual encounters may be attenuated or even lost completely when a woman has low sexual desire but nonetheless consents to sexual activity, as in compliance. Similarly, post refusal sexual persistence may decrease sexual pleasure and enjoyment if a woman feels her partner is disregarding her wishes, that she has lost control within the situation, or both. Her partner's ongoing pursuit of an interaction that she has already expressed resistance to is unlikely to foster feelings of sexual enjoyment.

It is possible that past CSA and unwanted interactions with current partners both contribute to reduced sexual satisfaction. Alternatively, the effects of CSA may be indirect, and better accounted for by more recent unwanted sexual experiences. Bartoi and Kinder [1998], for example, found stronger effects of adult sexual abuse than of CSA on adult women's sexual functioning, which may have been due to more recent experiences having more of an impact than more distant ones. Past CSA may indirectly attenuate sexual satisfaction by increasing the frequency with which women experience unwanted sexual interactions, both consensual and coercive, which in turn erode satisfaction.

Hypothesis 3: The relative effects of past CSA and current frequency of unwanted sexual interactions with partners (sexual compliance and post refusal sexual persistence) on women's sexual satisfaction with current romantic partners were explored.

Possible Alternative Predictors of Sexual Functioning in a Romantic Context

Finally, two factors that might better account for the expected effects of unwanted sexual interactions on sexual satisfaction were considered as possible confounding variables in the present research: general relationship quality and traditional gender-based dating beliefs.

A past history of CSA may impact the general quality of adult romantic relationships generally, and reduced general quality could interfere with sexual satisfaction independent of unwanted sexual interactions. Past studies have revealed that CSA survivors are at risk for problems within adult romantic relationships, including reduced relationship satisfaction with partners [Testa et al., 2005] or spouses [Whisman, 2006]. Di Lillo and Long [1999] reported that female college students with a CSA history reported less general satisfaction and trust and poorer communication with dating partners than those without past CSA. In the present study, relationship quality was conceptualized generally in terms of global satisfaction and subjective commitment. Satisfaction involves general positive feelings about the relationship [Norton, 1983], whereas commitment involves thoughts (e.g., a future-oriented perspective) and feelings (e.g., obligation, contentment) about relationship maintenance [Rusbult, 1983]. Consistent with past research, we expected that women who reported histories of CSA would report significantly less general satisfaction and commitment in current relationships.

Reduced relationship quality, in turn, could erode sexual satisfaction regardless of the presence of unwanted sexual experiences with partners.

Hypothesis 4a: Women with CSA histories, compared to other women, would be more likely to report lesser relationship quality than other women, as defined by general relationship satisfaction and commitment to the relationship.

Hypothesis 4b: Greater relationship quality may predict sexual satisfaction with the current romantic partner more strongly than unwanted sexual experiences with partners.

Finally, we explored the effects of CSA histories on women's traditional beliefs about appropriate behaviors for men and women. Gender-based dating beliefs involve interpreting men's acts of domination and women's acts of passivity as signs of love or affection [Lichter & McCloskey, 2004]. In this way, gender-based dating beliefs mask gender differences in power in heterosexual relationships while minimizing acts of abuse [Chung, 2005]. Because CSA involves an abuse of power in a sexual context, women with CSA histories may be at particular risk for greater traditional gender-based dating beliefs. Some research suggests that the experience of child maltreatment, defined broadly, may increase beliefs about the appropriateness of male dominance and female passivity and submission [Lichter & McCloskey, 2004]. Furthermore, childhood sexual abuse specifically appears to promote traditional gender role beliefs in women, who are more likely to defer to male partners in sexual situations [e.g., Holland, Ramazanoglu, Scott, Sharpe, & Thomson, 1990]. Women who hold more traditional gender-based beliefs may play a particularly passive role during sexual encounters, and subsequently may derive less enjoyment from them. Furthermore, women with such beliefs may be more accepting of and less distressed by submitting to unwanted sexual interactions because such interactions may be seen as normative or even as signs of partner affection and love. Therefore, traditional gender-based beliefs may dampen sexual satisfaction independent of unwanted sexual experiences with partners.

Hypothesis 5a. Women with CSA histories, compared to other women, would be more likely to report traditional gender-based dating beliefs than other women, suggesting a greater tendency to interpret men's dominant behaviors and women's submission and passivity as desirable.

Hypothesis 5b: Traditional gender-based dating beliefs may predict sexual satisfaction with the current romantic partner more strongly than unwanted sexual experiences with partners.

METHOD

Participants

Data were collected from 173 undergraduate women in exclusive current heterosexual relationships from a small public college in the northeastern United States. Most were either freshmen (31%) or sophomores (37%), and the rest were either juniors (20%) or seniors (12%). Participants' average age was 19.25 (*SD* = 1.46, range 17 to 30), and the mean partner age was 20.20 (*SD* = 2.51, range 17 to 35). Most women self-identified as Caucasian (86.2%); others identified as Asian (6.3%), Hispanic/Latina (4%), African-American/Black (2.3%), or other (1.1%). On average, women's current relationships had lasted 17.69 months

(*SD* = 16.92, range 1 to 84). The number of participants varied slightly across measures due to occasional missing values.

Measures

Childhood Sexual Abuse

The sexual abuse subscale from the *Early Trauma Inventory Self Report-Short Form* [ETISR-SF; Bremner et al., 2000] was used to assess participants' developmentally inappropriate experiences of sexual contact or penetration during childhood. There were 6 items; participants indicated whether or not they had each experience before age 14. A sample item is "Were you ever forced or coerced to touch another person in an intimate or private part of their body?" Endorsement of one or more these items was used to classify an individual as having a CSA history. The authors provide evidence of excellent internal consistency and test-retest reliability, as well as strong associations between the ETISR-SF sexual abuse scale and other measures of childhood sexual abuse.

Two types of unwanted sexual interactions with partners were examined in the present research. First, s*exual compliance* was assessed using three items adapted from items used by Impett and Peplau [2002] and Gentzler and Kerns [2004]. Participants were asked to indicate how many times they have consented to unwanted sexual interactions with the current partner, in the absence of explicit partner pressure. A representative question is, "How many times have you engaged in sexual interactions with your current partner because you felt like if refused the relationship would be damaged?" Responses were summed, with higher scores reflecting a greater frequency of sexual compliance.

Second, participants reported on their experiences of *post refusal sexual persistence* [Struckman-Johnson et al., 2003] with current romantic partners. More specifically, participants were asked to indicate the number of times their current partner has used each of 19 tactics to continue sexual contact despite participants' refusal. The four types of tactics assessed include sexual arousal (e.g., "persistent kissing and touching" 3 items total), emotional manipulation and deception (e.g., "threatening to break up with you" 8 items total), exploitation of the intoxicated (e.g., "purposefully getting you drunk" 2 items total) and physical force, threats or harm (e.g., "threatening physical harm", 6 items total). Contact included touching, oral penetration, vaginal penetration, or some combination of these. Participants were asked the number of times each post refusal tactic has been employed by the current partner. Responses within each category (arousal, manipulation, intoxication, and harm) were summed, with higher scores reflecting more frequent partner use of sexually coercive behavior.

Sexual satisfaction was assessed via the *Index of Sexual Satisfaction* [ISS; Hudson et al., 1981] is a 25-item self-report measure of respondents' levels of global satisfaction with sexual interactions with their current partners. A sample item is, "I feel that our sex life really adds a lot to our relationship." Respondents use a 5-point Likert scale (0 = *rarely or none of the time* to 4 = *most or all of the time*). Responses are summed, and higher scores reflect greater sexual satisfaction. The authors report evidence for reliability and validity. In the present study, the index of internal consistency was good (Cronbach's $\alpha = .88$).

General relationship quality was assessed using measures of global satisfaction and commitment. The six item *Quality of Marriage Index* [QMI; Norton, 1983] was revised with

questions pertaining to dating relationships [as in Katz, Kuffel, & Brown, 2006]. A representative item is, "We have a strong relationship." Responses are made on a 7 point Likert type scale (1 = *very strong disagreement*, 7 = *very strong agreement*). Individual responses were averaged; higher scores indicate greater global satisfaction. The estimate of internal consistency in the present study was excellent (Cronbach's α = .94). Rusbult's [1983] four item global commitment measure also was used. Items include the following: "How likely is it that you will end your relationship in the near future?" (1 = *extremely*, 9 = *not at all*), "For what length of time would you like your relationship to last?" (1 = *week or so*, 9 = *lifetime*), "To what extent are you 'attached' to your partner?" (1 = *not at all*, 9 = *extremely*), and "To what extent are you committed to your relationship?" (1 = *not at all*, 9 = *extremely*). Responses were averaged such that higher scores reflect greater commitment. The internal consistency estimate (Cronbach's α) in the present sample was .84.

Gender-based dating beliefs were assessed with five items developed by Lichter and McCloskey [2004]. Each item asks participants subjects to rate the extent to which they endorse gender-based power differences in their relationships according to a four point scale (1 = *strongly disagree*, 4 = *strongly agree*). Such power differences reflect beliefs that appropriate heterosexual interactions are characterized by male dominance and female passivity or submissiveness. A representative question is, "In general, women should let their partners win arguments." Responses were averaged; higher scores reflect more traditional gender-based dating beliefs. The internal consistency estimate (Cronbach's α) in the present sample was .81.

Finally, a series of standard demographic items asked for the participants' age, partner age, length of dating relationship, race/ethnic identity, collegiate status, and sexual orientation.

Procedure

Participants were recruited for an anonymous study of *Dating and Sexual Interactions* at a public college through a voluntary psychology department pool. All data were collected in a single research session lasting an hour or less. Research sessions were administered in small groups on campus in classrooms by 1-2 female undergraduate research assistants. Participants provided informed consent, completed self-report paper and pencil measures, and were debriefed. All received information about free, on campus access to counseling services. In addition, to monitor participants' emotional response to the study, participants were asked for input on their experience of participation using an item adapted from Newman, Walker, and Gelfand [1999], "Completing this survey upset me more than I expected." (1 = *strongly disagree*, 7 = *strongly agree*). An open-ended item was also included for general comments, and participants were invited to be in contact by the first author if they had any questions or concerns about the study. Participants who met with the author discussed their concerns and were encouraged to seek counseling services as appropriate.

RESULTS

In general, women in the sample reported moderate to high sexual satisfaction, with average score of 79.84 (*SD* = 11.71). As shown in the first column of Table 1, sexual compliance was not uncommon. Furthermore, the more socially acceptable post refusal sexual persistence tactics were used more often than the less acceptable ones; there were frequent reports of partner arousal and less frequent reports of partner emotional manipulation and deception, intoxication, or force. Overall, levels of global satisfaction and commitment were high for most participants in the sample. In contrast, mean scores for traditional gender-based dating beliefs were low.

Frequency analyses revealed that of the 173 participants, 23.7% (*n* = 41) reported a past history of CSA based on unwanted sexual contact or penetration before age 14. Two-tailed univariate tests were conducted to compare the demographic and relationship characteristics of women who did and did not report CSA. Results revealed no significant between-group differences in age, partner age, or year in school. Unexpectedly, however, CSA was related to self-identified race/ethnicity. Specifically, among those who identified as Caucasian, 17% reported past CSA, whereas among those who identified as Black, Asian, Hispanic, or other, 65% reported past CSA, X^2 (1) 25.29, $p < .001$. Because less than 14% of our sample reported identification with a racial/ethnic minority group, it was not possible to explore differences across different racial/ethnic categories; however, racial/ethnic identity was examined as a possible control variable for in subsequent analyses comparing women with and without CSA histories.

Table 1. Unwanted Sexual Interactions, General Relationship Quality, and Gender-Based Dating Beliefs in Current Romantic Relationships as a Function of Past Childhood Sexual Abuse

	Childhood Sexual Abuse			
	(*N* = 173)	Presen(*n* = 41)	Absent(*n* = 132)	*F*
Frequency of unwanted sexual interactions				
Compliance	4.93 (13.86)	9.52 (25.42)	3.20 (6.81)	6.13*
PRSP arousal	6.48 (12.05)	7.07 (11.28)	6.29 (12.32)	< 1
PRSP manipulation	2.90 (12.68)	6.28 (24.58)	1.83 (4.43)	4.34*
PRSP intoxication	0.25 (0.90)	0.45 (1.60)	0.18 (0.53)	3.57+
PRSP force	0.03 (0.20)	0.05 (0.02)	0.02 (0.20)	< 1
General relationship quality				
Global satisfaction	5.80 (1.12)	5.29 (1.51)	5.95 (0.93)	10.22**
Commitment	7.76 (1.35)	7.31 (1.72)	7.90 (1.19)	4.24*
Gender- based dating beliefs	1.45 (0.47)	1.62 (0.64)	1.39 (0.39)	4.62*

Note: Means (and SDs) are presented.
+ $p = .06$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

We hypothesized that past CSA would have a significant negative impact on current sexual satisfaction (Hypothesis 1). An ANCOVA was used to compare women with and without sexual abuse histories on sexual satisfaction with current partners controlling for racial/ethnic identity. Racial/ethnic identity was not a significant covariate. As expected, there was a significant between-group difference, F (2, 169) = 12.81, $p < .001$ Consistent with our predictions, women with past histories of CSA endorsed significantly less sexual satisfaction (M = 73.92, SD = 14.40) than other women (M = 81.59, SD = 10.80).

We also hypothesized that past CSA would increase risk for unwanted sexual experiences in the current relationship (Hypothesis 2), poorer general relationship quality (Hypothesis 4a), and more traditional gender-based dating beliefs (Hypothesis 5a). Because the former two constructs were assessed with multiple, inter-related measures, multivariate analyses of variance (MANCOVAs) were used to compare women survivors of CSA to other women on these variables controlling for racial/ethnic identity. Descriptive statistics for the entire sample and means for these MANCOVA comparisons are reported in Table 1.

Unwanted Sexual Interactions

The five dependent variables in the MANCOVA were sexual compliance and the four types of partner post refusal sexual persistence. Racial/ethnic identity was a significant covariate, F (5, 164) = 6.91, $p < .01$ (Pillai's Trace). As expected, there was a significant between-group difference related to past CSA, F (5, 164) = 4.10, $p < .01$ (Pillai's Trace). Women with past CSA endorsed greater sexual compliance with current partners as well as greater partner use of emotional manipulation and deception (hereafter referred to as "manipulation") to persist in sexual contact after the woman's refusal. However, women with past CSA were no more likely than other women to report partner post refusal sexual persistence using arousal or force, and there was only a nonsignificant trend for women to report more frequent partner persistence involving intoxication.

General Relationship Quality

The two dependent variables in the MANCOVA were general satisfaction (QMI-R) and commitment (COM). Racial/ethnic identity was not a significant covariate. As expected, there was a significant between-group difference related to CSA history, F (3, 165) = 4.84, $p < .001$ (Pillai's Trace). As shown in Table 1, women with past histories of CSA endorsed less general satisfaction and commitment than other women.

Gender-Based Dating Beliefs

We also expected that women with CSA histories would endorse more traditional gender-based dating beliefs than other women. An ANCOVA was conducted, controlling for race/ethnicity. Racial/ethnic identity was not a significant covariate. As expected, there was a significant between-group difference as a function of CSA. Table 1 shows that women with past CSA endorsed higher mean levels of traditional gender-based beliefs than other women.

Levene's test for inequality of variances also was found to be significant, suggesting significantly greater variability in beliefs among the CSA survivors than the other women.

In summary, univariate comparisons revealed that women survivors of CSA were more likely to identify with a racial/ethnic minority group but otherwise did not differ from other women in demographic characteristics, length of the current romantic relationship, or partner age. Women with CSA histories reported significantly less sexual satisfaction than other women as well as more frequent unwanted sexual interactions with partners. These interactions were both consensual, as in sexual compliance, and coercive, as in partner post refusal sexual manipulation. The other types of post refusal sexual persistence were not significantly more common among CSA survivors. Finally, women with CSA histories reported less general satisfaction and commitment in their current romantic relationships, as well as more traditional gender-based dating beliefs. Taken together, these findings suggest that past CSA may have pervasive effects on young women's sexual and relational functioning in adulthood.

Next, as reported in Table 2, intercorrelations among the variables associated with CSA status (see Table 1) were calculated. As can be seen, sexual satisfaction was significantly and negatively associated with compliance and partner post refusal sexual manipulation. Additionally, sexual satisfaction was positively associated with general satisfaction and commitment to the current partner. Traditional gender-based dating beliefs were unrelated to sexual satisfaction, however, and therefore were not examined further.

Table 2. Zero Order Correlations Among Study Variables Related to Past CSA (N = 173)

		1.	2.	3.	4.	5.
1.	Sexual satisfaction with partners	--				
2.	Gender-based dating beliefs	-.08	--			
3.	Compliant sexual interactions	-.33[c]	-.01	--		
4.	Post refusal persistence - manipulation	-.29[c]	-.06	.78[c]	--	
5.	General relationship satisfaction	.45[c]	.02	-.08	-.11	--
6.	General commitment	.37[c]	.01	-.06	-.06	.63[c]

[a] $p < .05$.
[b] $p < .01$.
[c] $p < .001$.

Next, a series of hierarchical regression equations were calculated to examine the effects of CSA, unwanted sexual interactions with partners, and general relationship quality on current sexual satisfaction with the romantic partner (Hypotheses 3 and 5b). Racial/ethnic identity was not included as a covariate because there was no association between this variable and sexual satisfaction. Standardized beta weights and model statistics are reported in Table 3. In a first block, CSA was a significant negative predictor of current sexual satisfaction. In a second block, when sexual compliance and partner post refusal sexual manipulation were added to the model, the beta weight associated with each was significant, indicating a negative relationship between both of these unwanted experiences and current sexual satisfaction. This indicates that compliant sexual interactions with partners and partner post refusal sexual manipulation each accounted for unique variance in sexual satisfaction, above and beyond the effects of CSA.

Finally, because sexual satisfaction was strongly and positively related to general satisfaction with the partner and commitment to the relationship (see Table 2), both of these indices of general relationship quality were added in a final block. As shown in Table 3, global satisfaction (but not commitment) significantly predicted sexual satisfaction. Regardless, both types of unwanted sexual activity with partners continued to account for a significant amount of variance in sexual satisfaction. These findings indicate that CSA and unwanted sexual interactions with partners uniquely predict lesser sexual satisfaction in adult romantic relationships. Moreover, the detrimental effects of unwanted sexual interactions on sexual satisfaction could not be accounted for by general relationship quality.

Table 3. Regression Analyses Predicting Sexual Satisfaction from CSA, Unwanted Interactions with Partners, and General Relationship Satisfaction (N = 173)

Predictors	Beta	*t* value	*F* for set	adj R^2
Block 1			12.14	.06***
CSA	-.26	-3.48**		
Block 2			12.05	.17***
CSA	-.21	-2.96***		
Sexual compliance	-.24	-3.24**		
PRSP manipulation	-.18	-2.42*		
Block 3			16.43	.32***
CSA	-.12	-1.79+		
Sexual compliance	-.23	-3.41**		
PRSP manipulation	-.16	-2.31*		
Satisfaction	.30	3.52**		
Commitment	.15	1.85+		

+ $p < .08$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

CONCLUSION

Women with CSA histories were more likely than other women to experience two specific types of nonviolent yet unwanted sexual interactions with romantic partners: sexual compliance and partner post refusal sexual manipulation. Although nonviolent, both types of unwanted sexual interactions significantly and independently predicted women's lesser sexual satisfaction with current partners. These findings reveal an important challenge for researchers in the field of CSA who study revictimization and adult sexual functioning. Even "socially acceptable" forms of unwanted sexual activity may impact sexual functioning above and beyond the effects of past CSA. Future conceptualizations of revictimization may need to be expanded in order to more comprehensively understand the effects of CSA on women's sexual functioning in adulthood.

In the present study, women with CSA histories reported more frequent sexual compliance with current partners than other women. CSA may increase compliance because CSA often increases feelings of insecurity and mistrust in close relationships [DiLillo & Long, 1999], and attachment insecurity is linked to greater sexual compliance [Gentzler & Kerns, 2004]. In addition, compliance could be due to negative affect experienced by CSA survivors during sexual interactions. To the degree that sexual encounters evoke feelings of guilt, shame, or anxiety [e.g., Finkelhor & Browne, 1985], sexual desire may be dampened when partners initiate sexual activity. In the context of a committed sexual relationship, despite an absence of sexual desire, CSA survivors may consent to sexual interactions for the good of the relationship [O'Sullivan & Allgeier, 1998] or because they have learned to submit to others' desires above their own [Herman, 1992]. Even consensual involvement in unwanted encounters, unfortunately, appears to confer considerable personal cost by reducing satisfaction with the sexual relationship generally.

Women with CSA histories also were more likely than other women to report partner use of post refusal sexual persistence involving emotional manipulation and deception. This finding is consistent with past research suggesting that women with CSA histories are at risk for becoming intimately involved with sexually aggressive men (Testa, VanZile, & Livingston, 2005). It is important to note, however, that the sexual "aggression" particularly evident in the relationships of women with CSA histories in our sample was nonviolent in nature. Indeed, emotional manipulation and deception as a post refusal sexual persistence tactic may be quite similar to the concept of verbal sexual coercion. In couples, sexual coercion due to psychological or verbal pressure, is much more common than attempted rape or rape involving physical force or intoxication [Basile, 2002; Ramisetty-Mikler et al., 2007]. Additionally, verbal sexual coercion has been shown to negatively predict sexual desire [Golding, 1996], sexual self-perceptions [Offman & Matheson, 2004], and sexual self-esteem [Zweig et al., 1999]. These findings converge well with the present finding that partner manipulation to persist in sexual pursuit negatively predicted women's sexual satisfaction.

Multivariate analyses revealed that both sexual compliance and post refusal sexual manipulation were independently and negatively associated with sexual satisfaction above and beyond the effects of CSA. Because these were independent effects, sexual compliance and partner manipulation appear to affect different aspects of sexual satisfaction. Possibly, this could be due to differences in the source of pressure experienced from compliance versus coercion. For example, it may be speculated that compliance may be related to internal pressures, including uncertainty about the legitimacy of refusing sex or anxiety about displeasing one's partner. That is, compliance may be related to intrapersonal stress or negative affect [see O'Sullivan and Allegier 1998] which could reduce satisfaction. In contrast, partner manipulation may be related to external pressure from one's partner; such pressure may lead to a sense of incompatibility with the partner, conflict, or other interpersonal stress which could reduce satisfaction. Future research on the specific intrapersonal and interpersonal consequences of different types of unwanted sexual interactions with partners may reveal the full extent to which these interactions impact women's individual and interpersonal well-being.

In the present study, women with CSA histories were more likely than other women to report reduced sexual satisfaction in their current romantic relationships. This finding converges with past research showing long term effects of CSA on later sexual satisfaction [e.g., Polusny & Follette, 1995; Wyatt et al., 1993]. Inconsistencies across past research on

the effects of CSA on decreased sexual satisfaction may be due to several different methodological factors across studies, including sampling techniques and operational definitions of sexual satisfaction/pleasure, as well as individual differences in the experiences of and responses to past sexual abuse [e.g., Merrill, Guimond, & Thomsen, 2003]. In the present study, CSA was operationally defined in terms of unwanted contact or penetration experiences before the age of 14. This focus on pre-pubescent sexual experiences may identify women at particular risk for traumatic sexualization and other negative developmental consequences of early sexual abuse.

Unexpectedly, we found that CSA was significantly less common among White women as compared to women who identified as Black, Asian, Hispanic, or other. Unfortunately, because our sample was homogenous with regard to racial/ethnic identity, there were not enough women in different minority groups to meaningfully explore differences among them. However, this is clearly a priority area for future investigations. To date, relatively little research has focused on the relationship between CSA and ethnicity, and the existing literature comparing prevalence rates across ethnic groups is fraught with conflicting results (e.g., Loeb, Williams, Carmona, Rivkin, Wyatt, Chin et al., 2002). However, the association between past CSA and ethnic/racial minority identification reported here is consistent with a past study that reported higher rates of past CSA among Black women compared to White women [Amodeo, Griffin, Fassler, Clay, & Ellis, 2006].

Racial/ethnic identity also was a significant covariate in analyses focused on unwanted sexual experiences with current partners; women who identified with racial/ethnic identities were particularly likely to report experiencing unwanted sexual encounters with romantic partners. In part, this could be due to differences in past CSA between groups; perhaps members of ethnic/racial minority groups had more severe CSA experiences than White women, which could create more of an impact on sexual interactions with adult partners. For example, one study showed that, compared to White children, African-American children were more likely to experience vaginal penetration, whereas Mexican-American children were more likely to experience rectal penetration [Huston, Parra, Prihoda, & Foulds, 1997]. In addition, African-American children may be more likely to be abused by more than one person as compared to their White or Mexican-American counterparts [Huston, Parra, Prihoda, & Foulds, 1995]. Furthermore, cultural differences concerning the appropriateness of behaviors in sexual interactions with partners may differ across ethnicity and ethnic identity specifically. For example, in a sample of Latino Americans, less acculturated individuals reported less condom discussion. Furthermore, when compared with members of other Hispanic ethnicities, Mexican-Americans were more likely to believe that passionate sexual impulses are not controllable [Marin, Tschann, Gomez, & Gregorich, 1998]. Thus, ethnic differences could influence the quality of a woman's sexual relationships in several ways, including increasing the likelihood of unwanted sexual encounters and by reducing the amount of control she has within sexual interactions. Additional research focused specifically on racial/ethnic identity and adult sexual functioning is needed.

The present results suggested that although traditional gender-based dating beliefs were elevated among women with histories of CSA, such beliefs were not associated either with sexual satisfaction or unwanted sexual experiences with partners. This null result might be attributed a lack of specificity associated with the measure used to operationalize this construct. Specifically, the scale used in the present study assessed a woman's acceptance of male control, domination, and violence in the general dating context (Lichter & McCloskey,

2004) rather than specifically during sexual interactions. We speculate that women who do not endorse traditional female submissiveness in their relationships generally still might adopt a more passive role in sexual encounters with male partners specifically [e.g., Sanchez, Crocker, & Boike, 2005]; this could, in turn, increasing their risk for unwanted sexual experiences, decreased sexual satisfaction, or both. Accordingly, the relationship between CSA, gendered beliefs about sexual interactions specifically, and sexual satisfaction should be explored in additional research.

Future studies also may extend the previous work by focusing on the effects of CSA on sexual assertiveness with male partners, and how such assertiveness may or may not prevent unwanted yet nonviolent sexual encounters. Sexual assertiveness has been defined as the presence of "behaviors, cognitions, and emotions" that depict "how open, communicative, and comfortable an individual is with sexuality in a particular intimate relationship" [Pierce & Hurlbert, 1999, p. 32]. High sexual assertiveness is present when a woman feels comfortable discussing sexual feelings with her partner and acts on her own feelings by, for example, initiating sex, sharing sexual fantasies, or declining unwanted sexual activity. Several studies have suggested that survivors of CSA endorse lower sexual assertiveness than other women [Johnsen & Harlow, 1996; Morokoff et al., 1997]. Because CSA survivors often report difficulties with intimacy and trust [Di Lillo & Long, 1999], open and direct communication, including sexual communication, may be inhibited [Mullen, Martin, Anderson, Romans, & Herbison, 1994]. VanZile-Tamsen et al. [2005] suggested that women with past histories of sexual victimization may be able to identify risk related threats as well as other women, but they may not behaviorally respond to such threats in a manner that minimizes their risk for assault. They also found that women who had been sexually assaulted more than once were less likely to choose direct tactics to resist unwanted sexual advances. In a clinical sample of women with CSA histories, revictimized women tended to be socially avoidant, non-assertive, and overly nurturant [Classen, Field, Koopman, Nevill-Manning, & Spiegel, 2001]; this profile of personality characteristics also could extend to women who have unwanted yet nonviolent sexual encounters with current romantic partners. The role of sexual assertiveness in preventing unwanted sexual interactions is an important area for future research.

Limitations of the present study should be noted. The present sample consisted of college women of primarily Caucasian descent, which limits generalizability to more diverse groups. Sexual functioning was assessed solely in terms of satisfaction, and additional outcome variables should be incorporated in future studies. Regardless, to our knowledge, these data provide the first study of CSA and risk for unwanted sexual experiences with partners. On average, women with sexual abuse histories showed poorer sexual and relational functioning than other women, including more frequent unwanted consensual and coerced sexual interactions with partners. Both of these types of unwanted sexual interactions negatively predicted sexual satisfaction and might also affect other aspects of sexual functioning. These findings call for broader future conceptualizations of revictimization to encompass nonviolent, unwanted sexual interactions, including those commonly experienced within committed romantic relationships.

REFERENCES

Abbey, A., BeShears, R., Clinton-Sherrod, A. M., & McAuslan, P. (2004). Similarities and differences in women's sexual assault experiences based on tactics used by the perpetrator. *Psychology of Women Quarterly, 28,* 323-332.

Amodeo, M., Griffin, M. L., Fassler, I.R., Clay, C. M., Ellis, M. A. (2006). Childhood sexual abuse among black women and white women from two-parent families. *Child Maltreatment. 11,* 237-246.

Arata, C. (2002). Childhood sexual abuse and sexual revictimization. *Clinical Psychology: Research and Practice,* 9, 135-164.

Bartoi, M. G., & Kinder, B. N. (1998). Effects of child and adult sexual abuse on adult sexuality. *Journal of Sex and Marital Therapy, 24,* 75-90.

Basile, K. C. (2002). Prevalence of wife rape and other intimate partner sexual coercion in a nationally representative sample of women. *Violence and Victims, 17,* 511-524.

Becker, J. V., Skinner, L. J., Abel, G. G., & Cichon, J. (1986). Level of postassault sexual functioning in rape and incest victims. *Archives of Sexual Behavior, 15,* 37-49.

Bremner, J.D., Vermetten, E., & Mazure, C.M. (2000). Development and preliminary psychometric properties of an instrument for the measurement of childhood trauma: The early trauma inventory. *Depression and Anxiety, 12,* 1-12.

Chung, D. (2005). Violence, control, romance and gender equality: Young women and heterosexual relationships. *Women's Studies International Forum, 28,* 445-455.

Classen, C., Field, N. P., Koopman, C., Nevill-Manning, K., Spiegel, D. (2001). Interpersonal problems and their relationship to sexual revictimization among women sexually abused in childhood. *Journal of Interpersonal Violence, 16,* 495-509.

DiLillo, D., & Long, P.J. (1999). Perceptions of couple functioning among female survivors of childhood sexual abuse. *Journal of Child Sexual Abuse, 7,* 59-76.

Finkelhor, D., Hotaling, G., Lewis, I. A., & Smith, C. (1990). Sexual abuse in a national survey of adult men and women: Prevalence, characteristics, and risk factors. *Child Abuse and Neglect, 14,* 19-28.

Gentzler, A. L. & Kerns, K. A. (2004). Associations between insecure attachment and sexual experiences. *Personal Relationships, 11,* 249-265.

Gold, E. R. (1986). Long-term effects of sexual victimization in childhood: An attributional approach. *Journal of Consulting and Clinical Psychology, 54,* 471-475.

Golding, J. M. (1996). Sexual assault history and women's reproductive and sexual health. *Psychology of Women Quarterly, 20,* 101-121.

Herman, J. (1992). *Trauma and recovery*. New York: Basic Books.

Holland, J., Ramazanoglu, C., Scott, S., Sharpe, S., & Thomson, R. (1990). Sex, gender, and power: Sexuality in the shadow of AIDS. *Sociology of Health and Illness, 12,* 336-350.

Hudson, W.W., Harrison, D.F., & Crosscup, P.C. (1981). A short-form scale to measure sexual discord in dyadic relationships. *Journal of Sex Research, 17,* 157-174.

Huston, R. L., Parra, J. M., Prihoda, T. J. & Foulds, D. M. (1997). Factors associated with the report of penetration in childhood sexual abuse. *Journal of Child Sexual Abuse, 19,* 163-174.

Huston, R. L., Parra, J. M., Prihoda, T. J. & Foulds, D. M. (1995). Characteristics of childhood sexual abuse in a predominantly Mexican-American population. *Child Abuse and Neglect, 19,* 165-176.

Impett, E. A. & Peplau, L. A. (2002). Why some women consent to unwanted sex with a dating partner: Insights from attachment theory. *Psychology of Women Quarterly, 26,* 360-370.

Impett, E. A. & Peplau, L. A. (2003). Sexual compliance: Gender, motivational, and relationship perspectives. *The Journal of Sex Research, 40,* 87-100.

Irwin, H. J. (1999). Violent and nonviolent revictimization of women abused in childhood. *Journal of Interpersonal Violence, 14,* 1095-1110.

Johnsen, L.W., & Harlow, L. L. (1996). Childhood sexual abuse linked with adult substance use, victimization, and HIV risk. *AIDS Education and Prevention, 8,* 44-57.

Katz, J., Kuffel, S. W., & Brown, F. A. (2006). Leaving a sexually coercive dating partner: A prospective application of the investment model. *Psychology of Women Quarterly, 30,* 267-275.

Loeb, T. B., Williams, J. K., Carmona, J. V., Rivkin, I., Wyatt, G. E., Chin D. et al. (2002). Child sexual abuse: Associations with the sexual functioning of adolescents and adults. *Annual Review of Sex Research, 13,* 307-345.

Lichter, E. L., & McCloskey, L. A. (2004). The effects of childhood exposure to marital violence on adolescent gender-role beliefs and dating violence. *Psychology of Women Quarterly, 28,* 344-357.

Marin, B., Tschann, J. M., Gomez, C. A., & Gregorich, S. (1998). Self-efficacy to use condoms in unmarried Latino adults. *American Journal of Community Psychology, 26,* 53-71.

Merrill, L L., Guimond, J. M., & Thomsen, C. J. (2003). Child sexual abuse and the number of partners in young women. The role of abuse severity, coping style, and sexual functioning. *Journal of Consulting and Clinical Psychology, 71,* 987-996

Messman-Moore, T. L., & Brown, A. L. (2004). Child maltreatment and perceived family environment as risk factors for adult rape: Is child sexual abuse the most salient experience? *Child Abuse and Neglect, 28,* 1019-1034.

Meston, C. M., & Heiman, J. R. (2000). Sexual abuse and sexual functioning: An examination of sexually relevant cognitive processes. *Journal of Consulting and Clinical Psychology, 68,* 399-406.

Meston, C. M., Heiman, J. R., & Trapnell, P.D. (1999). The relation between early abuse and sexual functioning: *Journal of Sex Research, 36,* 385-395.

Meston, C. M., Rellini, A. H., & Heiman, J. R. (2006). Women's history of sexual abuse, their sexuality, and sexual self-schemas. *Journal of Consulting and Clinical Psychology, 74,* 229-236.

Morokoff, P. J., Quina, K., Harlow, L. L., Whitmire, L., Grimley, D. M., Gibson, P. R., et al. (1997). Sexual assertiveness scale (SAS) for women: Development and validation. *Journal of Personality and Social Psychology, 73,* 790-804.

Mullen, P.E., Martin, J. L., Anderson, J. C., Romans, S.E., & Herbison, G. P. (1994). The effect of childhood sexual abuse on social, interpersonal, and sexual functioning in adult life. *British Journal of Psychiatry, 165,* 35-47.

Myers, H.F., Wyatt, G. F., Loeb, T. B., Carmona, J. V., Warda, U., Longshore, D. et al., (2006). Severity of child sexual abuse, post-traumatic stress, and risky sexual behaviors among HIV positive women. *AIDS and Behavior, 10,* 191-199

Najam, J. M., Dunne, M. P., Purdue, D. M., Boyle, F., & Coxeter, P. D. (2005). Sexual abuse in childhood and sexual dysfunction in adulthood: An Australian population-based study. *Archives of Sexual Behavior, 34,* 517-526.

Newman, E., Walker, E. A., & Gelfand, A. (1999). Assessing the ethical costs and benefits of trauma-focused research. *General Hospital Psychiatry, 21,* 187-196.

Norton, R. (1983). Measuring marital satisfaction: A critical look at the dependent variable. *Journal of Marriage and the Family, 45,* 141-151.

Offman, A., & Matheson, K. (2004). The sexual self-perceptions of young women experiencing abuse in dating relationships. *Sex Roles,* 51, 551-560.

O'Sullivan, L. F., & Allgeier, E. R. (1998). Feigning sexual desire: Consenting to unwanted sexual activity in heterosexual dating relationships. *The Journal of Sex Research, 35,* 234-243.

Oswald, L. D, & Russell, B. L. (2006). Perceptions of sexual coercion in heterosexual dating relationships: The role of aggressor gender and tactics. *The Journal of Sex Research,* 43, 87-95.

Pierce, A. P., & Hurlbert, M. (1999). Test-retest reliability of the Hurlbert Index of Sexual Assertiveness. *Perceptual and Motor Skills, 88,* 31-34.

Polusny, M. A., & Follette, V. M. (1995). Long term correlates of CSA: Theory and review of the empirical literature. *Applied and Preventive Psychology, 4,* 143-166.

Quina, K., Harlow, L. L. Morokoff, P. J., Burkholder, G., & Delter, P. J. (2000). Sexual communication in relationships: When words speak louder than actions. *Sex Roles, 42,* 523-549.

Ramisetty-Mikler, S., Caetano, R., & McGrath, G. (2007). Aggression among White, Black, and Hispanic couples in the U.S.: Alcohol use, physical assault and psychological aggression as its correlates. *The American Journal of Drug and Alcohol Abuse, 33,* 31-43.

Rusbult, C.E. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16,* 172-186.

Rusbult, C. E. (1983). A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology, 45,* 101-117.

Sanchez, D. T., Crocker, J., & Boike, K. R. (2005). Doing gender in the bedroom: Investing in gender norms and the sexual experience. *Personality and Social Psychology Bulletin, 31,* 1445-1455.

Shotland, R. L. & Hunter, B. A. (1995). Women's "token resistant" and compliant sexual behaviors are related to uncertain sexual intentions and rape. *Personality and Psychology Bulletin, 21,* 226-236.

Smith, P. H., White, J. W., & Holland, L. J. (2003). A longitudinal perspective on dating violence among adolescent and college aged women. *American Journal of Public Health, 93,* 1104-1109.

Struckman-Johnson C., Struckman-Johnson D., & Anderson, P. B. (2003). Tactics of sexual cocercion: When men and women won't take no for an answer. *The Journal of Sex Research, 40,* 76-86.

Testa, M., & Livingston, J. A. (1999). Qualitative analysis of women's experiences of sexual aggression. *Psychology of Women Quarterly, 23,* 573-589.

Testa, M., VanZile-Tamsen, C., & Livingston, J. A. (2005). Childhood sexual abuse, relationship satisfaction, and sexual risk taking in a community sample of women. *Journal of Consulting and Clinical Psychology, 73,* 1116-1124.

Tsai, M., Feldman-Summers, S., & Edgar, M. (1979). Childhood molestation: Variables related to differential impacts on psychosexual functioning in adult women. *Journal of Abnormal Psychology, 88,* 404-417.

Van Bruggen, L. K., Runtz, M. G., & Kadlec, H. (2006). Sexual revictimization: The role of sexual self-esteem and dysfunctional sexual behaviors. *Child Maltreatment, 11,* 131-145.

VanZile-Tamsen, C., Testa, M., & Livingston, J. A. (2005). The impact of sexual assault history and relationship context on appraisal of and responses to acquaintance sexual assault risk. *Journal of Interpersonal Violence,* 20, 813-832.

Whisman, M. A. (2006). Childhood trauma and marital outcomes in adulthood. *Personal Relationships, 13,* 275-386.

Wyatt, G., Newcomb, M. D., & Riederle, M. H. (1993). Sexual abuse and consensual sex: Women's developmental patterns and outcomes. Sage Publications: Newbury Park, CA.

Zweig, J. M., Crockett, L. J., Sayer, A., & Vicary, J. R. (1999). A longitudinal examination of the consequences of sexual victimization for rural young adult women. *Journal of Sex Research, 36,* 396-409.

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Chapter 4

FACILITATING TRANSITION VIA GROUP WORK WITH SURVIVORS OF CHILD SEXUAL ABUSE*

Antonia M. van Loon
Royal District Nursing Service Foundation Research Unit; Adjunct Faculty - Flinders University, Adelaide, South Australia
Debbie L. Kralik
Royal District Nursing Service Foundation Research Unit;
Adjunct Faculty – University of South Australia, University of Adelaide, Australia

ABSTRACT

Some survivors of child sexual abuse (CSA) live with continued disruption, disorientation and a diminished sense of self. Women living with addictions after experiencing sexual abuse in their childhood worked in groups to untangle life stories that had been silenced for too long. Using participatory action processes and principles helped to facilitate the women's transition, enabling them to recognise how past abuse experiences continued to impact on their lives. Women experienced the group work as helpful, empowering, supportive and practical. The process used in this research is an available and accessible tool for workers and CSA survivors. It has demonstrably shifted women to increase their self-determination, personal agency and assisted them to reclaim their sense of identity.

The information in this chapter is an outcome of research with women using their actual life experiences. It shows how the participatory group process using "Look, Think and Act" as a problem solving approach can help participants to make sense of current situations and begin to see how their emotional history impacts their current life choices. This chapter highlights the best practices that we uncovered in group facilitation with CSA survivors.

Talking in a group about sexual abuse can foreground painful and shameful past experiences. Establishing quality group processes creates a safe space for reflection,

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consciousness-raising and interpretation that enables reshaping and actioning that shifts the participants' life trajectory. Trust develops, enabling participants to gain confidence and courage about the issues/questions/topics they are prepared to work through. A climate of open acceptance, mutuality and non-judgemental presence promotes sharing and eliminates the sense of difference and isolation that characterises the CSA survivor's life. Hearing the narratives of others and sharing these stories increases the sense of personal validation and self-belief each participant feels. Giving voice to one's experiences improves clarity about the past and the ongoing impacts of CSA, and importantly it enables participants to develop a vision for a preferred future and action changes that will enable them to transition to a life with which they are more content.

INTRODUCTION

This chapter reports group processes and principles we used when working with survivors of child sexual abuse (CSA). The knowledge was developed during research with two groups of marginalised women CSA survivors who were homeless due to addictions to alcohol, drugs or gambling[1]. Participatory action processes and principles were used to facilitate women to build personal capacity and enable them to reclaim their sense of identity and generate personal resources that would enable movement to a healthier, life-affirming future.

The research was funded by Alcohol Education and Rehabilitation Foundation Ltd (AER) and undertaken by the authors who work at the Royal District Nursing Service (RDNS) Research Unit in South Australia. The research partners were Catherine House Inc. a provider of emergency and transitional supported accommodation in Adelaide, South Australia. Over 93% of the clients using that service had experienced the trauma of CSA and had turned to drugs, alcohol and gambling to manage their emotional and physical suffering. This in turn contributed to addictions and subsequent homelessness [1].

BACKGROUND

It is difficult to be accurate about the prevalence of CSA due to under-reporting, social silence and shame that surround discussions about the sexual abuse of children. Estimations are that as many as 1:3-5 Australian girls and 1:8-12 Australian boys are caught in this vortex of confusion and denial [2-5]. It is impossible to estimate how many of them will suffer adverse impacts from these experiences, however, the documented evidence of the short and long term impacts of CSA would indicate many will experience illness and disadvantage [6-27], addiction [28-35], violence [6, 36-52], homelessness [30, 51, 53-57] early and/or undesirable sexual experiences [58-63] to name a few of the more recognised adverse sequelae. The cost to Australian society is enormous in terms of health, social and economic consequences but also in the loss of aptitude for so many people who do not develop their natural gifts, do not contribute via employment, and who are not achieving their potential.

Drawing on women's descriptions, a working definition of CSA was developed that was applied throughout the project. That is, "CSA is any form of sexual activity or behaviour that an adult or adolescent exerts upon a child without her/him being able to control that situation. The women participating in this project unanimously agreed the end result was a betrayal of trust and a misuse of adult power over the child"[64].

Box 1. The Common Story

We were told throughout our lives that we were 'useless', 'good for nothing' and 'deserving of everything we got'. This was reinforced by 'betrayal' from our family and 'manipulation' from the perpetrator/s who 'dominated' us from their position of power and trust, making us feel 'powerless', 'worthless', 'ashamed', 'guilty' and 'to blame somehow'. We were 'used' and treated as 'objects' or 'meat'. When other children were developing 'the building blocks for a strong identity' and understanding that they were unique and worthwhile, 'able and OK'. We were 'stuck' in a world that taught us 'we would never amount to anything'. But worse, we still carry the burden of 'shame' and 'guilt', 'confusion' and 'sadness' which continually diminishes our 'self-worth' and 'shatters our identity'.

We spent our childhood maintaining a shroud of 'silence and secrecy' around our perverse experiences of child sexual abuse. We coped by 'suppressing memories', 'learning to forget', 'disengaging', disassociating', 'isolating ourselves emotionally and relationally', 'trying to please everyone', 'trying to adapt' and accommodate our 'weird' situation', because there was 'no escape anyway'. This allowed us to survive our childhood. But as we became teenagers we came 'unstuck'. We knew we 'didn't fit in'. So we 'numbed our rotten feelings' by using alcohol, drugs and/or gambling.

