www.cambridge.org/cns

Original Research

Cite this article: Seiser A, Eher R, Turner D, and Rettenberger M (2023). The prevalence of mental disorders among incarcerated adult men convicted of child sexual exploitation material offences. CNS Spectrums 28(6), 719–725

https://doi.org/10.1017/S1092852923002262

Received: 07 March 2023 Accepted: 24 April 2023

Kevwords:

Child sexual exploitation material (CSEM); CSEM-offender; prevalence of mental disorders; pedophilic disorders; personality disorders

Corresponding author:

Alexander Seise;

Emails: alexander.seiser@bmj.gv.at; alexander. h.seiser@gmail.com

The prevalence of mental disorders among incarcerated adult men convicted of child sexual exploitation material offences

Alexander Seiser¹, Reinhard Eher², Daniel Turner³ and Martin Rettenberger⁴

¹Directorate General for the Prison Service and Preventive Detention, Federal Ministry of Justice of the Republic of Austria, Vienna, Austria, ²Federal Evaluation Centre for Violent and Sexual Offenders (FECVSO), Federal Ministry of Justice of the Republic of Austria, Vienna, Austria, ³Department of Psychiatry and Psychotherapy, University Medical Center Mainz, Mainz, Germany and ⁴Centre for Criminology (Kriminologische Zentralstelle – KrimZ), Wiesbaden, Germany

Abstract

Objective. Despite the growing body of research on individuals convicted of child sexual exploitation material (CSEM), relatively little is known about the prevalence of mental disorders in this population. The aim of the present study was to describe the prevalence of mental disorders among individuals convicted of CSEM offenses.

Methods. This cross-sectional study examined data from 66 individuals serving a sentence for CSEM offenses in the Austrian prison system who underwent a clinical assessment between 2002 and 2020. Diagnoses were based on the German version of the Structured Clinical Interview for Axis I and Axis II disorders.

Results. In the total sample, n = 53 individuals (80.3%) were diagnosed with a mental disorder. Twenty-seven individuals (40.9%) had an Axis I disorder and n = 47 (71.2%) had an Axis II disorder. More than two-thirds of the sample, n = 47 (71.2%), had a personality disorder diagnosis, with cluster B personality disorders being the most frequent mental disorders. More than half of the sample, n = 43 (65.2%), had a diagnosis of pedophilic disorder, of which n = 9 (13.6%) were of the exclusive type. Twenty-eight persons (42.4%) showed evidence of a hypersexual disorder.

Conclusions. In line with previous research, the present sample of convicted CSEM offenders showed a comparatively high prevalence of personality disorders and paraphilic disorders, particularly pedophilic disorders. Additionally, the rate of hypersexual disorder symptoms was considerably high. These findings should be considered for the development of successful risk management strategies for this population.

Introduction

Freely accessible communication technologies and the availability of fast data connections and seemingly unlimited data storage opportunities are undoubtedly one of the most significant technical achievements of the past decades. However, this enormous technologization also has a few downsides. The spread of the internet has created new opportunities for the sexual exploitation of children. The production and distribution of child sexual exploitation material (CSEM) is just one of them. ¹

Since the early 2000s, there has been a significant increase in criminal charges and convictions related to CSEM offenses. In the United States, the number of individuals facing criminal charges related to CSEM grew from 169 in 1996 to 2539 in 2006. In the same year, about 69% of sexual offenses against children prosecuted nationwide were CSEM-related.² The numbers in England and Wales grew from 238 convictions in 1999 for CSEM-related crimes to 1296 in 2005.³ A similar development can be observed in the German-speaking countries: In Germany, the numbers increased significantly within 2 years, from 3753 criminal charges for CSEM in 2015 to 6512 in 2017.^{4,5} According to the Austrian criminal statistics, the number of criminal charges for CSEM-related crimes quadrupled between 2015 and 2022. While 465 criminal charges were filed in 2015, there were already 2061 in 2022.^{6,7}

The increasing number of CSEM offenses has led to a growing body of research on this group of offenders. While questions regarding the characteristics and motivations of offenders were central from the outset, they remain difficult to answer, given the anonymity that the internet provides. Most available research relies on data from individuals convicted of CSEM offenses but it must be assumed that far more people encounter CSEM than is actually known. Nevertheless, some characteristics of this population have been reliably demonstrated across multiple studies. A widely accepted hypothesis is that individuals convicted of CSEM offenses

© The Author(s), 2023. Published by Cambridge University Press.



