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**Recognizing child sexual abuse**

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General Introduction



## General Introduction

In 1977, during the C. Anderson Aldrich Lecture, doctor Kempe addressed child sexual abuse (CSA) as another hidden pediatric problem <sup>1</sup>. Unfortunately, over 40 years later, the problem remains.

### Definition of CSA

The World Health Organizations defines CSA as: *“Child sexual abuse is the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent, or that violates the laws or social taboos of society. Child sexual abuse is evidenced by this activity between a child and an adult or another child who by age or development is in a relationship of responsibility, trust or power, the activity being intended to gratify or satisfy the needs of the other person. This may include but is not limited to: the inducement or coercion of a child to engage in any unlawful sexual activity; the exploitative use of a child in prostitution or other unlawful sexual practices; the exploitative use of children in pornographic performance and materials”* <sup>2</sup>.

### Prevalence of CSA

The exact prevalence of CSA remains unknown. In three systematic reviews with meta-analysis on the prevalence of CSA in non-clinical samples we found a prevalence between 0.4 to 31%, depending on gender, whether the data was collected by means of informant reports or self-reports, and the type of CSA (e.g. contact or non-contact CSA) <sup>3-5</sup>. All three reviews found that the prevalence of CSA was about twice as high for girls compared to boys <sup>3-5</sup>. In a meta-analysis of 65 articles on the prevalence of CSA in non-clinical samples, Pereda and colleagues, 2009, found a prevalence of CSA of 7.9% for men and 19.7% for women <sup>3</sup>. Stoltenborgh et al, 2011, found lower prevalence of CSA in studies based on informant reports (0.4% (CI 0.1–1.5%)) compared to studies based on self-reports (2.7% (CI 1.0–7.5%)) <sup>5</sup>. And Barth and colleagues, 2013, found higher prevalence for non-contact CSA (31 % in girls and 17 % in boys) compared to contact abuse (13 % (CI 8–21 %) in girls, 6 % (CI 2–16 %) in boys) <sup>4</sup>.

The prevalence of internet mediated victimization is unclear. In a survey of children's exposure to violence, 6% of youth reported a past-year online victimization and 9% a lifetime online victimization during telephone interviews <sup>6</sup>. Almost all youth reporting a past-year online victimization (96%) reported offline victimization during the same period <sup>6</sup>. But sufficient data on the scope of this problem is lacking <sup>7</sup>.

The National Rapporteur on Trafficking in Human Beings and Sexual Violence against Children, Mrs. C.E. Dettmeijer-Vermeulen, published the report 'On Solid Ground' on the problem of sexual violence in Dutch children <sup>7</sup>. To estimate the prevalence of CSA in the Netherlands she included three Dutch population studies <sup>8-11</sup>. However, because of heterogeneity between the studies it was difficult to give a prevalence of CSA in the Netherlands. They estimate that one in three Dutch children will experience any kind of CSA before the age of 18. One in ten girls experienced unwanted manual sexual contact and 5-10% unwanted oral sexual contact or intercourse <sup>7</sup>.

### **Long-term consequences of CSA**

Various systematic reviews have been published on the long-term consequences of CSA on physical and mental health. CSA is significantly related to conduct disorder <sup>12</sup>, sleep disorders <sup>13</sup>, depression <sup>14</sup>, self-injurious behavior (although modestly related and correlated with the same psychiatric risk factors) <sup>15</sup>, and eating disorders <sup>16</sup>.

Some of the long-term physical health problems associated with CSA are obesity <sup>17</sup>, neurological, musculoskeletal, cardiovascular, and respiratory conditions <sup>18</sup>, functional gastrointestinal disorders, nonspecific chronic pain, psychogenic seizures, and chronic pelvic pain <sup>19</sup>. Additionally, the experience of sexual abuse during childhood is related to adult victimization experiences <sup>20</sup>.

Considering the serious consequences of CSA on both mental and physical health it is important that CSA is recognized at an early stage in order to stop the abuse and offer adequate support. If adequate treatment is not received, CSA-victims have a higher chance on revictimization <sup>21-23</sup>.