For some of us self-harm and re-victimization continued. Weak 'boundaries' made us 'an easy target' for 'predatory people', increasing our 'hopelessness and sadness'. We no longer trusted easily because 'everyone seemed to want something from us', so we chose to become 'disconnected' to protect ourselves from further 'hurt'. We had 'few dreams or hopes for the future' using addictions to 'escape', 'cope' and even 'survive'. We recognise these were 'toxic life patterns'.

When we encounter health professionals we would like them to help us with 'sensitivity', 'understanding', 'respect' and 'support', so we can 'heal and grow' toward the future that was 'taken from us during childhood'. We were 'victims', but we have become 'survivors', and with help we are daring to hope and believe we will eventually 'thrive'.

[64]:79-80

BRINGING THE GROUP TOGETHER

The sensitive nature of the topic of CSA requires careful thought about how to bring a group together. The women of Catherine House were invited to consider whether CSA had been their experience. If so, did they want to explore the impacts it had and understand how these may have contributed to responses such as alcohol misuse, illicit drug taking and problem gambling[64]. They were invited to join a group to do this work. The maximum number in the group would be 8-10 women, because such sensitive work could not be

undertaken in large groups. The group met once every fortnight for two hours over an eighteen month period. To commence, one of the authors conducted a face to face interview with each participant, This author also became the group facilitator. Each interview lasted about one hour and enabled a connection to occur between the researcher and each woman. During the interview the woman was invited to share what she had experienced during her childhood, with a focus on how this experience had continued to impact her life. Each woman shared aspects of her story that she felt were important for the facilitator to know. These interviews enabled the facilitator to know the personal areas of discomfort or sensitivity each woman might have in the group discussion[65].

When all the face to face interviews were completed, thematic analysis was undertaken and concepts constructed using the woman's own language. These themes were re-analysed and condensed into a de-identified 'common story' that was returned to each of the women for their validation. This common story became the starting point for group discussions (refer box 1). The collective voice gave each woman a sense that she was standing with others who understood her. We suggest that this story is a useful place to commence group work with CSA survivors.

The group members were invited to discuss the feelings and emotions that emerged when reading this common story. How much of it resonated with their experience? How had they coped? The ensuing discussion provided a starting point to examine the ongoing impacts that were playing out in the participants' lives.

USING COLLABORATIVE NARRATIVE GROUP WORK

A narrative framework was a useful approach for the group. Narrative is more than retelling a story. It is a vehicle to make sense of life because one has conversations about aspects of life that matter the most[66]. Such conversations are therapeutic because they facilitate the quest for personal meaning and identity. The knowledge by which a person understands and interprets their external world cannot be understood by experience alone. A person notices their subjectivity in the public recognition of them self in relationship with others. This shapes identity, as significant aspects of one's personhood are recognised and known by others and in turn by one's ourself. [67]. Constructs such as status, roles, gender, position and aspects of the self that are described as 'the social me' are the overarching themes of these group conversations. It is in these narratives that we see ourselves and in telling and exploring our stories we can facilitate healing of the disrupted sense of identity that is a legacy of abuse[65]. The identity building aspects of story telling come from the opportunity for the inner self to come out and locate an identity outside of one's self [68].

Healing is about dealing with aspects of the story that impact identity. It is not necessary to recount lurid details of the assaults and abuse[69]. One's story is a reflection of how each person perceives themselves and others, or how they wish others to see them. It provides an opportunity to organise and display one's real self so there is a sense of coherence and growth in one's identity[70]. Narrative allows the experience to move from the subjective internal realm to the objective external realm, so experience can be examined and incorporated. Such externalising conversations facilitate transition and build personal capacity[71].

In group work with vulnerable people we privilege personal empowerment as an aim of all interactions [65]. In the research group we prepared the participants to witness stories and to acknowledge one another's experiences[65]. Attention to what was said was paid in an affirming way. Each person was asked to think about what would help the speaker most when they asked questions or made responses. We sought to make all of our responses affirming or reflective, so the speaker could discover their thoughts and feelings and gain new understandings of their experiences. In thinking about each person's story and their responses, group members began to see similarities with their own narrative.

Suffice to say, the person who is willing and able to share their story will in the telling of their narrative reveal the kind of strengths they used to survive their ordeals, to get on in the world, and persevere. They will say what people and situations they watch out for, and highlight actions that are memorable or remarkable in their story. In telling their story they will remind themselves of who they are–and who they are not– and what aspects of their identity are valuable enough to keep in their on-going story that is their life. The telling experience is valuable because people consider their story as one worth hearing and their reality as respected, and their self as affirmed [72]. They gain legibility and recognise where they have been, reclaiming aspects of themselves that they wish to take into their future[64]. During the retelling of their story, emphasis on aspects of their experiences may shift so they gain fresh understandings. In the telling they rediscover things that matter. They present their story to the group and their values and responses are shaped by the affirmation and feedback they receive from the group [65]. The healing aspects of telling one's story come dialogically because the teller constructs in their story a sense of authentic self that is located within their story. In the interactions with others the person reveals their concerns, their values, their attitudes, and aspects that make them resilient. The group reflects the strengths they see in that story back to the person. It is important to emphasise that the facilitator listens for opportunities to highlight strengths and reshape negative constructions into plot lines of resistance and strength. The person discovers aspects of their authentic self that have been subverted and repressed by the continual fore-grounding of their abuse story [73].

THE 'LOOK, THINK, ACT' PROCESS HELPS TO EXPLORE NARRATIVE CONTENT

The 'Look, Think, Act' process developed by Stringer [74-76] worked well in this research because it used perceptual skills that enable the participants to notice and comprehend visual, auditory and spatial cues about everyday social behaviour within their environment. This heightens the self-awareness that moves participants toward self-control as they understand the links between their inner thoughts and feelings and their behaviours. Finally, 'Look, Think, Act' encourages the use of cognitive skills so participants learn to solve problems, think about possible outcomes and consequences and intentionally develop appropriate behaviours, verbal and non-verbal responses that might facilitate more helpful outcomes. In so doing the participant receives pro-social motivation which encourages them to want to apply their skills in the real world. The support of the group provides the encouragement and reinforcement required to maintain new or rediscovered behaviours and transfer of skill into more life-affirming habitual responses.

What is ‘Look, Think, Act?’

‘Looking’ involves observing, listening and clarifying actual issues or problems confronting group members. ‘Thinking’ involves expressing feelings and reflecting on these so participants can consider available options. The facilitator can assist participants to evaluate consequences of each option so they can judge the most appropriate solutions to their problem. Finally, the participants consider ways to ‘act’ by choosing the best response or behaviour that will give them the outcome they desire. The facilitator and the group provide a platform for shared perspectives, exploration, reflection, encouragement and feedback. If the participant’s chosen response does not have the desired outcome, logical consequences will usually follow. These situations enable the facilitator to help the participants to tease out what could/should be changed when a similar situation arises in the future. In summary, the participants develop self control, perceptual and communication skills when ‘looking’, reflective and cognitive problem solving skills when ‘thinking’ and behavioural skills when ‘acting’.

It is useful to commence with current issues and impacts that may be linked to past experiences. Then use the ‘Look, Think and Act’ process to name the issue confronting the participant, and then think about the ways she/he can face these issues and reshape them.

CSA survivors may become disengaged with their lives. In our group some women had become so disconnected and disengaged during the course of their lives that they were unable to identify that they had needs and held few hopes or aspirations for their lives. Encouragement to recognise and name feelings and emotions was an important starting point. Incorporating action into their lives required careful consideration. Many women had seldom taken even small steps toward action so there was fear associated with the change that action could create. Taking the most easily managed actions that would have the most benefit for their wellbeing assisted them to choose small steps that moved them toward a goal. Some participants had to learn how to set a goal that was manageable and near because they had been so systematically disempowered they could no longer set even simple personal goals. The key is to keep it small, near and manageable. Reflection on success was an important part of group processes. Success developed confidence and when the women could see they were activating choices for their own wellbeing. This empowered them to kepp actioning further change and move ahead. The group gained momentum as people actioned change.

Teaching the ‘Look, Think, Act’ Process

It was important to cycle through the ‘Look, Think, Act’ process with the group at each session until it becomes a habitual way of problem identifying and solving. To do this we developed some questions that each woman could ask herself at each stage of that process[64, 65]. These will be useful for others conducting group work with CSA survivors.

Looking

Looking’ involves building a picture of the issue based on the available information. Participants describe what is going on so a clear picture of the context emerges. During this phase the participant gathers as much information as possible to build an accurate mind

picture of the issue/event based on the available data. The aim is to understand the when, what, where and how of the experience. They should describe:

- Who is involved?
- What is going on?
- When and where is this occurring? What time?
- What is happening within me as a result of this issue?
- How am I feeling about it?
- What thoughts and emotions are welling up within me?
- What has my response been?
- How long am I are mulling over the event after it happens?

Thinking

After describing the issues, the participants are invited to think about what they can do about the issue. 'Thinking' is the clarification phase where meanings and feelings generated by the experience are explored. It involves sense making questions such as:

- What's the main problem? Why might this be happening?
- What might the reason be for the responses?
- Was their a trigger or cause?
- Are there attitudes, beliefs, past experiences triggering or contributing to this situation?
- How am I behaving? Am I being defensive?
- What have the consequences been in situation like this in the past?
- With which area/s can I move forward?
- What might moving forward look like?
- When should I begin? In what order?

The participant decides what moving on might look like for them, but they may clarify their decision making using the group and the facilitator's questions. When an action is decided on (and it helps to remind participants that doing nothing is an action that will also have consequences) the participant decides what they can do, what is feasible and achievable and how they can do it. This is not easy as this woman noted:

> Some weeks everything seems like just big mess in my head and the group helps me find some peace as I sort things out that are in my head. I can listen to how others do things and work things out, and I talk it through. At other times it's nice to just sit back and watch and listen to other people sorting their stuff out. [65]

Actioning

'Actioning' is a difficult phase that involves effecting change. Action requires involvement with the situation. Thinking about change does not effect change. The participant can spend a lot of time thinking about what they want to do and wishing things were different without actually taking the step toward making change happen.

We used the analogy of dieting. We can think about what it will be like to be thinner, we can buy the diet books, and read them. We can talk about what it will be like and consider ways to diet but… nothing happens while we just look and think. The weight comes off when we action the diet. People can spend a lot of time in what we called the "Look-think two step" and never move forward.

Actioning requires participants to become involved with the current situation and choose actions that enable movement toward their chosen goals. Often there is little choice about the need to change, and one can only choose how they will change. A good place to start is to think about what could/should be done differently to achieve the outcome the person desires. Then begin to action the smallest and most easily managed act that would have the most benefit to the person's wellbeing. Participants set personal goals and tasks, and then work out how they will take action on the changes they wish to make. In this step the person makes an action plan and starts the action steps that will help them to achieve that plan.

- In what area/s do I want to action change?
- What is most important are to work on right now?
- What is the most achievable thing I can act on now?
- What is the likely outcome of the action?
- What places can help me achieve my goal?
- Which people can help me?
- Where can I get support if I need it?

As this woman notes:

> The hardest part is starting. It's like riding a bike, you have to get on first and then you fall a few times, but you get back on again until you get a feel for the balance, so you know how to correct yourself, keep upright and move forward.*[65]*

The 'Look, Think, Act' Process and Behaviour

> All humans have thoughts, feelings and attitudes about their experiences. These thoughts and feelings give rise to emotions such as love, fear, anger, hatred, sadness, sorrow, which need to be recognised, acknowledged and if possible named. Those emotions can trigger within people particular behaviours and responses that are based on past reactions when similar emotions were triggered, but under different circumstances. In the case of CSA survivors their past abuse experiences taught them to respond in ways that were helpful in childhood, but may be less useful when they transition into adult life.

All behaviours have consequences, whether they have been thought through or not. These consequences impact other people, other situations, or they impact within us. Some consequences can be anticipated and some are unintended. Regardless of the consequence, each person experiences or deals with the direct or indirect impacts of their behaviours. People modify their behaviours by the reactions and results their behaviours provide them. People can become confused if the outcomes of interactions are not what they thought they would be. The 'Look, Think, Act' process is a tool to help participants work out what is

occurring. ‘Look, Think, Act’ focuses on changing thinking, so we can see choices in future behaviours and responses and action those choices to obtain different outcomes under similar circumstances. This process facilitates the important life function of maintaining and nurturing a coherent sense of identity or self, within changing and ambiguous life circumstances.

Using ‘Look, Think and Act’ takes practise. It helps to use various scenarios from the group participants and over time they see the value of the tool and how they can use it themselves. Invariably some people use it and others reject its use for their situation. That is a choice. The processes of change are processes of trial and error so when people understand the benefit of using this tool they are more likely to engage it later.

A brief example used by one of the women shows the process:

> My son says something rude to me (Behaviour). I think ‘How dare he speak to me like that…’ (Thoughts) The emotions I feel are annoyance, frustration, even anger (Emotion), so my immediate reactive response is to shout a ‘put down’ response back to him (Response). He turns around and gives me a rude gesture and walks off (Consequence). I become more irritated and angry (Emotion), and the episode escalates until it is out of control. The self-talk in my head is ‘I’ll show you who the boss is! I won’t let you treat me this way’ (Thoughts) and that drives my reactive response to give him a smack (Behaviour). He turns around and hits me back (Consequence) and the cycle of violence and anger escalates. Alternatively, I could have stopped myself and thought ‘What sort of outcome do I want from this interaction?’ and chosen a response that would be more likely to achieve the desired behaviour.[65]

The participants were encouraged to step back and take a more considered response that might shift the outcome. The ‘Look, Think, Act’ process informed their choices and helped them to work out what they want. To achieve their desired outcome they modified their thoughts, feelings, attitudes or behaviours and choose responses in a thoughtful way.

Pretending that nothing is happening, not responding, or running away, is a choice that many CSA survivors have used in the past. That is not to say that withdrawing to think or regroup is not a valid choice, it can be a safe and useful option. However, ignoring or pretending nothing is going on, decreases the person’s ability to influence the outcome, yet they will still have the consequences of doing nothing.

In summary, the ‘Look, Think, Act’ process facilitates self-talk by providing a framework to externalise one’s personal narrative. It was experienced by women as empowering because they made choices to take action. First the participant gives expression to the issue and looks at it objectively, as they would if they were describing a chair in the middle of the room. They examine the issue from many angles, think about the problems and work out what they want to do with it. Do they want to take the issue back? Do they want to share it with somebody else like a worker so they get help working through it? Do they want to leave the problem with whomever it belongs to? This approach is not easy and it takes guided practise within the group, but when the participants work through issues systematically using ‘Look, Think, Act’ it does become easier. It is not enough to think about possible action, they have to make an attempt to do it, if their situation is to change. *Action is the catalyst to change.* We found this process works and it is rewarding to see the positive change in a participant’s face and demeanour when they have successfully undertaken even small actions and obtained the outcome they had hoped for. It is useful to first try the process

on smaller needs and desires, and continue practising until this way of processing problems and life issues becomes habitual.

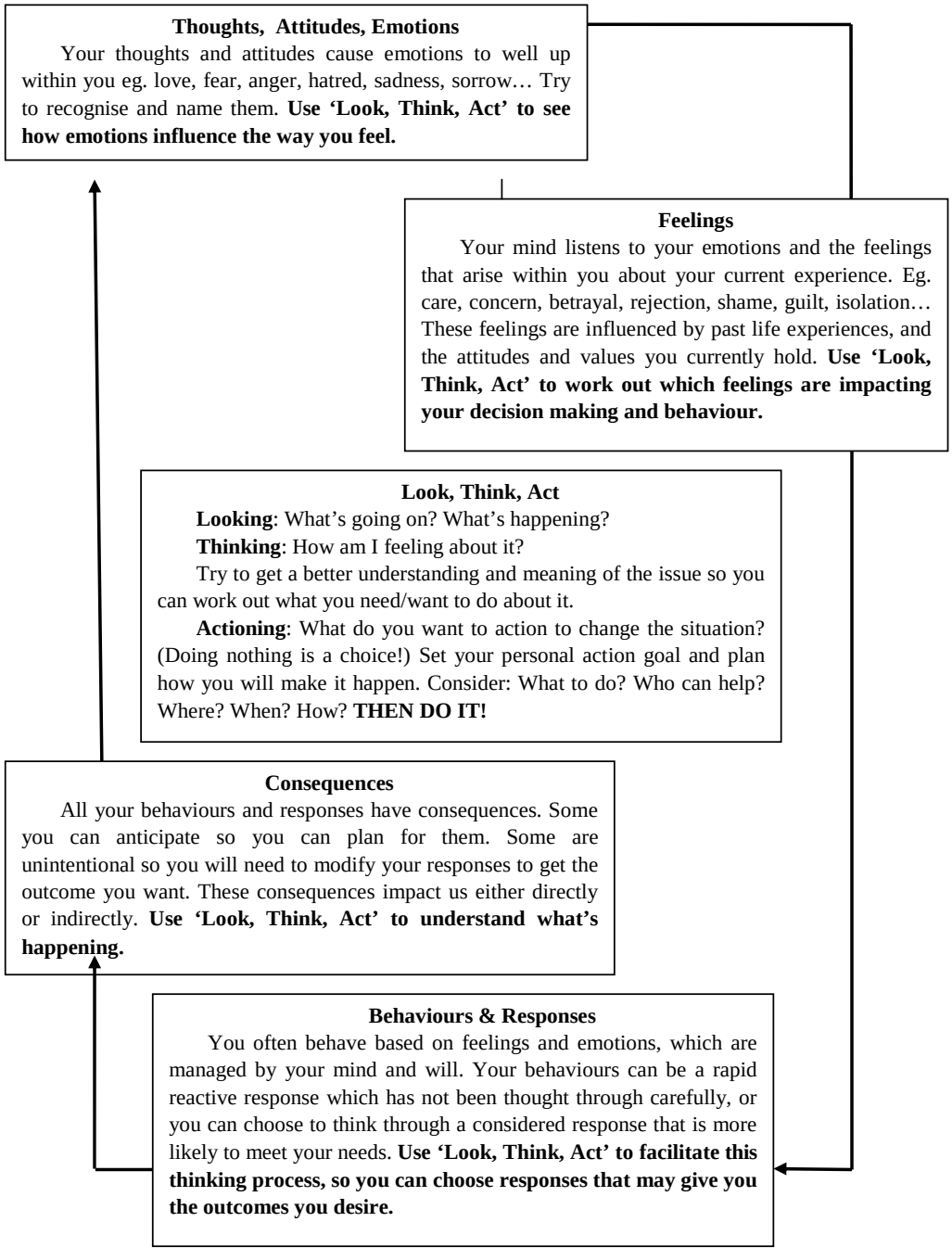

Figure 1. Thinking, Feeling, Responding and the 'Look, Think, Act' Process [65 p33].

THE GROUP MEETINGS

The Physical Space

When working with people that are vulnerable it is important to find a meeting space that is accessible and preferably familiar so people feel comfortable. The room should be small but not confined, with comfortable seating that is spaced with sufficient room for each person to move freely and still feel a safe distance from their neighbour. It is important that the participants can control that space, so seating, heating and cooling is always negotiated. Discussing intense experiences in a small closed room can make people feel uncomfortable, perhaps even afraid and anxious. The facilitator should sit away from the door so participants can feel free to leave if they need to. Tissues and glasses of water should be available because sharing painful stories often leads to expression of emotion through tears.

Developing a Safe Space in the Group

Herman notes that healing and recovery can only take place within the context of relationships [77]. The group space is not a value neutral zone. Each person brings to the group their personal attitudes and beliefs. Watching that those beliefs are not imposed unethically is essential to quality outcomes. Facilitators will need to help participants see particular values in relation to their abuse experiences, but how these are shared is important to the outcomes. The facilitator holds the balance of power in the group relationship, so they need to take time to step back and reflect on how this is impacting the group's interaction so practices are reflected upon and kept in check.

Professional boundaries will define the relationship the facilitator has with group members and will dictate the establishment and maintenance of appropriate behaviours. These boundaries are usually compromised by either party imposing personal values or attitudes that interfere with the therapeutic aims of the group.

The facilitator must remain cognisant of her/his legal and professional standards and codes of conduct. The safety and wellbeing of the participants is assured through a therapeutic response that respects and adheres to current professional practices and guidelines, codes, policies and procedures that govern professional conduct in that discipline. The facilitator is responsible for the management of the group and the maintenance of professional boundaries.

Safety, trust and ethical behaviour underpin the facilitator relationship. Facilitators should refrain from discussing confidential information outside of appropriate forums. There is potential risks associated with all interpersonal relationships and the use of touch and personal contact within these relationships needs to be managed to minimise risk situations[65]. All forms of sexual relationship are misconduct. It is important to ensure personal self-disclosure is appropriate and minimised to occasions where it assists to achieve a therapeutic goal. Facilitators must check judgmental attitudes, the desire to probe for unnecessary information, and reflect on their own practice to check for shifts in personal attitude. Facilitators must use effective listening, communication and group facilitation skills, to effect the participants' healing opportunities.

Guidelines for group behaviour or group norms should be developed in consultation with the group. Confidentiality is stressed and personal expectations and fears explored. No person is ever coerced to speak. They can decline to say anything which is not uncommon in the early weeks. Invitations to speak may be met with responses that contribute new understandings and demonstrate to the rest of the group the value of sharing. In our groups some women sat silently for several months before they found the courage to speak about their experiences. Facilitators may make assumptions that people who are not speaking are not participating. However, we found that when women have had their voice dismissed for much of their life, speaking in public is a new skill. When groups are scheduled to take place over short time frames, such participants may never find their voice[65]. It is wrong to assume that silence indicates non-participation. People may be taking information from conversations and relating it to their own experiences. Group dialogue is optimal if one is to externalise a problem or issue, but dialogue cannot be forced, and its absence does not mean transformative change is not occurring in the thoughts of quieter participants[65].

Developing a Climate of Trust

Participants may feel unsure about safety and trust within the group. CSA survivors are sensitive and careful of how and what they say, because they knows it affects others. We found that the women judged our reactions to their story and used it as gauge to stop or continue on with the conversation. Confidence improves with thoughtful, respectful and caring responses from the facilitator. However the social dynamics of the group may mean they test one another for authenticity and safety before they entrust their story to the group. We found that women tested the conversation and shared limited information at first and then challenged the facilitator, to see how well she was listening and how she would respond [65]. Survivors of CSA have refined intuitive and observation skills and may quickly discern nonverbal signs and body language that demonstrates whether the facilitator is present, aware and listening or simply hearing. Based on these responses the participant may disclose, converse, challenge or not. When the interaction is unhelpful women lost confidence and trust, and may leave the group. The women said that they had left past group interactions feeling ‘broken’ and ‘disappointed’ so they had become careful about how much they would disclose.

Safe Disclosure in the Group

Intense feelings and deep emotions may surface when disclosing to others about experiences of CSA which may conspire to silence discussion and dissuade disclosure. Adult survivors of child sexual assault may speak of their experiences of being blamed, ridiculed or shunned when they tried to disclose as children [78, 79]. Consequently, survivors may avoid situations where they are required to disclose or report because they fear repercussions and can be overwhelmed by their intense emotions and feelings of guilt and shame[64]. Children may not have the language to describe what is happening to them and therefore they do not speak about their experiences. The silence continues as they get older because they did not speak out when they were younger [64]. Aannee Brown was 15 years of age when she

presented to a doctor, pregnant with her father's child as a result of ongoing sexual abuse over many years. She recalled being asked by the doctor 'With whom have you had sex?' but she had no idea what the words 'have sex' meant [80]. She had been kept isolated from other people, living in remote areas with no television so she had limited vocabulary to describe what was happening to her.

CSA survivors use protective defences learned in childhood such as denying, minimising, or dissociating to cope with their situation [65]. Thus acknowledging the impact of CSA and disclosing are difficult tasks that women seldom undertake unless they feel safe and ready, or they are specifically asked about CSA [81]. Fleming suggests embarrassment or shame (46%) are key reasons that women do not disclose, followed by the belief that the other person will not be able to help them (23%), or will blame or punish them (18%)[82]. The experiences of the women participants confirmed these findings and they added the need to feel listened to and to feel safe, as of equal importance [65]. Therefore the group needs to be a safe place where participants can begin to speak about feelings emotions and experiences that they may struggle to name. The key aim of the group is to structure a safe place to voice and listen to one another's life stories and unpack issues, because this is in itself healing [77, 83]. One woman said:

> I blocked out for years. Eventually, I found I couldn't communicate with anyone and when I wanted to it was like a block and there was no way of doing it. I thought no one really cared about me anyway, so I blocked the pain out again and I became an addict and took lots of drugs and smoked lots of marijuana thinking that was going to help… I would hardly talk when I was living here. Until I opened my mouth started to talk to someone about it I realized I had blocked out everything. Going back on it, I have been able to put a light on it. I was able to have a look at it and I can see now just how it has affected my whole life. I found it hard at first. [65]p. 74

About your Facilitation

Some experts suggest that the facilitator's role in group processes is one of helping people understand what they need to change and how they need to change it, but we disagree [84] [85]. Facilitators cannot assume to know what each person needs to change nor how they should proceed. On the contrary, we contend that each person is the author of their own story and only they will know what they can do to re-story their life. The role of facilitator is to be an active listener who can help people externalise their stories and locate in their stories points of strength from which they can build an alternate plot line to re-story their current situation. Facilitators may work with group members to uncover dominant narrative and their effects, and highlight alternate stories of resistance, posing questions to guide the participants' reflection. The facilitator cannot suppose to know exactly what needs changing, nor how the change can occur. The dialogue between group members will illuminate new understandings and the facilitator works to guide that dialogue without directing it. In so doing, each person chooses their own direction and maintains responsibility and autonomy over their outcomes. We view this as integral to promoting freedom and empowerment [65]. It reinforces to each group member that only they can choose appropriate actions. In our groups this was a revelatory experience for several participants who had been subjugated throughout their lives.

They discovered the freedom that came from being proactive, rather than reactive about their lives [64, 65].

The facilitator exposes contradictions and points of tension in the dominant story and the person's own story, highlighting possible action points. Such insights can be met with varied responses. They are welcomed, disregarded, ignored, or denied, but the choice to action remains with each participant. This may be frustrating as the following example from our project shows[65].

A participant was making strident personal growth in her understanding and had chosen to action positive life changes. She was reunited with her adult son and immediately reverted to her old pattern of responding to adversity by using drugs and alcohol, which necessitated her expulsion from her living situation so she returned to living on the streets. This incisive insight came from another group participant who said, '…her new ways are as wobbly as unset jelly, but her old ways are set in concrete. When she needs something solid in her life, her new way of living isn't secure enough yet, so she turns to the way she has managed in the past…'. Such insights generated in group dialogue underscore that everyone learns life-changing truths from participating in narrative group processes. The woman absented herself from the group for several meetings, but later returned and was welcomed back by the other members. She stayed for the remainder of the group process where she continued her recovery and healing. Facilitators may be disappointed when a member goes "backwards", but disappointment should not be expressed by disapproval or judgemental attitudes, because this will prevent the participants from returning to the group when they are ready. It is this acceptance that enables confidence to keep working at change[65].

People who have been hurt by others, particularly when there has been abuse and betrayal, have learnt not to trust people. This is how they survive. Therefore people who have CSA in their history may not be able to trust the facilitator or other group members for a long time and perhaps they will never trust completely. Facilitators can begin to build trust and safety by demonstrating attentiveness and care. The participants need to know they are going to be respected, accepted and that their privacy and confidentiality will be unequivocally respected. It can be difficult to hear the participant's story, especially when these stories stir deep emotions and feelings. It can become too difficult to listen to, but a compassionate space to be heard and believed is one of the most important things a facilitator can offer.

We found that the participants do not mind having the facilitator confront and challenge their responses and behaviours [65]. However this has to be done in a fair and responsive manner that enables the participant to frame their actions within the broader social context. They may not want to be challenged in a manner where they feel blamed, or where their integrity may be compromised. Being confronted gently and with compassion situates accountability where it belongs with the perpetrator/s. Such transparent conversations require the facilitator to enact very careful responses and questioning techniques.

Sometimes the participants need time to reflect on things and time to mull over possible courses of action. The facilitator should not cajole or coerce participation. Sometimes the person may not be ready to begin the process of exploration, nor be ready to talk about what happened. The participants' choices must be respected. When uncertain about the participants' needs, the best approach is to consult with them. It is important to gain permission to talk about what is happening, to talk about their feelings, or to ask them what sort of support they think might be most helpful for them now. It is not helpful when a facilitator assumes that they know what the participant needs better than that person does.

One aspect of group work that is most challenging is the management of unanticipated distress that some participants may experience in the group. The expression of emotions that accompany grief and loss leave a heavy sadness that can envelope the group and lead to despair. This sadness needs to be acknowledged and managed. It can be difficult to conclude meetings at such times and we found it useful to stop discussion when it became too difficult and instead spend time discussing the validity of safely expressing hurt feelings in the group. It seemed important to validate painful memories but not to let them overwhelm the person. We shared how we felt and what each person could do with those feelings before meetings closed. Often a woman would spontaneously get up from her seat to give a distressed participant a hug, or an affirming touch, or say something encouraging. At our earlier meetings we had discussed group norms around personal space and touch, because some women were uncomfortable about close touch, however, such spontaneous acts of compassion were helpful to the group process and were always met with acceptance from the hurting participant, and therefore we did not feel they were out of place in our group work [65]. At such times the availability of professional support and debrief opportunities was reiterated to the group.

It is important to recognise that when working with such sadness, facilitators may experience vicarious traumatisation [86, 87]. There is no doubt that hearing and thinking about the group members' stories can continue well after participants have left the group. It will help to have in place appropriate support and debriefing mechanisms and processes [88].

CONCLUSION

The prolonged suffering associated with child sexual abuse can be turned around. Understanding the impacts of the experiences and allowing someone to help with the healing journey presents a challenge to many people. They want to trust, and most want to reclaim their self-agency. Sharing their story, complete with the emotions, thoughts and feelings that are threaded around and through that story it requires supportive facilitation. When the person begins to unravel themselves from the binding feelings, they experience a freedom that is empowering and liberating. They may retell their story as it evolves over time. With each telling and each hearing they transform their suffering into breaths of life and the healing journey continues. It is for this reason that groups working with CSA survivors should be conducted by prepared facilitators who are sensitive and careful. The groups should be conducted over long time frames to enable trust to develop and time for participants to feel their pain, name it, face it, process it, reframe it and/or deal with it. Moving through the adversity of past CSA is possible and supportive groups are one very helpful way of achieving transition.

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REFERENCES

[1] Van Loon, A.M. and D. Kralik, *Final report - Capacity building with women survivors of child sexual abuse who have become homeless due to alcohol, drug or gambling addictions*. 2005c, Royal District Nursing Service Foundation Research Unit, Catherine House, Alcohol Education and Rehabilitation Foundation: Adelaide. http://www.rdns.org.au/research_unit/research_publications/CSA%20Final%20Report_Nov05.pdf

[2] James, M., Child abuse and neglect: Part one – redefining the issues., in *Trends and Issues Series No146.* 2000, Australian Institute of Criminology: Canberra.

[3] Layton, R., *Child protection review report: Our best investment: A state plan to protect and advance the interests of children.* 2003, Government of South Australia.: Adelaide.

[4] Mullighan, E., *Children in State Care: Commission of Inquiry Interim Report*, in *Interim Report*. 2005: Adelaide.

[5] Mullen, P.E. and J. Fleming, Long-term Effects of Child Sexual Abuse Issues, in *Issues in Child Abuse Prevention Number 9 Autumn1998* 1998, Australian Institute of Family Studies - Commonwealth of Australia . Canberra.

[6] Conte, J.R. and J.R. Schuerman, The effects of sexual abuse on children: a multidimensional view. *Journal of Interpersonal Violence*, 1987. 2: p. 380 - 390.

[7] Bebbington, P.E., et al., Psychosis, victimization and childhood disadvantage: Evidence from the second British National Survey of Psychiatric Morbidity. *British Journal of Psychiatry* 2004. 185 (September): p. 220-226.

[8] Beitchman, J.H., et al., A review of the short-term effects of child sexual abuse. *Child Abuse and Neglect*, 1991. 15(4): p. 537 - 556.

[9] Beitchman, J.H., et al., A review of the long-term effects of child sexual abuse. *Child Abuse and Neglect*, 1992. 16(1): p. 101 - 118.

[10] Briere, J.N., Child Abuse - the Lasting Effects: *Trauma and Treatment*. 1992, California: Sage.

[11] Browne, A. and D. Finkelhor, Impact of child sexual abuse: a review of the research. *Psychological Bulletin*, 1986. 99: p. 66 - 77.

[12] Bushnell, J.A., J.E. Wells, and M. Oakley-Browne, Long-term effects of intrafamilial sexual abuse in childhood. *Acta Psychiatrica Scandinavica*, 1992. 85(2): p. 136 - 142.

[13] Cole, P.M. and F.W. Putnam, Effect of incest on self and social functioning: a developmental psychopathology perspective. *Journal of Consulting and Clinical Psychology*, 1992. 60(2): p. 174 - 184.

[14] Bifulco, A., G.W. Brown, and Z. Adler, Early sexual abuse and clinical depression in adult life. *British Journal of Psychiatry*, 1991. 159: p. 115 - 122.

[15] Bryer, J.B., et al., Childhood sexual and physical abuse as factors in adult psychiatric illness. *American Journal of Psychiatry*, 1987. 144: p. 1426 - 1430.

[16] Elliot, D.M. and J. Briere, Post-traumatic stress associated with delayed recall of sexual abuse: a general population study. *Journal of Traumatic Stress*, 1995. 8: p. 629 - 647.

[17] Fergusson, D.M., M.T. Lynskey, and L.J. Horwood, Childhood sexual abuse and psychiatric disorders in young adulthood: Part I: The prevalence of sexual abuse and the factors associated with sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1996. 35(10): p. 1355 - 1365.

[18] Fergusson, D.M., L.J. Horwood, and M.T. Lynskey, Childhood sexual abuse and psychiatric disorders in young adulthood: Part II: Psychiatric outcomes of sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1996. 35(10): p. 1365 - 1374.

[19] Fullerton, C.S. and R.J. Ursano, *Posttraumatic Stress Disorder: Acute and long-term responses to trauma and disaster*. 1997, Washington D.C:: American Psychiatric Press Inc.

[20] Garnefski, N. and R.F. Diekstra, Child sexual abuse and emotional behavioural problems in adolesence: gender diferences. *Journal of American Academy of Child and Adolescent Psychiatry*, 1996. 36(3): p. 323-329.

[21] Kendler, K., Bulik, CM, Silberg, J. Hettema, JM., Myers, J. and Prescott, CA, Childhood sexual abuse and adult psychiatric and substance use disorders in women: An epidemiological and cotwin control analysis. *Archives of General Psychiatry*, 2000. 57(953-59).

[22] Macmillan, H., Fleming, JE, Streiner, DL, Lin, E, Boyle, MH, Jamieson, EK, Walsh, CA, Wong, MYY, and Beardslee, WR, Childhood abuse and lifetime psychopathology in a community sample. *American Journal of Psychiatry*, 2001. 158: p. 1878-83.

[23] Mullen, P.E., et al., Childhood sexual abuse and mental health in adult life. *British Journal of Psychiatry*, 1993. 163(12): p. 721 - 732.

[24] Eonseca, B.K. and S. Booth, Child Sexual Assault and the Prevalence of Sexually Transmitted Diseases. *Journal of Paediatrics & Child Health*, 1997. 33(4): p. 45.

[25] Kitzinger, J., Recalling the pain: incest survivors' experiences of obstetrics and gynaecology. *Nursing Times*, 1990. 86: p. 38-40.

[26] Mayer, L., The severely abused woman in obstetric and gynaecological care: Guidelines for recognition and management. *Journal of Reproductive Medicine*, 1995. 40(1): p. 13-18.

[27] Perry, B.D., Neurobiological sequelae of childhood trauma: post-traumatic stress disorders in children, in *Catecholamine function in post-traumatic stress disorder: emerging concepts*, M. Murburg, Editor. 1994, American Psychiatric Press: Washington, DC.

[28] Berry, R. and J. Sellman, Childhood Adversity in alcohol and drug dependent women presenting to outpatient treatment. *Drug and Alcohol Review*, 2001. 20(4): p. 361-37.

[29] Langeland, W. and W. van den Brink, Child sexual abuse and substance use disorders: role of psychiatric comorbidity. *British Journal of Psychiatry* October, 2004. 185: p. 353.

[30] Anderson, C. and K. Chiocchio, Chapter: The interface of homelessness, addictions and mental illness in the lives of trauma survivors, in *Sexual abuse in the lives of women diagnosed with serious mental illness. New directions in therapeutic interventions*, M. Harris and C. Landis, Editors. 1997. p. 21-37.

[31] Imbierowicz, K. and U.T. Egle, Childhood adversities in patients with fibromyalgia and somatoform pain disorder. *European Journal of Pain*, 2003. 7(2): p. 113-9.

[32] Miller, B.A., *Victimization and drug abuse: Gender, addiction and women*. 2000, Presented at Smithsonian Institute: Washington, D.C.

[33] Walton-Moss, B. and K. Becker, Women and Substance Use Disorders. Guidelines for the Evaluation of Sexual Abuse of Children: Subject Review. *Lippincott's Primary Care Practice Addictions*. May/June, 2000. 4(3): p. 290-301.

[34] Manhal-Baugus, M., The self-in-relation theory and women for sobriety: Female-specific theory and mutual help group for chemically dependent women. *Journal of Addictions and Offender Counseling*, 1998. 18(2): p. 78-83.

[35] Kingree, J.B., M.P. Thompson, and N.J. Kaslow, Risk factors for suicide attempts among low income women with a history of alcohol problems. *Addiction Behaviours*, 1999. 24(4): p. 583-87.

[36] Gladstone, G.L., et al., Implications of Childhood Trauma for Depressed Women: An Analysis of Pathways From Childhood Sexual Abuse to Deliberate Self-Harm and Revictimization. *American Journal of Psychiatry* August, 2004. 161(8): p. 1417-1425.

[37] Rokvic, D. Betrayal of trust: the experiences of adult women victim/ survivors of child sexual assault. in *8th Australian Institute of Family Studies Conference*. 2003. Melbourne: Australian Institute of Family Studies.

[38] Romans, S.E., Childhood sexual abuse: concerns and consequences. *Medical Journal of Australia*, 1997. 166(2): p. 59-60.

[39] Sadoff, R.L., From Child Sexual Abuse to Adult Sexual Risk: Trauma, Revictimization, and Intervention. *American Journal of Psychiatry* June, 2004. 161(6): p. 1142-1143.

[40] Alexander, P.C., The differential effects of abuse characteristics and attachment in the prediction of long-term effects of sexual abuse. *Journal of Interpersonal Violence*, 1993. 8: p. 346 - 362.

[41] Anderson, P. and National Aboriginal Community Controlled Health Organisation. Moving on: thinking about violence on Aboriginal communities. in *AMA Federal Conference*. 2002. Melbourne: World Rural Health 2002.

[42] Astbury, J., et al., The impact of domestic violence on individuals. *Medical Journal of Australia*, 2000. 173(8): p. 427-431.

[43] Andres-hyman, R.C., M.A. Cott, and S.N. Gold, Ethnicity and Sexual Orientation as PTSD Mitigators in Child Sexual Abuse Survivors. *[Article]. Journal of Family Violence* October, 2004. 19(5): p. 319-325.

[44] Attorney General's Department, *Young People and Domestic Violence: National research on young people's attitudes and experiences of domestic violence.* 2001, Commonwealth Government of Australia.: Canberra.

[45] Borrill, J.O., et al., Patterns of self-harm and attempted suicide among white and black/mixed race female prisoners. *Criminal Behaviour & Mental Health*, 2003. 13(4): p. 229-240.

[46] Cook, B.D., F. and Grant, A., Sexual violence in Australia, in *Research and Public Policy Series*. 2001, Australian Institute of Criminology: Canberra.

[47] Dal Grande, E., et al., Domestic Violence in South Australia: a population survey of males and females. *Australian and New Zealand Journal of Public Health*, 2003. 27(5): p. 477-576.

[48] Department of Indigenous Affairs, *Breaking the silence on sexual abuse: 'My body belongs to me': an awareness-raising project for Aboriginal communities*. 2002, Department of Indigenous Affairs.

[49] Kitzinger, J., Sexual Violence and Midwifery Practice, in *Challenges in Midwifery Care*, I.H. Kargar, SC, Editor. 1997, Macmillan.

[50] Mazza, D., et al., The physical, sexual and emotional violence history of middle-aged women: a community-based prevalence study. *Medical Journal of Australia*, 2001. 175(4): p. 199-201.

[51] The NSW Women's Refuge Movement and the Victorian Council to Homeless Persons, *Out of the Fire: Domestic Violence & Homelessness.* 2001, DVIRC, Domestic Violence & Incest Resource Centre: Melbourne.

[52] Wilson-Cohn, C., S.M. Strauss, and G.P. Falkin, The Relationship Between Partner Abuse and Substance Use Among Women Mandated to Drug Treatment. *Journal of Family Violence* March, 2002. 17(1): p. 91-105.

[53] Boyle, M., Men, Male Family Violence and Homelessness, in *Parity Issue Homeless Men: the Forgotten Homeless?* 2001.

[54] Martin, R. Is this homelessness? Women and children affected by domestic and family violence. in *3rd National Homelessness Conference 'Beyond the Divide'convened by the Australian Federation of Homelessness Organisations, 6-8 April 2003*. 2003. Brisbane: Department of Social Work and Social Policy, Curtin University of Technology.

[55] AIHW, *Homeless SAAP Clients with a Disability 2002-03*. 2005, *Australian Institute of Health and Welfare*: Canberra. p. 25.

[56] Chung, D., et al., *Home Safe Home*, in *WESNET report on links between DV and homelessness*. 2000, Social Policy Research Group, University of South Australia.: Adelaide, Australia.

[57] Tyler, K.A., et al., Self-Mutilation and Homeless Youth: The Role of Family Abuse, Street Experiences, and Mental Disorders. *Journal of Research on Adolescence December*, 2003. 13(4): p. 457-474.

[58] Brown, J., et al., Sexual Trajectories of Abused and Neglected Youths. [Article]. *Journal of Developmental & Behavioral Pediatrics* April, 2004. 25(2): p. 77-82.

[59] Einbender, A.J. and W.N. Friedrich, Psychological functioning and behaviour of sexually abused girls. *Journal of Consulting and Clinical Psychology*, 1989. 57(1): p. 155 - 157.

[60] Fergusson, D.M., L.J. Horwood, and M.T. Lynskey, Childhood sexual abuse, adolescent sexual behaviours and sexual revictimization. *Child Abuse and Neglect*. 1997. 21(8): p. 789 - 803.

[61] Hickie, I., Sexual Behavior: Problems and Management. *Psychological Medicine*, 1996. 26(6): p. 1287-88.

[62] Itzin, C., Incest, paedophilia, pornography, and prostitution: making familial males more visible as the abusers. *Child Abuse Review*, 2001. 10(1): p. 35-48.

[63] Nagy, S., R. DiClemente, and A.G. Adcock, *Adverse factors associated with forced sex among southern adolescent girls. Pediatrics*, 1995. 96(5): p. 944 - 946.

[64] Van Loon, A.M. and D. Kralik, Reclaiming Myself After Child Sexual Abuse. 2005b, Adelaide: Royal District Nursing Service Foundation Research Unit, Catherine House, Alcohol Education and Rehabilitation Foundation. *http://www.rdns.org.au/research_unit/documents/Reclaiming_Myself_Resource.pdf*

[65] Van Loon, A. and D. Kralik, Facilitating Transition After Child Sexual Abuse. 2005a, Adelaide: Royal District Nursing Service Foundation Research Unit, Catherine House,

Alcohol Education and Rehabilitation Foundation. *http://www.rdns.org.au/research_unit/documents/Facilitating_Transition_Resource.pdf*

[66] White, M. and D. Epston, *Narrative means to therapeutic ends*. 1990, New York: WW. Norton & Co.

[67] Nelson, H.L., *Damaged Identities, Narrative Repair*. 2001, Ithaca: Cornell University Press.

[68] Bauman, Z., *Liquid modernity*. 2000, London: Polity Press.

[69] Dulwich Centre, ed. *Working with the stores of women's lives*. 2001, Dulwich Centre Publications: Adelaide.

[70] White, M., *Re-Authoring Lives: Interviews & Essays*. 1995, Adelaide: Dulwich Centre Publications.

[71] Dulwich Centre, ed. *Responding to Violence: A collection of papers relating to child sexual abuse and violence in intimate relationships*. 2003, Dulwich Centre Publications: Adelaide.

[72] Frank, A., Why study people's stories? The dialogical ethics of narrative analysis. *International Journal of Qualitative Methods*, 2002. 1(1): p. Article 6. Retrieved from http://www.ualberta.ca/~ijqm/.

[73] Frank, A.W., Survivorship as Craft and Conviction: Reflections on Research in Progress. *Qualitative Health Research*, 2003. 13(2): p. 247-255.

[74] Stringer, E., *Action Research*. 1996, California: Sage Publications.

[75] Stringer, E. and W.J. Genet, *Action Research in Health*. 2004, New Jersey USA: Pearson Education Inc.

[76] Stringer, E.T., *Action Research 2nd Edition*. 1999, California: Sage Publications.

