

Signs of abuse in children with disabilities: A rapid review with expert panel social validation

Amanda Nyberg ^{a,c}, Ulrika Ferm^b and Juan Bornman^a

^aCentre for Augmentative and Alternative Communication, University of Pretoria, Pretoria, South Africa;

^bChild Neuropsychiatry BNK, Sahlgrenska University Hospital, Gothenburg, Sweden;

^cDepartment of Research and Development, SV Hospital Group, Alingsås, Angered, Göteborg, Kungälv, Sweden

Abstract

Background: Children with intellectual disabilities are at risk of becoming victims of abuse. However, persons working with this population often lack knowledge on how to interpret signs of abuse. The purpose of this study was to identify and socially validate signs of abuse in children with disabilities.

Method: The study employed a mixed-method sequential design. The first phase consisted of a rapid review of publications that described signs of abuse in children with disabilities (n = 23). The second phase included social validation using an online survey. The participants were professionals working with disability and/or child abuse (n = 39).

Results: A significant difference between the 10 highest rated signs of abuse compared to the 10 lowest rated signs was found. Group comparisons between participants showed significant differences in the ratings of eight signs.

Conclusions: The results from the study can provide guidance to the accuracy of signs of abuse in children with disabilities.

Keywords: Abuse; children with disabilities; signs of abuse; manifestations of abuse; social validation

Children with disabilities are three to five times more likely of being victims of abuse than their peers without disability (Jones et al., 2012). Children with intellectual disabilities have been found to be more likely to experience several occasions of maltreatment (Dion et al., 2018).

An intersectional perspective is helpful for understanding this elevated risk as disability itself is a risk factor for different forms of abuse, including any form of physical and emotional ill-treatment, sexual abuse, neglect, and exploitation that results harm to the child's health, development or dignity (Winters et al., 2017). Social disadvantage, type of impairment, gender, communication difficulties, dependency on social support systems, lack of resources and social support for parents of children with disabilities as well as parental stress can be potential factors linked to abuse of children with disabilities (Flynn, 2020). Children with complex communication needs (which manifests as difficulties with understanding language and/or with producing spoken language) may, for example, face additional barriers to disclosing abuse (Flynn & McGregor, 2017) and could thus be at higher risk of experiencing abuse and victimisation due to their communication difficulties (Flynn, 2020; Goldberg Edelson, 2010).

Identifying and understanding signs of abuse in children with disabilities is crucial to end ongoing abuse and enable rehabilitation and support. Despite limited studies focused on the signs of abuse, results indicate similarities between children with and without disabilities (Debelle, 2012; Reinke, 2005) identifying behaviour problems as the most common sign of abuse (Reinke, 2005). However, interpreting and understanding these signs can be compounded by the fact that behavioural and emotional signs can also be attributed to the disability rather than to underlying trauma or co-morbid disorders (Vervoort-Schel et al., 2018). In addition to this, a child's intellectual and language development can impact their reaction to traumatic experiences such as abuse (McCarthy, 2001; Vervoort-Schel et al.,

2018). Post-traumatic stress disorder (PTSD), for example, has been described as more difficult to identify in persons with intellectual disabilities or autistic people as the symptoms can be interpreted as being linked to the disability rather than to abuse (Kildahl et al., 2019, 2020). This paucity of research regarding the signs of abuse may possibly be attributed to beliefs about abuse risk for children with disabilities (Miller & Brown, 2014).

Practitioners who work with children with disabilities often lack knowledge about abuse and signs of abuse and the topic of abuse is often not included in professional training (Franklin & Smeaton, 2017; Inkinen, 2015) even though the potential risk of abuse should necessitate awareness and vigilance (Flynn, 2020). Similarly, primary caregivers (including parents) and other family members can be unaware of how to detect and interpret signs of abuse in children with disabilities and typically lack knowledge for considering trauma or abuse as underlying reasons for the manifested behavioural or emotional symptoms (Kildahl et al., 2020). Consequently, this can result in abuse not being detected. Therefore, it is vital that key stakeholders such as parents, teachers and other adults in these children's social networks become aware of potential signs of abuse in children with disabilities as a first step in preventing abuse. Subsequently, a rapid review of publications describing signs of abuse in children with disabilities was carried out in this study.

Social validation is defined as judging the social significance, appropriateness and importance of goals, procedures and results (Wolf, 1978). Wolf specifies three dimensions of the social validity concept for the applied behaviour analysis field, namely (1) social importance of goals, (2) social acceptability of procedures and (3) social importance of the outcomes (Wolf, 1978). Carter and Wheeler (2019) agree, stating that acceptability is a vital component of social validity defining it as judgments of treatments by stakeholders or potential consumers. Despite agreement on the importance of social validity, guidelines for reporting and assessing it is lacking (Park & Blair, 2019). When it is incorporated into a study,

it is often done by asking those who implement, receive or consent to a treatment or intervention about their opinions (Carter & Wheeler, 2019). Several different methods can be used to do so, of which using a survey or a rating scale constructed for the specific purpose of socially validating the study in question is the most common (Carter & Wheeler, 2019). The application of social validity measurements in the child abuse prevention research field is seemingly scarce. As in other research fields, the component of social validity is often an “afterthought” and is not described in detail in publications (Carter & Wheeler, 2019).