### **Recognizing CSA in children**

Unfortunately, many cases remain unrecognized <sup>5</sup>. It is estimated that only one in eight victims of CSA come to the attention of statutory authorities <sup>24</sup>. These data suggest that the scale of the problem is even larger than assumed based on the figures of authorities. Why is it so difficult for, among others, pediatricians to put the puzzle together? This is related to the regular absence of a disclosure and the relative value of the diverse and non-specific psychosocial and physical symptoms, the anogenital examination and sexually transmitted infections (STIs) tests.

### **Lack of disclosures**

Most children do not disclose spontaneously or only at a later, sometimes even adult age <sup>25,26</sup>. There are various reasons that withhold children from telling about abuse, for instance feelings of shame and guilt or fears for being blamed, or self-blame <sup>25-28</sup>.

Young children may not disclose, because they do not understand for a long time that the abuse is inappropriate. Children are often instructed to keep the abuse a secret. For children it is difficult to talk about something secret, confusing and distressful; especially when such a theme is not discussed in the child's surroundings<sup>29</sup>. Additionally, in the younger age group (preschool children) there are verbal limitations that retain them from telling<sup>30</sup>.

### **Psychological and physical symptoms are often absent or non-specific**

In children, there is a possible positive association between CSA and behavioral problems<sup>31-35</sup>. Internalizing behavioral problems are reported more often in girls, whereas externalizing behavioral problems are more prevalent among boys<sup>35</sup>. Also in childhood, a positive association between CSA and PTSD has been reported<sup>31-35</sup>. Approximately one quarter of children develop PTSD after interpersonal traumas such as CSA, girls more often than boys<sup>36</sup>. When exposed to trauma, the rates of PTSD in preschool children appear to be lower compared to older children<sup>36,37</sup>. Studies of children who have been sexually abused suggest a dose-response effect, with higher risks associated with revictimization, and penetrative sexual abuse than with contact or non-contact abuse<sup>38,39</sup>. So far, specific knowledge about the association between PTSD and CSA in infants and preschoolers is limited. More depression is reported in sexually abused children compared to non-abused children, odds ratios vary between 1.4 and 8.8<sup>40-43</sup>. Additionally, CSA seems also to be associated with eating disorders (e.g., bulimia and anorexia) and increased risk of attempted suicide<sup>38</sup>. Multiple reviews report a positive association between CSA and self-injurious and suicide related behaviors in children<sup>33,34,44</sup>. CSA seems to be a risk factor for self-injurious behavior mediated by dissociation<sup>33</sup>.

Age-inappropriate sexual behavior is observed in about one third of children who have been sexually abused and is therefore believed to be an indication of possible CSA<sup>35,45-47</sup>. Sexual behavior problems after CSA can be expressed as overt or intrusive sexualized behavior in preteen children<sup>38</sup>, or as earlier onset of sexual activity and more sexual risky behavior (such as unprotected consensual sexual contact and having multiple sexual partners) in adolescents<sup>31,38,48</sup>. However, age-inappropriate sexual behavior is associated with many other traumatic experiences (e.g. physical abuse and other types of maltreatment, family violence, coercive parenting, child behavior, and modelling of sexual behavior) and thus non-specific for CSA<sup>30,38,49-51</sup>. Further, we need to consider the influence of the exposure to sexual-related information from peers and through social media.

Regarding the physical consequences of CSA, many studies indicate a negative impact on physical health. Urogenital complaints are reported more frequently after CSA. About 60% of girls who experienced CSA with genital contact report urogenital complaints, such as genital pain, dysuria and genital bleeding. In girls who experienced genital-genital con-

tact abuse, higher prevalence of complaints has been found<sup>52</sup>. Several studies compare abused with non-abused children, these studies report more bladder control problems/incontinence<sup>53</sup>, dysuria, genital pain, blood loss<sup>54</sup>, and enuresis<sup>55</sup> in abused children.

Various gastrointestinal complaints have been studied in relationship to CSA. The prevalence of CSA among children with chronic abdominal pain varies between 2.1% - 8%<sup>56</sup>. When comparing abused to non-abused children some studies find no differences in the prevalence of abdominal pain<sup>57</sup>, where others report higher prevalence among sexually abused girls<sup>58,59</sup>. Inconsistent data exists regarding fecal incontinence. Two studies reported that fecal incontinence was more often found in sexually abused children compared to non-abused<sup>53</sup>, whereas one study found a lower prevalence<sup>55</sup>. When comparing children with constipation versus children without constipation, CSA was more often reported among CSA-victims (5.8% vs. 2.6%,  $p = 0.03$ )<sup>60</sup>.