[77] Herman, J., Recovery from psychological trauma. *Psychiatry and Clinical Neurosciences*, 1997. 52(s5): p. 145-156.

[78] Scott, D., Walker, L. and Gilmore, K, *Breaking the Silence: A Guide to supporting adult victim/survivors of sexual assault.* 1995, Melbourne: Centre Against Sexual Assault, Royal Women's Hospital.

[79] Colton, G. and M. Grossman, *When a Child or Youth is Sexually Abused... A Guide for Youth, Parents and Caregivers. The Handbook*. 1997, Central Agencies Sexual Abuse Treatment Program's (CASAT): Ontario.

[80] Brown, A. and M. Young, *Beyond the Lies*. 2000, Townsville: Aaneee Brown Enterprises.

[81] Martin, J., et al., Asking about child sexual abuse: methodological implications of a two-stage survey. *Child Abuse Neglect*, 1993. 17(3): p. 383-392.

[82] Fleming, J.M., Prevalence of childhood sexual abuse in a community sample of Australian women 1997*; Medical Journal of Australia*, 1997. 166: p. 65-68.

[83] Silent Too Long, *Your Voices Inspire Mine*. Dulwich Centre Journal, 1998. 4.

[84] Meyer, J., Using qualitative methods in health related action research. *BMJ 2000*. 320(January): p. 178-181.

[85] Harvey, G.B., et al., Getting evidence into practice: the role and function of facilitation. [Miscellaneous Article]. *Journal of Advanced Nursing* March, 2002. 37(6): p. 577-588.

[86] Saakvitne, K.W. and L.A. Pearlman, *Trauma and the Therapist: Countertransference and Vicarious Traumatisation in Psychotherapy with Incest Survivors*. 1995, New York: W W Norton and Co.

[87] Etherington, K., Supervising counsellors who work with survivors of childhood sexual abuse. *Counselling Psychology Quarterly, 2000*. 13(4): p. 377-393.

[88] Freer, M. and S. Seymour, *The abyss of despair: South Australian Women's experiences of child sexual abuse*. 2003, Women's Health Statewide: Adelaide.

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Chapter 5

METHODS FOR INCORPORATING MEASURES OF CHILDHOOD SEXUAL ABUSE INTO GENETICALLY INFORMATIVE STUDIES OF PSYCHOPATHOLOGY

Arpana Agrawal*, Vivia V. McCutcheon, Alexis E. Duncan and Carolyn E. Sartor
Washington University School of Medicine, Dept. of Psychiatry, 660 S. Euclid, #8134, St. Louis, MO 63110, USA

ABSTRACT

Childhood sexual abuse (CSA) is associated with childhood and adult-onset psychopathology. We describe some methods of incorporating CSA in twin and molecular genetic studies of psychopathology, drawing from the existing literature and posing future methodological avenues. The classical twin method, using monozygotic (MZ) and dizygotic (DZ) twin data partitions individual differences into genetic, twin-shared and individual-specific environmental influences. Within this context, we discuss methods for examining the environmental overlap between CSA and psychopathology and for measuring whether heritable influences on psychopathology vary across individuals exposed and not exposed to CSA. We also review findings from cotwin-control studies, which allow control for familial background, where authors have demonstrated that the member of a twin pair who has experienced CSA is significantly more likely to also report other psychopathology, when compared to their unexposed cotwin. In addition to methods for assessing unmeasured genotype x measured environmental interactions using twin moderator models, tests of measured genotype x measured environment interaction, with childhood maltreatment as the environmental component, which have underscored the possible role of genotype (e.g. in the monoamine oxidase A gene) on the association between CSA and psychopathology, are also

* Corresponding author: Phone: (314)-286-1778; Fax: (314)-286-2213; Email: arpana@wustl.edu

discussed, along with their strengths and caveats. Avenues for future research, including the study of epigenetic change and refinement of measures of CSA are presented.

INTRODUCTION

1. Background

Ever since the publication of "The Correlation Between Relatives on the Supposition of Mendelian Inheritance" [1] by geneticist and statistician, Ronald Fisher, in 1918, epidemiology has been revolutionized by the ability of investigators to disentangle the extent to which biological and environmental factors act independently and interactively to shape population variation in complex traits. Even now, in the postgenomic era, where we have progressed from parsing unmeasured genetic variance to the composite effects of multiple genes, the analytic toolkit for the examination of the influence of genotype on phenotype is largely inspired by that seminal work by Fisher and by that of Sewall Wright [2]. Our essay on genetic methodology for the study childhood sexual abuse (CSA) and its interactions with psychopathology that follow polygenic inheritance (e.g. major depression or alcoholism), is but a homage to the creative intellects that have introduced these elegant methods to us. It is impossible to encompass the wisdom of Fisher, Wright, and other luminaries, such as Kenneth Mather [3], John Jinks [4], Luigi Luca Cavalli-Sforza [5], Lindon Eaves [6], Kenneth Kendler [7] and Andrew Heath [8], to name but a few, in such a brief report. We, thus, encourage interested readers to refer to these fine works for further pedagogic discussion and to an excellent textbook by Neale and Cardon [9] for detailed lessons on the methods presented here.

The present review focuses on several existing and emerging methods that examine the impact of exposure to CSA on the development of psychopathology. The phenotypes (meaning: *observed characteristics of underlying vulnerability*) investigated here are non-Mendelian (or, complex) – that is, they are not *caused* by the exclusive action of a single gene [9]. In fact, these measures of psychopathology are multi-factorial (meaning: *influenced by genotype and environment*) and polygenic (meaning: *shaped by the action and interaction of several genes of small effect).* And while the current evidence supports a purely environmental basis for individual differences in CSA, there is considerable support that these environmental predictors and correlates are heterogeneous.

2. Why Study Childhood Sexual Abuse?

A challenge of a review of methodology is the fine balance between concept and substantive implication. The aim of this review is to present a panoramic view of genetically informative techniques available to investigators studying the relationship between CSA and psychopathology, and thus this review weighs heavily in methodology. This should, in no way, detract from our overarching goal: to provide insights that clinicians may utilize in their care of adolescents and young adults exposed to CSA and eventually alleviate the morbidity due to exposure to such traumatic life events. We focus here on whether the etiologic

pathways to psychopathology (e.g. depression) vary in those exposed to CSA versus those who have not experienced this trauma. In essence: *Do the genetic and environmental factors influencing risk for psychopathology act (or interact) differently in those reporting a history of CSA?*

3. Why Use a "Genetically Informative" Approach?

Given that there is no evidence for a "genetic" liability to CSA, one may question the need for genetically informative methods. There are two justifications for this. First, genetic epidemiology, especially when using twin pairs, is a highly informative method for the study of environment. For instance, monozygotic twin pairs (identical, for the most part, for genetic background) afford a convincing design for the study of a purely environmental association between CSA and psychopathology, after accounting for familial resemblance. Second, genotype rarely operates in isolation from the environment. Hence, CSA as an environmental measure may mediate or moderate the impact of genotype on psychopathology, and genotype itself may mediate or moderate the association between CSA and psychopathology. Overall, utilizing genetically informative methods provides a considerable increase in understanding the putative mechanisms contributing to observed correlations between CSA and psychopathology.

CSA IN FAMILY AND TWIN STUDIES

1. Heritability and Environment

Family-based data are traditionally used to determine the extent to which familial and individual-specific factors shape a behavior. Certain behaviors, such as major depressive disorder (MDD), tend to cluster within families – that is to say, that the likelihood of an individual with MDD having other family members with MDD is greater than the likelihood of such clustering in family members of an individual without MDD [10;11]. This aggregation may be due to the genetic background shared by these family members or due to the environment that they receive or perceive similarly; however, it is most likely a combination of both. In order to disentangle these influences from each other, one may utilize modified family designs, such as the adoption design, (adoptees, their biological and adoptive parents), or, as is more commonly done, a twin study of monozygotic (MZ) and dizygotic (DZ) twin pairs. In the adoption design, similarity in a behavior between offspring and their biological parents (with whom they share approximately 50% of their genes, but from whom they are separated from at birth) may be attributed to biological factors, while similarities between adoptees and adoptive parents (to whom the adoptees, presumably, bear no genetic similarity) are due to the rearing environment. Perhaps the most notable limitation of the adoption design is placement bias, whereby adoptive parents are not selected from a population at random, and thus may have a genetic background that overlaps with the adoptees. This, and the legislation surrounding access to adoption records, diminish the feasibility and generalizability of adoption studies. Hence, utilization of twin data is a

common practice for distinguishing the role of genetic versus familial environment (in addition to individual-specific environmental factors) on the etiology of a trait. At its simplest, the twin design requires MZ and DZ twins. Usually, MZ twins share 100% of their genetic makeup while DZ twins share only 50% of their genes. If it is assumed that the only other source of similarity between MZ and DZ pairs is a "twin" environment, which is uniformly shared at 100% between both types of twin pairs, then MZ-DZ correlations for a behavior may be decomposed into genetic, twin-environmental and individual-specific environmental (by definition, uncorrelated across members of either twin pair) factors. For instance, if the correlations for MZ and DZ twin pairs for MDD are 0.50 and 0.30 respectively, then we surmise that genetic factors contribute to 40% of the individual differences in MDD, while the twin-environment contributes to 10% of the variance of MDD.[1] The proportion of the total variance in a behavior attributable to genetic factors is termed heritability (or broad heritability).

The estimates of heritability from the basic twin model, as described above, are specific to the given population. Therefore, we might expect differences in sub-groups – we may hypothesize that CSA mediates and/or moderates the impact of genetic and environmental influences on psychopathology such that the heritability of MDD differs in individuals based on their exposure to CSA. There are several approaches currently available to test this proposition, including multivariate twin models, multiple-group twin models and the case-control twin design. To describe these methods and their similarities and differences, we apply them to the hypothesis that exposure to CSA is associated with an increased risk for adult-onset MDD.

2. Methods for the Study of Covariance

2.1. Bivariate Model

Variation in CSA is due to twin-environment and individual-specific environmental factors. In other words, if we were to compare MZ-DZ correlations for CSA, we might find that DZ pairs are nearly as similar as MZ pairs for CSA. Dinwiddie et al (2000), found evidence for familial (63%) and individual-specific (37%) environmental factors on risk for CSA in women and no evidence for heritable influences on CSA. Due to the lack of MZ male twin pairs concordant for abuse, this study was unable to report on individual differences in CSA reports in men [12].The multivariate twin model allows us to test the sources (genetic, twin-environmental or individual-specific environmental) contributing to covariance across CSA and psychopathology, such as MDD to determine the extent to which the association between MDD and CSA is due to common features of the twin or individual-specific environment. Using information on the correlation between CSA and MDD in members of MZ versus DZ twin pairs (cross-twin cross-trait correlations), we can fit a model where the

[1] Let genetic factors be denoted by "A" and twin-environment by "C". The MZ similarity, as indexed by the correlation of 0.50 is due to A+C, while the DZ similarity of 0.30 is due to 0.5A+C. On solving these equations simultaneously, we get: 0.5A=(0.50-0.30) or A=0.40, and then, 0.40+C=0.50 or C=0.10. As correlations are standardized estimates of covariance, A+C+E=1, where E includes individual-specific environmental factors and measurement error. Therefore, A+C+E=1, and E=0.50. Hence, the heritability of MDD is 40%, with individual-specific environment explaining 50% of the variance. Note that this is a crude assessment of heritability as it relies on observed correlations.

twin-environmental factors contributing to CSA and MDD can be decomposed into trait-specific versus overlapping influences.[2] Such a model may reveal, for instance, that a significant proportion of the modest twin-environmental influence on MDD is shared with those twin-environmental factors that influence CSA. In general, this would suggest that there exist familial influences, such as risky neighborhoods, that contribute to increased risk for CSA and predispose individuals to subsequent MDD. To our knowledge, no published twin studies have utilized the multivariate twin model to build on existing epidemiological evidence for a robust association between CSA and psychopathology, especially MDD, generalized anxiety disorder, panic disorder (Table 1, Bulik et al, 2001) [13] or suicidality (Table 1, Statham et al., 1998) [14].

Table 1. Table of representative CSA studies using genetically-informative samples, by year of publication

Study	Sample	CSA/Maltreatment measure	Key Findings
Statham, Heath, et al., 1998	Australian Twin Register, N=5995 (males and females)	Single question about forced sexual activity before age 18	For women and men, CSA has association with suicidal thoughts and attempts independent of familial effects and psychiatric history
Dinwiddie, Heath, et al., 2000	Australian Twin Register, N=5995 (males and females)	Single question about forced sexual activity before age 18	CSA associated with alcohol abuse and dependence, major depression, panic disorder, conduct disorder, suicidal ideation and attempt in men and women. Genetic models showed evidence for shared familial effects on CSA. No evidence for genetic influence on risk for CSA.
Kendler, Bulik, et al., 2000	Virginia Twin Registry, N=1411 female twins	Hierarchical categories CSA: (1) nongenital =sexual invitation, kissing, exposing; (2) genital but no intercourse = fondling and sexual touching, (3) intercourse	Any CSA associated with major depression, generalized anxiety disorder, panic disorder, alcohol dependence, drug dependence. Nongenital CSA associated only with alcohol and drug dependence. Genital CSA associated with major depression, generalized anxiety disorder, alcohol dependence, drug dependence. Intercourse associated with all outcomes. Controlling for family background factors and for parental psychopathology attenuated most associations.

[2] Such a model is a "Cholesky" or triangular decomposition model. A, C and E are parameterized as A_{11}, C_{11} and E_{11} for CSA, A_{21}, C_{21} and E_{21} for the impact of genetic and environmental factor influencing CSA and MDD (where A_{21} would be constrained to zero, since A_{11} is zero) and A_{22}, C_{22} and E_{22} for those influences on MDD not shared with CSA. If correlations between CSA and MDD across members of MZ and DZ twin pairs are approximately equivalent, we would expect C_{21} to be highly significant while C_{22} would approach zero.

Table 1. Continued

Study	Sample	CSA/Maltreatment measure	Key Findings
Bulik, Prescott, & Kendler, 2001	Virginia Twin Registry, N=412, female twins	(1) features of CSA including age at abuse; number, gender, and age of perpetrators, use of force or threats (2) co-twin report of twin CSA	Elevated risk for all disorders (major depression, generalized anxiety disorder, bulimia nervosa, panic disorder, alcohol dependence, drug dependence) from attempted or completed intercourse vs. other forms CSA; abuse by relative vs. non-relative or stranger; use of force or threats; how affected victim was at the time; negative response if told someone. Protective effect if reporting stopped the abuse.
Nelson, Heath, et al., 2002	Australian Twin Register, N=1991, males and females	Composite variable based on positive response to any one of 5 items about rape, molestation, forced sexual acitivity inside and outside family during childhood and adolesence	CSA associated with major depression, suicide attempt, conduct disorder, alcohol dependence, nicotine dependence, social anxiety, rape after age 17, divorce. Associations maintained after controlling for family background factors. Highest risk with intercourse.
*Caspi, Sugden et al., 2003	Dunedin Multidisciplinary Health and Development Study N= 1037 (males and females)	Unwanted genital contact or attempted or completed intercourse before age 11. Collapsed into a composite childhood maltreatment score for ages 3-11 which included harsh discipline, physical abuse.	Childhood maltreatment predicted depression in individuals with a short allele (s/s, s/l) of 5-HTTLPR (serotonin transporter genes) but not in those without a short allele (l/l).
Kendler, Kuhn, & Prescott, 2004	Virginia Twin Registry, N=1404 females	CSA hierarchical categories (1) no CSA, (2) non-genital CSA, (3) genital CSA (genital contact but no intercourse), (4) intercourse. 2=mild, 3=moderate, 4=severe	No difference between mild & moderate CSA on risk for depression onset. CSA has associations with depression onset independent of measure of neuroticism. Women with CSA histories more sensitive to stress than women with no CSA history; most severe form of CSA associated with highest stress sensitivity.

Table 1. Continued

Study	Sample	CSA/Maltreatment measure	Key Findings
*Kaufman, Yang et al., 2004	Children drawn from larger study examining effects trauma on children over time and evaluation of a state-run intervention for children removed from their homes. N=101 children aged 5-15	Maltreatment history & severity (5 maltreatment types: physical or sexual abuse, neglect, emotional abuse, exposure to domestic violence)	Compared to matched community controls, maltreated children had higher rates mood disorders, less frequent contact with their primary social support person. Maltreated children with two short alleles had highest depression scores. Social support moderated the risk for depression associated with the short allele and stressful life events.
*Kaufman, Yang et al., 2006	Same as Kaufman, Yang et al., 2004 N=196 boys and girls, aged 5-15.	Same as Kaufman, Yang et al., 2004	Compared to matched community controls, maltreated children had higher rates mood disorders, posttaumatic stress disorder. Social support moderated risk for depression in maltreated children with the most vulnerable genotype.
Nelson, Heath et al., 2006	Australian Twin Register, N=6050	composite variable based on positive response to any one of 5 items about rape, molestation, forced sexual acitivity inside and outside family during childhood and adolesence	CSA associated with use of licit and illicit drugs and with drug-related disorders. CSA associated with earlier age at first use of nicotine, alcohol, cannabis, opioids, stimulants
Kaufman, Yang et al., 2007	Same as Kaufman, Yang et al., 2004 N=127 boys and girls aged 8-16	Maltreatment history & severity (5 maltreatment types: physical or sexual abuse, neglect, emotional abuse, exposure to domestic violence)	Compared to matched community controls, maltreated children had higher rates mood disorders, posttraumatic stress disorder, oppositional-defiant disorder, conduct disorder, more likely to have used alcohol, to have gotten drunk, more likely to smoke. Maltreated children began using alcohol 2 years earlier on average (age 11 vs 13), 9% reported weekly intoxication. Maltreated children with a short and long allele on the 5HTT gene had the greatest risk for early alcohol use. Sexual abuse severity was associated with early alcohol use
Sartor, Lynskey, et al., 2007	Missouri Adolescent Female Twin Study N=3536 female twins	Endorsement of rape or molestation or forced sexual contact inside and outside family before age 16	CSA associated with alcohol use and alcohol dependence. CSA predicted earlier age at first use of alcohol, but did not predict a more rapid progression from first alcohol use to alcohol dependence.

* Indicates study examined a measured genotype.

2.2. Multiple-group Twin Model

The multivariate model can detect the extent of common and specific influences on MDD and CSA, but cannot estimate variations in the sources of individual differences in MDD itself, in those with and without CSA. For instance, does MDD represent a more or less heritable trait in those with a history of CSA? This is equivalent to testing an unmeasured genotype (the latent genetic influences on MDD) by measured environment (i.e. CSA exposure) interaction or for the moderating effects of CSA on the heritability of MDD. It is important here to first account for mediating effects (or for gene-environment correlation; i.e. is MDD more or less prevalent in those with a history of CSA?). With this control in a twin model,[3] we can attempt to model the heritability of MDD in three groups of MZ and DZ twin pairs: pairs concordant for CSA (i.e. both twins exposed), pairs concordant for no CSA (i.e. neither twin exposed) and pairs discordant for CSA (i.e. one twin exposed). We can then test whether upon exposure to a potent environmental stressor, such as CSA, MDD is more "environmental" in nature (i.e. heritability in CSA-concordant twins is zero), whereas, in unexposed twins, there is evidence for heritable influences on MDD. If this were the case, we could suggest that CSA moderates the extent to which latent genetic factors influence an individual's predisposition to MDD. Again, we are not aware of any published studies that employed the multiple-group approach to examine whether exposure to CSA moderates the variation in important correlates, such as MDD and substance use problems.

2.3. Case-control Twin Model

Perhaps the most intriguing pairs of twins are the MZ and DZ twin pairs discordant for CSA exposure – i.e. one twin reports experiencing CSA while their co-twin does not. The risk for psychopathology and substance use problems can then be estimated in the exposed twin and compared to their unexposed counterpart. This method, called cotwin (or case)-control or discordant twin, or a fixed effects model affords a powerful match for familial aggregation of risk. Compared to a random sample of unrelated individuals, MZ twins are matched for genetic and twin-environmental attributes, while DZ twins are matched 50% for genetic liability and 100% for twin-environment. Utilizing this gradation of matching, we can compare the odds of, say, MDD in pairs of MZ and DZ twins discordant for CSA exposure.[4] If the exposed twin is at no increased risk for MDD, we may posit that the association between CSA and MDD is entirely mediated by familial risk factors (e.g. risky home environment) that jointly contribute to risk for CSA and MDD. In contrast, if there is evidence for increased risk of MDD in twins exposed to CSA when compared to their unexposed co-twins, then we may hypothesize that exposure to CSA exerts an influence on MDD that extends beyond common familial background. This is especially true if there is evidence for increased risk in discordant MZ pairs, who are matched for all influences save individual-specific environmental factors.

By far, the case-control twin model has been the most popular multivariate technique employed to investigate the association between CSA exposure and psychopathology. As reviewed in Table 1, four independent studies using adult Australian twins found increased risk for suicidal thoughts and attempts, MDD, conduct disorder, alcohol or nicotine

[3] Achieved by allowing the threshold (parameterization of prevalence for categorical traits) or mean (a continuous measure of MDD, e.g. symptom count) to vary in CSA-exposed and CSA-unexposed twin pairs.

[4] $\text{logit}_{exp}\text{-logit}_{unexp}$ = odds-ratio = $[\log (p/1\text{-}p)]_{exp} - [\log (p/1\text{-}p)]_{unexp}$

dependence, social phobia, divorce and rape after age 18[12;14-16] in the twin exposed to CSA when compared to their unexposed co-twin. In two related studies drawing data from the Virginia Twin Study, authors demonstrated that CSA was associated with MDD, anxiety disorders, bulimia nervosa, and especially with alcohol and drug dependence[17;18].

Twin studies clearly find robust evidence for the association between CSA exposure and a lifetime history of mental health and substance-related problems as well as of experiencing stressful life-events in adulthood via direct and indirect pathways. For the latter, Kendler and colleagues report that women with a prior history of CSA are most sensitive to the depressogenic effects of stressful life events, and that this relationship is moderately dose-dependent (i.e. more severe CSA predicts greater sensitivity) [18]. They also note that neuroticism interactively modified the risk attributable to CSA. This begs the question: does CSA (either directly, or in conjunction with aspects of personality) influence the action of genes that impact mental health and substance-related problems or does it modify the environmental substrate in which these disorders evolve? In other words, is the relationship between CSA, which is a putative environmental risk factor, and psychopathology, a genotype x environment interaction or an environment x environment interaction?

2.4. Gene-environment Interactions

Reflecting on the literature surrounding the former (i.e. G x E), Kendler and colleagues proposed that stress (such as, CSA) and diathesis (or vulnerability to psychopathology, such as MDD) interact such that the impact of stressful life-events, such as CSA, in predicting onset of MDD, is greatest in an MZ twin who is exposed to the event and whose co-twin meets criteria for a lifetime history of MDD [19]. Recent studies, however, have moved beyond genetic liability to investigate whether the association between specific genes and a specific disorder varies with exposure to CSA or whether genes mediate the association between CSA and subsequent mental health problems.

Exploration of gene-environment interactions provides a means of testing hypotheses about why children exposed to early abuse have different outcomes. Why do some children go on to have fairly normal adult lives, while others are beset with various forms of psychopathology and social maladjustment? The study of gene-environment interactions in humans is relatively new, but G x E effects have been observed in animal models for some time. Use of targeted and well-measured environmental variables is key. As opposed to attributing variance into broad “genetic” and “environmental” components, as in many studies of heritability, studies of G x E require carefully targeted, specific measures of environment. Childhood sexual abuse can be one such measure. The measurement and scaling of CSA variables can contribute to the statistical power necessary to detect G x E interactions. Several studies that have detected such interactions have used childhood maltreatment variables that include reports of childhood sexual or physical abuse, neglect, emotional maltreatment, or exposure to domestic violence[20-22].

CSA IN GENE ASSOCIATION STUDIES

A gene association study is used to examine whether measured genotype explains a significant proportion of variance in a complex phenotype. Genotype is often measured as a

single nucleotide polymorphism (a SNP, meaning: *a change in a single base-pair in a stretch of DNA, eg. Base 'A' to 'T')* which may be functional (meaning: *cause a change in the amino acid coded by the configuration of 3 base-pairs)*. There are multiple approaches to association studies, that can be broadly categorized as exploratory (e.g. a *genomewide* search for polymorphisms from known and unknown genes) or confirmatory (e.g. examining SNPs in a *candidate gene* of proposed biological relevance). Samples for association studies may consist of related individuals (*family-based*, parents with affected offspring in the simplest case) or unrelated individuals (*cases and controls*, or individuals from the population). The literature surrounding the role of CSA (broadly encompassed by the construct of childhood maltreatment/abuse) and genotype associated with psychopathology has largely utilized *candidate genes* in *cases and controls*. The basic statistic from such a study then is a chi-square test for association.[5] When examining whether a covariate, such as CSA, interacts with genotype to predict risk for psychopathology, the chi-square test of association can simply be extended to a logistic regression[6] or a linear regression when predicting a continuous outcome. One of the first studies to demonstrate the controversial association between a candidate gene, the monoamine oxidase A (*MAOA*, on the X chromosome), and childhood maltreatment found that they independently and interactively predict symptoms of antisocial personality problems in boys. In that study Caspi and colleagues used a functional polymorphism which modulated MAOA activity [23]. This polymorphism was not due to a single base-pair change, but instead was coded by a variable number tandem repeat (VNTR, meaning: a short stretch of nucelotides that are repeated, in tandem, a variable number of times) in the gene promoter. The authors reported that the level of MAOA activity itself was not associated with antisocial problems. However, childhood maltreatment, which included unwanted sexual contact before age 11, independently, and interactively with genotype, predicted antisocial problems. Thus, maltreated boys with the genotype that increases MAOA expression were less likely to report antisocial problems than their counterparts reporting maltreatment but with the low activity MAOA allele [23-25]

A similar hypothesis has focused on the interaction between stressful or adverse life events and a functional length polymorphism in the promoter of the serotonin transporter gene (*5-HTTLPR*) which predicts risk for major depressive disorder [26-28]. Caspi and colleagues (2002) demonstrated that stressful life events (not including CSA) predicted a lifetime history of depressive symptoms, depression and suicidality, with greater likelihood in those with one or more copies of the short allele (l/s or s/s) than in those with two copies of the long allele (l/l) [26]. In an extension of that study by Kaufman and colleagues, the effects of maltreatment (defined as physical or sexual abuse, neglect, emotional abuse, or exposure to domestic violence), of genotype (l/l, l/s, or s/s), and of social support (child's frequency of

[5] Let genotype for a certain SNP be AA (homozygous for major/more common allele), aa (homozygous for minor/rarer allele) and Aa (heterozygous). To test the hypothesis of whether having one or more copies of the minor/rare allele is associated with being affected (or a case) versus unaffected (or a control), we compare the observed frequency of cases and controls with genotype "AA" and cases and controls with genotype "Aa/aa". Under the null hypothesis of no association between phenotype and genotype, there is an equal probability that a case and control is AA or Aa/aa. Therefore, the chi-square test of association is the square of the difference between the observed and the expected probability of observing a genotype given a phenotype divided by the expected probability. The degrees of freedom is n-1, where n is the largest number of categories for any one measure (i.e. n-1=1 when genotype is AA vs. Aa/aa, and n-1=2 when genotype is AA vs. Aa vs. aa).

[6] The equation is case (affected) = $\beta 1$*genotype + $\beta 2$*CSA + $\beta 3$*genotype*CSA + ε (residual). If genotype interacts with CSA to predict case-status, then $\beta 3$ should be significant.

contact with the person who provides the most support) on risk for depression were examined [21]. Maltreatment, the s/s genotype, and low levels of social support each predicted higher depression scores in children, and maltreated children with the s/s genotype had the highest depression scores. When comparing the scores of the children at highest risk both genetically (s/s genotype) and socially (low social support) across maltreatment groups, the scores of the maltreated children were twice as high as the scores of the non-maltreated children. However, maltreated children who had an s allele (higher genetic risk) but who had at least monthly contact with their primary support person had lower depression scores than maltreated children with the same genotype who had less frequent contact with their primary social support person [21]. The results suggest that the availability and frequency of social support can promote resiliency even among children who possess a high genetic vulnerability to depression and who experience childhood adversity [21]. This represents an intriguing interaction of two related environmental measures (maltreatment and social support) with divergent effects in which maltreatment positively predicts depression and social support negatively predicts depression and both interact with genotype to modulate risk for depression.

CHALLENGES AND SOME FUTURE DIRECTIONS

Studies of latent and measured genotype suggest that the association between CSA and psychopathology is complex. Certainly, there is evidence for genotype x environment interactions (e.g. children with a particular genotype are more responsive to the effects of stress than children with a less susceptible genotype), but also for *genotype x environment correlations* (r_{GE}), which can confound the observed G x E interactions. Using the example of childhood maltreatment and later antisocial problems, one may postulate that exposure to maltreatment during childhood is strongly correlated with having parents with antisocial personality traits who are abusive. Given familial clustering for antisocial traits, the emergence of antisocial behavior in maltreated children may be influenced not just by exposure to maltreatment but also by heritable influences on antisocial behavior transmitted from parents to offspring. This is termed passive gene-environment correlation, and other forms (e.g. evocative r_{GE}) also may come into play. Kim-Cohen et al., for instance, found that the risk for violent behavior in maltreated children with the low activity *MAOA* allele persisted even after controlling for maternal history of antisocial behavior [29]. Therefore, while it is likely that r_{GE} does not entirely explain the association between CSA and psychopathology, it is vital to account for it in genetic studies.

Evidence of association of CSA with psychopathology from twin and general population studies, combined with measurable physiological alterations that can increase vulnerability to mental disorder, make CSA a plausible environmental pathogen for use in studies of G x E interaction [30]. Because testing for G x E effects requires more power than simple main effects, an important consideration in G x E studies is *measurement*. This involves refinement of assessments of CSA, with respect to (a) age-of –onset; (b) chronicity; (c) intra or extra-familial perpetrators; (d) specific form of CSA and (e) rater differences.

(a) There is growing evidence that earlier onset of CSA may be potent correlate of subsequent psychopathology. The greater plasticity of developmental systems, like the brain or the stress response system in early childhood, make them greatly susceptible to the potency of an environmental insult like CSA. The childhood maltreatment variable emerging from the Dunedin Multidisciplinary Health and Development Study collapsed childhood sexual abuse into the broader category of childhood maltreatment from age 3 to 11, in an attempt to increase the power to detect gene-environment interactions. However, epidemiological studies suggest that adequately powered samples may wish to consider the impact of early-onset CSA [13].
(b) The chronicity of the abuse (e.g. how many times experienced abuse) and whether it persisted despite informing someone may also yield predictive value over and above that afforded by a dichotomous measure of CSA.
(c) Bulik et al., point out that individuals reporting CSA where the perpetrator is a relative are 1.7 times more likely to report a lifetime history of MDD when compared to those reporting CSA from a non-related perpetrator [13].
(d) Kendler and colleagues, for instance, have shown that a gradient of risk attributable to CSA exists with respect to the extent of contact (e.g. nongenital vs. genital vs. intercourse), even though evidence for statistical differences between these levels of CSA may not be significant [17].Where data and sample sizes permit, investigators may wish to tease apart the specific forms of CSA. Other aspects of the experience, such as perceived stress at the time of exposure and whether the incident was accompanied with force or a threat have also been found by Bulik and colleagues to afford some ability to classify a gradient of severity of exposure[13].
(e) Finally, Kendler et al have reported only modest concordance between twin and co-twin reports of CSA, suggesting that multiple-informant ratings, when available, may provide insights into the reliability of existing assessments of CSA.

There are several advancements that can be made to existing measures of CSA, which are often dichotomous. The challenges to these extensions of measurement are two-fold: First, the prevalence of CSA is modest and using definitions that are not dichotomous may, in certain samples, detract from our ability to detect effects. Second, and more importantly, participants in twin and genomic studies, may experience growing discomfort when asked to recount their experience of CSA in significant detail [31].

Finally, future studies may also wish to consider the role that traumatic events, such as CSA, play in epigenetic modifications of DNA.[7] Studies in this area have focused on animal models where rearing behavior has been shown to contribute to change in methylation of DNA, an epigenetic modification, which directly impacts gene expression [32; see 33 for a review]. Un-methylated DNA is not tightly bound to its core of histones through electrostatic bonds, and hence is open to the binding of transcription factors that facilitate gene expression.

[7] An epigenetic modification is a change that occurs not in the underlying sequence of DNA but instead, occurs during cellular differentiation, i.e. a structural change in the DNA. An example is structural changes that loosen the electrostatic bonds between DNA and a core of proteins, known as histones, around which DNA is tightly wound. Histone deacetylases are attracted to methylated DNA – they consequently silence gene expression. Histone acetylases have an affinity for hypomethylated DNA, which is loosely bound to histone, and thus facilitate binding of transcription factors to DNA and induce expression.

In animal studies, maternal care has been associated with hypo-methylation of DNA and thus, gene expression. Cross-fostering has been shown to reverse these effects, thus demonstrating the epigenetic basis to this association. Clearly, such experiments are not feasible in the human paradigm, but studies of the incidence of epigenetic change in children exposed to varying levels of CSA may provide an initial start to extensions of these studies.

IMPLICATIONS

The study of CSA within genetically-informative designs can help to inform clinicians about how best to approach treatment with clients who have histories of CSA. A study of treatment outcome among patients with chronic depression found that patients with histories of early abuse, including CSA, responded better to psychotherapy than to antidepressant treatment, unlike those with no history of abuse, who responded equally well to either treatment [34]. Findings such as these, in combination with genetically-informative studies such as those described above, can provide valuable information to help tailor treatments to the individual based on genetic and environmental vulnerabilities. While genotyping in the clinical context is not commonplace, knowledge of a client's family history of disorder, for example depression, and knowledge of the findings from twin designs and other genetically-informative studies, can help guide decisions about whether pharmacotherapy, psychotherapy, or their combination should be the first treatment approach.

CONCLUSION

CSA is associated with psychopathology [35-47] via mechanisms that involve genotypic vulnerability and as a purely environmental correlate. We conclude that biological vulnerability to psychopathology is an important moderator of the risk posed by an environmental measure like CSA and psychopathology, thus making some individuals more susceptible to the prolonged effects of this trauma. Given the robust phenotypic associations between CSA and these aspects of psychopathology, future studies of genes and environment should include CSA as a key covariate in their repertoire of measures.

REFERENCES

[1] Fisher RA. The correlation between relatives on the supposition of Mendelian inheritance. *Transactions of the Royal Society of Edinburgh.* 1918;52:399-433.

[2] Wright S. Correlation and causation. *Journal of Agricultural Research. 1*921;20:557-585.

[3] Mather K, Jinks J. *Biometrical Genetics: The Study of Continuous Variation*. London: Chapman and Hall; 1982.

[4] Jinks JL, Fulker DW. Comparison of the biometrical genetical, MAVA, and classical approaches to the analysis of human behavior. *Psychol Bull.* 1970;73:311-49.

[5] Cavalli-Sforza LL, Feldman M. *Cultural transmission and evolution: A quantitative approach.* Princeton: Princeton University; 1981.
[6] Eaves LJ, Last K, Martin NG, Jinks J. A progressive approach to the non-additivity and genotype-environmental covariance in the analysis of human differences. *British Journal of Mathematical and Statistical Psychology.* 1977;30:1-42.
[7] Kendler KS, Eaves LJ. Models for the joint effect of genotype and environment on liability to psychiatric illness. *Am J Psychiatry.* 1986;143:279-89.
[8] Heath AC, Kessler RC, Neale MC, Hewitt JK, Eaves LJ, Kendler KS. Testing hypotheses about direction of causation using cross-sectional family data. *Behav Genet.* 1993;23:29-50.
[9] Neale MC, Cardon LR. *Methodology for genetic studies of twins and families.* Dordrecht: Kluwer Academic Publisher; 1992.
[10] Wickramaratne PJ, Greenwald S, Weissman MM. Psychiatric disorders in the relatives of probands with prepubertal-onset or adolescent-onset major depression. *J Am Acad Child Adolesc Psychiatry.* 2000;39:1396-405.
[11] Weissman MM, Wickramaratne P, Nomura Y, Warner V, Verdeli H, Pilowsky DJ, Grillon C, Bruder G. Families at high and low risk for depression: a 3-generation study. *Arch Gen Psychiatry.* 2005;62:29-36.
[12] Dinwiddie S, Heath AC, Dunne MP, Bucholz KK, Madden PA, Slutske WS, Bierut LJ, Statham DB, Martin NG. Early sexual abuse and lifetime psychopathology: a co-twin-control study. *Psychol Med.* 2000;30:41-52.
[13] Bulik CM, Prescott CA, Kendler KS. Features of childhood sexual abuse and the development of psychiatric and substance use disorders. *Br J Psychiatry.* 2001;179:444-9.
[14] Statham DJ, Heath AC, Madden PA, Bucholz KK, Bierut L, Dinwiddie SH, Slutske WS, Dunne MP, Martin NG. Suicidal behaviour: an epidemiological and genetic study. *Psychol Med.* 1998;28:839-55.
[15] Nelson EC, Heath AC, Madden PA, Cooper ML, Dinwiddie SH, Bucholz KK, Glowinski A, McLaughlin T, Dunne MP, Statham DJ, Martin NG. Association between self-reported childhood sexual abuse and adverse psychosocial outcomes: results from a twin study. *Arch Gen Psychiatry.* 2002;59:139-45.
[16] Nelson EC, Heath AC, Lynskey MT, Bucholz KK, Madden PA, Statham DJ, Martin NG. Childhood sexual abuse and risks for licit and illicit drug-related outcomes: a twin study. Psychol Med. 2006;36:1473-83.
[17] Kendler KS, Bulik CM, Silberg J, Hettema JM, Myers J, Prescott CA. Childhood sexual abuse and adult psychiatric and substance use disorders in women: an epidemiological and cotwin control analysis. *Arch Gen Psychiatry.* 2000;57:953-9.
[18] Kendler KS, Kuhn JW, Prescott CA. Childhood sexual abuse, stressful life events and risk for major depression in women. *Psychol Med.* 2004;34:1475-82.
[19] Kendler KS, Kessler RC, Walters EE, MacLean C, Neale MC, Heath AC, Eaves LJ. Stressful life events, genetic liability, and onset of an episode of major depression in women. *Am J Psychiatry.* 1995;152:833-42.
[20] Kaufman J, Yang BZ, Douglas-Palumberi H, Grasso D, Lipschitz D, Houshyar S, Krystal JH, Gelernter J. Brain-derived neurotrophic factor-5-HTTLPR gene interactions and environmental modifiers of depression in children. *Biol Psychiatry.* 2006;59:673-80.

[21] Kaufman J, Yang BZ, Douglas-Palumberi H, Houshyar S, Lipschitz D, Krystal JH, Gelernter J. Social supports and serotonin transporter gene moderate depression in maltreated children. *Proc Natl Acad Sci U S A*. 2004;101:17316-21.

[22] Kaufman J, Yang BZ, Douglas-Palumberi H, Crouse-Artus M, Lipschitz D, Krystal JH, Gelernter J. Genetic and environmental predictors of early alcohol use. *Biol Psychiatry*. 2007;61:1228-34.

[23] Caspi A, McClay J, Moffitt TE, Mill J, Martin J, Craig IW, Taylor A, Poulton R. Role of genotype in the cycle of violence in maltreated children. Science. 2002;297:851-4.

[24] Haberstick BC, Lessem JM, Hopfer CJ et al. Monoamine oxidase A (MAOA) and antisocial behaviors in the presence of childhood and adolescent maltreatment. *Am J Med Genet B Neuropsychiatr Genet* 2005 May 5;135(1):59-64.

[25] Craig IW. The role of monoamine oxidase A, MAOA, in the aetiology of antisocial behaviour: the importance of gene-environment interactions. *Novartis Found Symp* 2005;268:227-37; discussion 237-41, 242-53.:227-37.

[26] Caspi A, Sugden K, Moffitt TE, Taylor A, Craig IW, Harrington H, McClay J, Mill J, Martin J, Braithwaite A, Poulton R. Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene. *Science. 2*003;301:386-9.

[27] Kendler KS, Kuhn JW, Vittum J, Prescott CA, Riley B. The interaction of stressful life events and a serotonin transporter polymorphism in the prediction of episodes of major depression: a replication. *Arch Gen Psychiatry* 2005 May;62(5):529-35.

[28] Gillespie NA, Whitfield JB, Williams B, Heath AC, Martin NG. The relationship between stressful life events, the serotonin transporter (5-HTTLPR) genotype and major depression. *Psychol Med* 2005 January;35(1):101-11.

[29] Kim-Cohen J, Caspi A, Taylor A, Williams B, Newcombe R, Craig IW, Moffitt TE. MAOA, maltreatment, and gene-environment interaction predicting children's mental health: new evidence and a meta-analysis. *Mol Psychiatry.* 2006;11:903-13.

[30] Moffitt TE, Caspi A, Rutter M. Strategy for investigating interactions between measured genes and measured environments. *Arch Gen Psychiatry.* 2005;62:473-81.

[31] Martin J, Anderson J, Romans S, Mullen P, O'Shea M. Asking about child sexual abuse: methodological implications of a two stage survey. *Child Abuse Negl* 1993 May;17(3):383-92.

[32] Weaver IC, Cervoni N, Champagne FA, D'Alessio AC, Sharma S, Seckl JR, Dymov S, Szyf M, Meaney MJ. Epigenetic programming by maternal behavior. *Nat Neurosci* 2004; 7(8): 847-854.

[33] Fish EW, Shahrokh D, Bagot R, Caldji C, Bredy T, Szyf M & Meaney MJ. Epigenetic programming of stress responses through variations in maternal care. *Ann N Y Acad Sci*. 2004; 1036:167-80.

[34] Nemeroff CB, Heim CM, Thase ME, Klein DN, Rush AJ, Schatzberg AF, Ninan PT, McCullough JP Jr, Weiss PM, Dunner DL, Rothbaum BO, Kornstein S, Keitner G, Keller MB. Differential responses to psychotherapy versus pharmacotherapy in patients with chronic forms of major depression and childhood trauma. *Proc Natl Acad Sci* U S A. 2003;100:14293-6.

[35] Sartor CE, Lynskey MT, Bucholz KK et al. Childhood sexual abuse and the course of alcohol dependence development: Findings from a female twin sample. *Drug Alcohol Depend* 2007; 89:139-44.

[36] Pine DS, Cohen JA. Trauma in children and adolescents: risk and treatment of psychiatric sequelae. *Biol Psychiatry* 2002 April 1;51(7):519-31.

[37] Molnar BE, Berkman LF, Buka SL. Psychopathology, childhood sexual abuse and other childhood adversities: relative links to subsequent suicidal behaviour in the US. *Psychol Med* 2001 August;31(6):965-77.

[38] Teusch R. Substance abuse as a symptom of childhood sexual abuse. *Psychiatr Serv* 2001 November;52(11):1530-2.

[39] Neumann DA, Houskamp BM, Pollack VE, Briere J. The long term sequelae of childhood sexual abuse in women. *Child Maltreatment* 1996;1:6-16.

[40] Bushnell JA, Wells JE, Oakley-Browne MA. Long-term effects of intrafamilial sexual abuse in childhood. *Acta Psychiatr Scand* 1992 February;85(2):136-42.

[41] Dembo R, Dertke M, La VL, Borders S, Washburn M, Schmeidler J. Physical abuse, sexual victimization and illicit drug use: a structural analysis among high risk adolescents. *J Adolesc* 1987 March;10(1):13-34.

[42] Rind B, Tromovitch P, Bauserman R. A meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychol Bull* 1998 July;124(1):22-53.

[43] Jumper SA. A meta-analysis of the relationship of child sexual abuse to adult psychological adjustment. *Child Abuse Negl* 1995 June;19(6):715-28.

[44] Bifulco A, Brown GW, Adler Z. Early sexual abuse and clinical depression in adult life. *Br J Psychiatry* 1991 July;159:115-22.

[45] Freeman RC, Collier K, Parillo KM. Early life sexual abuse as a risk factor for crack cocaine use in a sample of community-recruited women at high risk for illicit drug use. *Am J Drug Alcohol Abuse* 2002;28(1):109-31.

[46] Pope HG, Hudson JI. Does childhood sexual abuse cause adult psychiatric disorders? Essentials of methodology. *J Psychiatry Law* 1995;Fall:363-81.

[47] Simpson TL, Miller WR. Concomitance between childhood sexual and physical abuse and substance use problems. A review. *Clin Psychol Rev* 2002 February;22(1):27-77.

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Chapter 6

CULTURE AND THE 'HIDDEN ARM' IN SEXUAL ABUSE OF PUPILS BY TEACHERS IN ZIMBABWE

Almon Shumba*
School of Post Graduate Studies, Faculty of Education, University of Fort Hare
Main Campus, South Africa

ABSTRACT

Sexual abuse of pupils by teachers in schools is now a cultural and social issue because it appears acceptable in some cultures. Some of the victims of sexual abuse are sometimes shunned by the society or even harassed by perpetrators' wives for having love relationships with their husbands. This study is one of the first of its kind that explains and explores the overlap of cultural conditions and other circumstances with child sexual abuse by teachers in Zimbabwean schools.