The overall aim of this study was to identify signs of abuse in children with disabilities by firstly conducting a rapid review to describe the extant literature and secondly to confirm the results by employing a custom-designed social validation questionnaire completed by an international expert group.

Method

The study employs a two-phase mixed-method sequential research design (Creswell & Creswell, 2018) commencing with a rapid review followed by a survey including both quantitative and qualitative questions. The study was approved by the Ethical Committee at the Faculty of Humanities, University of Pretoria (reference number GW0180828HS).

Rapid review

Rapid reviews are used for compiling and synthesising knowledge in a simplified manner, using parts of the systematic review process (Tricco et al., 2015). The purpose of a rapid review is to make results available to stakeholders in a timely manner using resources effectively (Hamel et al., 2021). As the intent of the present study was to enhance the results from the review with a social validation component, a rapid review was deemed appropriate for the purpose of this study. Rapid review methodology varies across studies, but ways to streamline the process is to limit the search to published literature and limiting the search in

regards to language and date (Tricco et al., 2015), which were both employed in the present study. Furthermore, using only one reviewer to screen title, abstract and full text has been found to be a common approach in rapid reviews (Tricco et al., 2016). This process was enhanced in the present study by using one reviewer for the title and abstract screening, but three researchers in total working independently for the full-text screening and data extraction. All three researchers had a good understanding of the topic and used the same screening and data extraction criteria and tools and followed instructions drafted by the first author to ensure consistency in the screening and data extraction process.

The search was performed in October 2019 by a research librarian well experienced in conducting database searches, using the following databases: PubMed (1022 references), PsycINFO (548 references) and Cinahl (647 references). Articles between 1989 and 2019 that were written in English, Swedish, Norwegian and Danish were searched. The additional languages (beside English) were added as the first and second authors can read and understand these languages. The search terms used were: Disabled Persons OR Intellectual Disability OR disabled OR intellectual disabilit* AND Contusions OR Signs and Symptoms OR Diagnostic Screening Program OR bruise*OR manifestation* OR sign OR signs OR symptom* OR clinical effect* OR mark OR clinical finding*OR behavioural issue*OR screening OR assault* AND abuse OR neglect OR maltreatment OR violence OR assault* OR cruelty OR ill-treatment OR mistreat* OR molest* OR oppression OR violent OR violently. Boolean operators were included, and only published literature was searched.

The search resulted in 1797 records after duplicates (n = 420) were removed, as shown in the PRISMA (Preferred Reporting Items for Systematic Review and Meta-analysis) (Page et al., 2021) in Figure 1.