720 A. Seiser *et al.*

represent a distinct group of persons who—unlike individuals convicted of contact sexual offenses—have better self-management skills and more stable lifestyles in terms of occupation, education, and a lack of criminal convictions. Furthermore, they are more likely to be young white males, and are less likely to have experienced severe childhood problems such as neglect or physical and sexual abuse. ¹¹⁻¹³

However, there are not only sociodemographic characteristics that distinguish individuals with CSEM-related offenses from other sexual offending groups. In terms of motivation, there is clear evidence that sexual deviance plays an even more important role in CSEM offending than in other sexual offending behaviors. Seto et al. 14 found in their study of 685 men that those convicted for CSEM offenses showed significantly more sexual arousal for children compared to other sexual offending groups. The authors argued that a history of CSEM offenses is a valid diagnostic indicator of pedophilia. Indeed, a significant association between pedophilia and CSEM offending has been confirmed in further studies. 11,12 Furthermore, a preoccupation with sexual content appears to be highly associated with CSEM offending, as are problems with sexual self-regulation. ¹² Kuhle et al. ¹⁵ demonstrated that even among offenders diagnosed with a pedophilic disorder, CSEM offenders show significantly higher sexual preoccupation than individuals who committed contact sexual offenses.

Although sexual interest in children and hypersexual behavior are two empirically supported risk factors for sexual offending, ^{16,17} previous research has found that CSEM offenders have a much lower risk of recidivism compared to individuals convicted of contact sexual offenses. Furthermore, only a very small proportion has offended with a contact sexual offense against children after the commission of a CSEM-related offense. ^{18,19} Eke et al. ²⁰ even found a negative correlation between a history of CSEM offenses and contact sexual recidivism. This is related to the fact that individuals who committed online-based offenses are generally less likely to exhibit antisocial behaviors and have at the same time better self-management skills and more empathy, which likely prevents them from committing contact offenses. ^{11,21} However, all these findings apply to individuals who committed only CSEM-related offenses and no further crimes from other offense categories.

On the contrary, dual offenders, who have both CSEM offenses and contact sexual offenses on their criminal record, are a particularly high-risk group. This group is up to 3 times more likely to commit new sexual offenses than CSEM-only offenders. ^{19,22} Compared to other groups with offending behaviors, dual offenders are considered more sexually deviant in terms of a more salient pedophilic preference and are deemed to have greater deficits in their sexual regulation capacities. ¹² Additionally, dual offenders can be distinguished from CSEM-only offenders based on measures of sexual preoccupation. ¹⁵ However, their most important distinguishing features are characteristics typically associated with antisociality such as impulsivity, rule-breaking behavior, lack of empathy, and a history of violent offending. ^{11,12} The combination of antisocial traits and sexually deviant motives makes them a particular high-risk group for sexual recidivism. ⁸

The difference in risk between the two groups can be explained using the motivational–facilitation model, which was developed by Michael Seto to explain sexual offenses against children. ²³ The model basically distinguishes between motivational and facilitation factors, the latter being either state or trait factors. According to the model, the main motivation for committing sexual offenses is to be found in a person's individual sexuality. In the case of pedophilic disorders, sexual desire is characterized by a strong sexual interest

in children. Regardless of paraphilic sexual interests, a person can also have a very strong sex drive which, if uncontrolled, can lead to sexual acts being performed on vulnerable victims without their consent. Combined with state-facilitating factors such as deficits in self-regulation, or situational facilitating factors such as drug intoxication, sexual offenses eventually become more likely. According to this model, CSEM-only offenders who are pedophilically motivated but have good self-regulation skills have a lower risk of committing sexual offenses than dual CSEM offenders who are less able to regulate their sexual impulses or show antisocial behavior. Clinically, the relevant risk factors are characteristics of paraphilic disorders or personality disorders, that is, mental disorders that are significantly associated with violent or sexual recidivism.² Therefore, to better understand the risk and possible treatments for these offender groups, knowledge of mental health, specifically the prevalence rates of mental disorders, is needed.