Objectives

This study sought to determine: (a) cultural beliefs about sexual abuse of pupils in Zimbabwean schools; and (b) the challenges faced by pupils sexually abused by teachers in schools.

Method

Data on sexual abuse perpetrators charged for improper association with pupils were collected from the perpetrators' files in six regional offices. Five cases of child sexual abuse including cases whereby perpetrators were charged 'lobola' (bride price) by the

* All correspondence and requests should be sent to: Professor Almon Shumba. School of Post Graduate Studies, Faculty of Education, University of Fort Hare, Main Campus, King William's Town Road, Private Bag X1314, Alice 5700. South Africa. E–mails: ashumba@ufh.ac.za & almonshumba@yahoo.com

victims' parents and charged by the Public Service Commission were used to illustrate the role of culture in sexual abuse of pupils by teachers in Zimbabwe. Data on five cases were collected from the perpetrators' files and used to illustrate the nature of relationship between child sexual abuse by teachers and culture. Some of the cases used in this study illustrate the nature of treatment that some pupils experienced at the hands of perpetrators' wives in schools.

Results

Culture appears to play a pivotal role in sexual abuse of pupils in schools. It appears from the cases that some victims of sexual abuse experience trauma at the hands of perpetrators' wives. The study found that victims were sometimes assaulted, verbally abused, humiliated publicly and ostracized by the perpetrators' wives and the society for having such love relationships. The victims involved do not seem to have the capacity to understand these manipulation and inappropriate activities that they are subjected to by the perpetrators. Evidence from the five cases examined show that most victims lack emotional support from the school and society.

Conclusion

Culture appears to be closely linked to child sexual abuse by teachers in Zimbabwean schools.

Key words: sexual abuse, culture, case studies, teachers, pupils, schools, Zimbabwe

INTRODUCTION

Most parents have high expectations of their children and would always want them to succeed in their lives (Mwamwenda, 2004; SAPA, 1997; Shumba, 2001; Shumba & Moorad, 2000; Vally, 1999). On the other hand, there are some parents in Zimbabwe who view their girl child as a source of income and often think of charging *lobola* (bride price) instead of thinking about her future welfare. As such, it appears that some of the cultural practices and greediness seem to promote rather than protect children against sexual abuse of pupils. All child abuse cases that occur within the school are expected to be handled by the school head, school counselor, social worker or police in Zimbabwean schools (Chinyangarara, 1995a, 1995b & 1996; Circular P9 Ref. C100/174, 1991; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). Parents of the abused child seem to have a peripheral role in sexual abuse matters because all child abuse cases within the school are expected to be reported to the school head who in turn reports the case to the Public Service Commission through the Ministry of Education, Sport and Culture or the police. All cases handled by the police are normally very serious cases that involve rape and these are dealt with by the courts of law (Collings, 1991; Shumba, 1999 & 2001; Zindi & Shumba, 1999). On conclusion of the case by the courts of law, a court verdict report is sent to the Public Service Commission for its

attention so that it can take action against the perpetrator. It is only then that such action is taken against the perpetrator by the Public Service Commission (Chinyangarara, 1995a, 1995b & 1996; Circular P9 Ref. C100/174, 1991; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). If the perpetrator has been convicted for rape (having sex with a child below 12 years with or without her consent) or statutory rape (having sex with a girl above 12 years but below 16 years with or without her consent), then the Public Service Commission charges the perpetrator with improper association and bringing the name of the teaching service into disrepute (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). Accordingly, the perpetrator will be discharged from the teaching service for the offence. The perpetrator can apply to rejoin the teaching service after two years and such an application should be accompanied by letters of support from distinguished members of the community (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). These letters of support should indicate that the perpetrator has been counselled and has reformed in order for him to be reconsidered for a teaching post by the Public Service Commission. If such an application meets the criteria for reconsideration, the perpetrator normally gets readmitted to the teaching service.

CULTURAL BELIEFS AND CHILD SEXUAL ABUSE BY TEACHERS

There are controversies about cultural beliefs on sexual abuse by teachers in Zimbabwean schools. For example, in the urban areas of Zimbabwe, a love affair or sexual relationship between a teacher and a pupil is not seen as a scandal because it is considered as something that does not matter. As such, it can take long before child sexual abuse is detected or reported to the Public Service Commission and police in an urban setting. The police have the mandate to arrest and charge any perpetrator suspected of sexually abusing a minor (a pupil). However, teachers in rural areas are viewed by the society as 'very rich' people in Zimbabwe (Shumba, 2001; Zindi & Shumba, 1999). It is believed that some parents even encourage their daughters to marry teachers so that they can make a lot of money from 'lobola'. In other words, such parents view this kind of marriage as a means to elevate their family status within their society. Culturally, a relationship between a female teacher and a male pupil is a taboo and is rarely reported because male pupils seem to believe that such a relationship is victory since their needs are catered for (Brookes & Higson–Smith, 2004; Shumba, 2003; Zindi & Shumba, 1999). Such pupils are likely to be less traumatized than sexually abused female pupils (Brookes & Higson–Smith, 2004; Collings, 1991; Stein, Golding, Siegel, Buman & Sorenson, 1988; Struckman–Johnson, 1991; Struckman–Johnson & Struckman–Johnson, 1992).because of the mutual agreement and nature of the relationship.

Although there is no research available on pupils who have babies at home, it is also possible that some female pupils come to school already sexually abused by their parents or family members (Brookes & Higson–Smith, 2004; Finkelhor, 1979). Parents may not be aware that such a thing might have happened to their children since it is a taboo for children to talk about such issues in African settings (Chinyangarara, 1995a; Shumba, 2001). These girls are likely to be 'easy prey' or 'sitting ducks' for perpetrators. In addition, these girls are also likely to 'lure' some young male teachers into a love relationship because of their past exposure to such love relationships. Such a relationship is considered as improper association

between a teacher and a school girl and is forbidden by the law in Zimbabwe (Circular P9 Ref. C100/174, 1991; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). Any teacher found to have violated this law is charged with bringing the name of the teaching profession into disrepute (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). Such a teacher may be discharged from the teaching service by the Public Service Commission (the employer of all teachers in Zimbabwe) for *improper association* with the pupil (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). In such circumstances, the teacher is viewed as having taken advantage of the pupil by using his own power since a teacher *acts in–loco–parentis* within the school (Finkelhor, 1979 & 1984; Khan & Nyanungo, 1995a & 1995b; Levett, 1989a & 1991; Loewenson, 1995; Loewenson & Chikamba, 1994; Shumba, 1999 & 2001).

There is also the assumption that all teachers are morally upright in the teaching profession (Bendix, 1996; Benthal, 1991; Brookes & Higson–Smith, 2004; Russell, 1983). This is the normal expectation of the society but may not be always true since some teachers sexually abuse their pupils (Human Rights Watch, 2001; Jones, 1994; Khan, 1995; Pillay, 1992; SAPA, 1997; Shakeshaft & Cohan, 1995; Shumba, 2001; Vally, 1999; South African Human Rights Commission, 2002; Zindi & Shumba, 1999). Yet, teachers, unlike medical practitioners, are not governed by a Professional Code of Conduct that they must sign on qualification which stipulates their professional behavior and interactions with their pupils in Zimbabwean schools.

In his study of the action taken by the Public Service Commission against teachers for improper association of pupils in Zimbabwean schools, Shumba (2001) found that 110 cases of sexual abuse were reported in six regional offices from 1990 to 1997. The majority of the perpetrators 91 (82.7 %) were discharged from the teaching service for improper association with their pupils; 4 (3.6 %) were fined; 1 (0.9 %) was reprimanded; 7 (6.4 %) were pending at the time of the study, 6 (5.5 %) cases were withdrawn; and in 1 (0.9 %) case, the perpetrator was demoted for the offence. Contrary to the Public Service (Disciplinary) Regulations (Circular P9 Ref. C100/174, 1991; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992), the researcher found 3 cases of improper association between a teacher and a pupil whereby the girls' parents and the chief took action against perpetrators. In all these cases, parents and the chief took action against the perpetrators. Two of these perpetrators were charged 'lobola' by the victims' parents whilst the other perpetrator was fined by the chief for having a 'love affair' with a female pupil. Such a scenario is a negation of the General Law because all cases of sexual abuse are expected to be reported to the police or to the school head (Circular P9 Ref. C100/174, 1991; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). Although parents and chiefs have the right under the Customary Laws of Zimbabwe to charge 'lobola' or fine perpetrators for having sexual relationships with school pupils (Chinyangarara, 1995a & 1996; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992), such a scenario appears to create tension between the Public Service Regulations, the General Law and the Customary Laws in Zimbabwe. As such, this is a departure from the normal practice that exists in schools as stipulated by the Public Service Commission (Circular P9 Ref. C100/174, 1991; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992).

The issue of lobola within the African setting requires formalization of the relationship with all relatives (parents, aunties, uncles etc.) of both the bride and the bridegroom to their families. Lobola or the bride price is considered as the traditional bride price paid in

Zimbabwe in the form of money and cattle by a man to his in–laws as a token of appreciation for getting married to their daughter (Chinyangarara, 1995a; Shumba, 2001). Such a traditional cultural practice is common in Africa including Zimbabwe. It is only when the man has paid lobola that the bride and the bridegroom can be allowed to get married and be awarded a marriage certificate. Any departure from this traditional cultural practice implies that such a marriage is considered as 'having fun' and invalid. On the contrary, lobola has now become too commercialized in some cultures because it has lost its value and meaning. For example, some parents tend to consider what they have invested in their girl child by way of looking at how much money they paid in sending their girl child to school. In such a scenario, parents are considered as commercializing lobola and making money from such a marriage. As such, instead of looking at lobola as a token of appreciation, some parents consider it (lobola) as 'big business' whereby their son–in–law is expected to buy for the in–laws such luxury items as a car, house, clothing etc. Perhaps, this explains why some mothers in rural areas are likely to encourage their daughters to be married by teachers as a way to raise their status since teachers are viewed as 'very rich' people.

Although nothing appears to have been documented about the issue of polygamy in Zimbabwe, it appears that polygamy also seems to propagate child sexual abuse in schools because it sees no boundary between adults and children. As such, men (including male teachers) are free to marry more than one wife in Zimbabwe. This practice (polygamy) is common in rural areas of Zimbabwe among the Shona speaking people (Karanga, Manyika, Ndau, Shangaan, Zezuru etc.). Currently, education is compulsory to both boys and girls in Zimbabwe and hence this cannot be considered as the reason why some girls are sexually abused by teachers in schools. Another possible reason why some teachers who are married have relationships with their female pupils could be that some teachers are married to their former students and have never been challenged for such practices. Such a practice is likely to promote child sexual abuse by teachers in schools. Of course, such behaviour shows lack of respect and regard for pupils by teachers. Perhaps this explains why some teachers who are married have relationships with their female pupils in schools. It is against this background that this study sought to determine: (a) cultural beliefs held by parents and chiefs about sexual abuse of pupils in Zimbabwean schools; and (b) challenges faced by pupils sexually abused by teachers in schools. This study only focuses on child sexual abuse by teachers in Zimbabwean schools. As such, this study does not address child sexual abuse committed by people other than teachers.

METHOD

Sample

In this study, only a sample of five cases of improper association (sexual abuse) between a teacher and a pupil reported during the period 1999 to 2003 were compiled from the perpetrators' files kept in regional offices in Zimbabwe. These cases were used to illustrate the relationship between child sexual abuse by teachers and culture. The sexual abused victims referred to in the five cases used in this study were aged between 14 and 16 years and their perpetrators were aged between 21 and 60 years. In this study, cases of sexual abuse

handled by parents and chiefs were reported only in five of the six provinces where data were collected. All this information forms the basis of this study. The case studies data were analyzed in order to determine some cultural trends that could possibly lead to improper association between teachers and their pupils in Zimbabwean schools. It must also be pointed out that most cases of sexual abuse are never reported to the authorities (Shakeshaft & Cohan, 1995; Shumba, 2001; Zindi & Shumba, 1999).

Procedure

Case studies data were collected from the perpetrators' files kept in six regional offices in Zimbabwe. Permission to access the information from the perpetrators' files was granted by the Ministry of Education, Sport and Culture. All the information was collected in the presence of the education officer (Professional Administration) in each regional office. This measure was necessary to ensure that no file was taken out of the office and the protection of all perpetrators. In order to have an insight of the trends of pupil sexual abuse in schools, the researcher also interviewed each of the six Education Officers (Professional Administration) who handle and process all the cases of child abuse committed by teachers in each province. Since the information is sensitive and confidential, the researcher ensured that all the information compiled does not include names of perpetrators, or any details that could be identified as relating to a particular perpetrator or victim involved in each case. In this study, only five cases handled by parents and chiefs were used in this article to determine some cultural trends that could be related to improper association between a teacher and a pupil in schools. Incidentally, all the five cases used in this study were cases of sexual abuse by teachers in five of the six selected regional offices.

Ethical Issues

Permission to conduct this study in six provinces of Zimbabwe was granted by the Ministry of Education, Sport and Culture. Since the information collected is sensitive and confidential, the researcher ensured that the data collected was used for purposes of this study only. The researcher also ensured that the names of sexually abused pupils and perpetrators used in this study, and names of provinces where data were collected were kept confidential.

RESULTS

Below are five cases compiled in order to determine cultural trends and influences that could be related to child sexual abuse (improper association) between a teacher and a pupil) by teachers in Zimbabwean schools.

Case Study 1

Teacher had a love affair with a 15–year school girl and the case was reported to the Ministry of Education, Sport and Culture. Parents charged the teacher between Z$8000.00 and Z$10 000.00 as damage and part of 'lobola' (bride price). The teacher discussed the case with the father–in–law and persuaded them not to report him to the Ministry of Education, Sport and Culture because he would lose his job. After the payment of the lobola charged, the girl was instructed by parents not to tell anyone about it. Information leaked to the regional office that the teacher had a love affair with the female pupil and was charged with improper association by the Ministry of Education, Sport and Culture. The teacher's wife was teaching in the same school with the husband. After the husband had been charged and suspended for improper association, she harassed the girl in front of other pupils and accused her that she was a prostitute.

Case Study 2

A married teacher fell in love with a 14–year school girl. The girl was accused, harassed and beaten up by the teacher's wife. The case was reported to the police and the teacher admitted the love affair with the school girl. The teacher was suspended from the teaching service for having an improper relationship with the school girl by the Public Service Commission.

Case Study 3

A teacher had a love affair with a 15–year school girl in the same school. He invited the girl and her friends under the pretext that they were coming to make lunch for him at his house. This was a guise to get a chance to see the girl. After lunch, the girl remained behind and others left. The teacher was married and this girl was in his wife's class. The teacher's wife harassed the school girl for having a love affair with her husband.

Case Study 4

A 16–year school girl was suspected to be having a love affair with her husband by the teacher's wife. The school girl refuted that she was having a love affair with the teacher. The teacher's wife harassed and beat up the school girl and even confiscated some of the school girl's belongings which she suspected to have been bought for her by the teacher (the husband). Although the school head was aware about the case, he did not take any action against the teacher's wife. Even some Ministry of Education officials who visited the school are alleged not to have taken action against the teacher's wife although they were aware of the case. The school girl was never given a hearing and was expelled from the school for 'having' a love affair with the teacher.

Case Study 5

The teacher got married to a 14–year school girl and paid lobola to his in–laws in the rural areas. The in–laws told the school head not to report their son–in–law to the Ministry of Education, Sport and Culture since he had paid lobola and had agreed to marry their daughter. The girl's parents even went to the regional offices of the Ministry of Education, Sport and Culture and pleaded with the officials not to discharge their son–in–law from the teaching service since he was now married to their daughter and had paid lobola. The teacher was charged and suspended for improper association, and later discharged from the teaching service by the Public Service Commission.

DISCUSSION

The five case studies clearly show some of the hidden gaps that exist in child sexual abuse issues in schools. Unless these gaps are addressed, most female pupils who are victims of sexual abuse will continue to be harassed and traumatized by the perpetrators and their wives. In any case, why should such a situation happen in schools at the expense of pupils? Why should the perpetrators' wives be allowed to take the law into their hands and assault pupils involved in love affairs with their husbands?

Currently, it is very difficult to estimate the population of young women who are sexually abused by teachers in Zimbabwean schools because there is no database available (Khan, 1995). Only anecdotal data on sexual abuse of pupils is available in Zimbabwe (Shumba, 2001). It appears from the above findings that most girls who are vulnerable to sexual abuse by teachers are in transition from childhood to adulthood (12 to 18 years) and need help from adults (Mwamwenda, 2004). The reality of the situation is that girls' needs are far more than those of boys during this stage. For example, girls would need new clothes, perfumes, shoes just to name a few which their parents may not be able to afford. Such girls are likely to look elsewhere (at young male teachers) so that their needs can be addressed. It is a fact that some of these girls with kids at home and are likely to lure some of these teachers into having love relationships with them because their own schoolmates are likely to shun them. Such girls put on short dresses (mini–skirts), talk and visit the teacher until they develop a love relationship and promise not to report the teacher to the school authorities. In such a situation, parents appear also to encourage such a relationship because of the benefits that are likely to come from the teacher who is viewed as 'very rich' by the society.

It must also be pointed out that some pupils in rural schools lodge in huts (pole and dagga houses) because of lack of boarding facilities. These pupils become exposed and vulnerable to very difficult realties of life that they are not used to in their lives. Such conditions are too harsh and degrading to some pupils (and are a sign of poverty). There is no doubt that such conditions are likely to make some pupils (especially girls) to become readily available to young teachers. In other words, these girls will lure the teachers into having love relationships with them in order to get a better life.

Although there is no research evidence to support the argument, interviews with education officers responsible for professional administration revealed that most cases of sexual abuse tend to involve young men who are married and who seem to be not satisfied

with the sexual competence of their wives (Shumba, 1999 & 2001). These young men tend to go for the young girls because they think that they are still virgins (Shumba, 1999 & 2001). Other possible causes for such relationships to develop could be women's failure to perform in the bedroom or harassment by the wife or the young man was forced by the woman into early marriage before fully decided about it. In other words, such a marriage is a marriage of convenience or by accident and is not likely to last for a long time. This is a grey area that needs to be researched to determine reasons why married young men prefer school girls to their wives. Is this because of lust or other reasons?

As already mentioned in this article, a love relationship between a teacher and a pupil is viewed as something unique by the rural society in Zimbabwe (Khan & Nyanungo, 1995a & 1995b; Loewenson, 1995; Loewenson & Chikamba, 1994; Shumba, 2001; Zindi & Shumba, 1999). It is possible that some parents are likely to encourage their children to get married or fall in love with teachers so that their lives could change for the better. As such, most people are likely to take note quickly of the love affair between a teacher and a school pupil in rural areas than in urban areas because such a relationship involves status and prestige. Hence, most people are likely to talk about it until it reaches the ears of the head of the school where the girl child was attending. There is also a likelihood of jealousy by some members of the society and report such cases to the school head.

Interviews with education officers revealed that in most cases of sexual abuse, the mother of the girl child is likely to be aware about the love relationship between the teacher and the girl but would not want to come to the fore (Shumba, 1999 & 2001). In actual fact, the mother of the girl encourages the love relationship 'behind closed doors'. On the contrary, the father of the girl may not know about such a love affair between the teacher and the girl. This may only come to the father's knowledge when the girl is pregnant or until their 'son–in–law' comes to pay lobola. It appears from the above discussions that some mothers promote child sexual abuse in schools by protecting the perpetrators with the hope that their daughter may get married to the perpetrator.

Perpetrators Connive with the Victim's Parents

Interviews with education officers responsible for handling and processing all child abuse cases revealed an interesting scenario (Shumba, 1999 & 2001). Once a pupil is pregnant, the perpetrator sends an emissary to the girl's parents to indicate to them interest to marry the girl. The girl's father together with his relatives (other elders) is expected to demand lobola from the son–in–law (the perpetrator). Such a scenario is acceptable culturally within the African setting (Chinyangarara, 1995a & 1996; Dow & Mogwe, 1992; Human Rights Watch, 2001; SAPA, 1997). Although there is no evidence to show this, it is strongly suspected that some parents connive with the perpetrators at the expense of the victim (the pupil), especially after paying part of the 'lobola'. Since the perpetrator is now considered as their son–in–law, they (the girl's parents and the perpetrator) agree that the girl should not report the case to the school head because the perpetrator might be discharged from the teaching service and lose his job. This is merely a ploy to be saved from losing the job by the perpetrator under the pretext that he would marry the girl. In other words, the perpetrator pretends that he intends marrying the girl. There is no guarantee that this kind of marriage will last forever because the perpetrator has been forced into it in order to save his job.

Interviews with education officers revealed that it is also strongly suspected that there are some school heads that connive and collaborate with perpetrators who are their relatives (Shumba, 1999 & 2001). In such a situation, it is strongly felt by the education officers that such heads pretend to be ignorant about the case (Shumba, 1999 & 2001). Such cases are a recipe for disaster because this kind of situation promotes sexual abuse of pupils in schools. It is possible to speculate that some of these cases are likely to be settled between the school head, the perpetrator and the victim's parents (the child). Another dimension is that it is also believed that in some cases, some heads even assist perpetrators with the payment of the 'lobola'.

It appears from the above discussions that pupils do not seem to be aware about their rights in schools and hence become victims of circumstances (Shumba, 2003). As such, there is a need for the Ministry of Education, Sport and Culture to conduct awareness seminars, workshops and conferences with teachers, parents and pupils. In other words, pupils need to be made aware of their rights in schools so that they are not harassed and traumatized by the perpetrators' wives. It must be pointed out that it is the responsibility of the head to make sure that all learners are safe within the school. Perpetrators' wives should not be allowed to harass any school girls whom they suspect being abused and /or prior to having love relationships or being impregnated by their husbands. Under such a situation, the school head needs to report such people (such as the perpetrators' wives) to the School Governing Board or the police for interfering in the affairs of the school.

There is also a need to explain to parents the laws that operate in schools versus culture in order to make parents aware of the problems that children are likely to face in such abrupt marriages. As already indicated in this article, some parents tend to think about charging lobola without considering the welfare and the future of the girl child. Again, parents need to be made aware of the 'hidden agendas' of the perpetrators wishing to save their jobs when the girl child has fallen pregnant. As such, parents and school heads should not connive with perpetrators at the expense of the girl child. In conclusion, this study helps to put into perspective the 'hidden arm' of culture that is sometimes used by perpetrators to save them from being discharged from the teaching service. Since the sample used is very small, the findings of this study cannot be generalized over the whole population of female pupils sexually abused by teachers in Zimbabwean schools.

REFERENCES

Brookes, H. & Higson–Smith, C. (2004). Schools Response to Gender–Based Violence in Schools. In L. Richter, A. Dawes & C. Higson-Smith (Eds). *Sexual Abuse of Young Children in Southern Africa*. Cape Town: HSRC Press.

Chinyangarara, I. (1995a). *General Law and Customary Law on Child Sexual Abuse and Marriage*. Paper presented at a Workshop on Traditional Law and Culture on Sexual Abuse of Children, Harare, Zimbabwe. 29 – 30 June.

Chinyangarara, I. (1995b). *Review of Press Reports on Child Sexual Abuse, January to December 1995*. Child and Law Project, Harare, Zimbabwe.

Chinyangarara, I. (1996, September). *Study on the Current Levels of the Offence of Child Sexual Abuse: The Reporting Patterns Management of the Cases and Sentencing Patterns*. Child and Law Project, Training and Research Support Centre.

Circular P9 (1991, May 31). Disciplinary Procedures: Students on Teaching Practice. *Ref. C100 / 174 of the Public Service Commission of Zimbabwe*. Harare.

Collings, S.J. (1991). Child Sexual Abuse in a Sample of South African University Males: Prevalence and Risk Factors. *South African Journal of Psychology*, 21, 153 – 158.

Dow, U. & Mogwe, A. (1992). *The Convention on the Rights of the Child and the Legal Status of Children in Botswana*. A Consultancy Report for UNICEF Botswana. Women and Law in Southern Africa Research Project (WLSA) Botswana.

Finkelhor, D. (1979, October). What's Wrong with Sex Between Adults and Children? Ethics and the Problem of Sexual Abuse. *American Journal of Orthopsychiatry*, 49 (4), 692 – 697.

Finkelhor, D. (1984). *Child Sexual Abuse: New Theory and Research*. New York, Free Press.

Human Rights Watch (2001). *Sacred at School: Sexual Violence Against Girls in South African Schools*. New York: Human Rights Watch: USA.

Jones, J. (1994). Towards an Understanding of Power Relations in Institutional Abuse. *Early Child Development and Care*, 100, 69 – 76.

Kaseke, B.S. (1996, June). Abuse of the Legislative Function: The Criminal Procedure and Evidence Amendment Act 1 of 1992. *Legal Forum*, 8 (2), 11 – 13.

Khan, N. (1995, July). Patterns of Child Sexual Abuse in Zimbabwe: An Overview. *Zimbabwe Journal of Educational Research*, **7**(2), 181 – 208. Khan, N. & Nyanungo, K.L. (1995a). *Issues in Management of Child Sexual Abuse: A Preliminary Study*. A Paper presented at a Conference on: Mental Health in Africa: A Multidisciplinary Approach, Harare, Zimbabwe. 3 – 7 April.

Khan, N. & Nyanungo, K.L. (1995b, September). Legal Issues in the Management of Child Sexual Abuse in Zimbabwe. *Legal Forum*, 7 (3), 5 – 7.

Levett, A. (1989a). A Study of Childhood Sexual Abuse Among South African University Women Students. *South African Journal of Psychology*, 19 (3), 122 – 128.

Levett, A. (1991). Contradictions and Confusions in Child Sexual Abuse. *South African Journal of Criminal Justice*, 4 (1), 9 – 19.

Loewenson, R. (1995). *Sexual Abuse of Children: The Legal Issues in Zimbabwe*. A Paper presented to the Training Programme on Victim Friendly Courts, Judicial College, Harare, Zimbabwe.

Loewenson, R. & Chikamba, M. (1994, October). *Report of Action Programme on Information and Awareness on Child Sexual Abuse*. Harare, Zimbabwe, Child and Law Project.

Mwamwenda, T.S. (2004). *Educational Psychology: An African Perspective (3 rd Ed.)*. Durban: Butterworth.

Nyandiya–Bundy, S. & Bundy, R. (1994, March). Child Sexual Abuse in Zimbabwe: An Analysis of Court Records. *Legal Forum*, 8 (1), 7 – 9.

Pillay, D. (1992, September). *Pupil Sexual Abuse by Teachers in the Greater Durban Area*. A Paper presented at the SASPCAN Conference, Cape Town.

Russell, D. (1983). The Incidence and Prevalence of Intrafamilial and Extrafamilial Sexual Abuse in Female Children. *Child Abuse and Neglect*, **7**, 133 – 146.

SAPA (1997, June 18). *Project 107: Sexual Offences Against Children*. South Africa Law Commission. Pretoria. .

Shakeshaft, C. & Cohan, A. (1995, March). Sexual Abuse of Students by School Personnel. *Phil Delta Kappan*, 76 (7), 512 – 520.

Shumba, A. (2003). Children's Rights in Schools: What Do Teachers Know? *Child Abuse Review*, 12, 251 – 260. John Wiley & Sons, Ltd.

Shumba, A. (2002). Teacher Conceptualization of Child Abuse in Schools in the New Millennium. *Journal of Interpersonal Violence*, 17 (4), 403 – 415.

Shumba, A. (2001). 'Who Guards the Guards in Schools?' A Study of Reported Cases of Child Abuse by Teachers in Zimbabwean Secondary Schools. *Sex Education*, 1, 77 – 86.

Shumba, A. (1999). An Analysis of the Nature and Extent of Child Sexual Abuse in Zimbabwean Primary and Secondary Schools. *Southern African Review of Education: The Journal of Foundation for Education with Production*, 5 (5), 59 – 65.

Shumba, A. & Moorad, F. (2000). A Note on the Laws Against Child Abuse in Botswana. *PULA: Botswana Journal of African Studies*, 15 (2), 253 – 258.

Sorenson, G.P. (1991, November). Sexual Abuse in Schools: Reported Court Cases from 1987 – 1990. *Educational Administration Quarterly*, 27 (4), 460 – 480.

South African Human Rights Commission (2002). *Report on Sexual Offences Against Children: Does the Criminal Justice System Protect Children?* Pretoria, South African Human Rights Commission.

Statutory Instrument 65 of the Constitution of Zimbabwe (1992). *Public Service (Disciplinary) Regulations of 1992*, 423 – 448.

Stein, J.A, Golding, J.N., Siegel, J.M., Buman, M.A. & Sorenson, S.B. (1988). Long–Term Psychological Sequelae of Child Sexual Abuse. In G.E. Wyatt & G.J. Powell (Eds.). *Lasting Effects of Child Sexual Abuse* (pp. 135 – 154). Newbury Park: Sage.

Struckman–Johnson, C. (1991). Male Victims of Acquaintance Rape. In: A. Parrot & L. Bechhofer (Eds.). *Acquaintance Rape: The Hidden Crime*. New York: John Wiley & Sons.

Struckman–Johnson, C. & Struckman–Johnson, D. (1992). Acceptance of Male Rape Myths Among College Men and Women. *Sex Roles: A Journal of Research*, 27, 85 – 100.

The Secretary of Education and Culture (1993). *Circular Number P35 of 3 May*.

Vally, S. (1999, November 15). Violence in South African Schools. *Current Issues in Comparative Education*, 2 (1), 1 – 9.

Zindi, F. & Shumba, A. (1999). The Epidemiology and Aetiology of Child Sexual Abuse in Zimbabwe's Secondary Schools. *African Journal of Social Work*, 1 (1), 37 – 50.

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Chapter 7

CHILDHOOD SEXUAL ABUSE AND SUBSTANCE USE PROBLEMS: DISENTANGLING A COMPLEX ASSOCIATION

Carolyn E. Sartor, Alexis E. Duncan, Vivia V. McCutcheon and Arpana Agrawal
Washington University School of Medicine; Department of Psychiatry,
660 S. Euclid Ave., Box 8134, St. Louis, MO 63110, USA

ABSTRACT

Evidence for the association between childhood sexual abuse (CSA) and later misuse of substances covers a wide range of licit and illicit drugs and spans multiple stages of involvement, including increased likelihood of use, higher probability of early initiation, and elevated risk for onset of substance use disorders (SUDs). Contributions to this literature represent a variety of approaches to addressing the association of CSA to alcohol and drug-related problems, which is complicated by the fact that many of the same factors that elevate risk for CSA exposure also increase risk for substance use problems. Methods for disentangling direct effects of CSA events on substance use outcomes from the effects of risk factors that are frequently present in families in which CSA exposures occurs (e.g., parental drug or alcohol problems) include measurement and adjustment for potentially confounding factors and the use of co-twin designs. Findings across methodological approaches provide support for CSA-specific risk for substance use outcomes, despite the significant contribution of family background factors to overall risk. In combination with the critical information about treatment presentation and response provided by clinical population-based studies, these investigations represent important steps for modeling the pathways from CSA to substance use outcomes and for informing intervention efforts with this high-risk population.

INTRODUCTION

The risks for substance-related problems posed by childhood sexual abuse (CSA) are substantial and far-reaching. In addition to the impairment and psychological distress that stem from substance misuse, individuals with CSA histories who abuse substances have an increased likelihood of exposure to and engagement in other health-compromising behaviors. The high rates of sexual revictimization (Coid et al., 2001; Messman-Moore & Long, 2003) and sexual practices that increase risk for HIV infection (Bensley, Van Eenwyk, & Simmons, 2000; The NIMH Multisite HIV Prevention Trial Group, 2001) underscore the vulnerability of this population and the importance of building a foundation from which prevention and intervention efforts can evolve.

Evidence for the association between CSA and substance misuse has grown significantly in the last two decades, and, as interest in this area of research has increased, the complexity of the relationship between sexual abuse history and drug and alcohol-related problems has become increasingly apparent. As a result, a wider range of approaches for identifying factors that increase CSA-associated risk and delineating pathways from CSA to substance use problems has developed. The aim of the present chapter is to review the development of the body of research on CSA and substance use problems and to highlight the utility of two methodological approaches for disentangling the contribution of risk factors common to CSA and substance use problems in determining the risk attributable specifically to CSA events.

1. CSA AND SUBSTANCE USE OUTCOMES

1.1 What we Know from Clinical and High-risk Populations

In a review of the literature, Simpson and Miller (2002) reported that the rate of CSA among females seeking treatment for substance use problems is twice that of women in the general population (Simpson & Miller, 2002). History of CSA has been associated with earlier age at initiation of alcohol use and greater alcohol-related problems among individuals using detoxification services (Brems, Johnson, Neal, & Freemon, 2004), earlier age at onset of alcohol use disorders (AUDs) for participants in a day hospital program (Zlotnick et al., 2006), and higher quantity and frequency of alcohol consumption among individuals arrested for driving while intoxicated (McMillan, Hanson, Bedrick, & Lapham, 2005). More rapid relapse rates following treatment have been documented as well for individuals exposed to CSA (Greenfield et al., 2002; Walitzer & Dearing, 2006). Evidence for the link among adolescents with alcohol abuse or dependence is even more striking. Clark and colleagues reported that, compared with control subjects, adolescents meeting AUD criteria were 18 to 21 times more likely to have histories of CSA (Clark, Lesnick, & Hegedus, 1997). Although fewer in number than clinical studies focused on alcohol-related behaviors, treatment outcome studies for illicit drug use reveal similar patterns: CSA is correlated with younger age at entry into treatment and predicts lower likelihood of abstinence following program completion (Boles, Joshi, Grella, & Wellisch, 2005).

1.2. Evidence from Community-based Studies

The relationship between CSA and substance use problems in samples representative of the general population parallel those derived from the clinical literature and extend findings to include the association of CSA history with tobacco use outcomes. Early initiation of alcohol consumption (Edgardh & Ormstad, 2000), elevated rates of alcohol problems (Galaif, Stein, Newcomb, & Bernstein, 2001; Pedersen & Skrondal, 1996), illicit drug use and dependence (Boden, Fergusson, & Horwood, 2006; Lynskey et al., 2006; Thompson, Arias, Basile, & Desai, 2002), early age at first cigarette (Anda et al., 1999), and onset of nicotine dependence/withdrawal (al Mamun et al., 2007) have all been linked to CSA history in community-based samples. In addition, several population-based investigations simultaneously examining alcohol, illicit drug, and tobacco use behaviors have found evidence for CSA-associated risk across outcomes (Harrison, Fulkerson, & Beebe, 1997; Hussey, Chang, & Kotch, 2006; Macmillan et al., 2001; Plant, Miller, & Plant, 2004; Wilsnack, Vogeltanz, Klassen, & Harris, 1997), underscoring the global nature of its link to substance use problems. Furthermore, these studies provide critical evidence that the association of drug and alcohol problems with CSA is not unique to the subset of substance users who present for treatment and who typically represent the most severe manifestations of substance misuse.

1.3. Additional Factors Influencing the Link between CSA and Substance Use Outcomes

Gender differences in substance-related behaviors are consistent across outcomes, with males initiating use at an earlier age (e.g., Sartor, Lynskey, Heath, Jacob, & True, 2007a), more commonly engaging in heavy use (e.g., Naimi et al, 2003), and meeting criteria for substance use disorders (SUDs) in larger numbers (e.g., Compton, Thomas, Stinson, & Grant, 2007; Grant et al., 2004). By contrast, males are substantially less likely to report exposure to childhood sexual abuse (general population estimates range from 2-11 % in men versus 6-34% in women [Walker, Carey, Mohr, Stein, & Seedat, 2004]), which likely contributes to the inconsistency in findings for males. Although some studies examining the relationship between CSA and substance use outcomes separately in men and women have reported that the magnitude of association is similar across gender (Dube et al., 2005; Molnar, Buka, & Kessler, 2001), others have demonstrated stronger associations for women (Nelson et al., 2002). In addition to possible distinctions by gender, investigations have explored features of the sexual abuse events (e.g., severity) as potential sources of variance in substance use outcomes. The evidence for elevated risk in sexual abuse that involves contact (Chen, Dunne, & Han, 2006), especially attempted or completed intercourse, is robust (Bulik, Prescott, & Kendler, 2001; Fergusson, Horwood, & Lynskey, 1996a; Fleming, Mullen, Sibthorpe, & Bammer, 1999; Kendler et al., 2000; Nelson et al., 2002). Some studies have also suggested that the risk for substance use outcomes is higher among those individuals with an earlier age at CSA (Spak, Spak, & Alleback, 1998; Moncrieff & Farmer, 1998).

RISK FACTORS COMMON TO CSA AND SUBSTANCE-RELATED PROBLEMS

CSA may be best conceptualized as part of a constellation of risk factors for psychopathology and substance use outcomes. An investigation by Dube and colleagues (2003) revealed that 78% of individuals reporting a history of sexual abuse endorsed exposure to one or more additional adverse childhood experiences, such as physical abuse, neglect, or parental separation (Dube et al., 2003). Elevated rates of other risk factors for the development of substance-related problems, such as parental substance use problems (Anda et al., 2002; Legrand, McGue, & Iacono, 1999; Hill, Shen, Lowers, & Locke, 2000), marital conflict (Fergusson, Lynskey, & Horwood, 1996), disorganization or instability in the family (Hussong & Chassin, 1997; Li, Duncan, & Hops, 2001), and low parent-child attachment (Fergusson et al., 1996b) are common in families of children who have experienced sexual abuse. In such an overall dysfunctional environment (Kendler et al., 2000), parents are less likely to provide the nurturance and support that serve as protective factors against exposure to CSA and other adverse events.

2. A Direct or Indirect Relationship?

The idea that the pathway from CSA to substance use or SUD is direct, possibly resulting from attempts at regulating negative affect associated with the abuse through alcohol consumption or drug use, is intuitively appealing and commonly discussed in clinical literatures. The temporal progression, with CSA preceding onset of substance use in the majority of cases, further promotes the notion of a direct causal pathway. However, as implied in the above review of common risk factors, there may be an indirect relationship in which both CSA and substance-related problems result from a shared risk factor, such as poor parental supervision (Walsh, MacMillan, & Jamieson, 2003) or parental psychopathology (Fergusson et al., 1996a; Vogeltanz et al., 1999; Walsh et al., 2003). Two primary methodological approaches used to tease apart indirect influences of risk factors that typically co-occur with both CSA and substance use problems from those effects specific to CSA are outlined below.

METHODOLOGICAL APPROACHES

3. Epidemiological Studies Using Measured Covariates

A number of investigations seeking to clarify the nature of the relationship between CSA and substance-related outcomes have measured and adjusted for the influences of other relevant familial risk factors. For example, Fergusson and colleagues (1996) examined CSA in relation to SUDs in a study of 1,019 18 year-olds who had reported in an earlier wave of data collection on familial risk factors such as parental psychopathology, family conflict, and parental substance abuse. Analyses adjusted for these and other potential confounders revealed that CSA remained a significant predictor of AUDs and other SUDs, and in the case

of other SUDs, the association was almost unaffected by the statistical adjustment for relevant covariates (Fergusson et al., 1996a). A similar approach was used by Kilpatrick et al. (2000) in their investigation of CSA and past-year alcohol and illicit drug abuse/dependence in a national probability sample of 12 to 17 year olds. Variance associated with sexual abuse was assessed after accounting for sociodemographic factors as well as family history of alcohol problems and familial drug problems, resulting in a significant association between CSA and both past-year AUD and cannabis use disorder (Kilpatrick et al., 2000). An investigation by Miller and colleagues (1993) using an all-female adult sample that included participants recruited from both treatment settings and the community led to similar conclusions. Even after adjusting for family background factors, treatment condition, and parental alcohol problems, CSA predicted women's alcohol-related problems (Miller, Downs, & Testa, 1993), further substantiating the assertion that sexual abuse history is specifically linked to substance use problems; common risk factors do not fully account for the association.

4. Co-twin Designs

Genetically informative designs have also made critical contributions to the task of disentangling indirect from direct sources of risk in the relationship between CSA and alcohol and drug-related problems. Co-twin designs are based on the premise that twins share a known proportion of genetic variance (100% for monozygotic (MZ) twins and 50% for dizygotic (DZ) twins) as well as family and other significant environments (e.g., school, neighborhood). Incorporation of data from co-twins creates the opportunity to statistically control for genetic and environmental factors shared by members of a twin pair. In this approach, the contribution of factors such as parental history of SUDs is accounted for by design and thus ruled out as a possible source of distinction in substance use outcomes between CSA-exposed and non-exposed individuals.

Recent work from our group illustrates this strategy. Using a sample of 3,536 female twins, we examined CSA history in relation to two major transitions in the course of alcohol dependence (AD) development: onset of first alcohol use and transition time from consumption of first alcoholic drink to onset of AD. CSA status was entered into the analyses after co-twin AD status, zygosity, and an interaction term reflecting zygosity by co-twin AD status, which provided an estimate of the degree to which familial risk may be attributed to genetic versus environmental factors. Results revealed that, although CSA was associated with higher rates of both lifetime alcohol use and AD, CSA-specific risk for consumption of first alcoholic drink was evident only at ages 12 and 13 and rate of transition from first alcohol use to AD did not differ by CSA status. In short, after adjusting for potential confounders through co-twin AD status, risk conferred by CSA for rapid transitions in AD development was apparent only among the earliest initiates of alcohol use and was specific to the onset of first alcohol consumption (Sartor et al., 2007b).

The discordant twin design, similar to the above described co-twin methodology, draws on the unique twin pair relationship in which genetic and environmental factors shared by twins can be accounted for in assessing variability in outcomes. However, instead of statistically adjusting for the co-twin's status on the outcome variable, the discordant twin design utilizes twin pairs who differ on exposure to the risk factor of interest, such that the unexposed co-twin serves as a matched control for the exposed twin. For investigations of

CSA and substance use behaviors, twin pairs in which one twin was sexually abused and the other was not are selected and, given that the unexposed co-twin carries identical genetic material (in the case of MZ twins) and has had the same exposures to other relevant familial risk factors, differences in substance use outcomes can be attributed to CSA.

Findings from discordant twin studies suggest that CSA poses risk for substance-related problems above and beyond risk attributable to family background factors known to contribute both to CSA exposure and to drug and alcohol outcomes. For example, Nelson and colleagues' (2006) investigation of CSA in relation to a variety of drug use outcomes concluded that a history of sexual abuse elevates risk for regular smoking, illicit drug use, and drug abuse and dependence (Nelson et al., 2006). A study conducted by Kendler et al. (2000) using an all-female twin sample to assess the role of CSA in the development of psychiatric disorders and SUDs found that CSA was associated with AD and other drug dependence, and concluded that findings support a causal link between sexual abuse exposure and SUDs (Kendler et al., 2000). Elevated risk for AD was also reported by Dinwiddie and colleagues (2000) in their investigation of psychopathological outcomes and CSA history (Dinwiddie et al., 2000). Consistent with previously discussed literature highlighting commonality of risk factors for CSA exposure and substance use problems, the authors also reported evidence for the contribution of family background factors to psychiatric and alcohol-related outcomes, as did an earlier study by Nelson et al. (2002). In sum, conclusions from studies employing co-twin methodology coincide with those derived from general population-based studies using measured covariates: familial risk factors, such as parental SUDs and family conflict contribute to substance use outcomes, but CSA poses additional risk that is not fully accounted for by these factors.

CONCLUSION

The constellation of risk factors that characterize family environments where children are at risk for CSA exposure creates significant challenges for developing a comprehensive model for the pathway (or pathways) from CSA to the manifestation of substance-related problems. The two methodologies described above present important steps toward disentangling direct from indirect influences, although much work remains to be done in the effort to identify the underlying mechanisms that link CSA to substance use problems and to fully understand the meaning of "a direct path" from one to the other. It is also important to note that neither approach addresses completely the challenges of this line of research. The use of measured covariates in epidemiological samples, for example, requires that an extensive number of potential confounders be assessed. The consequence of omitting a critical covariate may be the misattribution of risk to CSA rather than another source, yet the inclusion of a large number of covariates can compromise statistical power. Discordant twin studies, although powerful tools for accounting for familial risk, also have their drawbacks. They require access to large twin registries and, given the high concordance rates of CSA in twin pairs (Dinwiddie et al., 2000; Kendler et al., 2000), may reflect atypical sexual abuse histories. Rather than determine a single superior strategy for modeling the complexity of the association between CSA history and substance use problems, integration of the available tools and findings derived from their use provides the most reliable foundation from which

clinical applications can be developed. Not the least of these sources are the clinical population-based studies, which provide essential information about treatment response that is rarely addressed in other types of investigations and which have already led to the establishment of treatment approaches specifically tailored to individuals with sexual abuse histories who also engage in problem substance use.

REFERENCES

al Mamun, A., Alati, R., O'Callaghan, M., Hayatbakhsh, M. R., O'Callaghan, F. V., Najman, J. M., et al. (2007). Does childhood sexual abuse have an effect on young adults' nicotine disorder (dependence or withdrawal)? Evidence from a birth cohort study. *Addiction, 102,* 647-654.

Anda, R. F., Croft, J. B., Felitti, V. J., Nordenberg, D., Giles, W. H., Williamson, D. F. et al. (1999). Adverse childhood experiences and smoking during adolescence and adulthood. *Journal of the American Medical Association, 282,* 1652-1658.