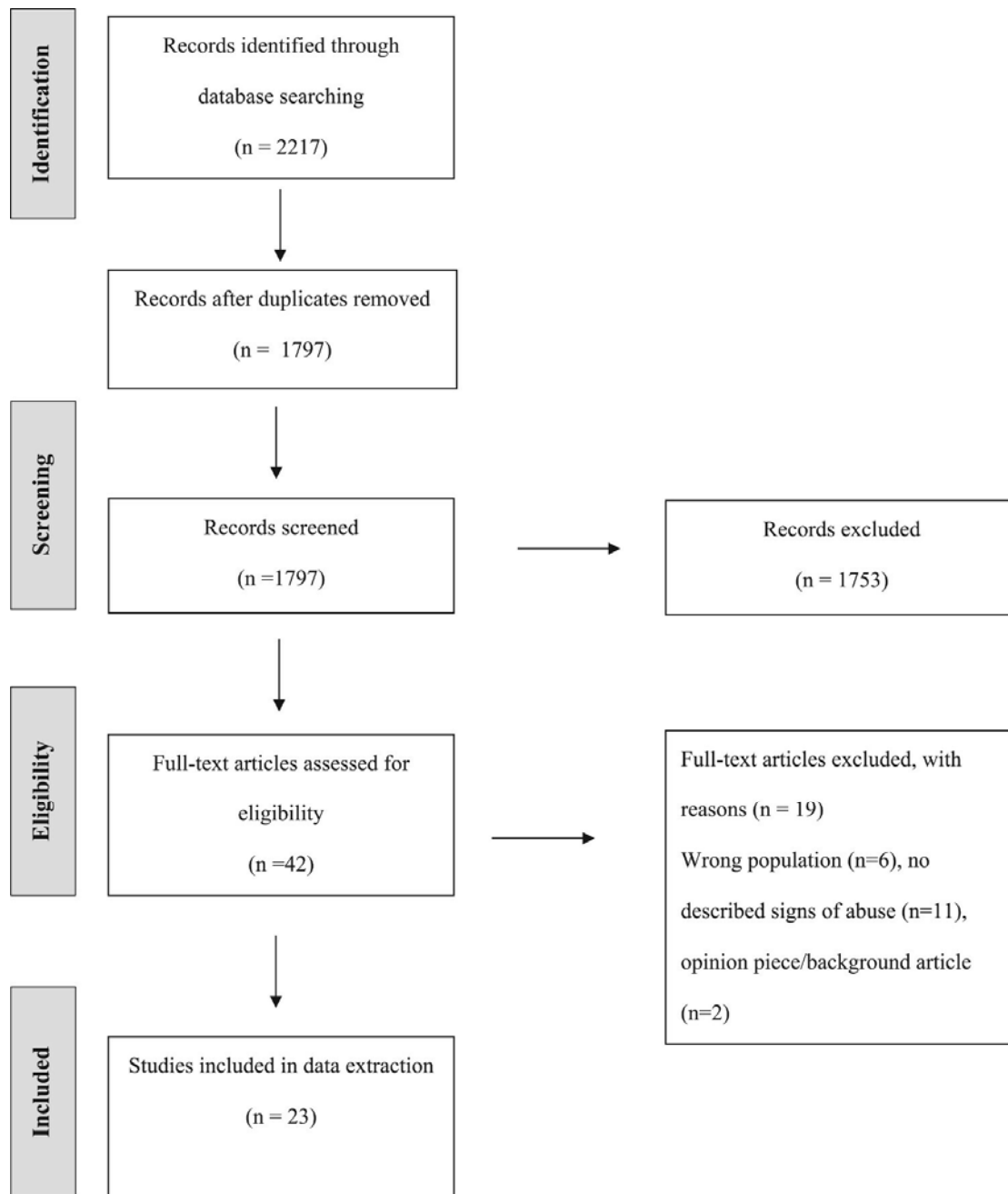


Figure 1. PRISMA – chart of present study.

Screening

The first author screened all studies on a title level using the PEO-criteria (Table 1). After this initial screening, 471 studies were reviewed on an abstract level by the first author. Subsequently, 42 studies were deemed appropriate for full-text screening. The full text

screening was carried out by three reviewers independently. The first author read all 42 studies, while the second and third author each read 21 studies. In case of disagreement, discussions were had until consensus was reached. After reviewing the full text articles, 23 studies were included for data extraction (Figure 1) (Akbas et al., 2009; Berg, 2014; Berg et al., 2015; Debelle, 2012; Dion et al., 2018; Elvik et al., 1990; Firth et al., 2001; Hayes, 2009; Kildahl et al., 2019; Koppenhaver, 1995; Martorell & Tsakanikos, 2008; Nowak, 2015; Reinke, 2005, 2006; Sequeira & Hollins, 2003; Shabalala & Jasson, 2011; Soylyu et al., 2013; Strickler, 2001; Sullivan & Knutson, 1998; van der Put et al., 2014; Verdugo et al., 1995; Walters et al., 1995; Wissink et al., 2018).

Table 1. *PEO-Criteria of the Current Study.*

	Inclusion	Exclusion
Population	<ul style="list-style-type: none"> • Children with disabilities (18 years of age and younger) 	<ul style="list-style-type: none"> • Persons without disabilities • Only adults with disabilities
Exposure	<ul style="list-style-type: none"> • Victim of any of: <ul style="list-style-type: none"> - Sexual abuse - Physical abuse - Neglect - Financial abuse - Exploitation - Emotional abuse 	<ul style="list-style-type: none"> • Primary substance abuse or alcohol abuse • Gun violence
Outcomes	<ul style="list-style-type: none"> • Signs of abuse (behavioural, emotional) 	<ul style="list-style-type: none"> • Medical examination

Data extraction

A custom-designed data extraction tool was developed, and pilot tested by a practitioner peer-group prior to data extraction. This group consisted of 10 PhD-candidates, who were trained professionals in the disciplines of speech-language pathology, psychology (educational or clinical), education and occupational therapy. The data extraction tool contained six types of abuse, 15 behavioural signs of abuse and 19 physical signs of abuse.

This practitioner group was asked to use two key references and complete the data extraction tool and provide feedback on its applicability and useability. Minor changes were suggested and made, prior to the data extraction. Data extraction was carried out independently by all three authors. The data extraction was complicated by the fact that publications used different labels for the same signs of abuse (e.g., “aggression” and “violent behaviour”) and that there was a general lack of definition of concepts. This resulted in moderate interrater reliability, with Cohen’s kappa of 0.75 between the first and second authors (McHugh, 2012)

The quantitative data on signs of abuse was summarised and calculated for frequency. As each extracted sign could be noted down two times for each article (one for each reviewer), a level of at least five notations (meaning that the sign of abuse was mentioned in more than two articles) was selected. The rationale for this approach is that the purpose of the study was to identify signs of abuse in children with disabilities that had a higher frequency and that would therefore be expected and seen more probably.

The qualitative descriptions of signs of abuse (e.g., signs that were written in the “other column”) were listed, refined (e.g., by grouping synonyms) and followed with a frequency count. Similar to the quantitative data, only signs with at least five notations were added to the final list. The frequency of the behavioural and physical signs of abuse, using both the qualitative and quantitative data was counted and summarised. This resulted in a final list that contained 28 items.