However, with regard to clinical features, there are many unanswered questions. Previously published study findings on this topic suggested that individuals convicted of CSEM offenses have a high need for treatment, with significantly higher utilization of mental health services compared to the general population. 11,13 Krueger et al.²⁵ used structured clinical interviews in their study of 60 men with internet-related sexually motivated offenses against children. Thirty-eight of them were arrested for possession of CSEM, and the other 22 for attempting to meet children. The authors found a high prevalence (70%) of Axis I disorders for the total sample. The authors did not report prevalence rates for personality disorders but showed that 31% of their sample had a pedophilia diagnosis. Additionally, they found evidence of a hypersexual disorder in 33%. Prat and Jonas²⁶ examined forensic reports from a sample of French offenders arrested for CSEM offenses and who were therefore subjected to psychiatric evaluation. In contrast to Krueger et al.²⁵, only 1 of 5 participants showed a psychiatric medical history. Less than 10% had an Axis II diagnosis and only about 25% obtained an Axis I diagnosis. Pedophilia was the most common diagnosis with a prevalence rate of 25%. Although both studies examined forensic populations of CSEM offenders referred for psychiatric evaluation under court order, the results varied substantially. Given the methodological differences between both studies, there remains a clear need for further research about the mental health status of individuals convicted of CSEM-related offenses by using structured clinical instruments.

Method

The Austrian prison system stipulates that every person incarcerated because of the commission of a sexual offense—and this includes CSEM offenses—must be reported to the Federal Evaluation Center for Violent and Sexual Offenders (FECVSO). The FECVSO is a scientific institution of the Austrian Ministry of Justice that specialized in clinical, forensic, and risk assessment of individuals convicted of sexual offenses. Each case goes through a risk-related and file-based screening process conducted by specially trained clinical psychologists. Individuals (a) who either committed a previous sexual offense, who (b) sexually assaulted an unrelated minor child, (c) have been sentenced to 4 years or more in prison, (d) are younger than 25 years of age, or (e) have a Static-99²⁷ total score of more than 5 must undergo an in-depth clinical evaluation. This comprehensive forensic examination is conducted directly at the institution and takes about 2 weeks. During this time, each person is assessed using the German version of the Structured

Clinical Interview for Axis I and Axis II Disorders (SCID I and SCID II). ^{28,29} In addition, trained clinical psychologists and psychiatrists conduct clinical interviews about the sexual and general biography, in order to assess paraphilic interests and sexuality-related disorders. ³⁰

First, all cases of individuals convicted of CSEM-related offenses who have served a prison sentence since the FECVSO records began in 2002 were identified, which resulted in an initial sample of n = 221. The data were completely anonymized and did not contain any personal information. The study was conducted with the approval of the Federal Ministry of Justice of the Republic of Austria. These cases were then screened for duplicates: if an individual was repeatedly recorded due to multiple convictions, only 1 entry was used. Of the remaining n = 116, only cases that underwent an on-site assessment were selected for this study. The final sample consists of n = 66 individuals who served a prison sentence for a CSEM-related offense between 2002 and 2020. The mean age of the sample was M = 44.11 (SD = 12.38), with a range between 19 and 71. Thirty-five participants (53.0%) were never married, 8 (12.1%) were married and n = 21 (31.8%) were divorced (data on marital status were not available for 2 participants). Information on prior convictions was not available for the total sample. Thirteen (19.7%) individuals had been reported to the FECVSO at an earlier date, indicating a prior incarceration for a sexually motivated offense. For a more differentiated analysis, two subgroups were formed based on the index offense: Thirty-eight (58.0%) participants were convicted because of CSEM-only offenses, whereas n = 28 (42.0%) participants committed an additional violent or sexual contact offense.

For the purpose of the present study, the diagnoses of Axis I and II disorders were grouped into the following categories: Mood disorders, anxiety disorders, psychotic disorders, impulse control disorders, and substance use disorders. Personality disorders were further divided into clusters A, B, and C. Due to the particular scientific and clinical interest, sexual disorders and paraphilic disorders were presented separately. In addition, symptoms of hypersexual disorder were recorded. These were defined as compulsive masturbation, promiscuity, and pornography addiction and combined in an additional category. Differences in prevalence rates between the two abovementioned groups were analyzed using χ^2 -tests. When frequencies were too low, Fisher's exact test was calculated. Statistical analysis was performed using SPSS³¹ version 20.

Results

The prevalence of Axis I and Axis II disorders of the total sample is presented in Table 1: Twenty-seven (40.9%) were diagnosed with at least one Axis I disorder. Substance use disorders accounted for the largest proportion ($n=24;\ 36.4\%$), with alcohol misuse being diagnosed most frequently. Regarding Axis II disorders, n=47 (71.2%) were diagnosed with at least one personality disorder. Cluster B personality disorders were found most frequently: Specifically, n=21 (31.8%) were diagnosed with antisocial personality disorder, n=16 (24.2%) with narcissistic personality disorder, and n=13 (19.7%) with borderline personality disorder. In contrast, the prevalence of cluster A ($n=6;\ 9.1\%$) and cluster C personality disorders ($n=2;\ 3.0\%$) was comparatively low. Offenders with additional violent or sexual offenses tended to have more mental health problems, specifically related to Axis I disorders, while CSEM-only offenders had slightly more personality disorders.