Anda, R. F., Whitfield, C. L., Felitti, V. J., Chapman, D., Edwards, V. J., Dube, S. R., et al. (2002). Adverse childhood experiences, alcoholic parents, and later risk of alcoholism and depression. *Psychiatric Services, 53,* 1001-1009.

Bensley, L. S., Van Eenwyk, J., & Simmons, K. W. (2000). Self-reported childhood sexual and physical abuse and adult HIV-risk behaviors and heavy drinking. *American Journal of Preventive Medicine, 18,* 151-158.

Boden, J. M., Fergusson, D. M., & Horwood, L. J. (2006). Illicit drug use and dependence in a New Zealand birth cohort. *Australian and New Zealand Journal of Psychiatry, 40,* 156-163.

Boles, S. M., Joshi, V., Grella, C., & Wellisch, J. (2005). Childhood sexual abuse patterns, psychosocial correlates, and treatment outcomes among adults in drug abuse treatment. *Journal of Child Sexual Abuse, 14,* 39-55.

Brems, C., Johnson, M. E., Neal, D., & Freemon, M. (2007). Childhood abuse history and substance use among men and women receiving detoxification services. *The American Journal of Drug and Alcohol Abuse, 30,* 799-821.

Bulik, C. M., Prescott, C. A., & Kendler, K. S. (2001). Features of childhood sexual abuse and the development of psychiatric and substance use disorders. *British Journal of Psychiatry, 179,* 444-449.

Chen, J., Dunne, M. P., & Han, P. (2006). Child sexual abuse in Henan province, China: Associations with sadness, suicidality, and risk behaviors among adolescent girls. *Journal of Adolescent Health, 38,* 544-549.

Clark, D. B., Lesnick, L., & Hegedus, A. M. (1997). Traumas and other adverse life events in adolescents with alcohol abuse and dependence. *Journal of the American Academy of Child and Adolescent Psychiatry, 36,* 1744-1751.

Coid, J., Petruckevitch, A., Feder, G., Chung, W. -S., Richardson, J., & Moorey, S. (2001). Relation between childhood sexual and physical abuse and risk of revictimization in women: a cross-sectional survey. *The Lancet, 358,* 450-454.

Compton, W. M., Thomas, Y., Stinson, F. S., & Grant, B. F. (2007). Prevalence, correlates, disability, and comorbidity of DSM-IV drug abuse and dependence in the United States:

Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Archives of General Psychiatry, 64,* 566-576.

Dinwiddie, S. H., Heath, A. C., Dunne, M. P., Bucholz, K. K., Madden, P. A. F., Slutske, W. S., et al. (2000). Early sexual abuse and lifetime psychopathology: A co-twin-control study. *Psychological Medicine, 30,* 41-52.

Dube, S. R., Felitti, V., Dong, M., Chapman, D. P., Giles, W. H., & Anda, R. F. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The Adverse Childhood Experiences Study. *Pediatrics, 111,* 564-572.

Edgardh, K., & Ormstad, K. (2000). Prevalence and characteristics of sexual abuse in a national sample of Swedish seventeen-year-old boys and girls. *Acta Paediatrica, 88,* 310-319.

Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1996a). Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry, 35,* 1365-1374.

Fergusson, D. M., Lynskey, M. T., & Horwood, L. J. (1996b). Childhood sexual abuse and psychiatric disorder in young adulthood: I. Prevalence of sexual abuse and factors associated with sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry, 35,* 1355-1364.

Fleming, J. E., Mullen, P. E., Sibthorpe, B., & Bammer, G. (1999). The long-term impact of childhood sexual abuse in Australian women. *Child Abuse & Neglect, 23,* 145-159.

Galaif, E. R., Stein, J. A., Newcomb, M. D., & Bernstein, D. P. (2001). Gender differences in the prediction of problem alcohol use in adulthood: Exploring the influence of family factors and childhood maltreatment. *Journal of Studies on Alcohol, 62,* 486-493.

Grant, B. F., Dawson, D. A., Stinson, F. S., Chou, S. P., Dufour, M. C., & Pickering, R. P. (2004). The 12-month prevalence and trends in DSM-IV alcohol abuse and dependence: United States, 1991-1992 and 2001-2002. *Drug and Alcohol Dependence, 74,* 223-234.

Greenfield, S. F., Kolodziej, M. E., Sugarman, D. E., Muenz, L. R., Vagge, L. M., He, D. Y., et al. (2002). History of abuse and drinking outcomes following inpatient alcohol treatment: A prospective study. *Drug and Alcohol Dependence, 67,* 227-234.

Harrison, P. A., Fulkerson, J. A., & Beebe, T. J. (1997). Multiple substance use among adolescent physical and sexual abuse victims. *Child Abuse & Neglect, 21,* 529-539.

Hill, S. Y., Shen, L., Lowers, L., & Locke, J. (2000). Factors predicting the onset of adolescent drinking in families at high risk for developing alcoholism. *Biological Psychiatry, 48,* 265-275.

Hussong, A. M., & Chassin, L. (1997). Substance use initiation among adolescent children of alcoholics: Testing protective factors. *Journal of Studies on Alcohol, 58,* 272-279.

Hussey, J. M., Chang, J. J., & Kotch, J. B. (2006). Child maltreatment in the United States: Prevalence, risk factors, and adolescent health consequences. *Pediatrics, 118,* 933-942.

Kendler, K. S., Bulik, C. M., Silberg, J. L., Hettema, J. M., Myers, J., & Prescott, C. A. (2000). Childhood sexual abuse and adult psychiatric and substance use disorders in women: An epidemiological and cotwin control analysis. *Archives of General Psychiatry, 57,* 953-959.

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting & Clinical Psychology, 68,* 19-30.

Legrand, L. N., McGue, M., & Iacono, W. G. (1999). Searching for interactive effects in the etiology of early-onset substance use. *Behavior Genetics, 29,* 433-444.

Li, F., Duncan, T. E., Hops, H. (2000). Examining developmental trajectories in adolescent alcohol use using piecewise growth mixture modeling analysis. *Journal of Studies on Alcohol, 62,* 199-210.

Lynskey, M. T., Agrawal, A., Bucholz, K. K., Nelson, E. C., Madden, P. A. F., Todorov, A. A., et al. (2006). Subtypes of illicit drug users: A latent class analysis of data from an Australian twin sample. *Twin Research and Human Genetics, 9,* 523-530.

MacMillan, H. L., Fleming, J. E., Streiner, D. L., Lin, E., Boyle, M. H., Jamieson, E., et al. (2001). Childhood abuse and lifetime psychopathology in a community sample. *American Journal of Psychiatry, 158,* 1878-1883.

McMillan, G. P., Hanson, T., Bedrick, E. J., & Lapham, S. C. (2005). Using the bivariate dale model to jointly estimate predictors of frequency and quantity of alcohol use. *Journal of Studies on Alcohol, 66,* 688-692.

Messman-Moore, T. L., & Long, P. J. (2003). The role of childhood sexual abuse sequelae in the sexual revictimization of women: An empirical review and theoretical reformulation. *Clinical Psychology Review, 23,* 537-571.

Miller, B. A., Downs, W. R., & Testa, M. (1993). Interrelationships between victimization experiences and women's alcohol use. *Journal of Studies on Alcohol, 11,* 109-117.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health, 91,* 753-760.

Moncrieff, J., & Farmer, R. (1998). Sexual abuse and the subsequent development of alcohol problems. *Alcohol & Alcoholism, 33,* 592-601.

Naimi, T. S., Brewer, R. D., Mokdad, A. H., Denny, C., Serdula, M. K., & Marks, J. S. (2003). Binge drinking among US adults. *Journal of the American Medical Association, 289,* 70-75.

Nelson, E. C., Heath, A. C., Madden, P. A. F., Cooper, M. L., Dinwiddie, S. H., Bucholz, K. K., et al. (2002). Association between self-reported childhood sexual abuse and adverse psychosocial outcomes: Results from a twin study. *Archives of General Psychiatry, 59,* 139-145.

Nelson, E. C., Heath, A. C., Lynskey, M. T., Bucholz, K. K., Madden, P. A. F., Statham, D. B., et al. (2006). Childhood sexual abuse and risks for licit and illicit drug-related outcomes: A twin study. *Psychological Medicine, 36,* 1473-1483.

Pedersen, W., & Skrondal, A. (1996). Alcohol and sexual victimization: A longitudinal study of Norwegian girls. *Addiction, 91,* 565-581.

Plant, M., Miller, P., & Plant, M. (2004). Childhood and adult sexual abuse: Relationships with alcohol and other psychoactive drug use. *Child Abuse Review, 13,* 200-214.

Sartor, C. E., Lynskey, M. T., Bucholz, K. K., McCutcheon, V. V., Nelson, E. C., Waldron, M., et al. (2007a). Childhood sexual abuse and the course of alcohol dependence development: Findings from a female twin sample, *Drug and Alcohol Dependence, 89,* 139-144.

Sartor, C. E., Lynskey, M., Heath, A. C., Jacob, T., & True, W. (2007b). The role of childhood risk factors in initiation of alcohol use and progression to alcohol dependence, *Addiction, 102,* 216-225.

Simpson, T. L., & Miller, W. R. (2002). Concomitance between childhood sexual and physical abuse and substance use problems: A review. *Clinical Psychology Review, 22,* 27-77.

Spak, L., Spak, F., & Allebeck, P. (1998). Sexual abuse and alcoholism in a female population. *Addiction, 93,* 1365-1373.

The NIMH Multisite HIV Prevention Trial Group. (2001). A test of factors mediating the relationship between unwanted sexual activity during childhood and risky sexual practices among women enrolled in the NIMH Multisite HIV Prevention Trial. *Women and Health, 33,* 163-180.

Thompson, M. P., Arias, I., Basile, K. C., & Desai, S. (2002). The association between childhood physical and sexual victimization and health problems in adulthood in a nationally representative sample of women. *Journal of Interpersonal Violence, 17,* 1115-1129.

Vogeltanz, N. D., Wilsnack, S. C., Harris, T. R., Wilsnack, R. W., Wonderlich, S. A., & Kristjanson, A. F. (1999). Prevalence and risk factors for childhood sexual abuse in women: National survey findings. *Child Abuse & Neglect, 23,* 579-592.

Walitzer, K. S., & Dearing, R. L. (2006). Gender differences in alcohol and substance use relapse. *Clinical Psychology Review, 26,* 128-148.

Walker, J. L., Carey, P. D., Mohr, N., Stein, D. J., & Seedat, S. (2004). Gender differences in the prevalence of childhood sexual abuse and in the development of pediatric PTSD. *Archives of Women's Mental Health, 7,* 111-121.

Walsh, C., MacMillan, H. L., & Jamieson, E. (2003). The relationship between parental substance abuse and child maltreatment: Findings from the Ontario Health Supplement. *Child Abuse & Neglect, 27,* 1409-1425.

Wilsnack, S. C., Vogeltanz, N. D., Klassen, A. D., & Harris, T. R. (1997). Childhood sexual abuse and women's substance abuse: National survey findings. *Journal of Studies on Alcohol, 58,* 264-271.

Zlotnick, C., Johnson, D. M., Stout, R. L., Zywiak, W. H., Johnson, J. E., & Schneider, R. J. (2006). Childhood abuse and intake severity in alcohol disorder patients. *Journal of Traumatic Stress, 19,* 949-959.

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Chapter 8

THE NEGLECT OF CONTEXTUAL FACTORS IN STUDIES OF CHILD SEXUAL ABUSE: A COMMENTARY

David M. Allen*
Department of Psychiatry, University of Tennessee Health Science Center,
135 N. Pauline, Sixth floor, Memphis, TN, USA

ABSTRACT

Child sexual abuse (CSA), particularly within an individual's family of origin, has been implicated as a risk factor for a wide variety of adult psychiatric diagnoses and behavioral problems, including borderline personality disorder (BPD), dissociative identity disorder, depressive disorders, anxiety disorders, alcoholism, eating disorders, somatization disorder, sexual dysfunction, and suicide attempts. While biogenetic factors are almost certainly a significant factor in predisposing a victim to one or another of these conditions, two questions arise. First, what psychosocial variables may also influence the type of adult psychiatric problems suffered by a CSA victim? Second, why do some individuals who appear to have suffered severe abuse develop no psychiatric problems at all, while others who seem to have had relatively minor abuse develop several disorders?

Studies that examine psychosocial variables in CSA tend to focus on factors such as who the perpetrator was, what type of abuse was suffered, the severity and frequency of the abuse, and whether the social welfare or criminal justice system became involved. Occasionally, the response of non-abusive relatives to CSA victims is examined. Most results of such studies have been disappointing regarding finding links between specific disorders and these variables.

In the opinion of the author, investigators often ignore contextual factors in the family, both during the abuse and at other times, that may influence the effect of the abuse. Clearly, most of the victim's interactions with perpetrators and bystanders alike occur at times when abuse is not occurring, and these other parts of such relationships may also have profound effects on the victim's later socialization and self image. In interpersonal and systems-oriented individual psychotherapy, the victim's entire

* (901) 448-4567, Fax: (901) 448-2968; dmallen@utmem.edu

relationships with both the perpetrator and other key members of his or her family of origin are explored in detail. The effects of contextual factors have high clinical salience. Due to their staggering complexity and intermittent nature, they are difficult to study using statistical techniques. Qualitative research using series of case studies that examine the entire family context of CSA may be more helpful in uncovering relationships between psychosocial variables and specific psychopathology. An illustrative case example is presented.

Albert Einstein was said to have had a sign over his office at Princeton that said, "Everything that counts cannot be counted and everything that can be counted does not count." When it comes to studying the psychiatric sequellae of child sexual abuse (CSA), I believe it is wise to keep this maxim in mind. The nature and effects of complex interpersonal relationship patterns, such as those that transpire in the families of CSA victims, are almost impossible to quantify for "empirical" study or "proof" of causation of specific psychiatric disorders.

CSA, particularly within an individual's family of origin, has been implicated by at least one study as a possible risk factor for a wide variety of different adult psychiatric diagnoses and behavioral problems. These conditions include borderline personality disorder (BPD), dissociative identity disorder, depressive disorders, anxiety disorders, alcoholism, eating disorders, somatization disorder, sexual dysfunction, and suicide attempts [1]. Additionally, in CSA victims there is considerable overlap in the conceptualization of BPD and so-called "complex post traumatic stress disorder" [2]. Not all studies on some of these disorders show CSA as being a risk factor, and in some studies the effects of CSA have been shown to be mediated by other factors, such as subjects' impression of having been raised in a highly disturbed family environment. Often the backgrounds of CSA victims are also characterized by several types of abuse or generally chaotic relationships. Nonetheless, the effects of CSA on adult psychopathology seem to be both extensive and quite diverse.

Having said that, two question arise. First, why do some individuals who appear to have suffered severe abuse develop no psychiatric problems at all, while others who seem to have had relatively minor abuse develop severe disorders? Second, while biogenetic influences are certainly a big factor in predisposing an abused individual to or protecting him or her from development of one or another of these clinical sequellae of CSA, what are the psychosocial variables that also influence the development of or protect from the various types of adult psychiatric problems suffered by CSA victims?

Studies that examine psychosocial variables in child sexual abuse tend to focus on factors such as who the perpetrators were, the number of different perpetrators, what type of abuse was suffered (e.g. fondling versus intercourse), the severity and frequency of the abuse, the duration of the abuse, and if the social welfare or criminal justice system became involved. Occasionally, the response of the non-abusive parent, often the mother, is discussed but usually not quantified (e.g., if she believed the report of the victim or if she left the abusive spouse in response to learning of the abuse). Most results of such studies have been disappointing regarding finding links between specific disorders and these variables. For example, Paris, Zweig-Frank, and Guzder found that female subjects with borderline personality disorder had a greater frequency of CSA and more severe CSA than found in other personality disorders, but that CSA still had a low specificity to BPD. Furthermore, only

a subgroup of BPD subjects reported severe sexual abuse experiences [3]. About all than can be said as of this writing about the relationship of CSA to specific disorders is that the more types of abuse a victim suffers and the more severe the abuse is, the higher the probability that some type of psychopathology will result.

In the opinion of the author, investigators have usually ignored contextual factors in the family that exist, both during the abuse and at other times, that may strongly influence the psychological effects of the abuse. These contextual factors may predispose or protect the victim from specific psychiatric disorders. Contextual factors include the entire history of the relationship between the victim and the perpetrator: what is said during, before, and after the abuse; what the relationship between victim and perpetrators is like when the abuse is not taking place; what other people in the family are doing at the time of the abuse and at other times; how each family member relates to the victim; who if anybody knows what is going on and whether or not they intervene; and a whole host of other characteristics of the interpersonal environment of the victim. The context of the abuse is made even more complex due to the effect of chaos, the theory of which predicts that even small differences in environmental conditions can have large future effects. The so called "butterfly effect" would occur when small differences in the interpersonal environment of a child lead to a cascade of events which will be somewhat unique to each individual and greatly impact the exact nature of any psychiatric sequellae to the CSA.

Lack of empirical attention by researchers to contextual factors is certainly understandable in light of the supreme difficulty involved in quantifying many different complex interpersonal interactions that are characterized by several different parameters that come and go intermittently and involve an ever changing array of several different other people (e.g, a parental divorce followed by the appearance of a new stepparent with a whole new set of reactions to the interpersonal environment in which the CSA takes place).

Clearly, a victim's interactions with perpetrators during CSA are not limited to the sex act alone. Words may be spoken; other activities may occur right before, right after, and even simultaneously. Furthermore, the majority of the victim's interactions with perpetrators and bystanders alike occur at times when abuse is not occurring, and these other parts of the relationships certainly must have profound effects on the victim's later socialization as well as the victim's self image. These other factors can have a significant influence on exactly what personality traits and psychological symptoms a victim may develop and carry over into adulthood.

For example, Benjamin [4] discussed how the nature of verbal interactions with the perpetrator at the time of the abuse may influence the production of later borderline personality symptomatology. The tendency of some BPD patients to have unstable and intense interpersonal relationships characterized by alternating extremes of idealization and devaluation, for example, might result from a case in which a father "directly instructed her [the incest victim] in how to shift from idealization to devaluation. Early in a night visit, the father may say, 'You are the light of my life; I live for these times together…' Then, after the incestual attack, he might say, "It's your fault. You bitch. You whore. You're filthy. Go take a shower'" (p.119). In helping to create another BPD symptom, at times completely unrelated to the times in which CSA takes place, the BPD patient's autonomy may be attacked by either or both parents, with an accusation of disloyalty if the victim tries to assert her independence. This may lead to the type of self-sabotage often seen in BPD patients. Different types of dysfunctional interactions may lead to the development of still other BPD symptoms, leading

not only to the unique clinical picture of an individual CSA victim, but to the different combinations of DSM criteria seen in different patients with BPD.

In systems-oriented individual psychotherapy [5, 6], the victim's entire relationships with both the perpetrator and other key members of his or her family of origin are explored in detail, both historically and in the present. Information from many sources is examined, including detailed descriptions by patients of emotionally salient conversations with parental figures, conjoint interviews with patients and a parent, individual psychotherapy sessions with parents of progeny with various Axis II disorders, and audiotaped telephone conversations between patients and their parents.

In families that produce a BPD patient, for example, while the interactional patterns vary widely in specific detail, they tended to revolve around a specific theme that seems to be more common in the case histories of families with progeny with BPD than in families with progeny with other Axes I and II disorders [6]. This essence of this theme is that the parents seem to be highly conflicted over their role as parents, leading to oscillating extremes of hostile over-involvement with their children such as CSA, and hostile neglect [7]. This pattern is not necessarily directed at all the children in the household; sometimes it is focused on only one of many siblings (see the case example below). That one sibling is the one that seems to develop the most symptoms of BPD. Of course, with children who seem to be the target of this pattern, there are many times that the parental figures are neither over-involved nor under-involved, and their hostility level can vary quite widely over the course of even an hour.

In terms of figuring out how to react to the parents, targeted children have to have a repertoire of responses, and have to pay close attention to how the parental figures are behaving at any moment. This can certainly be a major factor in the BPD patient's exquisite interpersonal sensitivity. In response to the extremes of hostile over-involvement and hostile neglect, the targeted child seems to develop what are termed "spoiling" responses, which are also characteristic of BPD patients. This is the typical devaluing, hostile, and help-rejecting stance of the BPD patients in which all efforts to help them are in some way ruined or thwarted. A theoretical discussion of the relationship between the parents' behavior and the spoiling response is beyond the scope of this article and is presented elsewhere [6]. What is important is that the relationship of these two family patterns operates on what behaviorists term a variable reinforcement schedule, in which they occur and feed into one another intermittently and unpredictably, making them particularly intractable and resistant to change.

The profound effects of contextual factors such as the ones described above have high clinical salience. Their discussion in therapy tends to elicit the exact same symptoms of dysregulation of affect of which the patient complains.

Due to the staggeringly complex, contradictory and intermittent nature of these patterns of interpersonal interaction, it is difficult to imagine how a study of them employing statistical techniques might be designed that could prove a correlation between specific patterns and specific psychopathology. In the author's opinion, qualitative research on these issues, using case studies that examine the entire relationship context of individuals with a history of CSA, is superior in uncovering the answers to the questions raised by this paper. Complex pattern recognition is one area in which the human mind is superior to the mathematical models by which computers are programmed. Through case examples, researchers can look for recurring themes in the family experiences of individuals with a wide variety of Axes I and II conditions. Relationship patterns in families that do not produce

particular psychopathology can be compared to those in families that do. In families that seem to act out certain patterns found to be common to cases exhibiting specific psychopathology, yet which do not produce offspring with the disorder, mitigating aspects of the interpersonal context could be sought, and their frequency compared to that in families that do produce the disorder.

In closing, I present a case example of a CSA victim that illustrates how elements of the interpersonal context in one family exhibiting the above-described theme common to families that produce BPD offspring might have influenced the patient's specific clinical presentation. The family interactions in the case exhibited several complex and inter-related interactional behavioral sequences which, I believe, would be poorly amenable to "empirical" quantified comparisons to the patterns in other CSA families.

CASE EXAMPLE

X.Y. was a woman in her early thirties who came into therapy presenting with unstable affect, a pattern of unstable and intense interpersonal relationships with her family and her husband, confusion about her identity, recurrent suicide threats with some serious attempts, chronic feelings of emptiness, and difficulty controlling her anger. She thus met six out of the nine criteria for borderline personality disorder.

X.Y.'s experience with CSA, later confirmed in judicial proceedings, began with her natural father fondling her at a young age. He then backed off for a number of years, but started again with sexual abuse in X.Y.'s early teens and continued for about two years. The abuse included several episodes of intercourse. During the abuse, the father would consistently say loving things to her. He would tell her how beautiful she was and how much he loved her. (Later in life, the patient never believed men when they told her she was attractive, because she viewed such statements as manipulative, as well as being at odds with her own negative view of her appearance).

When not having sex, the patient and her father would have long, involved, and enjoyable conversations about philosophy and atheism. This wild oscillation between positive and negative aspects of her relationship with the father could certainly be a major factor in her later development of both unstable relationships and unstable affect. Compounding this effect was the fact that the father had come from an evangelical Christian family where "fire and brimstone" was the house philosophy, and that the patient had visited the paternal grandmother's home on numerous occasions where she had been subjected to frightening harangues on the subject. Later in life the patient became confused about what she believed about the existence of God. This was a good example of how specific and multi-faceted relationship dynamics might contribute to one aspect of the BPD symptom of identity disturbance. The patient and her father would also work together on musical activities. X.Y. wanted a career in music but found herself strangely reluctant to proceed with activities which might lead to one. Her confused sense of self-identity also led directly to feelings of emptiness, which in turn led to suicidal thoughts.

Partially because of the father's loving remarks and their happy times together, and despite the CSA, X.Y. felt closer to her father than to the mother. She described her mother as alternately neglectful and explosive, and occasionally physically abusive. The mother was

also described as having difficulty showing any physical affection. Of course, the mother would also have times during which she seemed loving and approachable. Each time the mother would act in a positive manner, X.Y would get her hopes up that the relationship would remain in this form, only to have the hopes dashed again and again by the mother's sudden angry tirades. Additionally, the patient always felt that she was somehow competing with the mother for the father's affection. The parents had a poor relationship even before the father's abusive behavior became known, and were separated for a time.

The patient did not tell the mother of the CSA out of a concern that it would hurt the mother's feelings coupled with her feeling that her mother really did not care anyway. The patient had good reason for being concerned with the mother's mental health as well as her own safety. On more than one occasion, the mother had spoken of an impulse to crash her car, killing herself and her children.

The sexual abuse stopped after X.Y. finally told a school counselor about it, who notified authorities. When the mother found out, to her credit she then did her best to stop the abuse. However, the patient felt that the only reason she did this was not out of concern for her, but because she viewed X.Y. as "the other woman" in a love triangle with the father. Prior to finding out, the mother had let the patient wear sexy clothes, and threw them out only afterwards. When the patient was an adult and the subject of the abuse came up, the mother accused her of having "lived like man and wife" with the father, as if the patient had really desired the abuse.

After the abuse became known to the authorities, the father was subsequently arrested, charged with the crime, convicted, and then served jail time. The mother became more unstable. On several occasions she emerged from her bedroom announcing to the patient that she had already taken an overdose of pills in a suicide attempt, but that she had changed her mind afterwards about wanting to die. The patient felt both terrified and helpless during these episodes.

During this period of time, the patient was taken out of the home and spent her late adolescence in group homes for acting-out teenagers. Many of these teens had been guilty of criminal behaviors. X.Y. felt that she did not fit in with the other girls because she was not a criminal. The feeling of not fitting in anywhere became a constant theme of the patient's adult life, and was yet another contributing factor to her identity confusion, feelings of emptiness, and suicidal thoughts.

Because of the charges, the parents divorced, although the mother seemed to blame X.Y. for the dissolution of her marriage. The mother seemed to avoid X.Y. as much as possible. For example, she would often disappear during times when visitation to the group home was allowed. Because of this behavior, X.Y. told her mother "not to bother" trying to regain custody of her. The mother seemed to willingly, and almost gladly, accede to this request. During one argument about the mother's apparent lack of interest in coming to visit, the mother violently pinned the patient up against the wall and yelled, "You want to hit me, don't you?" The patient refused to do so, and the mother finally let her go. This sort of occurrence may have been one factor in the genesis of the X.Y.'s anger control problems, as well as yet another factor in her tendency to have unstable relationships and suicidal thoughts.

The patient had one younger sister who was not molested. While somewhat closer to the mother than to the father, the sister had a poor relationship with both parents. She was physically abused by the mother on several occasions. She seemed almost jealous of the

attention the father lavished upon X.Y., and tried to emulate her musical talents, even though it was obvious that these activities were not her strong suit.

The family came from an impoverished background and money had always been very tight. Both parents went to school to get professional degrees, and eventually both began working. The improved financial lot of the family did not last long because of the events described above began leading to the parents' divorce. Prior to the start of the abuse, while both parents were in school, the patient was supposed to take care of her younger sister and do all the housework. She would be busy late into the evening with these chores, despite the fact that the mother would come home and do nothing to help her. She felt chronically neglected and burdened unfairly with domestic tasks. This left her with a feeling that she wished someone would take care of her but that such wishes were unrealistic. Additionally, she felt that she did not fit in with people who had money, nor with people who were poor.

The patient's husband was ambivalent over many of these same issues himself, partially due to his experiences within his own family of origin. Because of mutually-shared conflicts, the patient and her husband frequently gave mixed messages to one another about intimacy, outside activities, finances, housework, and disciplining their children. For example, the husband went back and forth between encouraging the patient to engage in the outside activities she wanted to do and then seeming to indicate that he did not want her to proceed with them. For example, the patient would complain about how tired she was and about how she was having difficulty following through on her wish to develop a musical career. After having initially encouraged her to proceed, the husband would suddenly start to make nasty remarks about both the life of a musician and her spending so much time away from him. Such mutual, simultaneous mixed messages led to an unstable relationship between X.Y. and her husband, which could go from fairly good to quite chaotic very quickly. This was another possible contextual factor that contributed to the genesis of this symptom of X.Y.'s BPD.

The patient had her own conflicts over being a parent, which may have mirrored those of her mother. She often did not feel very motherly towards her children – a feeling that stemmed partly from resentment over having had to watch her younger sibling when a child - and sometimes wished that they would leave her alone. She resented having to take the time to look after them. However, she cared enough about them to feel guilty about ever having such feelings. In response to X.Y.'s ambivalence about the children, her husband would alternate between letting X.Y. do all the disciplining of the children and then criticizing X.Y. for how she went about it, overindulging the children, and disciplining them in an overly harsh manner.

This case example illustrates how contextual factors may influence and shape the effects of CSA in creating specific psychopathology. While certainly open to different interpretations and observer biases, I believe that qualitative descriptions of such case histories represent a much richer source of clinical understanding than studies that use simplistic, cross-sectional observer ratings or self-report psychological measures.

REFERENCES

[1] Figueroa, E; Silk, KR, Huth, A; Lohr, N. History of childhood sexual abuse and general psychopathology. *Comprehensive Psychiatry*, 1997, 38, 23-30.

[2] McLean, JM; Gallop, R. Implications of childhood sexual abuse for adult borderline personality disorder and Complex Posttraumatic Stress Disorder. *American Journal of Psychiatry*, 2003, 160, 369-371.

[3] Paris, J; Zweig-Frank, H; Guzder, J. Psychological risk factors for borderline personality disorder in female patients. *Comprehensive Psychiatry*, 1994, 35, 301-305.

[4] Benjamin LS. (1993). *Interpersonal Diagnosis And Treatment Of Personality Disorders.* New York: Guilford.

[5] Allen, DM. (1988). *A Family Systems Approach to Individual Psychotherapy.* (Originally entitled, Unifying Individual and Family Therapies). Northvale, NJ: Jason Aronson.

[6] Allen, DM. (2003). *Psychotherapy with Borderline Patients: an Integrated Approach.* Mahwah, NJ: Lawrence Erlbaum and Associates.

[7] Melges FT; Swartz MS. Oscillations of attachment in borderline personality disorder. *American Journal of Psychiatry* 1989, 146, 1115-1120.

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Chapter 9

ENDOMETRIOSIS AND SEXUAL ABUSE

Jean Belaisch**[*] and Jean-Paul Allart
Maternité Pinard Hôpital Saint Vincent de Paul, 75014 Paris, France

ABSTRACT

Endometriosis is a purely feminine disease. It is due to the growth –mainly in the pelvis - of endometrial-like tissue out of the uterine cavity under the stimulation of ovarian hormones. Symptoms are pelvic pain both cyclical -mainly dysmenorrhea-, and acyclical, and hypofertility.

The lesions of endometriosis are palpable by vaginal examination and visible with laparotomy or laparoscopy. They can also be recognized by MRI or ultra-sonography. Their organic nature cannot thus be questioned. Consequently it is difficult to attribute their aggravation to a psychological disturbance and even less their initiation. However, we were struck by the discovery of long-lasting emotional traumatisms and very often of sexual abuse which have occurred in their childhood or their adolescence, in half of our endometriotic patients, after thorough questionning.

Many physio-pathological assumptions can explain these “psycho-somatic” phenomena.

The development of endometriosis seems to be narrowly dependent on the status of immunological defences. However it is now known that the level of these defences is function of the mental state, perhaps by means of the neuro-peptide Y secretion.

In addition the development of pelvic lesions is regarded as secondary to the arrival of endometrial cells in the peritoneal cavity via the tubes in a retrograde fashion, at the time of the menstruations. Antiphysiologic tubal contractions can increase this transfer. And it is well known that mood disturbances are accompanied by disorders of the autonomic nervous system which command tubal motility.

The knowledge of psychological factors influences primarily the relation between the patient and the doctor which ceases being limited to advise a local treatment and instead takes also into account the totality of the person.

[*] jean.belaisch@wanadoo.fr

Moreover once the patient feels understood she feels reassured and can more easily accept psychological help without the fear of being regarded as a hypochondriac. But the doctor must take care not to assign all the disorders of his patient to her old traumas.

I. INTRODUCTION

Sexual abuse has multiple effects on the health of women and can cause many functional disorders. Among those, pelvic pains occupy a place recognized by the gynaecologists as well as by the psychiatrists and the psychologists. Pelvic pains related to this kind of aggression are regarded as psychogenic and the large majority of the gynaecologists and doctors in general admit that they are completely distinct from pain of the endometriosis. On the other hand , gynaecologists consider that pain of the endometriosis are caused by manifest lesions. Hence they are of organic nature, requiring a specific treatment.

However the character of these pains which are generally explained neither by the extent nor by the localization of the lesions led some gynaecologists to wonder about the enigmatic relations linking the pelvic endometriosis and pain [1].

Our personal experience even led us to evoke the possibility that the pain of endometriosis is more narrowly dependent on the psychic state of our patients than it is usually thought, because of the frequency with which we found emotional traumatisms and in particular sexual abuse in their antecedents.

Also because in the majority of cases, these traumatisms had taken place in childhood and during adolescence, we raised the assumption that the state of emotional imbalance which had followed these shocks had been able to play a part in the *initiation* of the endometriotic disease.

II. WHAT IS ENDOMETRIOSIS

Endometriosis is defined by the presence outside the uterine cavity of a tissue having most of the characteristics of the endometrium - this mucosa which lines the uterine cavity. Usually endometriosis is confined to the pelvic cavity but occasionnally it occurs in distant sites (central nervous system, lungs and cutaneous sites...). Endometriosis lesions, as endometrium, respond to the stimulation by ovarian hormones and hence bleed during the menstrual periods.

The symptoms of endometriosis are pelvic pain mainly during menstruation (called dysmenorrhea) or of a continuous nature (and said acyclical pain). But the pain may also happen during sexual intercourse and sometimes during urination or defecation at the time of menstrual periods.

The other symptoms are abnormal uterine bleeding, subfertility and enlarged ovaries (endometrioma).

Endometriosis is a proteiform disease with various signs: clinical examination is painful and can discover pelvic induration, fixed uterine retroversion and the presence of implants on the utero-sacral ligaments which can be felt posterior to the cervix of uterus. Enlarged or

fixed ovaries is also a sign. Sometimes they are adherent one to the other and called “kissing ovaries”.

Laparoscopy (necessitating general anesthesia) is considered as the definitive diagnostic procedure for endometriosis: thanks to the introduction of an optic device in the peritoneal cavity, the surgeon sees perfectly the endometrial implants and the adhesions between genital and digestive organs.

But recently progress has been made in the fields of vaginal ultrasounds and Magnetic Resonnance Imaging (MRI) which are non invasive diagnostic tools [2].

The surgical treatment is the gold standard for the therapy of this disease, but the development of effective medical therapy and popularisation of *in vitro* fertilization are also advances taken into account in recent literature. Needless to say that it is not possible to describe in a few sentences a disease that has been the subject of thousands of pages every year.

III. How does Endometriosis Develop?

The most probable theory (advanced by Sampson in 1927) to explain the development of endometriosis is related to retrograde menstruation of viable endometrial cells arriving through the tubes in the peritoneal cavity. Those cells implant and grow on pelvic structures. In healthy women the endometrial cells are destroyed by scavengers cells of the immune system. But one understands that, if retrograde menstruation is too copious or if immunologic defences are altered, implantation of the endometrial migrated cells will take place. Other theories exists as development of embryonic remnants or metaplasia of the lining of peritoneal cavity.

The bleeding which occurs in the lesions and the peritoneal cavity at the time of each menstruation causes the development of adhesions between the various pelvic organs. These adhesions are sometimes also secondary to awkward surgical manoeuvers.

One of the major disadvantages of the endometriotic lesions is their frequent recurrences after the interventions of ablation even perfectly carried out and after medical treatment even prolonged. Those recurrences make a great part of the severity of the disease.

Actually, an apparent increase in prevalence may result from more accurate diagnosis, but also may be a consequence of delayed child bearing. On the other hand, the disease seems to be an explanation for severe menstrual pelvic pain as it has been found in 47 % of the 140 adolescents observed [3]. It is also clear that with menopause, almost all endometriosis will recover because of the disappearance of the ovarian hormones.

IV. Relations between Pelvic Pains and Lesions of Endometriosis

The gynaecologists who, during their operations, observe manifest and sometimes extensive lesions of endometriosis have many reasons to attribute to these lesions the pains experienced by their patients. Adhesions displace the organs which can be subjected to anomalous tractions. The lesions are put under pressure by menstrual bleedings. Finally

nervous ramifications have been observed, enclosed inside the endometriotic implants. Moreover, the prostaglandin released by those implants elicit very painful contractions of the uterine muscle (which are also the cause of idiopathic dysmenorrhoea).

This is why the majority of gynaecologists, who are mainly surgeons, are persuaded that these pains must be treated essentially by the destruction of the lesions. And some of them who however have a remarkable knowledge of the disease, do not evoke, even only once, the possible role of psychological factors or do not take into account the psychic state of their patients [4, 5]. Whereas it appears to us to be an essential factor in the treatment, which our observations amply appear to justify.

V. Our Observations

The first of our patients which put us on the track of a possible relation between sexual abuse and endometriosis had told us, after at least two years of consultations for pain and infertility related to a severe and multi-operated endometriosis, a very conclusive history.

In a few words: when the fiancée of her brother came to their apartment to sleep for a night, she was accustomed to sleep in the bed of her lover. He himself slept together with his young sister in her bed. He was in a quite comprehensible state of sexual excitment and could not prevent showing himself. The four years of the engagement were marked by insurmountable attacks of anxiety each time she learned about the imminent arrival of the betrothed. And she had remained deeply disturbed about it!

By chance the following day another endometriotic patient had spontaneously reported to us a personal history of an afflicting and painful rape in childhood.

We had been struck by these observations and we then started to pay attention to everything that could make us think that patients suffering from pelvic pains evocative of endometriosis could have been shaken by an emotional shock more or less related to sexual abuse and having given a negative feeling of the relationships between the sexes.

Quickly we observed that these emotional shocks were much more frequent than we had imagined, since they affected about half of our patients. And the banal sexual abuse was far from being rare. Curiously, we sometimes became aware of some of these abuses in patients whom we had followed for more than 20 years! Very often our patients also tell us with a lot of embarrassment and at a much later time that their first intimate relationship with a man was violent and physically abusive -without being sexually abused- and lasted for a much longer time that they would have liked.

Initially 95 in 200 successive patients [6], then in 153 in 300 women [7], we have learned about such emotional and prolonged traumas.

Conversely in half of the cases, the women questioned in a completely direct way after conventional medical questionning, did not declare any psychic traumatism.

A genetic origin of the endometriosis could be evoked in those cases, but it was difficult to quantify because the antecedents of endometriosis shown in the mother, the sisters or the near relatives, were not known with certainty.

However, it was manifest that all the shocks were not of directly sexual nature and one could find more or less serious traumatisms which, without excessive extrapolation, one could think that they had necessarily disturbed their psychic life.

An example of this is given by a patient suffering from very severe dysmenorrhoea since the age of 12 and who suffered from an extensive endometriosis confirmed by MRI. Her history is not very common but characteristic: one day when she was 11 years old, her mother had announced to her that they were going to leave on a journey to see one of her friends "with eyes closed ". And she found herself in a house close to a cemetery in front of an open coffin containing a corpse who had indeed his eyes closed. Her mother then said: this it is your father! And during the remainder of her life, this woman could never obtain the least explanation from her mother who had told her since she was 3, that her father had died very early of a mysterious disease. She thus could never forgive her mother "to have been given her father on his deathbed ".

This observation was selected among several others, because it shows that the traumatism is not necessarily "genital" but that it engages the psychosexual evolution of a woman... her gender and her femininity [8].

The accent was laid on three forms of emotional traumas at the time of the reports of our patients:

- the shock in relation to the aggressions which were, certainly often rapes and also unmerited and repetitive corporal punishment, but which, as one saw, were not always of sexual nature;
- the refusal of the parents to which the event was reported, or worse, the absence of any reaction of the parents who let the sexual abuse be repeated;
- the feeling of abandonment felt by these young women who had on the contrary, an intense need to be strengthened.

Nevertheless sometimes no sexual abuse nor direct aggression could be found, but a family context deeply and durably disturbed which resounds on the psychic balance of the young woman. A frequent example that occurs often is when parents divorced and mutually aggressed each other through their children and for many years.

Recently, an article coming from a team in HOUSTON [9] analyzed in a detailed way family antecedents as well of the maternal as paternal role of a young woman suffering from endometriosis. Using sophisticated measuring apparatus, prolonged stress reactions of her autonomic nervous system strikingly different of a non symptomatic control woman were shown.

Psychic imbalance or deterioration of family functioning also has harmful consequences. The most common appeared to be the aversion the girl felt towards her father or the existence of true family fractures. Several of our patients had left their parents or were in a hurry to do so. More serious consequences, in a great proportion of our cases, was the severely inadequate choice of a spouse (or of a sexual partner). Moreover, the dislikes felt for sexual activity (and the consecutive interdicts) were at the origin of dissensions in the couples. The partner, exasperated by the repeated refusal of sexual intercourse, often resorted to violence which prolonged and worsened the initial traumatism and led to an exacerbation of the pelvic pains.

We are fully aware that our remarks remain superficial and of a voluntary technical nature whereas the pain each one of our patients suffers is located in the parts of her body which are components of her deep identity as a future mother [10].

VI. How Sexual Abuse and other Emotional Traumatisms Can Lead to the Development of Endometriosis?

Nobody discusses the possible repercussions of disturbed family relationships on the mental state of young women and that they can exaggerate the perception of pelvic pain. However the early character of these aggressions and of the psychic shock which followed, seemed to us to deserve greater attention than usually recognized by the doctors.

Was it unreasonable to think that the endometriosis which had appeared several months and in general several years later, could have found its roots in the prolonged state of anxiety and in the psychic instability which characterized these young women?

The opinions defended in medical literature during the Eighties were radically opposed to these assumptions. We shall consider only some of the articles published.

Renaer and al. (1979) observed that there were few differences in the results of the personality tests to which women suffering from pelvic pains had been subjected, whether they were carrying or not lesions of endometriosis and concluded: *« given that endometriosis has few reasons to occur in neurotic women, it is probable that it is the pain that conducts to the neuroticism »*[11].

Other articles stuck to the effects of the sexual abuse but paid attention only on to women with normal findings at laparoscopy (Reiter) [12].

However 10 years later 2 publications appeared that approximate our conclusions.

B. Strauss and al. [13] observed in sterile women with endometriosis lesions, signs of a gender role conflict characterized by a negative experience of the puberty, precocious gynecological problems and negative sexual experiences. And they concluded that a psychosomatic approach of endometriosis could be promising.

And chiefly, Low, Edelman And Sutton [14] confirmed the importance of anxiety in women with endometriosis. They have asked 110 patients referred to their clinic for pelvic pain, infertility or both, to undergo before laparoscopy a psychological evaluation with 6 questionnaires (the State Trait Anxiety Inventory, the Beck Depression Inventory and the Eyesenck Personnality Questionnaire...) and 95 had accepted. Women with endometriosis obtained higher psychoticism, introversion and anxiety scores in comparison with the other pain patients. And these authors state in conclusion *" if however endometriosis patients show evidence of a psychological profile distinct from patients with pelvic pains of other origins, this would present stronger evidence for the argument according that some women are psychologically vulnerable to developing of endometriosis* **"** **.**.

Harrop Griffiths et al. [15] have analysed the association between chronic pelvic pain, psychiatric diagnoses and childhood sexual abuse, and they concluded that "chronic pelvic pain is more closely associated with psychiatric findings than with organic pathology". And they added: " this is similar to findings of Bonica, Fordyce and Sternbach with other types of chronic pain, such as back pain and headhaches". We share this opinion but their point of view was quite different from ours.

Certainly the most profound view on the cases of endometriosis pelvic pain has been written by John A. Rock: "*Often the pain is chronic and depression may open the gate to allow the pain to intensify despite stable disease... Contributing factors are complex. These include sexual dysfunction and conflict, affective disorders, a history of sexual abuse, and other detrimental developemental experiences*"[1].

The last publication linking pelvic pain, endometriosis and sexual abuse is from BW. Fenton who hypothesized that those patients could suffer from a dysfunction of limbic structures which necessitate an appropriate treatment [16].

The hypothesis we raise is of a completely different nature. It is purely a hypothesis but justified by the peculiarities of the endometriosis and its narrow dependence to hormonal secretion.

To explain the passage of psychic instability to organic disorder, we raised two great assumptions, both of them having a biological plausibility, and which can be associated:

- the anxiety induced by the emotional state creates a state of depression in the immune system favoring the peritoneal implantation and growth of the cells coming from the endometrium. Indeed it is well known that psychological conditions, including stress, compromise immune defenses. And it is not impossible according to the works of J Wheway [17] that neuropeptide Y (NPY) which is a major regulator of stress in the central nervous system, could play a role in this stress-induced immunosuppression.
- the second assumption rises directly from the work of Harrison: the autonomic nervous system disturbances lead to anomalies of regulation of fallopian tubes motility which would increase the backward flow of endometrial cells and their accumulation in the peritoneal cavity. The killer cells being overflowed, a graft would occur.

But we do not forget the alteration of hypothalamo-pituitary axis. In fact there is always an alteration of what has been called the *psycho-neuro-endocrino-immunologic network.*

Whatever is the initiating mechanism, the disease evolves thereafter on its own account, while remaining subjected to the vigilance of the immune system and the permanence of the secretion of the ovarian hormones.