Social validation

Participants and sampling

Participants were selected for the social validation phase of the study using a multiple-method sampling approach. This specific aim necessitated “expert participants” who were well versed in both disability and in abuse research. Due to the cross-disciplinary nature of the topic, the pool of potential participants was small. Four different groups of participants were primarily invited to participate in the survey, (1) authors of research studies included in the

abstract review stage of the rapid review conducted in phase 1 of this study; (2) authors of research studies included in a previously conducted scoping review by the authors of the present study with a related focus (Nyberg et al., 2021a) (3) personal contacts with suitable clinical or research background linked to the topic and (4) members of international organisations targeted at preventing violence and abuse towards children with/without disabilities or international disability alliances. All invited participants were asked to further snowball the invitation to other suitable possible participants in their own professional networks (Sue & Ritter, 2012). As the sample was based on a snowball technique, sampling error estimates and target sample size cannot be calculated (Sue & Ritter, 2012). Item nonresponse in the present study consisted of participants quitting the survey before finishing (n = 4), as responses could not be skipped without an answer being given. This resulted in a total of 39 completed surveys from participants.

Due to the global recruitment process and online data collection, participants represented different countries, namely Sweden (n = 14), South Africa (n = 7), Norway (n = 3), The United Kingdom (n = 3), Australia (n = 3), Turkey (n = 2), The United States (n = 2), The Netherlands (n = 2), Iceland (n = 1), Spain (n = 1) and Denmark (n = 1). Their first languages reflected the countries that they lived in. The years of experience in working in their current profession ranged from 0 to 5 years to over 20 years, with 49% of the participants having worked in their current profession for more than 20 years. The majority of the participants had completed postgraduate studies, with 41% having earned their PhDs and 46% having received a Master's degree. Academic knowledge is viewed as an essential part of the definition of an expert (King et al., 2008). Their job descriptions, which were provided in free text and thus could include several professions for each person, included psychologists (n = 11), professors (n = 7), associate professors/researchers/lecturer (n = 6), managers of units (n = 5), physicians (n = 2), child psychiatrists (n = 2), consultants/experts on

abuse/disability (n = 4), unnamed occupations (n = 2) and retired (n = 1). Other biographic data is shown in Table 2.

Table 2. *Biographical Information of Participants (n=39)*

Sex		
Female: 24 (62%)	Male: 15 (38%)	
Age: Seniority in career and age is highly linked, with increased age implying increased seniority for researchers (Over, 1988)		
31-40 y: 7 (18%)	41-50 y: 7 (18%)	51-60 y: 12 (31%)
61-70 y: 9 (23%)	71 y +: 4 (10%)	
Workplace (multi-choice question)		
Government: 5 (13%)	University: 16 (41%)	Healthcare: 16 (41%)
Non-profit organization: 6 (15%)	Other: 6 (15%) (This included community practice, children's advocacy center, NGO/INGO, retired)	
Main area of expertise relevant to the study (multi- choice)		
Children with disabilities: 20 (51%)	Child abuse: 30 (77%)	Other: 10 (26%) (This included adult abuse survivors, forensic psychiatry, police psychology, disability inequalities, parent-child relationships, child health care, child protection).
Years of clinical experience in your main area of expertise relevant to the study: Participants with many years of experience in the profession can be viewed as experts, although years of work experience alone does not guarantee expertise (Shanteau et al., 2002).		
1-5 years: 4 (10%)	6-10 y: 7 (18%)	11-20 y: 10 (26%)
More than 20 y: 15 (38%)	None: 3 (8%)	
Estimated number of cases of known abuse against children with disabilities involved in: Case-based reasoning (e.g., basing your judgement on previous cases) can be a component of expertise (Hoffman, 1998). This is highly relevant in this study as the participants rating of the accuracy of each sign of abuse must be weighed against their familiarity with the topic.		
1-5 cases: 4 (10%)	6-10 cases: 4 (10%)	11-20 cases: 7 (18%)
More than 20 cases: 23 (59%)	Other: 1 (3%)	
Number of published studies authored in areas relevant to the study: This can be used to assess performance in the research field (Abramo et al., 2015).		
1-5 published studies: 12 (31%)	6-10 published studies: 3 (8%)	11-20 published studies: 3 (8%)
>20 published studies: 6 (15%)	None: 15 (38%)	

Material

An online survey was constructed in Qualtrics, a digital platform for constructing surveys ([https://www. qualtrics.com/uk/](https://www.qualtrics.com/uk/)). The system was set up so that each participant had to provide written consent before being able to continue with the survey. After written consent had been provided by the participant, a biographical information section followed, as described in Table 2.