However, group comparisons revealed no significant differences (Table 1).

The prevalence of sexual and paraphilic disorders is shown in Table 2. Of the total sample, n = 10 (15.2%) individuals were diagnosed with at least one sexual disorder with erectile dysfunction (n = 6; 9.1%) and male orgasmic disorders (n = 4; 6.1%) as the most common sexual disorders. Forty-eight (72.7%) persons were diagnosed with at least one paraphilic disorder. With a prevalence rate of 65.2% (n = 43) pedophilia was the most frequent paraphilic disorder in the present sample. Most pedophilic offenders (n = 25, 37.9%) showed a sexual preference for female children, 9 (13.6%) showed a sexual preference for male children, and 8 (12.1%) for both sexes. Within the group of pedophile offenders, 9 (13.6%) had a diagnosis of an exclusive pedophilic disorder. Finally, 28 (42.4%) showed indicators of a hypersexual disorder: 8 participants (12.1%) showed signs of compulsive masturbation, 12 (18.2%) of promiscuity, and 20 (30.0%) of pornography addiction. More paraphilic disorders were found among CSEM-only offenders, although no statistically significant differences were found between the groups.

Discussion

Despite intensive research in recent years, knowledge about the mental health of individuals convicted of CSEM-related offenses is still limited. Sexual interest in children, deficits in self-regulation, and an antisocial lifestyle are among the most important risk factors for sexual offending against children and are clearly associated with CSEM offending. 11,32 Clinically, these risk factors are expressed in personality disorders or paraphilic disorders, that is, mental disorders that are significantly associated with violent or sexual recidivism. 24 However, the prevalence rates of these disorders are unknown. The present study aims to address this gap by evaluating data from n = 66 men convicted of a CSEM-related offense, who served a prison sentence between 2002 and 2020 and underwent a comprehensive clinical assessment.

Concerning Axis I disorders, more than one-third (36.4%) of the sample had a substance use disorder, with alcohol abuse being the most common diagnosis. This finding confirms previously published studies on this offender population. 13,25,33 However, our data showed relatively low rates of mood disorders, anxiety disorders, and impulse control disorders (about 3%). This was unexpected as it has been hypothesized that emotional dysregulation may play an important role in the etiology of sexual offending³⁴ and the prevalence of mood disorders was significantly higher in a previous study on the mental health of CSEM offenders.²⁵ In fact, in another Austrian sample of convicted men with sexual offenses involving adult and child victims, a similarly low prevalence rate for mood and anxiety disorders (about 6% each) was found. 35 Just like in our study, the clinical assessment in this sample was conducted at the beginning of the prison sentence. These results suggest that mood or anxiety disorders are rather not a typical feature of CSEM offenders. However, it is not possible to determine whether the symptoms of these disorders were already present at the time of the offenses.

The high rate of personality disorders presents a salient characteristic of our sample: More than two-thirds (71%) were diagnosed with at least one personality disorder, which is substantially higher than the lifetime prevalence of personality disorders in the nonforensic population (39.5%-51.1%) and the prison population in general (65%). While based on previous research increased rates were expected, 11,19,38 the prevalence of antisocial personality