And one understands that the recurrences of the endometriosis can be, at least in certain cases, explained by the persistence of an immune depression for psychic reasons. And we observed many such coincidences.

But the recurrences are far from being always related to psychism. The genetic mechanisms, and also the anatomical factors supporting the backward flow (very abundant menstruations, stenosis of the cervix...) would explain many of them. In fact endometriosis probably needs to developp an accumulation of factors, the psychic trauma being only one of them, even if it is major.

As for the hypofertility of the endometriotic women, it could be attributed to the endometriosis lesions themselves and to the peritoneal inflammation (and thus the numerous pregnancies occurring quickly after the surgical ablation of the lesions would be explained) but also to the hypothalamic disturbances caused by the emotional shocks. As is well known, ovarian failure can result from altered hypothalamo-hypophyso-pituitary axis. And the unexpected cures of infertility in period of improvement of psychic balance would now find their explanation.

An increasing number of cases of infertility among women suffering from endometriosis, are cured by intra-uterine artificial inseminations - or by in vitro fertilization. But among some women when the failure of these techniques are repeated, these results perhaps from the severity of the psycho-immunitary disturbances.

Do Endometriotic Women Differ from Others?

These psychopathological explanations must also take into account a specificity of the endometriotic woman.

Patients Associations have observed that their adherent members too often suffered from other functional disturbances, in particular of irritable bowel syndrome, interstitial cystitis, vulvodynia and Crohn disease. The role of psychism in each one of these diseases has always been recognized. One could put the question: is the endometriotic woman different? (A Audebert) [18]. It appears to us that it is also additional proof of the implication of psychism in the aetiology of endometriosis.

VII. DISCUSSION

The first concept to be taken into account is the remarkable scarcity of works published in the international reviews of gynaecology on the relations between endometriosis and psychism, whereas the publications on the relations between psychism and pelvic pains are innumerable. This dichotomy can be perfectly explained.

The first aspect of the question is essential: the main fear of women suffering from pelvic pains is to be taken for a hypochondriac. The proof was given by several remarkable articles published in the issue of november 2006 of Fertility and Sterility: *Controversy: delay in diagnosis of endometriosis: Why* [19]

- To discuss their psychological difficulties with the gynaecologist whom they expect will discover the organic cause of their pains, can only be in opposition to their hope. They have thus a natural tendency to hide their affective conflicts.
- On another side the organicist gynaecologists are not trained to listen to the intimate sufferings and it is not in their tradition to pay attention to the indirect signs revealing the effects of emotional shocks, *a fortiori* if they happened many years before. And so even if they feel that they exist they will direct as possible their questionning towards controllable data. Unfortunately the traumatism of adolescence apt to induce a deterioration of the immune defences or to disturb the health at the point to allow the development of endometriotic lesions, can be expressed only if the patient fells very confident and if she feels that she is understood and can be helped. Our etiologic assumptions are likely thus to meet with skepticism by many gynaecologists who will not find the reflection of their daily experience. Skepticism is also justified by the fact that endometriosis appears under multiple masks and that it seems difficult to attribute the same mechanism to all its forms.

Additional reason, the reviewers of the scientific newspapers adopt a quite understandable attitude at the time of the Evidences Based Medicine. They severely criticize all the articles based on questionnaires which cannot be repeated and that any gynaecologist cannot carry out by himself... showing thus a total incomprehension of what is a female brain.

Last reflection: even if the gynaecologist discovers in the past of his patient any emotional trauma, he will not be able to help her because of his limited expertise, he is even likely to create an awkward situation.

On the other hand, psychiatrists and psychologists are constantly confronted with patients refered to them by gynaecologists who have checked the absence of organic lesions, and they have the desire to share their positive findings.

We would be happy if works such as this book could modify the state of mind of the gynaecologists.

VIII. Treatment or Therapeutic Consequences

This work is not about discussing means of alleviating the psychological disturbances felt by woman having been subjected to aggressive acts and having suffered during years from their consequences. Even if we are aware of the major importance of progress in this field.

We will not either insist or repeat to which point gynaecologists must be careful vis-a-vis of those patients terrorized by these traumas and likely to sue them for any word or gesture.

We will thus stick here to the characteristics of the treatments of endometriosis. The endometriosis is a disease of an unequalled complexity. It is sensitive to surgical procedures of ablation, to the hormonal treatments which are almost always useful, and as one saw, to the variations of the psychic and immunologic state. That psychological factors cause only an increase in the sensitivity to the pain, or that they are able to initiate a endometriosis and to favour the recurrences, it is obvious that these factors must always be dealt with and with the greatest delicacy.

The recourse to the psychologists or the psychiatrist-psychoanalysts must be proposed by the gynaecologist in parallel to other forms of therapy such as acupuncture for example, after he has demonstrated to his patient that he has explored all the aspects of her disease and in order not to make her think that she is regarded as a psychopath.

The difficulty is increased by the need for combining the efforts of many specialists: surgeons, endocrinologists and psychotherapists, none of them not having to feel superior to the others.

Difficulties also come from the attitude of patients who are dictated by the number of surgical operations that they have undergone and/or their acceptance of the methods of artificial insemination or IVF.

Nevertheless, and this is our experience, taking into account the psychological factors by the whole team of the attending practitioners can have only beneficial effects on the evolution of this unforeseeable disease.

As our patients come from different cities and we could not follow up with them all, we cannot say what proportion have had the advantage of this beneficial effect.

Fenton has written: “without a full disruption of both the central hypervigilance and pelvic organ dysfunction, pain recurs” and for R Maheux “the surgeon who thinks only to eradicate the endometriosis lesions and does not consider the entire past of his patient will often encounter minimum success and many recurrences “[20].

The aim of this chapter is to encourage clinicians to associate all means surgical, hormonal and psychological when treating all kinds of endometriosis and in any period of the disease which often lasts during the entire reproductive years of the life of patients.

REFERENCES

[1] Rock J.A. Endometriosis and pelvic pain. *Fertil Steril* 1993; 60: 950-l.

[2] Bazot M; Thomassin I; Hourani R. Diagnostic accuracy of transvaginal sonography for deep pelvic endometriosis. *Ultrasound Obstet Gynecol* 2004; 242: 180-5.

[3] Goldstein DP; de Cholnoky C; Emans SJ; Leventhal JM. Laparoscopy in the diagnosis and management of pelvic pain in adolescents. *J Reprod Med* 1980; 24: 251.

[4] Vercellini P; Bocciolone L; Vendola N; & al. Peritoneal Endométriosis Morphologic appearance in women with Chronic Pelvic Pain. *J Reprod Med.* 1991;36: 533-36

[5] Chapron Ch; Fauconnier C ; Fauconnier A ; Barakat H ; Viera M ; Foulot H. Endométriose et douleurs pelviennes in Fernandez H. : *Traité de Gynécologie*. Paris: Flammmarion Medecine Sciences. 2005, 298-304.

[6] Belaisch J; Allart JP. Endométriose génitale et traumatismes psychologiques in Belaisch J. *L'endométriose.* Paris: Masson , 1999, 157-167.

[7] Belaisch J; Allart JP. Endometriose et vécu de l'adolescence. *Gynecol Obstet Fertil* 2006 ; 34 : 242-247.

[8] Louka JM. Prolégomènes à tout abord psychanalytique de l'endométriose . *Gynecol Obstet Fertil* 2007 ; 35: 285-382.

[9] Harrison V; Rowan K; Mathias J. Stress reactivity and family relationship in the developpment and treatment of endometriosis. *Fertil Steril*. 2005; 83: 857-64.

[10] Besançon I. Le point de vue du psychologue. Un autre regard. *Reprod Hum et Horm*. 2006; XIX: 433-6.

[11] Renaer M; Vertommen H; Hijs P. Psychological aspects of chronic pelvic pain in women. *Am J Obstet Gynecol* 1979; 134: 75-80.

[12] Reiter RC; Shakerin LR; Gambone JC; Milburn AK. Correlation between sexual abuse and somatization in women with somatic and nonsomatic chronic pelvic pain. *Am J Obstet Gynecol* 1991; 165: 1O4-O9.

[13] Strauss B; Didzus A; Splidel H. A study of the psychosomatic aspects of endometriosis *Psychoter Psychosom Med psychol* 1992; 42: 242-52.

[14] Low AL; Edelman RJ; Sutton C. A psychological profile of endometriosis patients in comparison to patients with pelvic pain of other origins. *J Psychosomatic Research* 1993; 37: 11-116.

[15] Harrop-Griffiths J; Katon W; Walker E; Holm L; Russo J; Hickok L. The association between chronic pelvic pain psychiatric diagnoses and childhood sexual abuse. *Obstet Gynecol* 1988; 71: 585-94.

[16] Fenton BW. Limbic associated pelvic pain: A hypothesis to explain the diagnostic relationships and features of patients with chronic pelvic pain. *Med Hypotheses*. 2007; 69:282-6.

[17] Wheway J; Mackay CR; Newton RA; Sainsbury A; Boey D; Herzog H; Mackay F. A fundamental bimodal role for neuropeptide Y1 receptor in the immune system. *J Exp Med*. 2005; 202: 1527-38.

[18] Audebert A. La femme endométriosique est elle comme les autres? *Gynecol Obstet Fertil*. 2005; 33: 239-46.

[19] Multiple Authors. Controversy: delay in diagnosis of endometriosis ; Why? *Fertil Steril*. 2006; 86: 1296-1317.

[20] Maheux R. La douleur pelvienne et l'endométriose in *Précis de contraception hormonale et de gynécologie ambulatoire*. 2005 Bibliothèque Nationale du Quebec. Canada ISBN 2-9809060-X, 79-99.

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Chapter 10

SEXUAL AGGRESSIONS AMONGST UNDERAGED: VULNERABILITIES, RISK FACTORS, SIGNS OF CALLING FOR HELP

Philippe Bessoles
"Victimology and Criminology"
University Pierre Mendés France, Grenoble II, France
In collaboration with Myriam Linnell-Boutaud

Keywords: Victimology, traumatism, criminology, sexuality, resilience.

VULNERABILITY AND TRAUMA

Post-trauma notion of vulnerability, following a sexual aggression, appears too general in infantile clinical psychopathology to be sufficiently operating. Differences regarding criteria for symptomatological assessments, differential diagnosis with post-trauma disorders, personality changes inherent to child development, specificity (or not) of a post-traumatic semiology inherent to under fifteen, etc. add to the complexity of the question. According to research, vulnerability can be, at once, synonym of psycho-social factors of risk, signs of victimarius call for help or badly circumscribed psychological vulnerabilities. International studies often diverge as investigation methodologies are so contradictory and epidemiological data not consensual enough… Notions of abuse, touching, incest, remain blur and badly defined despite a number of publications in which categorizations are suggested by searchers like M. Montés de Oca, C. Yohant and A. Markowitz (1990), who differentiate:

- *Sexual abuse without body contact*: public or private exhibitionism, pornographic pictures, verbal incitation towards sexual activity, and erotic talk on sex in front of children.

- *Sexual abuse with body contact*: erotic caresses or kisses, touching, calls for masturbation.
- *Sexual abuse with penetration*: rape attempt or rape with anal, vaginal or oral penetration (the French penal code completes this definition of rape "*with the use of any object*".

Legal, clinical or medical definitions overlap or oppose themselves. Inside a research field, contradictions add to the complexity of psychopathological and therapeutic aims such as "*compliant hymen*" regarding medico-legal expertise or the statute of limitation after 10 years in the case of rape. Legal expertise is paradigmatic of these difficulties.

In this relatively complex context and based on our clinical victimology consultations in the ward of clinical forensic (CHU Montpellier, France – University Hospital Center), we have taken an interest (over a period of three years; 1998-2000) in two major questions on ill-treatments inflicted to underage:

1st question: *by differentiating sexual and non-sexual ill-treatments, what is the proportion of girls or boys who are affected?*
2nd question: *amongst observed disorders, do vulnerabilities, specific to under 15, exist that could lead to the hypothesis of a post-sexual-abuse syndrome?*

SYNTHETIC REVIEW OF THE QUESTION (CLINICAL ASPECTS)

The main epidemiological problem comes from the fact that some works are carried out based on retrospective sociological data gathered from adults, surveys from significant adult samples or studies limited to notional territory. These simple references demonstrate a disparity of assessment and methodological referential. These referential have no epistemological consensus and lead to bias in analysis.

We limit out research to a clinical approach of the phenomenon and the main publications on the subject.

The decade 70 – 80 can be called phenomenological to the extent that epidemiological data are statistically not very numerous. They are essentially, testimonies from female adults victim of incest during their childhood. The interest resides in the fact that research community has becoming aware of the need for granting this phenomenon with fundamental and applied research it deserves. Y.H.L. Haesevoets in 1997 and in 2004 emphasized that an important step has been taken in 1976 in K. Meiselman's study. This study, carried out between 1973 and 1976, on a sample of 58 adults abused in their childhood, observed chronic traumatic pathologies i.e. persisting 15 years after the trauma occurred. From this observation, analyses diverge. This divergence is partly due to the absence of comparative studies using either a control group or a clinical group of reference, the non-existence of standardized instruments in order to diagnose, the size of samples or the scarce anamnesistic studies prior to sexual trauma. This group of methodological approximations generates impassable bias for a rigorous research.

From the years 1980, researchers attempted to harmonize their investigation protocols even if the undertaken notions appear more phenomenological than clinical or psychopathological. H. Van Gijseghem demonstrates the irreversibility of psychological

wounds; S. Groi, of symptoms of anxiety and exacerbated fright (insomnia, nightmares, sleeping disorders, somatic disorders,…). Other research report after-effects such as food disorders, depression or phobia,…

In the years 1990, J. Kieser et al. show, with a sample of 10 children between 2 and 6, the development of symptoms in connection with Post Traumatic Stress Disorder criteria with reference to the DSM III R. Other studies balance these works [26]. We can retain:

- Loss of self-confidence (Mac Leer, 1998).
- Loss of self-esteem (shame and culpability) (Herman, 1981; S. Groi, 1982).
- Symptoms of depression, sometimes severe.
- Significant correlations between sexual brutalities and delinquent or criminal behaviors (David and Earls, 1987).
- Intellectual development disorders and sociability disorders (Gomes-Swartz; Horowitz, 1985).
- Depressions and suicidal thoughts (Wozencraft, 1991).
- Alteration in identity structure (Hunter; Childers, 1988).
- Typically psychiatric severe disorders (Cole; Putman, 1992).

In 1997, Y.H. L. Haesevoets suggests a grid of the principle psychopathological disorders connected with incest. This grid analyses somatic, physical and physiological, psychosomatic, cognitive, behavioral and relational, familial and social factors. The author yet specifies that the consequences of an abusive situation appear to depend on uncontrollable variables such as precocity of detection, the beginning of therapeutical treatment, designation of the sexual trauma (touching, rape, incest, sexual brutality, etc…) as well as the individual experience of the trauma by the underage.

The unpredictability of symptoms is not synonymous of their inexistence. From an empirical point of view, we observe symptomatic "*silences*" becoming loud, months – if not decades – later (as in peri- menopausic psychological changes, for example), symptomatic "*over-determinations*" revealed during subsequent minor trauma, for example. Some clinical constants appear and most theoretical models take them into account:

- Some symptoms seem inseparable from pre-existing symptoms. Post-trauma disorders intervene as an accentuation of the previous psychopathology.
- The clinical picture tends to put into relation some symptoms, with the real coercions of traumatic break-in, particularly coercions of humiliation as in collective rapes or torture.
- The recurrence of sexual violence during childhood seems to correlate with the severity of ulterior disorders, from a psychiatric point of view as much as a somatic decompensation one.
- With the exception of some sexual conduct disorders in the underage, there does not seem to be any evidence of causality between sexual abuse and symptom production.

Methodological "*weaknesses*" observed in different studies temporarily lead, not to postulate for a post sexual abuse answering to precise diagnostic assessment, specific diagnosis and sufficient anamnesistic backgrounds (research involving control groups).

Although, some of these bias appear in our works, considering the complexity of interactions whether psychological, pathological or inherent to child or teenage development, they seem to aim towards an opposite conclusion, which is the existence of such pathology.

STUDY 1

Method

The repartition according to sex of the victim and nature of sexual/non sexual ill-treatment has been studied in a first longitudinal research over three years (1999, 2000 and 2001). The data collection is from consultations in victimology in forensic ward (University Hospital Centre – Montpellier – France) during the first appointment.

Non-sexual ill-treatment: assaults, injuries, scratches, tortures, moral harassment, brutalities, punishments, deprivations.

Sexual ill-treatments: rape, incest, exhibitionism, voyeurism, sexual touching, sexual brutality, sexual tortures.

Results

Table 1. Study 1999- number of consultations: 61

Type of aggression	% girls	% boys
Non-sexual ill-treatments	17.6	29.4
Sexual ill-treatments	44.1	14.7
All ill-treatments overcome	61.7	38.2

Table 2. Study 2000- number of consultations: 111

Type of aggression	% girls	% boys
Non-sexual ill-treatments	3.6	25.2
Sexual ill-treatments	52.2	18.9
All ill-treatments overcome	55.8	44.1

Table 3. Study 2001- number of consultations: 160

Type of aggression	% girls	% boys
Non-sexual ill-treatments	6.5	23.7
Sexual ill-treatments	64.75	5.3
All ill-treatments overcome	71	29

Table 4. Average of the studies 1999, 2000,2001- number of consultations: 332

Type of aggression	% girls	% boys
Non-sexual ill-treatments	9.15	26.1
Sexual ill-treatments	53.6	12.9
All ill-treatments overcome	62.8	37.1

STUDY 2

Method

The data collection is for the year 2000 from 160 consultations. The semiology is identical to the one observed during the first interview. The interview's technique is semi-directive and aims towards a diagnosis. We do not use the repartition by age slice.

Data analysis was done in two parts. The first part was a generic draft of types of syndromes, of disorders encountered amongst underage, in order to, in a second part, specifies items susceptible to help us towards the creation of a symptomatic analysis grid. The aim of our research was the creation of a clinical assessment tool for sexually abused underage or underage suspected of having been sexually abused. This study was part of a HPCR (Hospital Project in Clinical Research) in relation to the French legal context – June 1998 law on audio-visual recording of interviewed of underage who are suspected to have been sexually abused, and the effects of "*over victimization*".

Results

Table 5. Frequency of the clinical signs expressed in % - year 2001- Number of people: 160- Clinical picture after the first consultation- Sex and age overcome.

Oral sphere disorders	26.5
Sphincterian functioning disorders	18.9
Disorders of the cognitive sphere	94.9
Behavior and conduct disorders	60.7
Sleeping and falling asleep disorders	22.7
Genital sphere disorders	20.25
Social link disorders	20.25

Table 6. Repartition per item. Oral sphere disorders.

Disorder of the oral sphere	Percentage
Anorexia	5.06
Bulimia	11.3
Weight loss	6.3
Weight gain	3.7

Table 7. Repartition per item. Sphincterian functioning disorders

Sphincterian functioning disorders	Percentage
Enuresis	2.53
Encopresis	2.53
Diarrhea	0.01
Constipation	5.06
Abdominal pains, stomach aches	8.96

Table 8. Repartition per item. Disorders of the cognitive sphere

Disorders of the cognitive sphere	Percentage
Sudden school failure	7.5
Scholastic drop	17.7
Scholastic non-implication	20.25
Mnemic disorders	10.12
Learning disorders	8.86
Concentration disorders	7.59
Language and communication disorders	11.3
Graphics and writing disorders	11.3

Table 9. Repartition per item. Behavior and conduct disorders

Behavior and conduct disorders	Percentage
Self-aggressive conducts	5.06
Aggressive behaviors	7.55
Passivity-depression- submission	13.8
Repetitive activities	5.6
Psycho-motor activities agitation	6.86
Psychosocial instability, within the group	8.75
Behavioral impulsivity	11.3

Table 10. Repartition per item. Sleeping and falling asleep disorders

Sleeping and falling asleep disorders	Percentage
Nightmares	7.6
Falling asleep disorders	11.5
weariness	3.8

Table 11. Repartition per item. Genital sphere disorders.

Genital sphere disorders	Percentage
Masturbation – touching	5.06
Exaggerated modesty	14.65
Frigidity	9.82
Anorgasmia	11.5
Definitive interruption of sexual intercourse	20.56
Gynecological problems	8.87
Compulsive washing disorders	19.86

Table 12. Repartition per item. Social link disorders.

Social link disorders	Percentage
Aggressiveness	6.32
Isolation-withdraw	12.08
Inhibition	7.34

Results' Synthesis

General data show a strong incidence of sexual trauma on the cognitive sphere for the quasi majority (94.9%) of the population examined. The study of individual items tends to confirm that troubles are not of an instrumental nature. It is the relation with didactic content and implication towards learning, which are being disturbed. The post-traumatic effect seems to interfere with concentration, representations and memorization. Scholastic drop (17.7%) and non-implication (20.25%) underline this "*leech off*" in the attitude towards learning like tools for appropriation of knowledge (language in particular).

Symptoms in relation to oral sphere disorders are feeding disorders of a bulimic nature (11.3%). Bulimic behavior emphasizes (based on the number of people we observed) the alterations of the body image especially the upheaval of body topography (inside, outside, bottom, top front, back…).

Sphychterian function disorders are not directly linked with mastering of sphincter -anal or urethral, for example- intestinal transit causing colonopathy or abdominal pain (8.96%). Sleeping disorders occur mainly in the form of difficulties to go to sleep (11.5%).

Behavior and conduct disorders (BCD) appear contradictory, when only reading on quantitative level. The item "passivity-depression- submission" (13.8%) is apparently in opposition with the item "behavioral impulsiveness" (11.3%). It seems that this opposition shows a double aspect of the BCD meaning predominance of passivity from which facial expressions–often anxious- of behavioral impulsiveness emerge. This aspect can be corroborated by social links disorders in which the item "isolation-withdrawal" is at 12.08%. The behavioral propensity would be a propensity towards withdrawal and isolation more than a post-traumatic pathology loud manifestation.

Finally, disorders of the genital sphere can appear surprising in particular the item related to the definitive interruption of sexual intercourse, considering our study is on under 15. This interruption regards the eldest underage we observed (20.56%). The item "compulsive

disorders" (19.86%) qualifies compulsive washing behaviors (of an obsessional type), frequent change of underwear with cleaning control, etc.

Comments and Analyses

The qualitative analyses of the above quantitative data permit to better assess psychological and psychical mechanisms striving, even though our preliminary study calls for other complementary and deepened researches. It still corroborates the 20 indicators of sexual exploitation defined by S. Groi as early as 1986 (cited by Y.H. Haesevoets).

On the level of cognitive process analysis, it seems that post-traumatic effects do not invalidate the efficiency of the cognition mechanisms (language, memory, perception, etc…). We, essentially, observe phenomenon of "interference" and inhibition more of less important, which, indeed, have some serious and durable consequences. This seriousness of sexual trauma tends to be correlated with the sensitive phases in the development (for example, the pubertal phase and its identity changes) or their duration (recurrent incest over many years).

Although, longitudinal studies are essential, when studying sexually abused underage, in order to avoid anamnesistic reconstructions or the after effect, it appears that phenomenon of anxiety consecutive to trauma pervert (literally) learning processes. H. Van Gijseghem (1975, 1985) underlines intellectual development deficiencies particularly of symbolic and Piagetian thought. Scholastic symptomatology shows a disharmony of learning processes generated by "*fright, inhibition of thought and relational passivity*". For school children, sexual trauma disturbs learning process even if that learning can help towards a better control of the sustained event as well as helping towards it verbalization.

A research consensus agrees that the earlier the abuse occurs in life, the more risks that wounds become irreversible at all levels; "*particularly on identity level*" adds H. Van Gijseghem. At more advanced ages, observed phenomenon on cognition level are identical to those observed amongst younger children. On the other hand, behavioral and conduct disorders (depression, dysthymia, running away, suicidal ideation, etc…) generate, for the essential, these cognitive disturbances.

Pathogenic components that touch the oral sphere, such as sphyncterian or functional (stomach ache) malfunctioning appear as somatic symptoms for want of sufficient psychical elaboration (alteration of representational mechanisms, in general). Bulimic behaviors, for example, emphasize alterations of processes of identity construction, in particular, the progressive construction of the body image. Bulimia appears during clinical examination like a reactional formation when facing the breaking of primary psychic sheaths. It acts like "*a lipidic protection*" for want of "*protective shield*" efficiency.

The "*psychosomatic*" aspect of psychical investments tends to accreditate the hypotheses of impossibilities in the representation of sexual trauma, such as pain affects, mentioned by M. Bertrand (cited by L. Crocq and P. Bessoles). This aspect of a symptomatology of the psychic body and the skin-Ego (D. Anzieu, 1987) attests of the victimarius destruction in the underage. All recent works confirm this double aspect of psychosomatic symptoms and disturbance in the image of the body. These same research corroborate others, more ancients, such as the model of D. Finkelhor and D. Browne in 1985, published in the American Journal of Orthopsychiatry.

Disturbances in falling asleep reveal the failures of the work of thought and dream. Abused underage appear to be fighting against the decline of the level of vigilante consciousness to which, falling asleep, lead, being too scared to be invaded with anxieties and traumatic reviviscence. This attitude, highly phobic, that can take the clinical shape of diurnal and nocturnal terrors is typical of post-traumatic syndromes amongst children as well as adults. We wish to underline this phobic aspect, which is at the source, it seems, of dysmorphophobia which particularly pathogenic amongst female teenagers.

The visible contradiction in our study, due to passivity ……. Withdrawal, isolation or inhibitions coexist through aggressive behaviors –sometimes violent-. Hyper-vigilance and hypersensitivity translate psycho-affective insecurity of the underage. It is expressed by constant submission and passivity. Violence appears like the manifest expression of anxious faces, facing paroxystic anxieties of an anaclitic type. This behavioral "*dyschrony*" attests of the underage internal disturbances, of which, acting out behaviors –auto or hetero aggressive – are the mirror of post-traumatic suffering.

Genital sphere disorders are, for the essential, psychosomatic (dermatosis, cystitis, prurit, inflammatory process, vaginal herpes attacks…). These phenomena, well known by medical corps, can be treated by using psychotherapeutic processes and without any medicine apart from comfort. On the other hand, it is true, particularly for female teenagers that, rituals of washing rituals of the uro-genital zone, particularly their frequency and intensity, have a tendency to modify the self-immune balance of the pelvic belt. Sexuality and sexual conducts disorders, in its different components according to the age of the underage, are constant. They lead to sexual prematureness, compulsive conducts of masturbation or important inhibitions (notably nudity) often observed by pediatricians or doctors (in the context of school medical).

With the exception of very few particularly suggestive mimes of coitus using a doll (which does not necessarily express the reality of the sexual trauma), a majority of underage patients did not show any seductive or provocative attitude, as it is often stated in literature. On the contrary, underage children show important inhibitions which require some form of talk prior to any somatic examination.

In an attempt to summarize clinical and psychopathological forms of vulnerabilities amongst sexually abused underage children, we can divide them into four main domains:

- A symptomatology of school learning. It is about learning process which become disturbed, inhibited and leeched off by post-traumatic effects. It is, therefore, the relationship with knowledge and knowledge which is at cause and not the cognitive efficiency.
- A symptomatology on behavior and conduct disorders centered on a dominating inhibition of the psychical link and social link. This domination sometimes turns into anxious acmes in the form of auto or hetero-aggressive raptus.
- A more or less invalidating phobic symptomatology, with obsessional behaviors mainly centered on rituals of washing.
- A somatoform symptomatology which indicates the alterations of representational processes and the effects of psychical staggering due to sexual trauma.

DISCUSSION

The evaluation of post-traumatic vulnerabilities amongst sexually abused underage children emphasizes, independently from clinical characteristics, the main – and durable – traumatogenic impact on the process of identity construction.

Ancient Freudian's works (1920) and Férenczian's (1927-1933) have broadly described post-traumatic psychopathologies for the same reasons as those more recent from L. Crocq, F. Lebigot, L. Daligand, etc… Our research confirms the presence of a psychopathological entity of trauma neurosis independent from psychopathological backgrounds, amongst underage children (as also observed amongst adults).

This traumatic neurosis adds to pre-existing pathologies but appears specific, even if the interactions with post-traumatic pathologies complexify the differential analyses of the clinical picture.

Our arguments rest on the above study as well as the therapeutic treatment of the underage children. We would like to specify that the hospital conditions for admitting patients (clinical victimology ward CHU Montpellier), were purposely limited to post-immediate sharp states. Underage children were addressed to partners of the network we collaborated with (specialized institution, CMPP -Medico Psycho Pedagogic Center-, child psychiatry…).

- A direct incidence exists between the event sustained and the emergence of a specific psychopathology described above (even if this incidence, still today, calls for more in depth research in order to specify their characteristics).
- Post-traumatic psychopathology observed cannot be limited to a reading of co-morbidity or accentuation factors in previous disorders. Even if it can be the case, for some of the examined underage children (like boarders in an institution for mentally deficient children), it is wrong to assert (from an empirical point of view to this date) that sexual trauma only produces a quantitative and qualitative surcharge of previous disorders.
- The specificity of a post-traumatic syndrome is argued in the differential diagnosis, i.e. significant correlations between sexual trauma characteristics and generated disorders. Thus, the "unfavorable" diagnosis has been confirmed for those, victim of sexual aggression with penetration, humiliation, repetition and torture.
- At an adult age, traumatic pathologies are even more persistent when the person has not been able to undertake any treatment, independently from therapeutical fields of reference.
- Sexual trauma generates real "*cataclysms*" in the underage child's psychic organization, not only in his psychical system of economy but above all in his structural organization. This aspect seems more pathogenic at time of phases of psychical organizations such as Oedipus, puberty or adolescence phase.
- The alteration of identity process is apparent in the clinical picture's somatoform expressions. This expression does not just reveal the difficulties in psychically elaborating the trauma but also the breaking of primary psychical sheaths ("*secure base*").
- Finally, "*we have to take into account*" the fact that most sexual abuses are committed by a member of family (or a relative) in 85 to 90% of cases (according to

our panel). These epidemiological data confirm the idea of pervertion of affective, familial, social,… bond, even if the degree of relativity between the underage child and his abuser remains to be specified.

CONCLUSION

We wish to emphasize the phobic dimension of post-traumatic states amongst the underage. On the semiological level, phobic symptoms observed in our study are not only due to classical description of child and teenager psychopathology. The intensity of anxiety does not only answer to phobic situations, it is often close to states of panic, notably in the difficulties in going to sleep. Likewise, dysmorphobia, observed in our research, do not appear to be phobia in the "strict" meaning, but disorders in the construction of body image, independently from corporal mutations inherent to the development of the young subject.

Anxiety is not only related to a potential traumatic situation as in traumatic reviviscences (notion of "anxiety warning"). It generates a constant and chronic feeling of anxiety, as well as an extremely invalidating subjacent depression of a neglected or anaclitic type, for most observed underage children.

The phobic aspect appear to evocate some border-line psychic functioning, as these phobia are atypical because of the context in which they appear, their content and the fact that they have no impact on anxiety. On the contrary, it soaks-in the entire underage mental function, and compromises relationships with others. The whole of the subject is threatened as anxiety is so massive and intrusive.

If, as stated by D. Marcelli, on the subject of phobic psychopathologies amongst the under aged and teenagers, "*it is a phobic neurosis from a clinical point of view, […] there is a reason to look for anxiety of a paranoid type*". Empirically, we agree with the term of paranoid anxiety, for some of the patients, during the sexual trauma post-immediate phase. It is characterized by the following aspects:

- The formulation of the trauma sustained, sometimes, appears incoherent, badly systemized, if not incomprehensible, independently from the syntactic or semantic level of the under-aged. This formulation appears terrifying and incommunicable, sometimes completed with invasions of interfering coenesthesia (twitches, shivers, spasms, interfering actions, mimes,…).
- The under-aged sometimes feel, spied on, observed or threatened and uses strategies such as para-verbal or psychomotor allusions (scribbles in dolls crotch done by young children, for example) or whispers in the doctor or psychologist ear "*but, you know…*".
- The threat of psychic dismantling can often be spotted in the form of persecutions, notably in graphic productions realized during the clinical interview. The people drawn are often being attacked, aggressed; sometimes, a whole has been made in the paper with the felted-pen. The intensity of anxiety is such that in some cases, dolls are literally destroyed, as if the esthetic experience was close to that feeling of having one's body cut into pieces.

- The way the body is apprehended, amongst the most dramatic cases (collective rapes perpetrated on female teenagers), is close to real processes of depersonalization with, a feeling of body dispossession, ideas of body transformation and for two clinical cases conducts of self-mutilations and autolysis.

These productive moments can be transitory, but we cannot, due to the absence of longitudinal follow-up, specify the evolution of chronicity. On the other side, retrospective studies on adults tend to confirm long lasting psychopathological after-effects as well as pathogenic reviviscences decades after the infantile trauma. It seems, in an empirical at this point in time, that specific phases of vulnerability, which are not related to life psychical hazard, exist. These phases are the one when identity changes are directly "requested" like peri-partum or pre-menopause phases.

On the other side, we feel that it is important to emphasize, in the same way we have done it elsewhere, on the resilient capacities, sexually abused children and teenagers are capable of. Psychical and psychological "fragilities" underlined hereby appear as, as much plasticity in psychical changes and elaborations of the sexual trauma. Recent research by M. Lemay (1998, 1999) or B. Cyrulnick (199, 2001) show these under-aged can elaborate particularly terrible and destroying sexual traumatisms. Nevertheless, it would be a mistake to think that these psychical elaborations are definite.

REFERENCES

Anzieu D. *Les enveloppes psychiques*. Paris : Ed. Dunod ; 1987

Baccino E, Bessoles P. *Le traumatisme sexuel et ses devenirs*. Lecques : Ed. Le Champ Social ; 2001.

Baccino E, Bessoles P. *Traumatisme et résilience : lien psychique, lien social*. Lecques : Ed. Le Champ Social, 2003.

Bessoles P. *Torture et temporalité : contribution à une sémiologie de psychose post traumatique.* In : *Les cahiers de psychologie clinique*. Bruxelles : Ed. De Boëck University ; 2004.

Bessoles P. 2000, Le *meurtre au féminin, clinique du viol*. Saint Maximin : Théétète Editions, 1997.

Bessoles P. *La psychose post-traumatique*. In : L'encéphale. Paris : Elsevier Editions ; 2005.

Brusset B. *Etats anxieux et névroses* : critique des concepts. In : Marcelli D, Braconnier A, editors. Adolescence et psychopathologie, 4. Paris : Ed. Masson ; 1999. p. 203-38.

Coutenceau R. *Vivre après l'inceste*. Paris : Ed. Desclée de Brouver ; 2004.

Crocq L. *Névrose traumatique et élaboration résiliente*. In : *Victime-Agresseur*, Tome 4. Lecques : Ed. Le Champ Social ; 2003. p. 27-41.

Crocq L. Bessoles P. *Récidive, réitération, répétition : lien d'emprise et loi des séries*. Lecques : Ed. Le Champ Social ; 2004.

Cyrulnik B. *Un merveilleux malheur*. Paris : Ed. Odile Jacob ; 1999.

Cyrulnik B. *Les vilains petits canards*. Paris : Ed. Odile Jacob ; 2001.

Dalignand L, Gonin D. *Violence et victimes*. Lyon : Ed. Méditions ; 2004.

Damiani C. *Les Victimes : violences publiques et crimes privés*. Paris : Ed. Bayard ; 1997.

Defrancis V. *Protecting the child victim of sex crimes committed by adults*. Denver, CO : American Human Association, Children's division ; 1976.

Fattah EA. *Le rôle de la victime dans le passage à l'acte : vers une approche dynamique du comportement délictuel*. Rev Int Criminol Police Tech 1973 ; XXVI(2) : 173-88.

Ferenczi S. 1927-1933, *Confusion de la langue entre l'adulte et l'enfant*, in : *Œuvres complètes*, Psychanalyse IV, Paris, Payot, 1968.

Finkelhor D. *Sexuality victimized children*. New-York : Free Press ; 1979.

Finkelhor D. Browne A. *The traumatic impact of child sexual abuse : a conceptualization*. Am J Orthopsychiatry 1989 ; 55 :530-41.

Gabel M. *Les enfants victimes d'abus sexuels*. Paris : PUF ; 1994.

Gabel M. *Le traumatisme de l'inceste*. Psychiatrie de l'enfant. Paris : PUF ; 2000.

Gutton P. *Adolescens*. Paris : PUF ; 1996.

Haesevoets YH. *L'enfant victime d'inceste*. Bruxelles : Ed. De Boëck Université ; 1997.

Haesevoets YH. *L'enfant en question. De la parole à l'épreuve du doute dans les allégations d'abus sexuels*. Bruxelles : Ed. De Boëck Université ; 2003.

Lebigot F. Bessoles P. *Situation d'urgence, situation de crise : clinique du psychotraumatisme immédiat*. Lecques : Ed. Le Champ Social ; 2004.

Lemay M. *Résilience devant la violence*. J Psychologues 1999 ; 164 :36-47.

Lighezzolo J, de Tyché C. *La résilience : se (re)construire après le traumatisme*. Paris : Ed. In Press ; 2004.

Marcelli D, Braconnier A. *Adolescence et psychopathologie*. Paris : Masson ; 1995.

Marcelli D. *Enfance et psychopathologie*. Paris : Ed. Masson, 1996.

Mazet P, Stoléru S. *Psychopathologie du nourrisson et du jeune enfant*. Paris : Masson ; 1993.

Montes de Oca M, Yohant C, Markowitz A. *Revue critique des travaux épidémiologiques anglo saxons récents sur l'abus sexuel à l'égard des enfants*. In : *Les abus sexuels à l'égard des enfants*, CTNERHI. Paris : PUF ; 1990. p. 7-70.

Van Gijseghem H. *L'enfant mis à nu. L'allégation d'abus sexuel : la recherche de vérité*. Québec : Méridien ; 1992.

Van Gijseghem H. *Autre regard sur les conséquences de l'inceste père-fille*. Revue canadienne de psycho-éducation ; 1985 ;14(2) :138-45.

Van Gijseghem H. *Facteurs interférents avec la qualité du témoignage de l'enfant au tribunal dans les causes d'abus sexuels*. Québec : Revue canadienne de Psycho-éducation 19.1.11.22 ;1975.

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Chapter 11

CORPORAL PUNISHMENT IN SCHOOLS: CURRENT ISSUES AND CHALLENGES IN AFRICA IN THE NEW MILLENNIUM

Almon Shumba [*]
School of Education Studies, University of KwaZulu–Natal
Edgewood Campus, Private Bag X03, Ashwood 3605, South Africa
Lily Cherian [†]
School of Education, Faculty of Education, University of Limpopo
Turflop Campus, Private Bag X1106, Sovenga 0727, South Africa
Douglas Mawere [‡]
Department of Preclinical Veterinary Studies, Faculty of Veterinary Sciences
University of Zimbabwe, P.O. Box MP 167, Mount Pleasant, Harare, Zimbabwe

INTRODUCTION

Corporal punishment has become a very controversial issue to eliminate in African schools and even worldwide. The controversy appears to be due to the parallels between what happens at home and in schools (Dubanoski, Inaba & Gerkewicz, 1983; Korbin, 1980; O'Brien & Lau, 1995; Shumba, 2003a & b; Zindi, 1995). Some child–rearing practices within the home mandate parents to use corporal punishment when disciplining their own children but the laws and regulations within the schools bar teachers from using corporal punishment. In some cases parents believe that the African child cannot learn in the school without being beaten. As such, there is no doubt that teachers, parents and pupils hold various myths and beliefs on why teachers use corporal punishment in schools. If anything, the authors do not

[*] Address all requests and correspondence to: Dr. Almon Shumba. Tel: (+27) (0) 31 260 3686 (Work) & (+27) (0) 72 426 8036 (Cell). E–mail addresses: shumba@ukzn.ac.za & almonshumba@yahoo.com
[†] E–mail: cherianl@ul.ac.za
[‡] E-mail: dmawere@vet.uz.ac.zw

support the use of corporal punishment in African schools. It is against this background that this article sought to explore issues and challenges on why corporal punishment is still difficult to eliminate in African schools in the new millennium. Both local and international literature has been used to examine this issue.

RESEARCH ON CORPORAL PUNISHMENT IN AFRICAN SCHOOLS AND IMPLICATIONS

Corporal punishment refers to intentional application of physical pain as a method of changing behavior (Shumba, 2003a; Straus & Mouradian, 1998) and includes such methods as hitting, slapping, spanking, punching with fists, kicking, pinching, shaking or using various objects such as wooden paddles, belts, sticks, electric cords or others (Dubanoski, Inaba & Gerkewicz, 1983; Grossman, Rauh & Riveira, 1995; Shumba, 2001; 2003a & b; Zindi, 1995). Whilst there are worldwide frantic efforts to outlaw this practice through the United Nations Convention on the Rights of the Child (Jonsson, 2003; Rohner, 1975; Rohner & Rohner, 1980; Sebonego, 1994), it looks like the battle is still very far from being over especially in African schools (Dubanoski et al., 1983; Mutema, 1988; Newell, 1993; Ntshingila, 2004; Shumba, 2002; 2003a & b; Zindi, 1995).

Corporal punishment has been and is still a conventional method in disciplining children when at home still under parental care and in schools in some African countries. As such, it has now become a very controversial issue to eliminate in African schools and worldwide because of the parallels and contradictions between what happens at home and in schools (Newell, 1993; O'Brian & Lau, 1995; Shumba, 2003a & b; Zindi, 1995). For example, in some cultures, there are some child–rearing practices within the home that mandate parents to use corporal punishment when disciplining their own children (Dow & Mogwe, 1992; Dubanoski, Inaba & Gerkewicz, 1983; Korbin, 1980; O'Brien & Lau, 1995).

On the contrary, within the school, the government of Zimbabwe, for example, has enacted laws and regulations within the schools that forbid teachers from using corporal punishment on pupils (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992; The Secretary of Education and Culture Circular P35, 1993). Under the current laws and regulations of Zimbabwe, only the school head is mandated and protected by the law to use corporal punishment on pupils within the school (Shumba, 2002; Shumba & Moorad, 2000). Teachers wishing to administer corporal punishment on misbehaving pupils are required by the law to first seek approval from the school head and should record in the school log book the name of the pupil and the nature of offence committed. Otherwise, any teachers who execute instance justice on pupils without approval by the school head are considered to have physically assaulted the pupil and are liable to be charged with assault or physical abuse (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992; The Secretary of Education and Culture Circular P35, 1993).

In communities in which the school has developed as a recognizable social institution, corporal punishment has not only been tolerated but has been prescribed as an essential part of the pedagogue's function (Dow & Mogwe, 1992; O'Brian & Lau, 1995; Payne, 1989; Sebonego, 1994). The belief that corporal punishment is a necessary and effective in disciplining children has become engrained and uncritically accepted in most traditions. It is

this belief that appears to have been used as a justification for the kind of disciplinary action in society and schools (Shumba, 2001 & 2003a). As such, it has now become very difficult to draw a line between what happens in the school and home since the school is an extension of the home (Shumba, 2001 & 2003a; Shumba & Moorad, 2000; Straus, 1994). It appears that it is the home culture or child–rearing practice that is extended to the school by some teachers in the name of discipline with teachers acting *in-loco-parentis* within the school (Shumba, 2001 & 2002). Hence, teachers seem to view this as exercising their *loco-parentis* role within the school and not as a violation of any regulations (Dow & Mogwe, 1992; Magagula, 1992; Sebonego, 1994; Shumba, 2003a & b).

Current research notes that parents and teachers who were physically abused as children are more supportive of corporal punishment than those who were not (Climinillo, 1980; Hyman, 1988; Newell, 1993; Ntshingila, 2004; Poole, Ushokov & Nader, 2003; Shumba, 2003a; Straus, 1991, 1994 & 1996). This implies that violence is transferred from generation to generation and perhaps a suggestion why some teachers physically abuse pupils in schools. Some parents who were physically abused at home or school claim that they never suffered any negative consequences (Hyman, 1988; Ntshingila, 2004; Payne, 1989; Poole et al., 2003).

In a recent comprehensive study carried out by the South African Human Science Research Council (HSRC), parents admitted to hitting their children and nearly a third of parents said that they beat them severely (Ntshingila, 2004). The HSRC study found that: (1) a third of those who admitted to hitting their children said they beat them severely using a belt, stick or other objects; (2) divorced parents were more likely than married ones to smack their children; (3) African parents were most likely to beat their children severely, followed by white and Coloured parents, with Indian parents the least likely to do so; (4) children under three years were likely to be 'smacked' but from four up, were more likely to be 'beaten'; (5) parents aged 25 to 35 were most likely to smack their children, while those over 35 were more likely to beat their children; and (6) there was a link between parents who maltreated their children and those in physically abusive relationships with their partners (Ntshingila, 2004: 1). Despite the incidence of corporal punishment revealed by the study, current research shows that South Africans hit their children less than the Americans or Britons where similar studies show that 90 % of children will be smacked at this stage of development (Newell, 1993; Ntshingila, 2004; Payne, 1989; Poole et al., 2003; Shumba, 2001; Shumba & Moorad, 2000; Straus, 1991, 1994, 1996). Although most experts in South Africa have called for the banning of corporal punishment in the home, it appears a tall order to implement and control.