Evidence on the association between CSA and childhood obesity is limited. Obesity might be more serious in girls who were sexually abused<sup>61</sup>. Studies comparing abused to non-abused children report either no differences or more obesity among those who were abused<sup>58,62,63</sup>. Comparative studies find more chronic health problems<sup>53</sup>, and poor perception of own health/feeling less healthy<sup>58</sup> in sexually abused children.

However, a clear pattern is lacking for psychosocial and physical symptoms. None of the discussed symptoms are specific for CSA; other underlying causes are also possible.

### **Anogenital examination**

We need to emphasize that CSA specific findings are only found in a minority of CSA-victims (4-5%) when examined over 72 hours after the last abuse<sup>64-69</sup>, due to, amongst other reasons, the rapid healing of mucous tissue. Accordingly, in 95% there are no physical findings at anogenital examination in children examined 48 hours or more after the abuse<sup>64,69,70</sup>. The more time there is between the abuse and the examination, the less physical signs specific for CSA, are found.

### **Sexually Transmitted Infections**

Diagnosing a sexually transmitted infection (STI) in a child does not necessarily mean the child has been sexually abused. The entire context needs to be taken into account.

For example, sexual contact is the most likely transmission route to acquire a chlamydia and gonorrhea infections (with the exception of ophthalmic gonorrhea). CSA needs to be considered in every child presenting with such infections (if consensual sexual contact is unlikely). Yet, non-sexual transmission need to be excluded<sup>68,71</sup>.

The risk of contaminating an STI depends on various factors such as the nature of the abuse and the prevalence of STIs in the population. Further, the profile of the possible perpetrator, and the presence of anogenital complaints or injuries should be considered when deciding on whether or not to test for STIs in children with alleged CSA<sup>68,71,72</sup>. The timing is dependent on the varying incubation times. STIs can be asymptomatic, thus, the absence of symptoms should not withhold from testing.

### **Differentiating between acute and non-acute cases**

Non-acute cases are those in whom forensic evaluation (such as DNA-sampling for legal evidence) is no longer possible as the last event happened too long ago. For a long time, 72 hours between the last event and consultation was applied as the time limit to differentiate between acute and non-acute cases. Today, with the improvement of technology, the time limit is expanded up to 7 days<sup>68</sup>. In acute cases of alleged CSA the child needs to be seen as soon as possible as collecting forensic evidence might be possible. Acute presentations of alleged CSA are relatively rare in children, mainly due to the absence of children's disclosures. However, 15-65% of the people seeking help in Dutch center for sexual violence in the acute phase was below the age of 18 years<sup>73</sup>.

### **Hands-on vs. hands-off CSA**

In case of hands-on CSA there is physical contact between the perpetrator and the victim, for example rape or groping. Hands-off CSA is characterized by the absence of physical contact between the victim and the perpetrator. Some examples of hands-off CSA are: grooming (making an appointment for a physical date with the purpose to abuse the victim via the internet) and watching child-pornographic images. Online victimization is a form of hands-off abuse. Various terms are used, such as sextortion (which refers to situations in which perpetrators threaten to expose sexual images to coerce victims to provide additional pictures, engage in sexual activity, or agree to other demands) and sexting (the self-production and distribution of sexually explicit images via digital media)<sup>6</sup>. Online victimization is a growing problem<sup>7</sup>.

In summary, CSA is a serious problem worldwide with serious long-term consequences. Unfortunately, many cases of CSA are not recognized as it remains difficult for clinicians to uncover CSA. The main difficulties are the regular absence of a disclosure, the relative value of the diverse and non-specific psychosocial and physical symptoms and the relative value of the anogenital examination and STI-tests.



## The grounds for this thesis

Child sexual abuse (CSA) is a concerning problem with serious consequences. As the impact of CSA can be severe, it is important that CSA is recognized at an early stage in order to stop the abuse and offer adequate support. However, the unfortunate fact remains that the majority of CSA-cases is not recognized. Often professionals have difficulties identifying CSA in children, because it requires experience and expertise. Early recognition of CSA in children needs to be improved, which is the major reason for this thesis. Therefore, more knowledge of the symptoms, which can be displayed in children who experienced CSA, is needed. Especially among young, pre-school children data are lacking <sup>74</sup>.