722 A. Seiser *et al.*

Table 1. Prevalence of Axis I and Axis II Disorders in CSEM Offenders

	Total (n = 66)	Offender group		
		CSEM-only (n = 38)	Additional offence (n = 28)	t/χ^2 -values
Age	44.11 (SD = 12.38)	45.50 (<i>SD</i> = 11.79)	42.21 (SD = 13.11)	0.29
Axis I disorder				
Any mood disorder	3.0% (2)	2.6% (1)	3.6% (1)	0.048
Major depressive episode	1.5% (1)	-	3.6% (1)	-
Bipolar disorder type I	1.5% (1)	2.6% (1)	-	-
Any anxiety disorder	3.0% (2)	-	7.1% (2)	-
Social phobia	1.5% (1)	-	3.6% (1)	-
Obsessive compulsive disorder	1.5% (1)	-	3.6% (1)	-
Any psychotic disorder	3.0% (2)	2.6% (1)	3.6% (1)	0.048
Any impulse control disorder	3.0% (2)	2.6% (1)	3.6% (1)	0.048
Pathological gambling	1.5% (1)	2.6% (1)	-	-
Trichotillomania	1.5% (1)	-	3.6% (1)	-
Any substance use disorder	36.4% (24)	31.6% (12)	42.9% (12)	0.886
Substance misuse drugs	12.1% (8)	13.2% (5)	10.7% (3)	0.090
Substance misuse alcohol	25.8% (17)	23.7% (9)	28.6% (8)	0.201
Substance dependence drugs	3.0% (2)	5.3% (2)	-	-
Substance dependence alcohol	7.6% (5)	5.3% (2)	10.7% (3)	0.684
Axis II disorders				
Any personality disorder	71.2% (47)	73.7% (28)	67.9% (19)	0.267
Cluster A PD	9.1% (6)	5.3% (2)	14.3% (4)	1.588
Paranoid PD	4.5% (3)	-	10.7% (3)	-
Schizoid PD	1.5% (1)	2.6% (1)	-	-
Schizotypal PD	3.0% (2)	2.6% (1)	3.6% (1)	0.048
Cluster B PD	53.0% (35)	52.6% (20)	53.6% (15)	0.006
Histrionic PD	4.5% (3)	2.6% (1)	7.1% (2)	0.756
Narcissistic PD	24.2% (16)	26.3% (10)	21.4% (6)	0.210
Borderline PD	19.7% (13)	10.5% (4)	32.1% (9)	4.763*
Antisocial PD	31.8% (21)	26.3% (10)	39.3% (11)	1.250
Cluster C PD	3.0% (2)	5.3% (2)	-	-
PD NOS	18.2% (12)	21.1% (8)	14.3% (4)	0.496

Note: Individuals can have multiple entries.

*p ≤ .05

disorder in our sample was considerably higher than in a study of individuals convicted of contact sexual offenses. Eher et al. 35 used structured clinical interviews to examine the prevalence of mental disorders in a sample of 1511 male sex offenders incarcerated in Austrian prisons between 2001 and 2017. About one-third of their sample had a cluster B personality disorder, most of which were antisocial (20.4%) and borderline personality disorder (17.9%). In contrast, more than half of our sample had a cluster B personality disorder and one-third had an antisocial personality disorder. The high prevalence of personality disorders in our sample may suggest that the true number of CSEM-only offenders is underrepresented, assuming that indicators of antisociality are significantly more common among dual offenders than among CSEM-only offenders. 11 In any case, however, this is a high-risk sample. An

alternative explanation could be that only those with very serious CSEM-related offenses would serve a prison sentence as first-time offenders.

Sexual deviance, such as pedophilia, is known to be an important risk factor for sexual offending. Previous research on this topic has provided robust evidence that pedophilic interest in children is significantly more prevalent among individuals convicted of CSEM offenses than among persons who committed contact sexual offenses. This is especially true for so-called dual offenders who represent a particularly high-risk offender group. For this reason, it has been argued that CSEM use might be a more valid indicator of a pedophilic disorder than a contact sexual offense against a child. Supporting the relevance of our findings, approximately two-thirds of our sample had a paraphilic disorder, with pedophilia being the

Table 2. Prevalence of Sexual and Paraphilic Disorders in CSEM Offenders

		Offender group		
	Total (n = 66)	CSEM-only (n = 38)	Additional offence (n = 28)	_χ ²-values
Sexual disorders				
Any sexual disorder	15.2% (10)	7.9% (3)	25.0% (7)	3.669
Erectile disorder	9.1% (6)	2.6% (1)	17.9% (5)	4.522
Male orgasmic disorder	6.1% (4)	-	14.3% (4)	-
Premature ejaculation	3.0% (2)	-	7.1% (2)	-
Disorder induced sexual dysfunction	3.0% (2)	2.6% (1)	3.6% (1)	0.048
Substance induced sexual dysfunction	3.0% (2)	2.6% (1)	3.6% (1)	0.048
Paraphilic disorder				
Any paraphilic disorder	72.7% (48)	81.6% (31)	60.7% (17)	3.538
Exhibitionistic disorder	4.5% (3)	2.6% (1)	7.1% (2)	0.756
Fetishistic disorder	10.6% (7)	7.9% (3)	14.3% (4)	0.694
Frotteuristic disorder	1.5% (1)	2.6% (1)	-	-
Pedophilic disorder	65.2% (43)	73.7% (28)	53.6% (15)	2.872
Boys	20.93% (9)	17.85% (5)	26.66% (4)	0.017
Girls	58.13% (25)	60.71% (17)	53.33% (8)	1.790
Both	18.60% (8)	17.85% (5)	20.00% (3)	0.090
Exclusive	20.93% (9)	17.85% (5)	26.66% (4)	0.017
Symptoms of hypersexual disorder	42.4% (28)	42.1% (16)	42.9% (12)	0.004
Compulsive masturbation	12.1% (8)	10.5% (4)	14.3% (4)	0.214
Promiscuity	18.2% (12)	18.4% (7)	17.9% (5)	0.003
Pornography dependence	30.3% (20)	28.9% (11)	32.1% (9)	0.078