On the contrary, other studies assert that approximately one half of students who were subjected to severe punishment develop an illness called Educationally Induced

Post–Traumatic Stress Disorder (EIPTSD). Such a disorder is a symptomatology analogous to the Post-Traumatic Stress Disorder (PTSD) often characterized by depression and anxiety (Hyman, 1988; Hyman, Irwin & Laily, 1982). This mental health imbalance is induced by significant stress and with EIPSD, the stress is caused by the inflicted corporal punishment (Hyman, 1988). Hence, such physically abused students often have difficulty with sleeping, fatigue, feelings of sadness and worthlessness, suicidal thoughts, anxiety episodes, increased anger with feelings of resentment and outbursts of aggression, deteriorating peer relationships, difficulty with concentration, lowered school achievement, antisocial behavior, intense dislike of authority, a tendency for school avoidance and school dropout and other high risk adolescent behaviors (Dubanoski et al., 1983; Hyman, 1988;

Hyman et al., 1982). This appears to be consistent with research that claims that physically abused children tend to become more rebellious and are more likely to demonstrate vindictive behaviors within the school or home (Poole et al., 2003).

Most studies available appear to suggest that African parents believe that corporal punishment is part of the African culture of child-rearing practices (Dow & Mogwe, 1992; Sebonego, 1994; Shumba, 2001 & 2003a; Zindi, 1995). As such, it has now become common practice by most African parents to use corporal punishment to discipline their children at home and that some parents believe that corporal punishment makes pupils 'perform well' in school (Shumba, 2001; 2003a&b). As such, some of the parents seem to be completely and totally oblivious of the laws and regulations that govern the treatment of pupils by their teachers in schools because whatever teachers do is believed to be 'always right' (Dubanoski, Inaba & Gerkewicz, 1983; Shumba, 2003b).

CORPORAL PUNISHMENT AND IMPLICATIONS: THE ZIMBABWEAN SCHOOL CONTEXT

However, the practice within the school is different from that at home because there are stipulated procedures on how to discipline pupils in schools (Secretary of Education Circular P 35, 1993; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). In Zimbabwe, corporal punishment should be inflicted only by the school head or a teacher to whom authority has been delegated by the head, or any other teacher in the presence of the head, and should be inflicted on the buttocks with a suitable strap, cane or smooth light switch (Secretary for Education and Culture Circular P 35, 1993; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992).

Current research shows that although the head is the only officer within the school with the authority to discipline pupils, it is now uncommon in Zimbabwe to find some school heads being charged for excessively canning pupils (Newell, 1993; Shumba, 2001; 2003a & b; Zindi, 1995). Other reasons why some teachers physically abuse their pupils from interviews conducted with Education Officers responsible for handling and processing all abuse cases by teachers in Zimbabwean schools appear to suggest that some of them tend to become too emotional when dealing with pupils and end up taking the law into their hands (Shumba, 2001; 2003a & b). When in such an emotional state, some school heads or teachers tend to by-pass the stipulated procedures by the Public Service Commission that teachers should obtain a mandate to use corporal punishment on their pupils from the school head (Secretary of Education Circular P 35, 1993; Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). It appears that some of these perpetrators tend to become too emotional when dealing with pupils and end up taking the law into their hands. Under such an emotional state, the perpetrators do not follow the stipulated procedures by the Public Service Commission that they should obtain permission to use corporal punishment on their pupils from the school head (Statutory Instrument 65 of the Constitution of Zimbabwe, 1992). Other studies also shows that most cases of physical assault reported tend to involve injuries on pupils and such cases are handled and processed by the police before being handed over to the courts of law (Newell, 1993; Shumba, 2001 & 2003a).

CORPORAL PUNISHMENT AND IMPLICATIONS: THE INTERNATIONAL CONTEXT

Other studies on physical abuse of pupils by teachers in schools suggest that the violation of stipulated laws and regulations to be based on certain beliefs regarding the effectiveness of corporal punishment and on lack of knowledge concerning disciplinary alternatives to physical abuse or corporal punishment in schools (Newell, 1993; Payne, 1989; Zindi, 1995). For example, Dubanoski et al. (1983) found that both society and teachers in the Caribbean Islands hold four common myths about corporal punishment: the belief that corporal punishment builds character; the belief that corporal punishment teaches respect; the belief that corporal punishment is the only thing some children understand; and, the belief that without corporal punishment, behavioral problems increase. Similarly, in Turkish schools, both teachers and headmasters are encouraged to use corporal punishment on their students (Korbin, 1980; Rohner, 1975; Rohner & Rohner, 1980). This seems to imply that such practices are viewed as promoting and inculcating their cultural practices and not as child abuse.

Other studies found that some cultures view the deliberate infliction of pain on children 'as vital to the development of strength, endurance and cultural allegiance' (Anderson & Payne, 1994; O'Brian & Lau, 1995; Payne, 1989). Similarly, in some cultures, corporal punishment is viewed as an instrument used in teaching the child values and norms of the society during the parenting process (Benatar, 2004; Straus, 1991). However, Greven (1990) argues that while corporal punishment is viewed as a positive aspect of parenting that provides children with the necessary structure of personality growth, it involves inflicting pain partly for retribution, and teaches a child that those in power can force others to obey. If corporal punishment has effects on children, it is debatable that it promotes positive cultural values and norms of the society (Dow & Mogwe, 1992; Sebonego, 1994; Shumba, 2001, 2002 & 2003a). Similar research shows that those who believe in the use of corporal punishment in schools do not have proper classroom order and to them corporal punishment is the only technique left to preserve academic control (Dubanoski et al., 1983; Payne, 1989; Sebonego, 1994; Straus, 1994).

As such, it is such cultures that condone violence against children as acceptable and useful in society that have made physical abuse or corporal punishment a very controversial issue to eliminate in schools worldwide (Anderson & Payne, 1994; Dow & Mogwe, 1992; Dubanoski et al., 1983; Sebonego, 1994; Shumba, 2001; 2003a & b). This study seeks to determine: pupils' myths and beliefs on why teachers physically abuse them in schools; if pupils have knowledge of the laws and regulations that protect them against physical abuse in schools; and recommend possible alternatives that could be used by teachers to discipline pupils in schools.

CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

It appears very clear from the above findings that pupils hold a variety of myths about why some teachers physically abuse them in schools. The majority of pupils seem to suggest that teachers 'want to control pupils who do wrong things' and 'they want to be feared'.

Perhaps, the question that we must raise is that why should teachers resort to such strategies if they are capable of delivering their subject matter? Teachers who are conversant with their subject matter are likely to be able to create a positive atmosphere during the learning process and motivate pupils to play their part. Current research suggests that it is most often a headache for some teachers to maintain classroom control in schools because 'many teachers fail to foster an atmosphere of mutual respect between their pupils and themselves or as originating in failed pedagogical relationships' (Benatar, 2004; Mushoriwa & Shumba, 2002). This often results in compromising their positions within the classroom because such teachers appear to lack the ability or the inclination verbally to communicate expectations to children in a professional manner. It is unfortunate that some of the teachers seem not to believe in rewarding good behavior but in punishing the bad behavior (Benatar, 2004). It is also interesting to note that even in countries where corporal punishment has been abolished such as South Africa, there are some teachers who do not observe the stipulated laws. Some of these teachers appear to hold the belief that the African child can only learn by using corporal punishment (Magagula, 1992; Mutema, 1988; Ntshingila, 2004; Sebonego, 1994).

It is important for teachers to be able to motivate their students during the learning process. One way to do this is for teachers to be well versed with their subject matter and this makes them to be respected by their students than teachers with the 'Data Deficiency Syndrome' (Mushoriwa & Shumba, 2002). These are teachers who are less versed with their subject matter in their areas of specialization. Such teachers often have confrontations with their students because of ignorance about their subject matter and are not very comfortable to be asked challenging questions. Therefore, it is necessary for teachers to be not dogmatic and should be able to learn some new ideas from their students because students are not like a *tabula rasa* or empty vessels where one pours in knowledge (Anderson & Payne, 1994; Lefrancois, 1997; Mwamwenda, 1996).

It also appears from the findings of this study that the majority of pupils are familiar with the laws and regulations that protect them against physical abuse in Zimbabwean schools. It is very interesting to note that pupils cannot be taken for granted by some unscrupulous teachers in the new millennium because they seem to be aware of their rights within the school. This implies that pupils could possibly report any form of physical abuse to their parents and other authorities.

What appears clear from the above findings is that some teachers seem not to be aware of the alternatives that they could utilize in order to maintain classroom control in schools. This paper will also attempt to come up with some of the alternatives that teachers could utilize to maintain classroom control in schools. First and foremost, the teacher needs to display an attitude of respect for the students so that students can feel that they are loved and understood by their teacher. In other words, the teacher should be positive and not negative attitudes towards the students all the time. This makes the students feel loved and cared for by the teacher. It must be pointed out that there are some children who may have never been shown any love in their lives (Rohner, 1975; Rohner & Rohner, 1980; Shumba, 2001; 2003a & b). Therefore, it is important for teachers in their *loco–parentis* roles to develop a positive relationship with their students all the time (Shumba, 2001; 2003a & b).

There is also a need for both parents and students involvement in decision making about school issues that affect the students, including educational goals and disciplinary issues. Research suggests that lack of involvement in the education of their children often leads to classroom disciplinary problems in schools (Hyman & Wise, 1979; Kelly, 1983).

Inappropriate behavior can also be reduced by using a technique known as extinction (Benatar, 2004). This technique removes or eliminates the rein forcers that maintain the inappropriate actions. In this regard, the teacher or parent must use a calm voice when giving instructions and this normally eliminates problems. As such, teachers need to be trained in this aspect so that they can be handle children within the classroom. Other methods of handling inappropriate behavior are by holding teacher–parent conferences, revocation of privileges, after school detention and counseling. However, it must be pointed out that detaining the children equally indicates failure by the teacher to foster an atmosphere of mutual respect between their pupils and themselves (Benatar, 2004).

Another alternative is to develop a program to educate teachers, parents and school administrators on how to eliminate corporal punishment in schools and within the society. The negative effects of corporal punishment must be publicized and recognized by the public at large and this may result in a social atmosphere condemning it. Family therapists need to work with parents and students at home and in schools on the effects of corporal punishment on child development and educate them on alternatives that are available to eliminate it. It must be noted that corporal punishment is ineffective in producing durable behavior change of students in schools and at home.

In conclusion, it is clear from the above discussion that enacting a law to abolish corporal punishment does not mean that teachers stop using it in schools. This is because such teachers appear desperate for 'sensible' alternatives to corporal punishment in schools. As such, the use and non–use corporal remains a challenge to all teachers in Africa and worldwide.

REFERENCES

Anderson, S. & Payne, M.A. (1994). Corporal Punishment in Elementary Education: Views of Barbadian School Children. *Child Abuse & Neglect*, 18 (4), 377 – 386.

Bell, J. (1996). *Doing Your Research Project: A Guide for First–Time Researchers in Education and Social Sciences*. Milton Keynes: Philadelphia, Open University Press.

Benatar, D. (2004). *Corporal Punishment: Philosophical Study*. http://www.corpun.com/benatar.hmtl

Climinilo, L.M. (1980). Discipline: The School's Dilemma. *Adolescence*, 15, 1 – 12.

Dow, U. & Mogwe, A. (1992). *The Convention on the Rights of the Child and the Legal Status of Children in Botswana*. A Consultancy Report for UNICEF Botswana. Women and Law in Southern Africa Research Project (WLSA). Botswana.

Dubanoski, R.A., Inaba, M. & Gerkewicz, K. (1983). Corporal Punishment in Schools: Myths, Problems and Alternatives. *Child Abuse & Neglect*, 7, 271 – 278.

Grossman, D.C., Rauh, M.J. & Rivara, F.P. (1995). Prevalence of Corporal Punishment Among Students in Washington State Schools. *Archives of Paediatric of Adolescent Medicine*, 149, 529 – 532.

Hyman, I.A. (1996).. Using Research to Change Public Policy: Reflections on 20 years of Effort to Eliminate Corporal Punishment in Schools. *Pediatrics*, 98 (Supplementary), 818 – 821.

Hyman, I.A., Irwin, A. & Laily, D. (1982). Discipline in the 1980's: Some Alternatives to Corporal Punishment. *Children Today*, 11, 10 – 13.

Hyman, I.A., Zelikoff, W. & Clarke, J. (1988). Psychological and Physical Abuse in the Schools: A Paradigm for Understanding Post-Traumatic Stress Disorder in Children and Youth. *Journal of Traumatic Stress*, 1, 243 – 266.

Jonsson, U. (2003). *Human Rights Approach to Development Programming*. UNICEF: Kenya.

Kinard, E.M. (1985). Ethical Issues in Research with Abused Children. *Child Abuse & Neglect*, 9, 301 – 311.

Korbin, J.E. (1980). The Cultural Context of Child Abuse and Neglect. *Child Abuse & Neglect*, 4, 3 – 13.

Kurebwa, E.V. (1987). Corporal Punishment: Do Teachers Know Best? *Teachers' Forum*, 4, Harare: College Press. April.

Lefrancois, G.R. (1997). *Psychology for Teaching*, Belmont: CA, Wadsworth.

Magagula, C. (1992). To Flog or Not to Flog: A Literature Review. *BOLESWA Educational Research Journal*, 9, 1 – 17.

Mushoriwa, T.D. & Shumba, A. (2002). Self-Perceived and Measured Study Strategies Among College Students. *Southern Africa Review of Education Journal*, 2 (1), 46 – 49.

Mutema, M. (1988). *Issues in the Philosophy and Practice of 'Kurova' (Beating) as a Pillar Punishing Method in Schools*. Unpublished B.A. (Hons) degree dissertation. Department of Religious Studies, Classics and Philosophy, University of Zimbabwe.

Mwamwenda, T.S. (1996). *Educational Psychology: An African Perspective*, Second Edition. Durban, Butterworth.

Newell, P. (1993). *Protecting African Children From All Forms of Violence: The United Nations on the Rights of the Child*. Paper presented at the Second African Conference on Child Abuse and Neglect, Cape Town, SASPCAN. September.

Ntshingila, F. (2004). South Africa's Child–Beating Shock: Experts Call For A Ban on Corporal Punishment in the Home. *Sunday Times*, 24 October.

O'Brian, C. & Lau, L.S.W. (1995). Defining Child Abuse in Hong Kong. *Child Abuse Review*, 4, 38 – 46.

Payne, M.A. (1989). Use and Abuse of Corporal Punishment: A Caribbean View. *Child Abuse & Neglect*, 13, 389 – 401.

Poole, S.R., Ushokow, M.C. & Nader, P.R. (2003). Corporal Punishment in Schools: Position Paper of the Society for Adolescent Medicine. *Journal of Adolescent Health*, 32, 385 – 393.

Rohner, R. (1975). *They Love Me, They Love Me Not: A World Study of the Effects of Parental Acceptance and Rejection*. New Haven, CT: HRAF Press.

Rohner, R. & Rohner, E.C. (1980). Antecedents and Consequences of Parental Rejection: A Theory of Emotional Abuse. *Child Abuse & Neglect*, 4, 189 – 198.

Sebonego, M.M. (1994). *Report of A Case Study: Child Abuse and Neglect*. Unpublished B.Ed. Dissertation, Department of Sociology, University of Botswana, Gaborone.

Shumba, A. (2000). *The Epidemiology and Aetiology of Child Abuse by Teachers in Zimbabwean Primary Schools*. PhD Thesis, Faculty of Education, University of the Western Cape. South Africa.

Shumba, A. & Moorad, F. (2000). A Note on the Laws Against Child Abuse in Botswana. *PULA: Botswana Journal of African Studies*, 14 (2), 175 – 181.

Shumba, A. (2001). The Epidemiology and Aetiology of Reported Cases of Child Physical Abuse in Zimbabwean Primary Schools. *Child Abuse & Neglect: The International Journal*, 25, 265 – 277.

Shumba, A. (2002). Teacher Conceptualization of Child Abuse in Schools in the New Millennium. *Journal of Interpersonal Violence*, 17 (4), 403 – 415.

Shumba, A. (2003a). Pupil Physical Abuse by Secondary School Teachers in Zimbabwe: A Child–Rearing Practice or Cultural Dilemma? *Journal of Aggression, Maltreatment & Trauma*, 8 (4) (#18), 143 – 159.

Shumba, A. (2003b). Children's Rights in Schools: What Do Teachers Know? *Child Abuse Review*, 12, 251 – 260. John Wiley & Sons.

Statutory Instrument 65 of the Constitution of Zimbabwe (1992). *Public Service (Disciplinary) Regulations of 1992*, 423 – 448.

Straus, M.A. (1991). Discipline and Deviance: Physical Punishment of Children and Violence and Other Crimes in Adulthood. *Social Problems*, 38 (2), 133 – 154. May.

Straus, M.A. (1994). *Beating The Devil Out Of Them. Corporal Punishment in American Families*. New York: Lexington Books.

Straus, M.A. (1996). Spanking and the Making Of A Violent Society. *Pediatrics*, 98 (Supplement), 832 – 881.

The Secretary of Education and Culture (1993). *Circular Number P 35 of 3 May*.

United Nations General Assembly (1989, November). *Adoption of a Convention on the Rights of the Child (U.N. Doc. A/Res/44/25)*. New York.

Zindi, F. (1995). An Analysis of the Arguments For and Against Corporal Punishment in Zimbabwe. *Zimbabwe Journal of Educational Research*, 7 (1), 69 – 83.

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Chapter 12

PERI-TRAUMATIC PSYCHOPATHOLOGY AMONGST SEXUALLY ABUSED MINORS

Philippe Bessoles
University Pierre Mendés France, Grenoble II, France

ABSTRACT

1. Objective of the Study

1.1. Main Hypothesis

This research concerns peri-traumatic pathologies amongst the under fifteen's who have been sexually abused. Our argument concentrates on the symptoms of phobia.

The aim is to do a structured analysis of clinical interviews conducted on recently sexually abused minors. The medical-psychological service is a forensic service available in French University Hospital Centers (CHU- Centre Hospitalier Universitaire).

2. Patients and Method

2.1. Patients

Seventy-nine children of all ages and sex all show signs of Acute Stress Disorders with reference to DSM IV (Post Traumatic Stress Disorder and Acute Stress Disorder).

2.2. Method

We use the semi-directive clinical interview technique. Analysis of the data follows the protocol of a semiological frequency structure. This study doesn't involve any factorial or correlational analysis. All results are given in percent.

3. Results

Four dominant peri-traumatic characteristics appear in our research:

3.1. A Symptomatology of Cognitive Efficiency

Relates to knowledge and to learning and not to intelligence or to cognitive process.

3.2. Behavioural and Conduct Disorders

The main disorder is an inhibition of the psycho-social bound. This inhibition sometimes gives way to anxious feelings with self or hetero aggressive assaults.

3.3. A Phobic Domination

Phobia is the most important syndrome. It does not simply signify the expression of neurotic disorders but suggests limited psychic functioning where paranoid anxieties dominate.

3.4. A Somatoform Aspect

The body symptomatology tends to confirm the identity disorders and alterations of the mental representation process of the sexual traumatism.

4. Conclusion

The main disorder amongst sexually abused children is the peri-trauma phobic dimension. It tends towards a paranoid clinical expression as emphasized by B. Brusset in 1999. The threat of psychic breakdown increases the necessity for rapid help for children. The phychic breakdown can sometimes be in the form of dysmorphophobia or in extreme cases depersonalization crisis (more or less transitional).

Keywords: sexual trauma, abuse, phobia, idea or presentation, anxiety

1. INTRODUCTION

1.1. Main Problem

At the convergence of legal, medical-legal and psychological epistemological fields, peri-trauma amongst children under fifteen (age of sexual maturity according to the French penal code) are as equally complex whether on a semiological or structural level. This complexity is due to the normal and pathological development of the child, the identity changes during puberty and the *adolescens* process (P. Gutton, 1996), the intra-family psychic economy, etc. The differential analysis between the actual post traumatic effects, the past psychic disorders and the factors of co-morbidity add to the difficulty of a clinical and pathological assessment.

On the methodological level, the notion of post-traumatic vulnerability, following sexual aggression, appears too generic in infantile clinical psychopathology to be operational. The legal, clinical or medical definitions are superposed or opposed. Within the same

epistemological field, variances add to the difficulty such as "*rape without breaking the hymen*" in the medical-legal frame, the qualification of crime or misdemeanour of a "*sexual aggression with penetration using any object or without penetration*" for a rape, the poly symptomatology or semiological overdetermination, etc… .

According to research (V. Defrancis, 1976; D. Finkelhor, 1979-1989; H. Van Gijseghem, 1985; Y.H. Hasevoets, 1997), the notion of vulnerability can be at the same time synonymous with psychosocial factors of risk, of help signals or badly defined psychological vulnerability. The notions of abuse, touching, incest, still remain vague and badly defined. The methodologies of assessment investigation and the epidemiological data are sometimes contradictory. The psychological expert's reports – and their extremely serious consequences- in the context of the recent Outreau's trial or Angers' trial are paradigmatic of these difficulties.

The children or teenage psychic dynamic is sometimes read via a legal or educational reference. It can lead to effects of over victimization often more pathogenic than the abuse itself.

A consensus of psychological research appears necessary, in order to conduct rigorous studies on the methodological and technical side. The therapeutical efficiency depends on preliminary rigorous clinical and psychopathological analysis with its corollary of high level scientific training for health professionals working with always exaggerated psychic problems.

1.2. Vulnerability and Peri-traumatic Stakes

The categorizations proposed by M. Montès de Orca, C. Yohant and A. Markowitz (1990) appear heuristic to us in order to delimit, in a better way, the outcome of the peri-trauma of sexual origin in the under fifteens.

- Sexual abuse without body contact: public or private exhibitionism, pornographic images, verbal incitation to sexual activity, erotic speeches about sex in front of children.
- Sexual abuse with physical contact: caresses or erotic kisses, touching, masturbation requests.
- Sexual abuse with penetration: rape attempt with oral, anal or genital penetration.

These categorisations have their own limits. For example, when can a kiss or a gesture be qualified as erotic? How to evaluate the cultural context of behaviour? How to "appreciate" the drifts –especially sectarian- of sexual abuse on children on pretext of vice liberation?

In this context, the aim of our clinical contribution is to specify the psychopathological aspects of the peri-trauma in children under fifteen who have been the victims of sexual aggressions. This contribution extends a pre-study presented during the national congress of clinical legal medicine in Dijon (France) in 2003. It refers to our consultation in clinical victimology in the legal-medical ward of the CHU of Montpellier (Prof. E. Baccino).

1.3. Aim of the Research

The main objective is:

To qualify an immediate post traumatic vulnerability amongst children under fifteen who have been sexually abused.

The biases in this study, which we will underline as we go along, have to be taken into account. These biases are to this day unavoidable due to the actual nature of these works. They are considered as necessary ponderation even if we find the same reservations in the works published so far (Y.H. Haesevoets, 1997, 2003; H. Van Gijseghem, 1975; M. Gabel, 1994; R. Coutenceau, 2004).

2. NOTIONAL AND EPISTEMICAL FIELDS

2.1. Protocol

2.1.1. Objective of the Research

From a clinical point of view this qualifies as a post traumatic state according to the DSM IV criteria (*Post Traumatic Stress Disorder and Acute Stress Disorder)* , our goal is to define a traumatic specificity in the sexually abused child. This specificity concerns the post immediate state of the child. Empirically, we offer the hypothesis of a phobic domination.

We name this time "factual" to stand apart from a purely semiological and quantitative analysis. Two clinical reasons conduct us to this differential analysis. The first is the epistemological confusion between the psychological notion of stress and the psychic notion of psycho-trauma (C. Damiani, 1997; P. Bessoles, 2001; L. Crocq, 2003). The second one is linked to a psychic factual concept and not a chronological one. The time when the child reveals the traumatic event is not at the time the sexual aggression occurred, this supposes an effect of psychic staggering, guiltiness or after shock. This fundamental aspect which defines psychic trauma resituates to the notion of psychic causality its psychodynamic quality. The subjectivity of the victim –as well as the aggressor- is a determining variable in the psychic elaboration and a start to the therapeutical process.

Clinicians know how much "*simple*" touching can generate a long lasting traumatic psychopathology where a more severe qualification can have more "*random*" psychic consequences.

The second time proceeds from an anamnestic study. The clinical interview is always semi-directive. It's about detecting in the patient's history some "*psychic characteristics*" which could increase a hypothetical "*victimization process*" (E.A. Fattah, 1973). We will temporarily name this second aspect: "*pre event vulnerability*".

The third time tallies with the evolution of those children treated in the legal-medical ward. The major consideration of this "*post event vulnerability*" is linked to the fact that the number of treated children is "*negligible*" considering they are addressed in priority to the partner's network (Child Psychiatrists or clinical psychologists specialized in clinical victimology,…). The therapeutical treatment, apart from techniques and theoretical references, at the heart of the CHU is impossible.

2.1.2. Sample

The sample is of 79 children of all ages and both sexes.. The proportion is 86% of girls Vs 14% of boys. They all show a post-traumatic clinical picture in reference to DSM IV. Characterized false allegations - cases where, according to the medical-legal examination or the medical-psychological expertise, the abuse is not established and the children show deep personality disorders (infant psychosis, confusion, delusional state, hebephrenia). These disorders exclusively concerned teenage girls (girls being the highest percentage of those hospitalised in child psychiatry wards or general mental wards).

2.1.3. The Results

The results are expressed as a percentage, following a frequency scale from the first clinical interview. The marking is done in terms of attendance / non attendance. The analysis structure presented thereafter has been elaborated in an empirical way in reference to our praxis in the legal medicine ward quoted above in collaboration with PhD and Master students.

2.2. Peri-traumatic Vulnerabilities

The three tables below show the results without any statistical processing (correlation or factor analysis for example). Our choice, within the frame of this article, is to delimit some clinical hypothesis in order to “implement” them afterwards on the methodological level.

2.2.1. The Factual Vulnerabilities: A Post Immediate Syndrome?

Table 1. “Factual” vulnerabilities

1- Seriousness of the act (oral, anal, genital penetration).	25.5%
2- Period, age.	20.25%
3- Moral restraint.	12.65%
4- Injunction to “participate”.	12.65%
5- Level of passivity.	22.78%
6- Status of the aggressor.	18.87%
7- Importance of the pains.	15.18%
8- Physical consequences.	16.45%
9- Weakness” of social support.	13.92%
10- Religious beliefs.	0%
11- Repetition of the acts.	16.45%
12- Staging.	12.65%
13- Injunction to silence.	15.18%
14- Physical threats.	13.92%
15- Psychological threats.	18.98%

2.2.2. Comments

The gross quantitative results show the reality of the sexual crime on the child psychopathology (25.50%). This aspect is in contradiction with one of our arguments above expressed in logic of psychic causality. There is a strong correlation between the seriousness of the act sustained and the seriousness of the clinical picture.

In fact, the seriousness of the act lies on the penetration of the victim's body. More than the horrors of the perpetrated act, the sexual crime acts like a demolition of primary psychic envelopments, bursting of formal signifier and of Skin Ego (D. Anzieu, 1987), distress of the body image especially the buildings of "inside/outside" at the base of injection/projection motions for example. These aspects have already been developed by (P. Bessoles, 1997, 2000) regarding children but also the victims of torture (P. Bessoles, 2005) show that the rape consists of "*victim destruction*" whose first effect is the collapse of the identity process.

The second lesson learned from the first table concerns the level of passivity of the child (22.78%). This aspect rejoins the psychological seriousness of the criminal act according to the age. The younger the child is at the time of the aggression, the more pathogenic effects it produces. We corroborate a consensus of research which confirms that the earlier the abuse occurs in life, the more risks for injuries to be irreversible on all levels; "particularly on the identity level" adds H. Van Gijseghem (1975). The vulnerability of the child is even more important when the childs psychic building is fragile, particularly during the early stage of their development such as the "stages" of identity changes (puberty for example). The assurance of their development is essential, particularly on didactic and cognitive, psychosocial and relational stakes. This aspect is confirmed by item 2 "*period, age*" - 20.25%. During these stages of identity changes times of psychic vulnerabilities appear which are more important than others. More than a noisy semiology, it seems that sexual traumatism weakens the child's developing psychic structure.

2.2.3. Pre-Factual Vulnerabilities: A "Victimization" Process?

Table 2. "Pre factual" vulnerabilities

1- Affection seeking.	19.99%
2- Psycho affective immaturity.	21.51%
3- Functional confusion.	25.31%
4- Loss of reference.	22.78%
5- Feeling of abandonment.	20.25%
6- Need for recognition.	18.78%
7- Standardization of sexuality.	16.45%
8- Ignorance of sexuality	21.51%
9- Jealousy among brothers/sisters	15.18%
10- Perverse behaviour	11.4%

2.2.4. Comments

We cannot eliminate a "*retrospective illusion*" i.e. a reconstruction of the story through the deforming prism of the traumatism. The "*scores*" obtained in items 2, 3, 4 confirms the arguments suggested by S. Férenczi as early as 1927 regarding "*the confusion of languages between adults and children*". The children involved show a weakness in identifying the family and generally space and time. The confusion is general for the status, functions and

roles. The lack of marking, at the same time internal and external, leads to too close relationships ("*go with one's father-in-law to a naturist camp*" for a young teenage girl for example) or too distant ("*I never spoke to him [her mother's new companion] and he wanted me to call him "daddy""*).

The second comments concerns item 8, "*ignorance of sexuality*". The sexuality is killed or popularized in the form of open perversion ("*watching a pornographic film together*", "*seeing adults' sexual frolics*") or a "*standardization*" just as perverted ("*not closing the bathroom door*", "*walking around the flat naked*") presented in the form of "*vice liberation*" or " *to move with the times*".

The results cannot by themselves contain a "*psychological profile*" causing a risk of becoming a victim. The absence of a control group invalidates this hypothesis. If the items "*sexuality*" is dominating, it would be hazardous at this point of the research to conclude that the essential of the peri-traumatic pathologies amongst sexually abused children lies in the perversion of the sexual. If we can certify that the sexual makes the symptom, the symptomatic over determination indicates other psychic bets such as body image disorders, abandon syndromes, signs of psychotic decompensation for example.

2.2.5. Post Factual Vulnerabilities: An Infantile Traumatic Neurosis?

Table 3. "post factual" vulnerabilities

1- Feeling of failure.	24.05%
2- Loss of self esteem.	18.98%
3- Feeling of "dirtiness".	17.72%
4- Absence of projection.	15.18%
5- Phobic avoidance.	65.82%
6- Rigidity.	15.18%
7- Silence.	13.92%
8- Absence of immediate treatment.	18.98%

2.2.6. Comments

As already emphasized, the therapeutic choice made by the hospital ward is the one of outpatient treatment. The only children (12) treated at the end of the year come under purely circumstantial considerations. On the other hand item 5, (phobic avoidance) is dominating.

3. DISCUSSION

Three main psychopathological syndromes temporarily come out of our study. They concern the cognitive sphere, behavioural and conduct disorders and the body image. This "*triptych*" is to be understood at the same time with reference to mutations of the normal development of the child but also to the pathogenic logics with regard to the identifying and identification mutations mentioned earlier. Finally, this same "*triptych*" depends on the resilient capacities of the child (L. Crocq, P. Bessoles, 2003) such as the precocity of their therapeutical treatment (F. Lebigot, P. Bessoles, 2005).

3.1. Sexual Traumatism and Cognitive Process

The differential analysis of cognitive efficiencies shows that the peri-trauma does not inhibit the structure, even a cognition mechanism such as language, the memory or the perception. The structure is not altered but its efficiency is. Nevertheless, a repeat of the trauma disrupts durably and in an irreversible way the cognition process. We call these phenomena “interferences” (however significant). They produce some alterations in the assimilation and learning process. The anxiety and phobic pathologies underlined above generate disorders of ideas and thoughts, body image and body scheme, etc. These same disorders inhibit cognitive efficiencies or weaken, for the younger child, the pre-requisites necessary for learning to read, for example.

As early as 1975, Hubert Van Gijseghem emphasised deficits in intellectual development, for logical, mathematical and symbolic thought. The school symptomatology is often one of a cognitive disharmony, for example, a young 12 year old girl, sexually abused by her uncle, showing an essential inhibition to learning geography lessons. She was incapable of drawing a geographical map and placing the mountains or the rivers etc... on it. This representation appeared impossible causing her much anxiety, and worked like “metonymy” of her abused body image.

3.2. Sexual Traumatism and Behavioural and Conduct Disorders (BCD)

We observe suicidal behaviour, running away, anti social behaviour and withdrawal, etc.. In a general way, our results confirm more ancient works such as the D. Finkelhor and A. Browne (1985) model.

More precisely, sleep onset disorders reveal weaknesses of thoughts and dreams. The abused child seems to be fighting against a drop of their vigilant consciousness. Entering into sleep revives the trauma and some anxiety “*overflows*”. This highly phobic attitude can take the clinical look of nocturnal or diurnal terror or of “*fleeing in a panic*”.

Hyper vigilance and hypersensitivity translate the psycho affective insecurity in which the child is plunged. They appear to have a strong correlation with the status of the aggressor (father, father-in-law, mother’s companion), through a background of constant submission and passivity. The aggressive semiology (self and hetero) of some clinical pictures appears like the expression, in the acting out, of anxiety attack facing panic attacks or paroxystic anxiety of an anaclitic type.

3.3. Sexual Trauma and Body Image

A major and constant effect of the sexual trauma is the upset of the body image and the building of the body scheme. It would appear, in an empirical way, that anamnesistic analysis unveils body image disorders previous to the sexual trauma (anorexic teenage girls for example). At this point in our work, we cannot differentiate these particularly pathogenic interactions. On the other hand, a constant of the sexual peri-trauma remains in bulimic conducts. Such extreme conducts generate obesity. It would appear that these psychogenic

"*pseudo obesities*" work like some "*lipid protections*" in front of all possibilities of trauma repeats.

Disorders of the urogenital sphere are essentially of a psychosomatic nature (rebellious dermatosis, repeated cystitis, pruritus, vaginal herpes attack, recurrent inflammatory process,…). These phenomena, well known among the medical profession, surrender to the therapeutic process without any special medications apart from those of comfort. The washing rituals, usual and "*intense*", produce the perverted effect of modifying the self immune balance of the pelvic belt. From the psychopathological point of view, these behaviours add an obsessional component to the clinical picture.

Amongst young children, the body image disorders lead to false sexual prematureness, compulsive masturbation or major inhibitions regarding nudity. Among teenagers (boys and girls) we met, we observed some premature sexual behaviour of a homosexual type.

3.4. Synthesis of Children's Sexual Peri-traumatic Clinical Forms

We can gather four main dominant clinical characteristics of peri-traumatic vulnerabilities among sexually abused children.

3.4.1. A symptomatology of cognitive efficiency. It rests essentially in the relation to learning and on the epistemological instinct. This cognition is disrupted, inhibited and leeched off. We can offer the hypothesis (which we encountered amongst adults) that some "*false mental deficiencies*" hold the nevropathic seal of sexual post traumatic pathologies. It therefore relates to knowledge and to learning and not to intelligence or to cognitive process.

The main reservation lies in the fact that the alteration can be lasting – if not permanent – if it concerns a child or a young child.

3.4.2. A BCD symptomatology centered on inhibition of the psychic or social link. This domination sometimes gives way to "*assaults*" of anxiety crisis or panic attacks in the form of self or hetero aggressive attacks.

3.4.3. A major phobic symptomatology is particularly invalidating on the semiological plan. It goes with obsessional behaviours essentially centered on washing rituals. The poly-neurotic aspect must not erase the fact that the identity stake is subjacent for the child.

3.4.4. A somatoform symptomatology - indicates the alterations of the mental representation process through the effects of psychic staggering. The semiology is in the actual body.

4. PERI-TRAUMATIC PHOBIA AND PARANOID ANXIETY

The phobic property of post traumatic states amongst sexually abused children represents a psychopathological dominance whose clinical reading cannot be reduced to a simple neurotic expression.

On a strictly semiological plan, the observed phobic symptoms – indeed in emergency situations – not only subsidize classical descriptions of the child and teenager psychopathology (P. Mazet, S. Stolèru, 1993; D. Marcelli, 1996; D. Marcelli, A. Braconnier, 1995) but answers to a phobogenic situation, the strength of the anxiety is often close to panic disorders. These states occur essentially during sleep onset time. Likewise, the dysmorphophobia are not phobia in the "strict sense" but real disorders of the body image independent of body changes inherent to child development.

The anxiety is not only linked to a potentially traumatic situation. It does not square with the definition of the anxiety signal. It becomes apparent out of the context of reviving the trauma. The anxiety constitutes a permanent and "chronic" background. It often occurs with a depressive co-morbidity, extremely invalidating, of an abandonic or anaclitic type. For some children, we have named this real-life experience an agonizing one, the anxiety was major and invading, leading some of them to a time of "depersonalisation". The peri-traumatic phobia evokes some limited psychic functioning such as those described by B. Brusset (1999). These phobic are atypical due to their context of apparition and their content. The phobic objects do not "absorb" the anxiety. They remain without efficiency. In the trauma context, the phobia doesn't fulfil its role of anxiety catalyst. On the contrary, it "infiltrates" the entire psychism of the child and compromises the relationship with others. The entire patient mental functioning is threatened by massive anxiety.

If as underlined once again by B. Brusset, regarding phobic psychopathologies amongst children and teenagers "it is a phobic neurosis from a clinical point of view […] they are reasons to look for anxiety of a paranoid type".

On looking at our study, the qualification of paranoid anxiety is the most suited for most of the children we encountered. This qualification mainly concerns the post-immediate phase of the peri-trauma of a sexual origin.

4.1. The formulation of the lived trauma often appears incoherent, independently of the child's age. It is badly systematized, even sometimes incomprehensible, outside the syntactic and semantic level of the child or the teenager. This formulation seems frightening and incommunicable, often with parasitical paraesthesia like twitches, shaking, spasms, itching, mimics,

4.2. During the clinical interview, the child feels spied upon or threatened. He calls upon verbal or grapho-motrice allusions (scribbles between a doll's legs for a young child for example) or "conniving" induction with the "reassuring" adult (psychologist, doctor) ("but, you know…").

4.3. The threat of psychic breakdown is perceptible in the form of persecuting elements such as the scribbles mentioned above. Amongst some, the drawn forms are attacked by felt tip pens and the sheet of paper is pierced. In some dramatic cases, the dolls given to children are literally torn to pieces as if the sensitive and sensorial experience was close to the body being cut into small pieces.

4.4. In some particularly odious cases (collective rape on teenage girls), the body real life experience is close to a real process of depersonalization. We noticed feelings of body dispossession, ideas of body transformation and for two clinical cases self mutilating and autolysis conducts.

5. CONCLUSION

These “fertile” moments on the clinical plan can only be transitory. Due to the absence of rigorous follow up, it is impossible to specify the evolution of the young patients.

If we refer to retrospective studies on adults, they tend to confirm the existence of long lasting psychopathological after-effects, just as trauma recurrences years or even decades after the trauma.

On the other hand, it is important to underline (E. Baccino, P. Bessoles, 2003; J. Lighezzolo, C. de Tyché, 2004), the resilient capacities of the sexually abused children. Paradoxically, the vulnerabilities mentioned earlier can act like “psychopathologic plasticity” propitious to a psychic elaboration. The goal depends on the therapeutic process and its set-up. Recent research by M. Lemay (1999), B. Cyrulnick (1999, 2001), M. Gabel (2000) or L. Daligand (2004) show how these children can elaborate extreme situations, starting with sexual trauma, even if it is particularly pathogenic. Nevertheless, it would be delusive to think that healing is final and permanent.

REFERENCES

Anzieu D. *Les enveloppes psychiques*. Paris : Ed. Dunod ; 1987

Baccino E, Bessoles P. *Le traumatisme sexuel et ses devenirs*. Lecques : Ed. Le Champ Social ; 2001.

Baccino E, Bessoles P. *Traumatisme et résilience : lien psychique, lien social*. Lecques : Ed. Le Champ Social, 2003.

Bessoles P. *Torture et temporalité : contribution à une sémiologie de psychose post traumatique.* In : *Les cahiers de psychologie clinique*. Bruxelles : Ed. De Boëck University ; 2004.

Bessoles P. 2000, Le *meurtre au féminin, clinique du viol*. Saint Maximin : Théétète Editions, 1997.

Bessoles P. *La psychose post-traumatique*. In : L’encéphale. Paris : Elsevier Editions ; 2005.

Brusset B. *Etats anxieux et névroses* : critique des concepts. In : Marcelli D, Braconnier A, editors. Adolescence et psychopathologie, 4. Paris : Ed. Masson ; 1999. p. 203-38.

Coutenceau R. *Vivre après l’inceste*. Paris : Ed. Desclée de Brouver ; 2004.

Crocq L. *Névrose traumatique et élaboration résiliente*. In : *Victime-Agresseur*, Tome 4. Lecques : Ed. Le Champ Social ; 2003. p. 27-41.

Crocq L. Bessoles P. *Récidive, réitération, répétition : lien d’emprise et loi des séries*. Lecques : Ed. Le Champ Social ; 2004.

Cyrulnik B. *Un merveilleux malheur*. Paris : Ed. Odile Jacob ; 1999.

Cyrulnik B. *Les vilains petits canards*. Paris : Ed. Odile Jacob ; 2001.

Dalignand L, Gonin D. *Violence et victimes*. Lyon : Ed. Méditions ; 2004.

Damiani C. *Les Victimes : violences publiques et crimes privés*. Paris : Ed. Bayard ; 1997.

Defrancis V. *Protecting the child victim of sex crimes committed by adults*. Denver, CO : American Human Association, Children’s division ; 1976.

Fattah EA. *Le rôle de la victime dans le passage à l'acte : vers une approche dynamique du comportement délictuel*. Rev Int Criminol Police Tech 1973 ; XXVI(2) : 173-88.

Ferenczi S. 1927-1933, *Confusion de la langue entre l'adulte et l'enfant*, in : *Œuvres complètes*, Psychanalyse IV, Paris, Payot, 1968.

Finkelhor D. *Sexuality victimized children*. New-York : Free Press ; 1979.

Finkelhor D. Browne A. *The traumatic impact of child sexual abuse : a conceptualization*. Am J Orthopsychiatry 1989 ; 55 :530-41.

Gabel M. *Les enfants victimes d'abus sexuels*. Paris : PUF ; 1994.

Gabel M. *Le traumatisme de l'inceste*. Psychiatrie de l'enfant. Paris : PUF ; 2000.

Gutton P. *Adolescens*. Paris : PUF ; 1996.

Haesevoets YH. *L'enfant victime d'inceste*. Bruxelles : Ed. De Boëck Université ; 1997.

Haesevoets YH. *L'enfant en question. De la parole à l'épreuve du doute dans les allégations d'abus sexuels*. Bruxelles : Ed. De Boëck Université ; 2003.

Lebigot F. Bessoles P. *Situation d'urgence, situation de crise : clinique du psychotraumatisme immédiat*. Lecques : Ed. Le Champ Social ; 2004.

Lemay M. *Résilience devant la violence*. J Psychologues 1999 ; 164 :36-47.

Lighezzolo J, de Tyché C. *La résilience : se (re)construire après le traumatisme*. Paris : Ed. In Press ; 2004.

Marcelli D, Braconnier A. *Adolescence et psychopathologie*. Paris : Masson ; 1995.

Marcelli D. *Enfance et psychopathologie*. Paris : Ed. Masson, 1996.

Mazet P, Stoléru S. *Psychopathologie du nourrisson et du jeune enfant*. Paris : Masson ; 1993.

Montes de Oca M, Yohant C, Markowitz A. *Revue critique des travaux épidémiologiques anglo saxons récents sur l'abus sexuel à l'égard des enfants*. In : *Les abus sexuels à l'égard des enfants*, CTNERHI. Paris : PUF ; 1990. p. 7-70.

Van Gijseghem H. *L'enfant mis à nu. L'allégation d'abus sexuel : la recherche de vérité*. Québec : Méridien ; 1992.

Van Gijseghem H. *Autre regard sur les conséquences de l'inceste père-fille*. Revue canadienne de psycho-éducation ; 1985 ;14(2) :138-45.

Van Gijseghem H. *Facteurs interférents avec la qualité du témoignage de l'enfant au tribunal dans les causes d'abus sexuels*. Québec : Revue canadienne de Psycho-éducation 19.1.11.22 ;1975.

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Chapter 13

CRIMINAL CAREERS OF DUTCH ADOLESCENT SEX OFFENDERS; A CRIMINOLOGICAL PERSPECTIVE

Arjan Blokland
Netherlands Institute for the Study of Crime and Law Enforcement,
Leiden, the Netherlands
Anton van Wijk
Police Academy, Apeldoorn, the Netherlands

INTRODUCTION

The term 'sexual offence' covers a wide range of punishable behaviour and those who commit sexual offences form a highly heterogeneous group (Righthand & Welch, 2001). Within a forensic clinical setting, offenders are commonly categorized based on the characteristics of the offence they committed. Recently however, it has been argued that knowledge gained in developmental criminology regarding the progression of criminal careers of various types of 'ordinary' offenders, could also provide valuable insights for distinguishing between various types of sex offenders. (Lussier, 2005). In this chapter we will analyze the criminal careers of adolescent sexual offenders with particular attention paid to the connection between sexual offences and other crimes. This study is based on a longitudinal dataset comprised of police registrations and covers a prospective period of 10 years.