Secondly, the need for a clinical guideline for pediatricians on the diagnostics in cases of alleged CSA. A pediatric guideline can provide insight in the scientific evidence of signs and symptoms, which can be gathered during a pediatric assessment (medical history, child-interview, physical examination, laboratory testing and in some cases forensic evaluation). This is helpful for pediatricians to interpret their findings in the light of alleged CSA.

The Amsterdam Sexual Abuse Case (ASAC) was the third reason that led to this thesis. The case came to light in 2010, through a child pornography investigation in the United States. A day-care center employee in Amsterdam was suspected of having sexually abused dozens of young children. Many very young children, for the greater part boys, were considered possible victims. Child pornographic images were decrypted in police investigations, and the employee eventually admitted sexual abuse of 87 children. Parents of 20 children decided against pressing charges, and the day-care worker was convicted for abusing 67 children. The ASAC is a unique case, owing to its large scale, the predominance of young boys, the confessed and convicted perpetrator, the high level of evidence, and the detailed documentation available on the abuse <sup>74</sup>.

This thesis describes research regarding the diagnostic value of different aspects in the psycho-medical evaluation of alleged CSA. We pursue the pediatric assessment of alleged CSA (Part I) whereas; part II describes the psychosocial and physical complaints, the sexual behavior and sexual knowledge, in children involved in the ASAC.

## General outline of the thesis

### Part I – The assessment of alleged CSA

Assessing alleged CSA in children is complex and can be compared with putting together a puzzle. To help pediatricians in their assessment of alleged CSA in children the Dutch Pediatric Society (Nederlandse Vereniging voor Kindergeneeskunde, NVK) recently published a guideline. The guideline informs about the different elements which are part of the assessment (e.g. medical history, physical examination and laboratory testing) and the relative value of the outcomes. In **Chapter 2** the most important recommendations derived from this guideline will be discussed.

To improve the recognition of CSA there is a need for validated tools and instruments which are helpful in objectifying psychosocial symptoms, such as sexual behavior in children. For this purpose we conducted a systematic review to assess for the diagnostic utility of the Child Sexual Behavior Inventory (CSBI) in differentiating between children with and without a history of CSA. In **Chapter 3** we report the results of a second systematic literature review on this manner. Subsequently, we present an overview regarding the outcomes of the multidisciplinary evaluation in children referred to the Academic Medical Center in Amsterdam for alleged CSA between 2012 and 2016 (**Chapter 4**).

In **Chapter 5** review the literature investigating the association between CSA and functional somatic symptoms (FSS). In this chapter we the aim to give an overview of the definitions and instruments used, and of two important design aspects, the selection of cases and controls and the use of blinding in published comparative studies.

### Part II – The Amsterdam Sexual Abuse Case

The ASAC is the largest confirmed CSA case series by one perpetrator in history. Its large scale, the predominance of young boys, the confessed and convicted perpetrator, the high level of evidence, and the detailed documentation available about the abuse make the ASAC a unique case.

The ASAC is the topic of the second part of this thesis (**Chapters 6-8**). We report on the findings of the initial assessment of children involved in the ASAC. In **Chapter 6** we qualitatively analyze the psychosocial problems reported in 125 medical files of children involved in the ASAC. Additionally we analyze the considerations of independent experts in evaluating (alleged) CSA and whether they are able to identify proven victims of CSA. Subsequently we qualitatively analyze the sexual behavior and knowledge displayed in these children, how often their parents reported atypical sexual behavior or age-inappropriate sexual knowledge, and how often the children showed atypical responses during

the child interviews (**Chapter 7**). In **Chapter 8** we present the results of the retrospective analysis of the physical complaints and outcomes of anogenital examination and laboratory findings in the medical files of 54 included proven victims. In **Chapter 9 and 10** the thesis is completed with a summary and general discussion of our findings.

## Abbreviations

ASAC	Amsterdam Sexual Abuse Case
CSA	Child sexual abuse
CSBI	Child Sexual Behavior Inventory
FSS	Functional somatic symptoms
PTSD	Post-traumatic stress disorder
STI	Sexually transmitted infection

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