Note: Individuals can have multiple entries.

most frequently found diagnosis of this disorder group at a rate of 65%. Group comparisons also revealed that CSEM-only offenders tended to be diagnosed with pedophilia more frequently than participants with an additional violent or sexual offense. The prevalence of pedophilia in our study was significantly higher than in Krueger et al.²⁵ who examined clinical characteristics in CSEM offenders and so-called solicitation offenders. However, our findings did not suggest a higher prevalence of paraphilia diagnoses than has been reported for individuals convicted of contact sexual offenses.³⁵

Finally, hypersexuality is a known comorbidity in individuals with paraphilic disorders. ⁴⁰ It is also an empirically supported risk factor for the etiology of sexual offending behaviors and is considered a motivational factor in CSEM-related offenses. ^{32,23} Consistent with the idea that hypersexuality plays a role in online sexual offending, nearly half of our sample showed symptoms of hypersexual disorder, with pornography dependence being the most prevalent at a rate of 30%. While Krueger et al. ²⁵ reported that CSEM-only offenders would be identified as having a hypersexual disorder with pornography dependence, this was not the case in this sample. Nonetheless, our findings suggest that individuals convicted of CSEM are highly sexually preoccupied, which could be considered a treatment target.

An important caveat of this study was the unavailability of information on prior offenses or convictions. Consequently, pre-existing convictions for other offences cannot be ruled out. In fact, CSEM-only offenders are believed to be underrepresented for one simple

reason: A person without prior convictions facing trial for the first time is much more likely to be sentenced to conditional imprisonment, especially if it is only for possession of CSEM. This is probably reflected in the large degree of overlap between the two groups. However, a tendency is apparent in group comparison, namely that CSEM-only offenders are more likely to be diagnosed with paraphilic disorders, whereas offenders with an additional contact sexual offense are more likely to have substance abuse, antisocial, and borderline personality disorder. This would support the view that CSEM-only offenders are more likely to be motivated by sexual deviance and are clinically distinct from other offender groups. The sample is representative of incarcerated CSEM offenders. However, it is unclear to what extent the results of this study can be generalized to CSEM offenders who have not been sentenced to prison.

Furthermore, due to the study design, no statement can be made on the extent to which CSEM offending is related to mental disorders. This is especially true for Axis I disorders. Since there is no control group design in our work, it is also possible that experienced symptoms of anxiety disorders or mood disorders are a consequence of imprisonment. In addition, we do not know for how long the symptoms had been present at the time of the assessment. However, compared to a study of contact sex offenders with a related study design, ³⁵ similarities were found in the prevalence of Axis I disorders. Although the results suggest that, for example, symptoms of affective disorders are neither a typical feature of CSEM offenders nor a consequence of incarceration, this cannot be ruled out.

724 A. Seiser *et al.*

Conclusion

Using the motivational–facilitation model, ²³ a high proportion of motivational factors in the form of a high prevalence of paraphilic disorder was demonstrated for the total sample. Furthermore, 1 in 2 individuals was found to show symptoms of hypersexual disorder. These risk characteristics combine with facilitating factors, most clearly in the form of an unexpectedly high prevalence of antisocial personality disorder. The results of this study suggest that individuals serving a prison sentence for a CSEM offense may have an increased prevalence of several clinical characteristics that are known risk factors for sexual offending and therefore should not be underestimated in terms of their risk of recidivism. This should be considered when planning appropriate risk management. In general, however, we share the opinion that further research is needed with clinically and psychometrically sound diagnostic instruments.

Financial support. This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

Author contribution. Conceptualization: A.S., M.R.; Data curation: A.S., R.E.; Formal analysis: M.R.; Methodology: A.S., M.R.; Project administration: A.S., M.R., R. E.; Supervision: M.R., D. T., R. E.; Visualization: A.S.; Writing—original draft: A.S.; Writing—review and editing: A.S., R.E., D.T., M.R.

Disclosure. The authors report no financial or other relationship relevant to the subject of this article. The study was conducted as part of the authors' professional activities.

Competing interest. We have no conflicts of interest to disclose.