After completing the biographical portion of the survey, participants were asked to rate signs of abuse in children with disabilities on an ordinal 7-point Likert scale (1 = Very accurate; 2 = Moderately accurate; 3 = Slightly accurate; 4 = Neither accurate nor inaccurate; 5 = Slightly inaccurate; 6 = Moderately inaccurate; 7 = Very inaccurate). A 7-point Likert scale was deemed appropriate as the population were experts in the field and could be expected to want to express a nuanced opinion (Chyung et al., 2017). Definitions for each sign of abuse were provided in the survey. Additionally, the participants were asked to volunteer and rate signs of abuse that they had encountered in children with disabilities in their research or clinical work. Participants were also able to provide a free-text comment at the end of the survey. The survey was pilot tested using a group of five professionals, namely two clinical psychologists, two PhD- candidates who were also trained as speech-language therapists and one specialised occupational therapist with a PhD in medicine. The pilot group were asked to complete the survey using the online link using a custom-designed questionnaire for evaluating their experience of the survey, including components such as usability and clarity of definitions and signs of abuse. Subsequent changes were made according to their feedback and the survey was re-tested by one of the participants to ensure that the suggested changes had been carried out to satisfaction.

Procedure

A quantitative description of the empirical accuracy of different signs of abuse in children with disabilities was deemed suitable for the purpose of the study (Creswell & Creswell, 2018), as the researchers wanted to collect data over a time-limited period (20 days). Data was collected using an online survey which was distributed through email containing the link to the survey (Sue & Ritter, 2012). This method of distribution was considered appropriate for the sample population as they are active in clinical work or research and thus are used to using emails as a method of communication. Potential participants were informed on the nature of the survey, the identity of the researchers and organisation, how data would be used and that they would remain anonymous in both completing the survey and when the results were reported, the average length of the survey (20–30 min) and that there were no risks associated with part-taking in the survey (Sue & Ritter, 2012).

Results

In total 35 full responses and four partial responses were recorded. Participants rated each of the 28 signs of abuse independently on a 7-point Likert-scale (1 = Very Accurate; 7 = Very inaccurate). Thus, the lower the score, the higher the perceived accuracy of the sign of abuse (Table 3). The survey results were analysed with SPSS, reporting means, range and standard deviation (Table 3).

Table 3. Numbers, Range, Mean and Standard Deviation for the Rating of Signs of Abuse.

	Sign of abuse	N	Range	Min	Max	Mean	Std. Deviation
1	PTSD	36	2	1	3	1.75	.692
2	Poor self-esteem	37	3	1	4	1.81	.908
3	Withdrawal	37	3	1	4	1.86	.948
4	Anxiety	36	3	1	4	1.94	.955
5	Signs of penetration	36	6	1	7	2.06	1.472
6	Nightmares	37	3	1	4	2.08	.983
7	Depression	36	4	1	5	2.14	1.018
8	Self-harm	36	3	1	4	2.17	.811
9	Acting out	36	4	1	5	2.19	1.037
10	Emotional problems	35	3	1	4	2.20	.994
11	Bruising	36	5	1	6	2.22	1.098
12	Inappropriate sexual behaviour	37	5	1	6	2.27	.962
13	Inappropriate anger	38	5	1	6	2.34	1.169
14	Behavioural problems	36	5	1	6	2.36	1.125
15	Aggressive behaviour	39	6	1	7	2.38	1.388
16	Suicidal thoughts	36	5	1	6	2.42	1.079
17	Burns or trauma	36	6	1	7	2.50	1.558
18	Irregular school attendance	36	5	1	6	2.61	1.076
19	Eating/appetite disturbance	35	5	1	6	2.63	1.087
20	Victimizing	36	6	1	7	2.67	1.242
21	Suicide attempt	36	4	1	5	2.69	1.142
22	Non-compliance	36	4	1	5	2.83	1.134
23	Running away from home	36	5	1	6	2.94	1.393
24	Negative peer involvement	35	5	1	6	2.97	1.150
25	Crying	35	5	1	6	3.09	1.269
26	Substance abuse	36	5	1	6	3.44	1.182
27	Alcohol abuse	36	5	1	6	3.53	1.134
28	Dominant behaviour	39	6	1	7	3.67	1.493

Statistically significant differences were not seen between each item as the differences and the sample size were too small, but a significance level of $p < .05$ was reached for the differences between the 10 signs rated as most accurate versus the 10 signs rated as least accurate (Table 4). The calculation was done by conducting a paired samples t-test of item 10 (Emotional problems) and item 19 (Eating/appetite disturbance) in SPSS.

Table 4. *P-value for Differences Between Item 10 and Item 19.*

Item and Item number	Mean	Std Dev	Std Error Mean	Lower	Upper	T	Df	Sign 2-tailed
Emotional problems (#10) Eating/appetite disturbance (#19)	-.429	.739	.125	-.682	-.175	-3.431	34	.002

Group differences

Ratings were compiled into different groups to compare the results between groups. Comparisons were made between the participants who had published in their main area of expertise relevant to the study (n = 21) and missing data (n = 3) and the participants who had no publications in their main area of expertise relevant to the study (n = 14) and missing data (n = 1) using an independent samples t-test. The participants with no publications rated inappropriate sexual behaviour, alcohol abuse, substance abuse, signs of penetration and running away from home as significantly less accurate as signs of abuse in children with disabilities than did the group with at least one publication, whereas they rated poor self-esteem, eating/appetite disturbance and emotional problems as significantly more relevant than did the participants who had published in their main area of expertise relevant to the study. For the other signs of abuse (n = 20), no significant differences were seen between the two groups. Only the significant results are presented in Table 5 (n = 8).