1. TYPES OF SEXUAL OFFENDERS

Studies on young sexual offenders commonly distinguish various types of offenders based on the characteristics of the offences they committed. Many studies distinguish between offenders committing sex crimes in which there was no physical contact, called *hands-off* offenders (Saunders et al., 1986; 1991), and offenders committing sex crimes where physical contact did occur, called *hands-on* offenders (e.g. Fehrenbach et al., 1986). Within

the broad category of *hands-on* offenders, further differentiations are made based on the age, familiarity or sex of the victims involved. Child abusers, those who commit sexual crimes against minors, make up the first subcategory; those who commit sexual crimes against adults or same-age victims form the second subcategory (e.g. Hunter et al., 2000; 2003; Gudjonsson & Sirgurdsson, 2000; Prentky et al., 2000). Within the subgroup of child abusers, a further distinction is made between those who victimize children from within the family circle, and those who choose victims from outside the family. An even more specific sub categorisation can be made based on the gender of the victims (Boyd et al., 2000). Within the group of those who commit sexual crimes against adults or same-age victims, offenders acting alone are differentiated from those who acting in groups (Hendriks & Bijleveld, 1999). Within the subgroup of solo-offenders, further differentiation can (again) be made between those who commit the crimes against family members and those who choose non-family victims (Langstrom et al., 2000). It is important to understand that this kind of categorizing is done to provide a framework for studying the aetiology of these kinds of offences and to offer guidance in determining which kind of treatment would be suitable. In reality, offenders are not easily classifiable. There are, for example, child abusers who victimize both males and females. *Hands-off* offenders can become *hands-on* offenders, or vice versa, as their offending behavior develops over time. Offenders changing categories (changing the kind of sex crimes they commit), are said to *cross-over* (e.g. Heil et al., 2003).

2. Criminal Careers and Offender Types

Studies on adolescent sexual offenders are often carried out by psychiatrists and psychologists who tend to view sexual delinquency primarily as a deviant form of sexual behaviour. This explains the emphasis placed on the sexual aspects of the crimes committed – e.g. the type of sexual activity and the age of the victim - rather than on the characteristics of the offender's criminal career (Smallbone, 2006). When developmental criminologists speak of a criminal career they refer to the evolution of some individual's criminal behavior over time (Blumstein, Cohen, Roth & Visher, 1986). Contrary to what the term 'career' might suggest, it does not imply that criminal behavior always develops from bad to worse. The term "career" is only used to indicate that individuals can at some point begin to display criminal behaviour, will at some point stop behaving this way, and that between beginning and end various changes can take place, not only in the seriousness of the crimes committed, but also, for example, in the rate of offending, the versatility of offending or in the sequencing of offence types. (LeBlanc & Loeber, 1998)

Developmental criminologists have also distinguished between different types of offenders. An often applied typology is that of Moffitt (1993). Moffitt's typology differentiates between life course persistent and adolescence limited offenders, each argued to have a different etiological background. Life course persistent offenders start their criminal careers at a young age, commit crimes frequently, and continue to do this far into adulthood. Adolescence limited offenders display much shorter criminal careers. These offenders only temporarily engage in crime starting in their early teens and quickly desisting from crime when they mature to adulthood. By far, most offenders are of the adolescence-limited type, with only a small percentage belonging to the persistent type.. Other developmental

criminologists have offered similar distinctions (e.g. Lahey & Waldman, 2005, Patterson & Yoerger, 2002)

Persistent offenders and adolescence-limited offenders differ not only in the way their criminal behavior develops over time. Their development is also argued to be rooted in different etiological processes which influence the types of crime these offenders commit as well. The criminal behaviour of persistent offenders is said to originate from a combination of the child's problematic personality and the parents' inability to adequately deal with their difficult child. This 'false start' may spring a negative spiral of inappropriate and anti-social behaviour at a young age to a persistent criminal career stretching far into adulthood. As a result of their attachment histories persistent offenders are argued to be more violent than adolescence limited offenders (Moffitt, 2006). The delinquent behaviour of adolescence-limited offenders on the other hand can, according to the typology, best be seen as resulting from the urge to express oneself as an autonomous individual. Unlike persistent offenders, adolescent-limited offenders are not burdened by problematic character traits or a long history of problematic behaviour, and are capable of shedding their inappropriate behaviour when the opportunity rises to achieve independence through conventional adult roles (e.g. through work, or by starting a family)(see also Moffitt, 2006).

Moffitt's typology possibly answers an important paradox in developmental criminology: many empirical studies have shown that the majority of adult criminals begin exhibiting criminal behaviour at an early age, but that most youthful offenders do not continue to commit crimes during adulthood. On the one hand there seems to be some truth in the saying: once a thief, always a thief. On the other hand, for many young people delinquency seems merely a way of 'sowing wild their oats' a phase they eventually outgrow. Moffitt's typology explains these apparently contradictory findings by pointing out that we are dealing with two types of offenders. Adult criminals are mostly of the persistent type and these offenders start their criminal careers at a fairly young age. Most delinquent youths however, are of the adolescence-limited type and are expected to rapidly outgrow their offending behaviour.

3. USING CRIMINAL CAREERS TO TYPIFY SEXUAL OFFENDERS

What is true for non-sex offenders is also true for sex offenders: a large share of the adult sex offenders commit their first sexual offence at a youthful age (Abel, Mittelman & Becker, 1985; Groth, Longo & McFadin, 1982). At the same time, studies on recidivism reveal that only 10 to 15% of juvenile sex offenders develop a 'career' in sex offenses which continues into adulthood (Rasmussen, 1999). Moreover, earlier studies show that many sex offenders also commit non-sexual crimes (e.g. Van Wijk et al., 2006). For these offenders, it appears that sexual crimes only form a part of a wider criminal career consisting of both sexual and non-sexual crimes. On the basis of these findings, many researchers are appealing for an integration of the sexual deviance perspective with the developmental criminology perspective in order to arrive at a better understanding of the (general) background and development of sexual delinquency.

One of the first attempts at integration was made by Becker and Kaplan (1988). These researchers distinguished three offender types, each with its own developmental pathway. The first type consists of "dead-end" offenders, who commit a sexual crime only once and

afterwards do not commit any other (kinds of) crime. The sexual criminal career of these offenders begins and ends with their first sexual crime. In other words, in the area of sexual crimes, they may be classified as *first-and-only offenders*. The second type consists of delinquent offenders, who commit several sexual crimes, but who also commit various other non-sexual offenses. For these offenders, sexual crimes only make up part of their entire criminal career. As they commit both sexual and non-sexual crimes, offenders of this second type are called *generalists*. Within contrast to the second type, the third type consists of *"specialists"*, those who limit themselves to committing sexual crimes, commit them repeatedly, and scarcely, if at all, show any other kind of criminal behavior. The typology of Becker and Kaplan fits in with research on continuity and change in sexual criminal careers: at one end, many youthful sex delinquents are *"dead-end"* offenders; at the other end, only a small number become *specialists* in sexual offences; in between these two, a large group can be found where the offenders commit all kinds of crimes, including sexual crimes.

In the developmental model of Seto and Barbaree (1997), which leans heavily on Moffitt's typology, two kinds of sex delinquents are distinguished. The first type displays a long history of anti-social behaviour and an extensive criminal career. Although sexual deviation in can be present in both types, for the first type sexual delinquency is viewed more as an expression of a more general anti-social tendency. Opposite the relatively small group of persistent anti-social sexual delinquents stands a large group of sex delinquents which Barbaree and Seto call the opportunistic type. Sex delinquents who fall under this second type do not display any anti-social behaviour early in life, hardly commit any other (kinds of) crime, and their sex delinquency is limited to their adolescent period. Offenders of this second type do tend to show a deviant sexual interest. While the large group of opportunistic sex delinquents is responsible for the largest number of sexual crimes, it is the persistent anti-social sex delinquents who commit sexual crimes of the more serious sort.

4. Mapping Criminal Careers of Juvenile Sex Offenders Using Police Data

To what extent can the above-mentioned categorizations be supported empirically? And to what extent do the offence-based categorization in sexual offender types and the categorization based on developmental pathways overlap? In order to gain insight into these questions, the remainder of this chapter will describe the criminal careers of all adolescent sexual delinquents who were registered by the Dutch police in 1996 (N=748). In that year, these adolescents were between 12 and 20 years of age. In The Netherlands, 12 years is the minimum age at which young people can be criminally prosecuted. In particular we will consider the associations between sexual crime and non-sexual crime. The following analyses are based on details about the complete criminal backgrounds of these sex delinquents until 2005. The data was obtained from the Dutch police (HKS) and pertain to all criminal offences these delinquents were suspects of. There are pros and cons to the use of officially registered data in general and police data in particular. The disadvantage of officially registered data is that they pertain only to crimes known to the police. Especially when it comes to sexual crimes, a the so called 'dark number' may be substantial, for example because victims do not (dare to) file a report. Another disadvantage of using HKS-data in the context of our analysis

is that no information is available with regard to convictions and sentencing, which means that there is a possibility that there are no new registered police contacts for an offender due to the fact he is incarcerated. The major advantage of police-data is that we have access to data pertaining to a large number of suspects, which allows us to distinguish subgroups of offenders and offence types.[1] Although legally individuals registered in the HKS-system are *suspects* since they have not been convicted, we will, for reasons of readability, refer to them *delinquents* or *offenders*.

5. Personal and Criminal Career Characteristics of Sex Delinquents registered in 1996

5.1. Age in 1996

Figure 1 shows the age distribution of all sex delinquents who were arrested in 1996. The age/crime distribution for non-sexual offending usually a single peak at the end of the adolescence followed by a gradual decline with age. The age/crime distribution for sexual delinquents differs from the non-sex age/crime curve in that it shows two peaks: the *first* appearing around age 15. It is of course possible that more adolescents commit sex offences when aged 15. However, the timing of the peak in the age/sexcrime curve is more likely to represent a system effect:: the judicial system probably reacts differently to teenagers who have committed a sexual crime in comparison with teenagers who have committed crimes against property or violent crimes. While theft or fighting by young people may sometime be settled without resulting in a registration in the HKS-system, this is unlikely to be the case when the offence in question is of a sexual nature. Figure 1 shows a second peak in the age/sexcrime distribution, well over age 30. Research reveals that, on average, sex offenders are older than non-sex offenders (Smallbone en Wortley, 2004). There are also indications that older sex offenders are predominantly child molesters (Van Wijk et al., 2006). When defined as aged between 12 and 20, adolescent sexual delinquents make up 20% of the total number of suspects registered for sexual crimes in 1996.

5.2. First Offenders and Recidivists in 1996

Prior research has shown criminal history to be an important predictor of criminal recidivism. Based on differences in criminal history Tables 1 and 2 distinguish various groups of sex delinquents. Note that this distinction is based on the criminal history of these delinquents in 1996: delinquents who were registered by the police as *first offenders* in 1996 could possibly have committed more crimes *after* 1996. We distinguish the following groups:

- first offenders
- sexual recidivists

[1] Offence types are based on the legal definition of the offence registered by the police which may not always coincide with the clinical label.

- non-sexual recidivists
- sexual and non-sexual recidivists

Figure 1. Age adolescent sex offenders in 1996.

Over two thirds of sexual delinquents registered in the HKS system in 1996 did not have any prior police contacts, these are the *first offenders*. A small percentage (2.5%) had already committed at least one sexual offence prior to the 1996 registration. We will refer to this group as the *sexual recidivists*. Over one out of four offenders already had a police record prior to the 1996-registration, but not for sexual offences, we refer to this group as the *non-sexual recidivists*. Lastly, 3.1% had already committed both sexual and non-sexual crimes prior to 1996. Most sex delinquents registered in the year 1996 were either registered first offenders or had experience prior police contacts but for other than sexual crimes.

5.3. Individual Characteristics

The individual characteristics of the sex delinquents in 1996 are presented in Table 1. Practically all sex offenders are male. More than half are of Dutch descent; that is to say, they either have the Dutch nationality or were born in The Netherlands. There are some marked differences across groups. For one, a relatively large percentage of the sexual recidivists are Dutch. Surinam, Antillian and Moroccan delinquents are predominantly in the groups who have previously committed non-sexual crimes or both sexual and non-sexual crimes prior to 1996. These offenders could be classified as generalists rather than as specialists. There are practically no adolescent sex offenders registered by the police as either alcohol or drug addicted. Relatively few sexual recidivists come from the four large cities (Amsterdam,

Utrecht, Rotterdam and Den Haag), while those cities harbour more offenders who have non-sexual criminal histories. Sexual recidivists predominantly come from cities where the population ranges between 10,000 – 50,000. It is known from prior studies that reports in connection with exhibitionism are filed more often filed in smaller towns, while larger towns tend to report more rape (Van Wijk et al., 2006). We also know that police data usually have more reports on exhibitionism than reports on rape.

Table 1. Characteristics of types of adolescent sex offenders 1996

	first offender (N=517)	recidivist sex (N=19)	recidivist non-sex (N=189)	recidivist sex and non-sex (N=23)	total (N=748)
offender types in 1996 (%)	69%	3%	25%	3%	100%
sex					
% male	98%	100%	99%	100%	99%
% female	2%	0%	1%	0%	1%
etniciteit					
% Dutch	56%	68%	41%	22%	51%
% Surinamse	5%	16%	15%	13%	8%
% Dutch Antillean	3%	5%	5%	9%	4%
% Turkish	11%	5%	10%	0%	10%
% Moroccan	12%	5%	19%	30%	14%
% other African	5%	0%	5%	0%	5%
% East European	1%	0%	2%	4%	1%
% Other European	3%	0%	1%	13%	3%
% Other	5%	0%	3%	9%	4%
Age in years					
in 1996 (mean)	16,0	17,3	17,4	17,4	16,4
City					
< 10.000 citizens	2%	5%	2%	0%	2%
10.00 - 50.000 citizens	38%	42%	28%	35%	36%
50.000 - 100.000 citizens	17%	11%	20%	22%	18%
100.000 - 250.000 citizens	22%	21%	17%	17%	21%
> 250.000 citizens	19%	16%	32%	26%	22%
foreign county	2%	5%	2%	0%	2%
addiction					
% alcohol	0%	0%	1%	0%	0%
% drugs	0%	0%	5%	4%	1%
% alcohol and drugs	0%	0%	1%	0%	0%
% none	100%	100%	94%	96%	98%

5.4. Criminal Career Characteristics in 1996

Table 2 provides information about the criminal careers of the various groups of sex delinquents. On average, sex delinquents commit their first sexual crime around the age of 16. The average age at which delinquents commit other (types of) crime is somewhat lower. Those who commit both sexual and non-sexual crimes begin their criminal career at the youngest age.

Table 2. Characteristics of criminal careers of types of adolescent sex offenders

	first offender (N=517)	recidivist sex (N=19)	recidivist non-sex (N=189)	recidivist sex and non-sex (N=23)	total (N=748)
age 1st offense					
sex (mean)	16,0	15,2	17,4	15,2	16,3
non-sex (mean)	17,0	17,5	14,7	14,5	15,9
# offenses before 1996					
sex (mean)	0,0	3,1	0,0	1,5	0,1
non-sex (mean)	0,0	0,0	6,2	8,6	1,8
sex offenses after 1996					
% yes	6,0%	10,5%	8,5%	13,0%	7,0%
% no	94,0%	89,5%	91,5%	87,0%	93,0%
non-sex offenses after 1996					
% yes	38,1%	21,1%	67,2%	78,3%	46,3%
% no	61,9%	78,9%	32,8%	21,7%	53,7%
# offenses after 1996					
sex (mean)	0,1	0,3	0,1	0,2	0,1
sex (mean; only recidivsts)	2,0	2,5	1,6	1,3	1,8
non-sex (mean)	1,5	1,7	4,1	5,7	2,3
non-sex (mean; only recidivist	4,0	8,0	6,1	7,3	5,0

Sexual recidivists committed on average more than three sexual offences before they were registered for a sexual offence in 1996. Non-sexual recidivists had an average of six prior registrations pertaining to non-sexual crimes. The average offender with a history of both sexual and non-sexual crimes prior to 1996, had committed six times as many non-sexual crimes as he had sexual crimes.

Up to 2005 the 748 adolescent sexual delinquents registered in 1996 are responsible for 5562 registrations in HKS, among which 1362 for sexual crimes. Figure 2 shows the age/crime distribution based on the longitudinal data for the adolescent sexual delinquents for both sexual and non-sexual crimes. Figure 2 shows that compared to non-sexual crimes, the curve for sexual crimes reaches its peak earlier followed by a less steep decline.

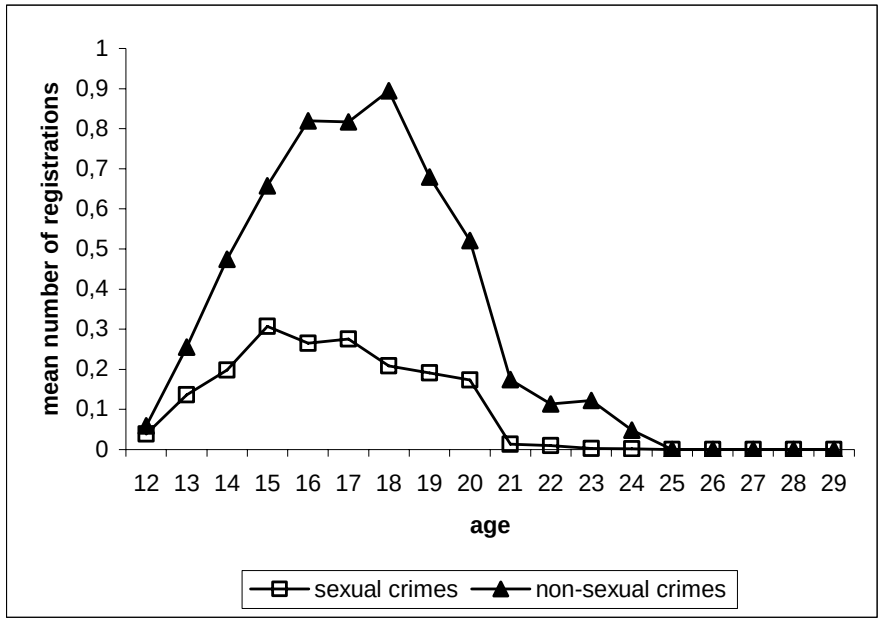

Figure 2. Mean number of registrations per crime type across age.

5.5. Recidivism after 1996

Which portion of the sex delinquents registered in 1996 recidivate and are registered again during the 10 year follow-up period of our study? Recidivism for the different groups of sex offenders is shown in Figure 3 and 4. It is important to note that reliable estimations of recidivism require a long-term follow-up, especially when sexual recidivism is concerned. The data used here cover the 10 year post-registration period between 1996 and 2005. Prior Dutch research that measured recidivism among sex over a period of 25 years found that 86% of all offenders who eventually would recidivate, had done so in the first 10 years (Nieuwbeerta, Blokland en Bijleveld, 2003). The numbers in figures 2 and 3 can therefore be expected to have been higher if the follow-up period of the current study had been longer.

Figures 3 and 4, graph the survival of the different groups of sex offenders that is the proportion of offenders that did not recidivate until a given year, for sexual and non-sexual crimes respectively. Figure 2 shows that most sexual delinquents are not registered for an additional sexual offence in the 1996-2005 period; most survived the 10 year period without again being registered for a sexual offence. Recidivism is lowest in first offenders and in those with non-sexual criminal histories prior to 1996. While sexual recidivism is higher for the two groups that did display a history of sexual offences in 1996, still most delinquents is these groups do not recidivate with a sexual crime during the 10 year follow-up.

Figure 3 shows the survival graphs for non-sexual offences in the 1996-2005 period. First thing to note is that compared to sexual offences, recidivism is much higher – survival is lower – for non-sexual offences. Figure 3 shows that, in general, sexual delinquents tend to recidivate to non-sexual crimes, more than to sexual crimes. Sexual recidivists, those delinquents who had committed only sexual offences prior to 1996, are the exception to this

rule. Of this group, 85% survived the period 1996-2005 considering sexual crimes, while more than 90% did, with regard to non-sexual crimes. (see also Table 3). Survival with regard to non-sexual crime is lowest – or recidivism highest- for delinquents who committed both sexual and non-sexual crimes prior to 1996.

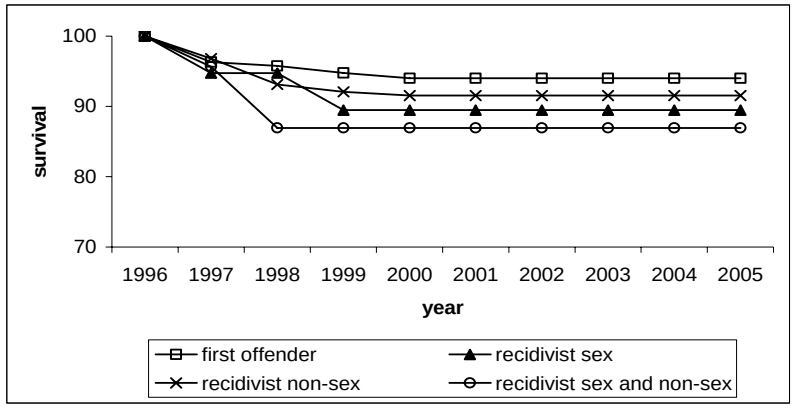

Figure 3. Chance for 'survival' for sexual delinquence for types of sex offenders.

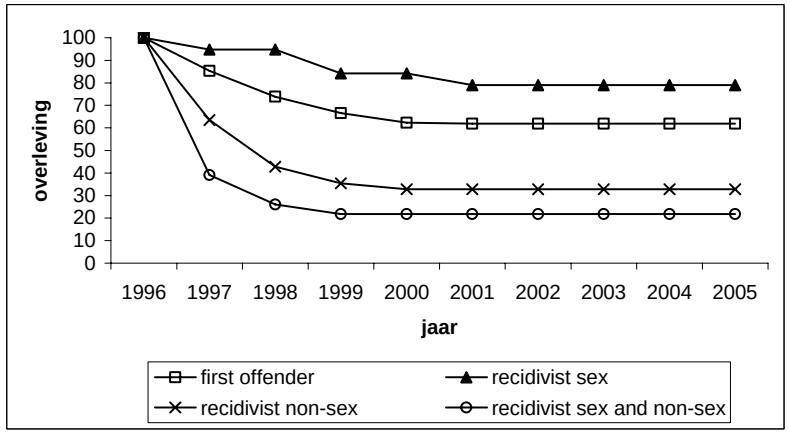

Figure 4. Chance for 'survival' for non-sex delinquence for types of sex offenders.

5.6. Link between Sexual and Non-sexual Crimes

In order to get better insight into the link between sexual and non-sexual crimes within delinquent careers, we will use data on the total criminal history of all juvenile sexual delinquents registered in 1996. That is to say, we make use of HKS-data on all crimes committed by this sample of sexual delinquents both before and after 1996, all the way up to 2005. Keeping in mind the distinctions made by Becker & Kaplan, and those of Seto & Barbaree, we categorize the delinquents based on the ratio of sexual and non-sexual crimes in their entire delinquent careers. The following example illustrates this categorization. James was registered in the HKS-system for a total of 12 offences: 3 sexual crimes, 9 crimes. Sexual crimes constitute ‘only’ 25% of his entire career, and he thus appears to be a perpetrator on

the delinquent path (Becker en Kaplan, 1988), or a persistent anti-social criminal (Seto en Barbaree, 1997). In comparison, Peter has been registered for 4 crimes, 3 of which were sexual offences. Although Peter committed just as many sexual crimes as James, sexual crimes make up 75% of his entire "career". It appears as that unlike James, Peter is on the sexual deviant pathway.

When we analyze the total delinquent careers of all sexual delinquents from 1996, results show that over one-fifth of the entire group has a delinquent career in which sexual crimes constitute less than 25% of the whole. These delinquents thus commit more than three times as many non-sexual crimes as they do sexual crimes. These delinquents could be labelled *generalists*. The opposite can be said for 4% whose delinquent career is comprised of sexual crimes for 75% or more. This group could be labels *specialists*. It must be noted however that a large percentage of the specialists were first offenders in 1996. Table 2 already showed that recidivism is lowest in first offenders. When using the term 'specialist' we must therefore consider that many of whom we label specialists are delinquents that are registered by the police only once.

Figure 5 indicates the average number of crimes per year in the criminal careers of delinquents, grouped according to the ratio of sexual and non-sexual offences in that career. The figure shows that when the *percentage* of sexual crimes in the career increases, the average *number* of sexual crimes (taking into consideration the number of years where the delinquent was observed) also increases (the example of James and Peter shows that this does not necessarily have to be the case). Moreover, it appears that the number of non-sexual crimes decreases as the percentage of sexual crimes in the career increases. Sexual delinquents who have delinquent career consisting solely of sexual offences (plotted on the extreme right in Figure 5) by definition do not commit any non-sexual crimes. That is why they are plotted separately for the other offenders in this and all following figures. The take from Figure 4 is that, there are very few delinquents who commit a lot of sexual crimes as well as a lot of non-sexual crimes; in most cases, it is either one or the other.

Figure 6 shows that as the percentage of sexual crimes in the total career rises, the percentage of rape drops. In other words, delinquents who commit many non-sexual crimes are more often guilty of rape than those who commit only a few or no non-sexual crimes. In contrast, the percentages for exhibitionism and sexual abuse of children rise when sexual crimes take up a larger percentage of the individual's total delinquent career. Exhibitionism and abuse are usually committed by delinquents who commit relatively few other types of crimes. 100%-sexual delinquents (farthest right) are registered predominantly for the sexual abuse of children, and less for rape and sexual assault. Given that 100%-sexual-offenders are, for the most part, first offenders (in 1996), we can conclude that delinquents who begin their criminal careers with a sexual crime turn up more often to be child abusers rather than rapists or sexual attackers. These results tie in with those from the studies of Van Wijk et al. (2006) that shows that rapists and are usually generalists whereas child abusers more often are specialists.

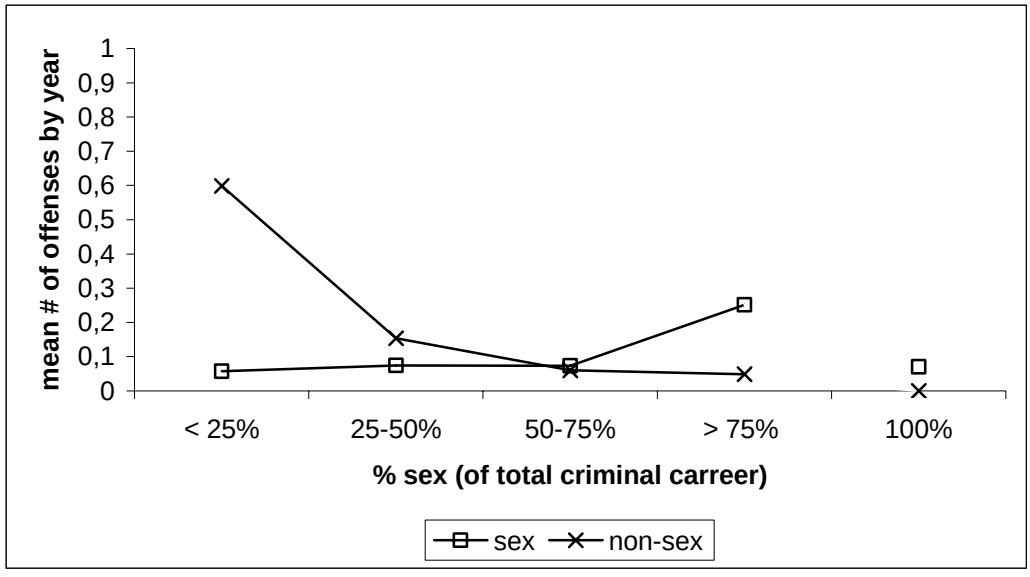

Figure 5. Mean number of offenses in criminal career for sex and non-sex offenders by portion of sex offenses in total criminal career.

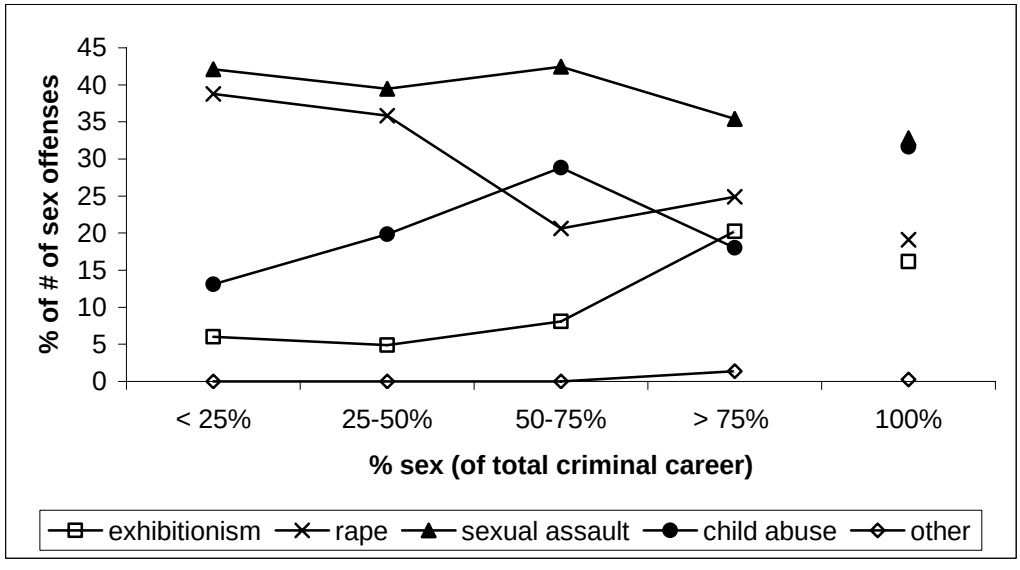

Figure 6. Percentage of the number of sex offenses, categorized by several types of sex offenses by portion of sex offenses in total criminal career.

In contrast to sexual crimes, categorization of non-sexual crimes does not show a clear tendency across groups (see Figure 7). Sex offenders who also commit non-sexual crimes, commit just as many crimes of violence and crimes against property, whether or not their careers are made up mostly of non-sexual or of sexual crimes. By definition 100%-sex delinquents do not commit any non-sexual crimes and have therefore been dropped from the figure.

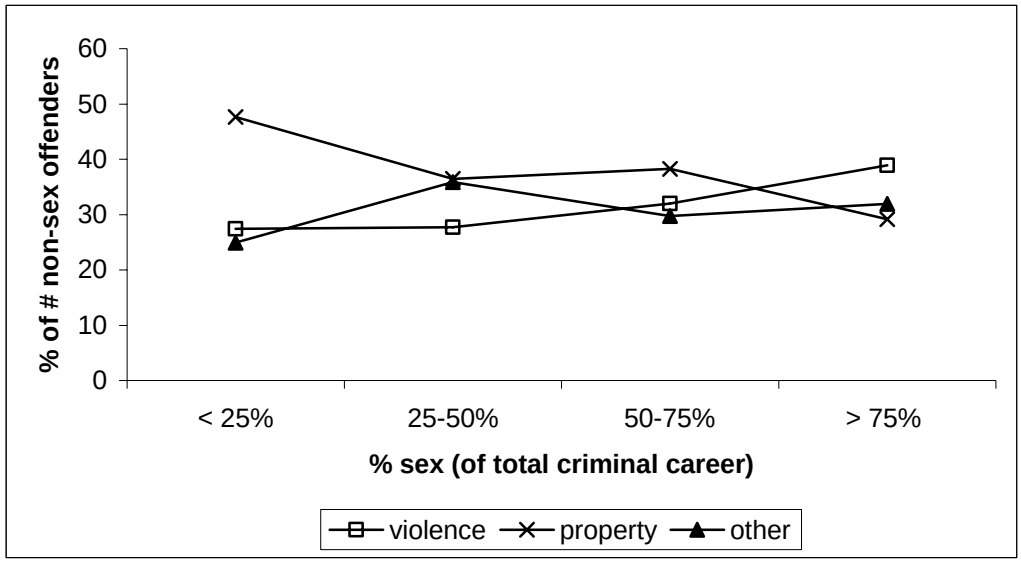

Figure 7. Percentage of the number of non-sex offenses, categorized by several types of sex offenses by portion of sex offenses in total criminal career.

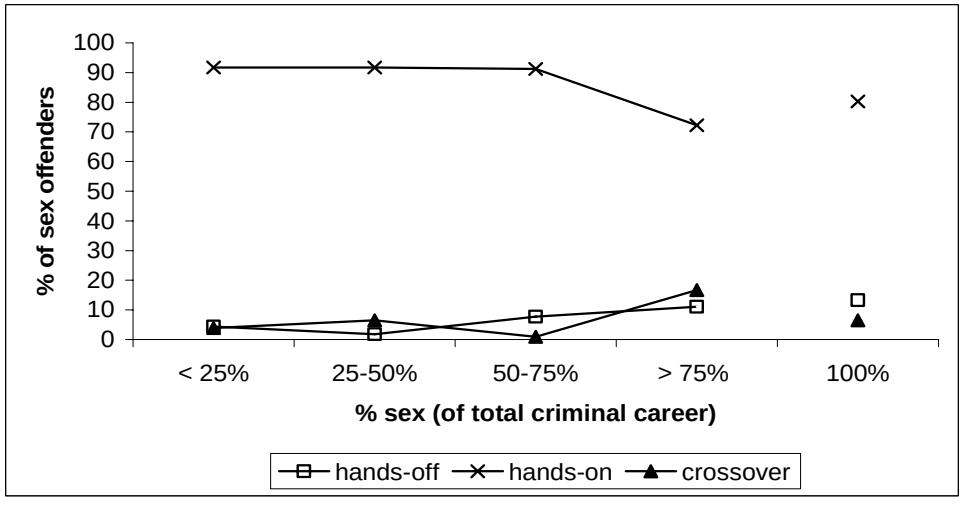

Figure 8. Percentage sex offenders by occurance of cross over between hands-on en hands-off sex offenders, by portion of sex offenses in total criminal career.

Finally, we analyze to what extent *'cross-over'* between *hands-on* and *hands-off* sexual offending is connected with the characteristics of the criminal careers of sexual delinquents. Figure 8 shows that *cross-over* between *hands-on* and *hands-off* (in both directions) only slightly increases as the percentage of sexual crimes in the entire career increases. This can partially be explained by the fact that with the *percentage* of sexual crimes in the career the *number* of sexual crimes also increases (see Figure 5), as a result of which the possibilities to *cross-over* also increase. 100% sexual delinquents hardly show any cross-over. This is due to the fact that most delinquents in this category were first offenders in 1996, and most first offenders did not recidivate during the 10-year follow-up period of the study.

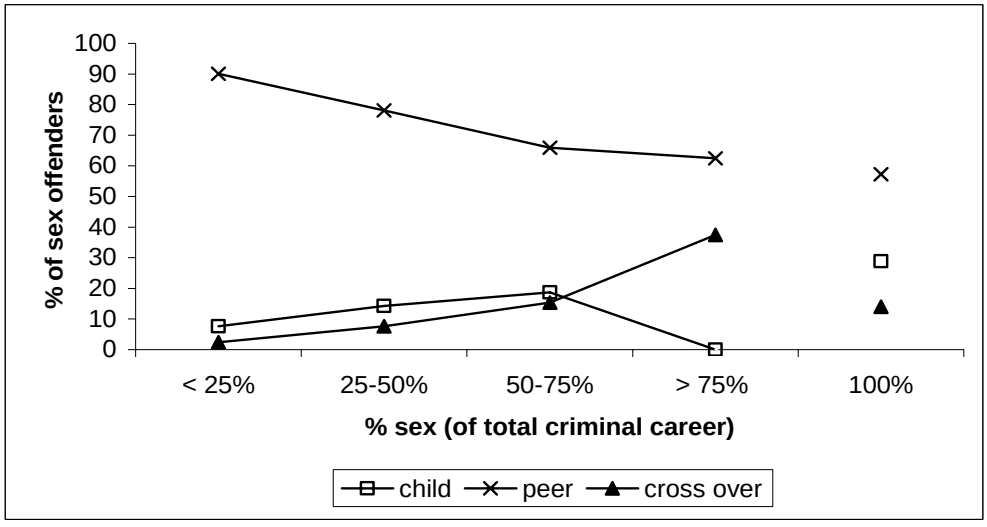

Figure 9. Percentage sex offenders by occurance of cross over between abuse of children en peers, by portion of sex offenses in total criminal career.

Cross-over between sexual abuse of children and sexual abuse of same-age persons increases more steeply when the percentage of sexual crimes in the entire career increases (see Figure 9). This ecrease is largely at the cost means a decrease in the percentage or number of delinquents that committed sexual crimes only against same-age victims. Delinquents predominately involved in sexual crimes more often choose both children as same-age peers for their victims.

6. CONCLUSION

Our analyses show that only a small number of sex delinquents are registered for another sexual crime within a period of ten years (see also Caldwell, 2002). A history of previously committed sexual crimes, whether or not in combination with non-sexual crimes, increases the likelihood of sexual recidivism. For all delinquents, except sexual recidivists, the probability of committing a non-sexual crime during the ten-year follow-up of our study exceeds that of committing a sexual crime.

Our analyses provide further support for the developmental paths described by Becker and Kaplan, and by Seto and Barbaree. For almost 25% of the sex delinquents registered in 1996, the delinquent career consists mostly of non-sexual crimes. For this group of *generalists*, sexual crimes make up less than 25% of their total delinquent careers. Generalists are more often registered for rape. There is also a small group of sexual delinquents who only commit sexual crimes. These *specialists* are more often registered for the sexual abuse of children. However, the distinction between generalists and specialists is far from clear cut, and a fair number of sexual delinquents committed just about as many sexual as non-sexual crimes. Both types – generalists and specialists – may therefore best be viewed as forming the extreme ends of a continuum.

Moffitt's typology attributes differences in criminal careers to differences in developmental background between types of delinquents. While the criminal behaviour of persistent delinquents is argued to result from their anti-social personalities, that of the adolescence-limited type is argued to originate from their social environment. The link found here between the characteristics of delinquent careers and the type of sex crimes committed raises the question of whether or not the same is true for different types of sexual delinquents: do the various types of sexual delinquents show differences in aetiology? In addition the role of one's social environment in the development of one's sexual-delinquent career is not yet clear. For example, how do peers affect the proclivity to commit a sexual crime? Does the probability of committing a sexual offence decrease as delinquents secure employment, become involved in more stable interpersonal relationships, or, in more general terms, change their daily routine (as is the case with adolescent-type delinquents)? Does the influence of social context differ between types of delinquents or types of sexual crimes? Future research on sexual delinquency should therefore not focus solely on differences between delinquents but also on within-individual changes in the proclivity to commit sexual delinquent acts at various phases *within* the lives of these delinquents.

Moreover, differentiating between generalists and specialists can have important consequences for the treatment of sex delinquents. For generalists, sexual crimes are part of a much wider criminal career. The sexual crimes committed by this group thus seem to stem from a more general anti-social inclination. Generalists might therefore benefit most from treatment that focuses on general criminogenic personality and situational factors such as impulsiveness, self-control, attitudes towards crime, but also, for example, factors such as alcohol and drug abuse. Specialists, on the other hand, might benefit most from a treatment which focuses specifically on their deviant (pedo)sexual development.

Lastly, it is important to realize that many sex delinquents are *dead-end* delinquents - at least according to police registrations. Most of today's juvenile sexual delinquents do not grow up to become tomorrow's dangerous adult sex offenders. Therefore, not withstanding the gravity of their offences, change seems to be more prominent in these boys lives then is continuity.

REFERENCES

Abel, G.G., Mittelman, M.S. & Becker, J.V. (1985) Sexual offenders: results of assessment and recommendation for treatment. In: Ben-Aron, M.H., Hucker, S.J. & Webster, C.D. (Eds.) Clinical Criminology: *The Assessment and Treatment of Criminal Behavior*. Toronto: M and M Graphics, 195-196.

Becker, J.V. & Kaplan, M.S. (1988) The assessment of adolescent sexual offenders. In: Prinz, R.J. (Ed.) *Advances in Behavioral Assessment of Children and Families*. Greenwich, CT: Jai Press, 97-118.

Boyd, N.J., Hagan, M. & Cho, M.E. (2000) Characteristics of adolescent sex offenders: a review of research. *Aggression and Violent Behavior*, 5, 137-146.

Blumstein, A., Cohen, J., Roth, J.A. & Visher, C.A. (1986) *Criminal Careers and Career Criminals, Volume 1*. Washington, DC: NJational Academy Press.

Caldwell, M.F. (2002). What we do not know about juvenile sexual reoffense risk. *Child Maltreatment*, 7, 291-302.

Fehrenbach, P.A., Smith, W., Monarstersky, C. & Dreisher, R.W. (1986) Adolescent sexual offenders: offender and offense characteristics. *American Journal of Orthopsychiatry*, 56, 225-233.

Groth, A.N., Longo, R.E. & McFadin, J.B. (1982) Undetected recidivism among rapists and child molesters. *Crime and Delinquency*, 28, 450-458.

Gudjonsson, G.H. & Sigurdsson, J.F. (2000) Differences and similarities between violent offenders and sex offenders. *Child Abuse and Neglect*, 24, 3, 363-372.

Hendriks, J. & Bijleveld, C. (2003) Juvenile sex offenders: differences between group and solo offenders. *Psychology Crime & Law*, 9, 3, 237-245.

Hunter, J.A., Figuerdo, A.J., Malamuth, N.M. & Becker, J.V. (2003) Juvenile sex offenders: towards the development o a typology. *Sexual Abuse*, 15, 27-45.

Lahey, B. B., & Waldman, I. D. (2005). A developmental model of the propensity to offend during childhood and adolescence. In D. P. Farrington (Ed.), *Integrated developmental and life course theories of offending* (Vol. 14, pp. 15-50). Piscataway, NJ: Transaction Publishers.

Långström, N., Grann, M., & Lindblad, F. (2000) A preliminary typology of young sex offenders. *Journal of Adolescence*, 23, 319-329.

LeBlanc, M. & Loeber, R. (1998) Developmental criminology updated. *Crime and Justice*, 23, 115-197.

Lussier, P. (2005) The criminal activity of sexual offenders in adulthood: revisiting the specialization debate. *Sexual Abuse*, 17, 3, 269-292.

Moffitt, T.E. (1993) Adolescence-limited and life course-persistent antisocial behavior: a developmental taxonomy. *Psychological Review*, 100, 4, 674-701.

Moffitt, T.E. (2006) Life-course persistent versus adolescence-limited antisocial behavior. In: Cicchetti, D. & Cohen, D. (Eds.) *Developmental Psychopathology*. New York: Wiley.

Nieuwbeerta, P. Blokland, A. en Bijleveld, C. (2003) Lange termijn recidive van delinquenten van seksuele delicten. *Tijdschrift voor Criminologie*, 45, 369-377.

Patterson, G. R., & Yoerger, K. (2002). A developmental model for early- and late-onset delinquency. In J. B. Reid & G. R. Patterson & J. Snyder (Eds.), *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention* (pp. 147-172). Washington, DC: American Psychological Association.

Prentky, R., Harris, B., Frizzell, K. & Righthand, S. (2000) An actuarial procedure for assessing risk with juvenile sex offenders. *Sexual Abuse*, 12, 71-93.

Rasmussen, L.A. (1999) Factors related to recidivism among juvenile sexual offenders. *Sexual Abuse*, 13, 15-25.

Righthand, S. & Welch, C. (2001) *Juveniles Who Have Sexually Offended*. Washington: OJJDP.

Saunders, E., Awad, G.A. & White, G.W. (1986). Male adolescent sex offenders. The offender and the offence. *Canadian Journal of Psychiatry*, 28, 105-116

Saunders, E.B. & Awad, G.A. (1991). Male adolescent sexual offenders: Exhibitionism and obscene phone calls. *Child Psychiatry and Human Development*, 21, 3, 169-178.

Seto, M.C. & Barbaree, H.E. (1997) Sexual aggression as antisocial behavior: a developmental model. In: Stoff, D., Breiling, J. & Maser, J.D. (Eds.) *Handbook of Antisocial Behavior*. New York: Wiley, 524-533

Smallbone, S.W. (2006) Social and psychological factors in the development of delinquency and sexual deviance. In: Barbaree, H.E. & Marshall, W.L. (Eds.) *The Juvenile Sex Offender*. New York: The Guilford Press, 105-127.

Smallbone, S.W. & Wortley, R.K. (2004) Criminal versatility and paraphilic interests among adult males convicted of sexual offences against children. *International Journal of Offender Therapy and Comparative Criminology*, 48, 175-188.

Wijk, A.Ph. van, Mali, S.R.F., Bullens, R.A.R., Prins, L. & Klerks, P.P.H.M. (2006). Z*eden-criminaliteit in Nederland. Delicten en delinquenten nader in beeld gebracht.* Zeist, Uitgeverij Kerckebosch.

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