References

- Kloess JA, Beech AR, Harkins L. Online child sexual exploitation: prevalence, process, and offender characteristics. *Trauma Violence Abuse*. 2014; 15(2):126–139.
- 2. Motivans M, Kyckelhahn T. Federal Prosecution of Child Sex Exploitation Offenders, 2006. Bureau of Justice Statistics; 2007. https://bjs.ojp.gov/content/pub/pdf/fpcseo06.pdf. Accessed April 17, 2022.
- 3. Middleton D, Mandeville-Norden R, Hayes E. Does treatment work with internet sex offenders? Emerging findings from the Internet Sex Offender Treatment Programme (i-SOTP). *J Sex Aggress*. 2009;**15**(1):5–19.
- 4. Bundeskriminalamt. Polizeiliche Kriminalstatistik Bundesrepublik Deutschland: Band 4 Jahrbuch 2016. Einzelne Straftaten/-Gruppen Und Ausgewählte Formen Der Kriminalität. Federal Ministry of the Interior and Community; 2017. https://www.bka.de/SharedDocs/Downloads/DE/Publikationen/Polizei licheKriminalstatistik/2016/pks2016Jahrbuch4Einzelne.pdf;jsessionid= CA25413629E8D18F0B913E61D38D6355.live602?__blob=publicationFile& v=3. Accessed April 17, 2022.
- Bundeskriminalamt. Polizeiliche Kriminalstatistik Bundesrepublik Deutschland: Band 4 Jahrbuch 2017. Einzelne Straftaten/-Gruppen Und Ausgewählte Formen Der Kriminalität. Federal Ministry of the Interior and Community;
 2018. https://www.bka.de/SharedDocs/Downloads/DE/Publikationen/Polizei licheKriminalstatistik/2017/pks2017Jahrbuch4Einzelne.pdf?__blob=publicationFile&v=8. Accessed April 17, 2022.
- Bundesministerium für Inneres. Kriminalitätsbericht: Statistik Und Analyse 2016. Federal Ministry of the Interior; 2017. https://www.bmi.gv.at/508/files/SIB_2016/03_SIB2016-Kriminalitaetsbericht_web.pdf. Accessed April 17, 2022.
- Bundesministerium für Inneres. Kriminalitätsbericht: Statistik Und Analyse 2022. Federal Ministry of the Interior; 2023. https:// bundeskriminalamt.at/501/files/2023/PKS_Broschuere_2022.pdf. Accessed March 31, 2023.