A second group comparison was carried out using an independent samples t-test, comparing participants with experience from more than 20 known cases of abuse against children with disabilities (n = 22) missing data (n = 1) and participants with experience from less than 20 known cases of abuse (n = 13), missing data (n = 3). For these two groups, smaller differences in mean ratings were found, producing no significant differences in ratings for any of the signs of abuse.

Table 5. *Group Comparison Using Independent Samples T-test in SPSS.*

Sign of abuse	Participant group	N	Mean	Std. Dev.	Df	T	Sign (p<0.05)
Poor self-esteem	No publ.	14	1.43	.646	35	-2.1	.044
	Publ.	23	2.04	.976			
Inappropriate sexual behaviour	No publ.	14	2.79	1.188	35	2.8	.009
	Publ.	23	1.96	.638			
Alcohol abuse	No publ.	14	4.14	.959	34	2.8	.007
	Publ.	22	3.14	1.082			
Substance abuse	No publ.	14	4.07	.997	34	2.8	.009
	Publ.	22	3.05	1.133			
Signs of penetration	No publ.	14	2.79	1.805	19,22	2.3	.036
	Publ.	22	1.59	1.008			
Running away from home	No publ.	14	3.64	1.646	19,31	2.3	.031
	Publ.	22	2.50	1.012			
Eating/appetite disturbance	No publ.	14	2.14	.949	33	-2.3	.029
	Publ.	21	2.95	1.071			
Emotional problems	No publ.	14	1.71	.914	33	2.5	.016
	Publ.	21	2.52	.928			

Ratings of additional signs of abuse

In the last section of the survey, participants were invited to add and rate additional signs of abuse in children with disabilities that they had encountered in their clinical work or research, using the same 7-point Likert scale (Table 6). Eleven participants provided 40 additional behavioural signs and 10 additional physical signs, all rated as accurate, ranging from 1 = Very accurate to 3 = Slightly accurate. The signs of abuse were analysed using a deductive analysis. Initially, signs that had been volunteered by participants that were synonymous with signs that were already included the survey and had thus already been rated by the participants were removed. Secondly, similar signs of abuse that had been volunteered by different participants were combined with each other. The process was carried out using a consensus discussion between the three authors. After these two steps, 23 signs of abuse volunteered by participants remained. The signs are presented in Table 6 with the number of entries and mean rating. The signs

provided by the participants in free text were compared to the signs extracted from the rapid review that were not included in the survey, as they had less than five notations. Sixteen of the 23 signs that were provided by the participants had also been extracted from the publications in the rapid review and are marked with cursive font in Table 6. However, only seven of the signs were provided more than once (and none more than by three participants), confirming that they were considered as more unusual signs of abuse in children with disabilities.

Table 6. *Signs of Abuse and Rating Provided by the Participants.*

Nr	Sign of abuse	Rating (mean)	Nr of entries
Behavioural signs			
1	<i>Hypervigilant, guarded/insecure behaviour</i>	1.7	3
2	Anxiety or reluctance to be in the presence of or be left alone with a particular person or to go to a particular place/room, behavioural avoidance	1.7	3
3	<i>Inappropriate laughter, grimacing or unusual smile, problems with emotion regulation</i>	2	3
4	<i>Child expressing fear of parent/other, fear of specific caregiver</i>	1.5	2
5	Change in child's behaviour without any other explanation, sudden change in behaviour	1.5	2
6	<i>Problems developing friendships with others, lack of social skills</i>	1.5	2
7	<i>Child describing parent/other in ONLY positive ways (overcompensating), odd interaction patterns with parent</i>	2	2
8	<i>Schoolastic difficulties</i>	1	1
9	<i>Attachment disorder</i>	1	1
10	<i>Loss of earlier abilities</i>	1	1
11	<i>Somatisation (complaints about body pains)</i>	2	1
12	<i>Uncritical behaviour amongst strangers</i>	2	1
13	<i>Dissociation</i>	2	1
14	Problems with emotion regulation	2	1
15	Non-independent behaviour, attachment disorder	2	1
16	<i>Selective mutism</i>	3	1
17	<i>Restlessness, increased motor activity</i>	3	
Physical signs			
18	<i>Enuresis, encopresis</i>	2.7	3
19	Discharge from vagina or penis	1	1
20	Venereal disease	1	1
21	<i>Pregnancy</i>	1	1
22	<i>Bite marks and sucking marks on child's body and neck</i>	2	1
23	Frequent bladder infections in females	2	1

Comments on the survey

Twenty participants chose to give free-text comments at the end of the survey.

Comments that were just complimentary were removed and the remaining comments were analysed using thematic analysis. Four themes were identified, namely (1) Methodological considerations; (2) Children with disabilities; (3) Signs of abuse and (4) Preventing abuse.

The “Methodological considerations” theme included three codes: methodological considerations/age (n = 5), methodological considerations/type of disability (n = 5), methodological considerations/lack of context (n = 3). Comments regarding methodological considerations/age included referring to participants experience as an influence on their rating of signs, or suggesting that rating could have been improved if the population had been divided into different age groups. The code methodological considerations/type of disability included comments wanting more clarity on the types of disabilities referred to in the survey or suggesting that the population were divided into different disabilities as a way of enhancing the rating. Methodological considerations/lack of context referred to the fact that the signs of abuse and the definitions were presented without any contextual information such as disability or environment of the child. One participant wished to be able to leave comments on each rated sign of abuse, to provide context to the rating.

The theme “Children with disabilities” contained five codes, namely communication implications (n = 4), caregiver considerations (n = 3), increased vulnerability (n = 3), type of disability affects the accuracy of signs/ symptoms (n = 4) and gullibility (n = 1).

Communication difficulties referred to the fact that children with disabilities can have difficulties with communicating about abuse, understanding that they have been abused and understanding different types of abuse. Caregiver considerations refer to both their unique position in being able to understand the child, especially if there are communication difficulties, as well as the need for professionals to analyse the interaction of the child and caregivers to gain more insight into the relationship and potential abuse. The code increased

vulnerability included comments that children with disabilities, due to physical and/or cognitive restraints, are more vulnerable of becoming victims of abuse. The code gullibility refers to a comment saying that children with disabilities might be more easily deceived into not telling about abuse or believing when being told that the abuse isn't harmful. The final code in this theme consists of comments from participants stating that different disabilities present with different signs of abuse, and that a behaviour (e.g., aggressive behaviour) could be interpreted as typical behaviour for children with specific types of disabilities, but concerning and as a potential sign of abuse in children with other types of disabilities.

The theme "Signs of abuse" contained six codes, unspecified signs (n = 5), specific signs (n = 5), not decisive signs (n = 7), same signs (n = 1), no signs (n = 2) and types of abuse (n = 1). Unspecified signs referred to comments saying that many different signs or symptoms could be seen as signs of abuse, and that they could be very unspecified. Specific signs included participants providing signs that they thought were accurate as signs of abuse in children with disabilities, such as behaviour changes, PTSD, aggression and bruising in specific locations. Several participants commented that the signs of abuse presented in the survey was not decisive and could not be used in isolation as definite signs of abuse as they could well also be present without any abuse history. Two participants said that children with disabilities often display the same signs as children without disabilities, whereas two comments wanted to bring attention to the fact that many children with disabilities do not present with any signs at all, even though they have been victims of abuse. Lastly, one participant stated that the different types of abuse (e.g., sexual abuse or physical abuse) are linked to specific signs.

The theme "Preventing abuse" contained four codes, namely investigation (n = 1), specific abuse prevention strategies (n = 3), case history (n = 1) and listening and believing (n = 1). Investigation refers to the need to investigate suspected abuse thoroughly without

scaring the child. The code abuse prevention included comments that claimed that the most important thing for this population was using individualised abuse prevention methods that are specifically adapted for children with disabilities. The importance of getting a case history to be able to detect abuse was highlighted in one comment. Another comment stated the need for persons such as teachers to be attentive and not discounting reports of abuse from children with disabilities.

Discussion

The purpose of the present study was to identify and socially validate signs of abuse in children with disabilities using a two-phase study. None of the signs included in the present study received an overall mean value that indicated them as inaccurate as signs of abuse in children with disabilities. The lowest rating of the included signs of abuse in the study had a mean value of 3.67 (dominant behaviour), indicating a level of neither accurate nor inaccurate—slightly accurate. These results were expected as the signs were derived from published literature on the topic. However, results from the social validation phase of the study suggest that the perceived accuracy of signs of abuse in children with disabilities differ between signs. The top 10 rated signs were perceived as significantly more accurate as signs of abuse in children with disabilities than the bottom 10 rated signs. The sign with the highest perceived accuracy was PTSD, which is interesting as it has been described as potentially challenging to diagnose in persons with disabilities (Kildahl et al., 2020). Poor self-esteem, withdrawal and anxiety were similarly rated as moderately accurate- very accurate, although the differences between each sign were small.

The differences in ratings between the participants with no publications and the participants who had published in their main area of expertise relevant to the study could be regarded as a potential difference between participants who were primarily clinicians or primarily researchers (with some exceptions). It is possible that the difference in rating was

linked to the signs of abuse that children with disabilities present within the clinical world in contrast to the signs of abuse that are most often described in research on the topic. For example, alcohol abuse and substance abuse in individuals with intellectual disabilities have been explored in research (Carroll Chapman & Wu, 2012) as well as signs of penetration as a sign of abuse in children with disabilities (Akbas et al., 2009; Wissink et al., 2018) However, these signs might not be the most typical sign that children present within a clinical setting, if one is not conducting a forensic examination (in the case of signs of penetration) or working with older children/teenagers (in the case of alcohol abuse and substance abuse). In contrast, symptoms such as poor self-esteem, eating disturbances and emotional problems may more frequently be present and observable in a clinical setting.