- Seto MC. Internet Sex Offenders. Washington, DC: American Psychological Association; 2013.
- Seto MC, Hermann CA, Kjellgren C, Priebe G, Svedin CG, Långström N. Viewing child pornography: prevalence and correlates in a representative community sample of young Swedish men. Arch Sex Behav. 2015;44(1):67–79.
- Dombert B, Schmidt AF, Banse R, et al. How common is men's self-reported sexual interest in prepubescent children? J Sex Res. 2016;53(2):214–223.
- Babchishin KM, Hanson RK, VanZuylen H. Online child pornography offenders are different: a meta-analysis of the characteristics of online and offline sex offenders against children. *Arch Sex Behav*. 2015;44(1):45–66.
- 12. Babchishin KM, Karl Hanson R, Hermann CA. The characteristics of online sex offenders: a meta-analysis. *Sex Abuse*. 2011;23(1):92–123.
- Henshaw M, Ogloff JR, Clough JA. Demographic, mental health, and offending characteristics of online child exploitation material offenders: a comparison with contact only and dual sexual offenders. *Behav Sci Law*. 2018;36(2):198–215.
- Seto MC, Cantor JM, Blanchard R. Child pornography offenses are a valid diagnostic indicator of pedophilia. J Abnorm Psychol. 2006;115(3): 610
- Kuhle L, Schlinzig E, Kaiser G, et al. The association of sexual preference and dynamic risk factors with undetected child pornography offending. J Sex Aggress. 2017;23(1):3–18.
- Hanson RK, Morton-Bourgon KE. The characteristics of persistent sexual offenders: a meta-analysis of recidivism studies. J Consult Clin Psychol. 2005;73(6):1154–1163.
- 17. Gregório-Hertz P, Rettenberger M, Turner D, Briken P, Eher R. Hypersexual disorder and recidivism risk in individuals convicted of sexual offenses. *J Forens Psychiatry Psychol.* 2022;**33**(4):572–591.
- Seto MC, Karl Hanson R, Babchishin KM. Contact sexual offending by men with online sexual offenses. Sex Abuse. 2011;23(1):124–145.
- Goller A, Jones R, Dittmann V, Taylor P, Graf M. Criminal recidivism of illegal pornography offenders in the overall population-a national cohort study of 4612 offenders in Switzerland. Adv Appl Sociol. 2016;6(2):48–56.
- Eke AW, Seto MC, Williams J. Examining the criminal history and future offending of child pornography offenders: an extended prospective followup study. Law Hum Behav. 2011;35(6):466.
- Elliott IA, Beech AR, Mandeville-Norden R, Hayes E. Psychological profiles of Internet sexual offenders: comparisons with contact sexual offenders. Sex Abuse. 2009;21(1):76–92.
- Elliott IA, Mandeville-Norden R, Rakestrow-Dickens J, Beech AR. Reoffending rates in a UK community sample of individuals with convictions for indecent images of children. *Law Hum Behav.* 2019;43(4):369.
- 23. Seto MC. The motivation-facilitation model of sexual offending. Sex Abuse. 2019; $\mathbf{31}(1)$:3–24.
- Biedermann L, Eher R, Rettenberger M, Gaunersdorfer K, Turner D. Are mental disorders associated with recidivism in men convicted of sexual offenses? Acta Psychiatr Scand. 2023;1–13.
- Krueger RB, Kaplan MS, First MB. Sexual and other axis I diagnoses of 60 males arrested for crimes against children involving the Internet. CNS Spectr. 2009;14(11):623–631.
- Prat S, Jonas C. Characteristics of French users of child pornography: description of a cohort subjected to forensic evaluation. *Med Leg J.* 2012; 80(4):162–166.
- 27. Rettenberger M, Eher R. Actuarial assessment of sex offender recidivism risk: a validation of the German version of the Static-99. Sex Offender Treat. 2006:1(3):1–11
- 28. Wittchen HU, Wunderlich U, Gruschwitz S, Zaudig M. Strukturiertes Klinisches Interview Für DSM-IV. Achse I: Psychische Störungen. Interviewheft Und Beurteilungsheft. Eine Deutschsprachige, Erweiterte Bearbeitung Der Amerikanischen Originalversion Des SKID I. Göttingen: Hogrefe; 1997.
- Fydrich T, Renneberg B, Schmitz B, Wittchen H. Strukturiertes Klinisches Interview Für DSM-IV Achse II: Persönlichkeitsstörungen (SKID-II). Göttingen: Hogrefe; 1997.
- Eher R. Zu den Aufgaben der Begutachtungs- und Evaluationsstelle für Gewalt- und Sexualstraftäter im Österreichischen Strafvollzug. KrimPäd. 2009;37:9–14.

 IBM. SPSS Statistics for Window [Computer Software]. Version 20. Armonk, NY: IBM; 2011.

- Hanson RK, Morton-Bourgon KE. The characteristics of persistent sexual offenders: a meta-analysis of recidivism studies. J Consult Clin Psychol. 2005;73(6):1154–1163.
- Aslan D, Edelmann R. Demographic and offence characteristics: a comparison of sex offenders convicted of possessing indecent images of children, committing contact sex offences or both offences. *J Forensic Psychiatry Psychol.* 2014;25(2):121–134.
- Ward T, Beech A. An integrated theory of sexual offending. Aggress Violent Behav. 2006;11(1):44–63.
- Eher R, Rettenberger M, Turner D. The prevalence of mental disorders in incarcerated contact sexual offenders. *Acta Psychiatr Scand.* 2019;139(6): 572–581.
- 36. Loranger AW, Sartorius N, Andreoli A, et al. The international personality disorder examination: The World Health Organization/Alcohol, Drug Abuse, and Mental Health Administration international pilot study of personality disorders. Arch Gen Psychiatry. 1994;51(3):215–224.
- Fazel S, Danesh J. Serious mental disorder in 23 000 prisoners: a systematic review of 62 surveys. *Lancet*. 2002;359(9306):545–550.
- Klein V, Schmidt AF, Turner D, Briken P. Are sex drive and hypersexuality associated with pedophilic interest and child sexual abuse in a male community sample? *PloS One*. 2015;10(7):e0129730.
- Seto MC, Reeves L, Jung S. Explanations given by child pornography offenders for their crimes. J Sex Aggress. 2010;16(2):169–180.
- Kafka MP, Hennen J. A DSM-IV Axis I comorbidity study of males (n=120) with paraphilias and paraphilia-related disorders. Sex Abuse J Res Treat. 2002;14(4):349–366.