Participants were given the opportunity to provide signs of abuse and rate them towards the end of the survey. These signs were seemingly based more on the specific nature of the participants' clinical work or research practice. None of these signs were mentioned more than three times, even though 23 different signs were described, pointing to the plethora of possibilities. Many of the signs had also been extracted during the rapid review but not included in the survey as they had too few notations, and thus were deemed less common. The additional signs of abuse provided by the participants reflect the difficulty that is inherent with analysing and understanding signs of abuse in children with disabilities, namely the unspecific nature of the signs of abuse and the fact that some children with disabilities present no signs of abuse at all. This was also mentioned by some participants in the comment section of the survey.

Hypervigilance, insecure behaviour and changes in behaviour were mentioned several times as a strong potential indicator of abuse. This includes a change in behaviour towards a certain person or situation, or a general behaviour change or avoidance. Careful enquiry and observation of the child's behavioural history and current behaviour could be important ways

to detect potential abuse. Difficulties with relationships or anxiety revolving around specific individuals or situations were also mentioned and could be important factors when reviewing case history.

All of the signs included in the present study can also be linked to other causes than abuse, as pointed out by some participants. This is in itself a risk, as attributing potential signs of abuse to the child's disability, without further investigation, could lead to abuse going undetected (Miller & Brown, 2014). Disablist attitudes and beliefs regarding children with disabilities capabilities and quality of life (Miller & Brown, 2014) as well as beliefs that children with disabilities are not abused (Stalker et al., 2010) can further increase the risk of both experiencing abuse, and that the abuse goes undetected (Franklin & Smeaton, 2017). Additionally, disempowerment, over protection, social isolation and a lack of education regarding sexuality and relationships can make children with disabilities more susceptible to experiencing abuse (Franklin & Smeaton, 2017).

Comments on the survey suggested that many different behavioural signs or physical signs could be signs of abuse, but that abuse could manifest differently in different children and that some children might not show any of the mentioned signs, even though they had been abused. To further complicate matters, some signs of abuse presented in this study could also be potential risk factors for abuse, such as low self-esteem, which could in turn be an effect of disablist attitudes. This bi-directional influence of attitudes, risk factors and potential signs of abuse complicates the detection and hindering of abuse. These comments underpin the need for a holistic view and assessment of signs of abuse as well as the need for skilled professionals with knowledge and understanding of abuse, trained at making judgments about the presence of abuse in children with disabilities (Franklin & Smeaton, 2017; Hernon et al., 2014; Miller & Brown, 2014). The importance of empowering children, believing children who disclose abuse and taking action should be highlighted in the training of professionals

(Franklin & Smeaton, 2017). Additionally, caregivers and individuals close to the child who know them well play an important role in recognising and spotting potential signs of abuse (Hernon et al., 2014).

Methodological considerations

Participants provided comments at the end of the survey linking to methodological considerations for the study. Some participants felt that the rating process was difficult, as the signs of abuse lacked context such as age of the child or the specific disability of the child. This lack of context could have influenced their rating of the signs of abuse. The lack of context was an intentional choice when constructing the survey, as providing context for each sign of abuse would limit the rating to just that specific situation/disability, when the researchers wanted to rather produce a general rating of commonly described signs of abuse in children with disabilities. Additionally, the option to provide comments to each rated sign of abuse was considered during the development process but was deemed unsuitable as it could potentially narrow the results to the specific context that participants described. However, these suggestions could be considered for future studies within this field.

Limitations of the study

Although a concerted effort was made to recruit experts in the field who would have knowledge on this complex topic, the number of participants was limited. The intersection of the topics of disability and child abuse is not well researched and consequently, few professionals or researchers can claim expertise in this area. However, when considering the participant description, it is clear that many prominent scholars in the field participated. As the rapid review methodology is not as theoretically sound as the more extensive systematic review methodology (Khangura et al., 2012), social validation was used to enhance the process by confirming the results of the rapid review. Several participants highlighted that

“children with disabilities” is a large and heterogeneous group, which includes babies, toddlers, middle-schoolers, and teens as well as different disabilities such as autism, cerebral palsy and Down’s syndrome, and that the signs of abuse were presented in the survey without context, making the rating process more difficult.

Conclusions

Findings from the study conclude that an international expert panel rated signs of abuse in children with disabilities derived from a rapid review on the topic as accurate. The perceived level of accuracy was significantly different between the 10 signs that were rated the highest, compared to then 10 lowest rated signs. The results should not be used as a checklist, but rather as guidance for clinicians, teachers, and parents in which signs could present in a child with disability that have been abused. The results should be viewed as preliminary due to the small sample size and the sensitive nature of the topic and should be used with caution. However, the prevailing problem we stand before today is not that abuse against children and adults with disabilities is being over-reported, but rather under-reported (Hernon et al., 2014; Nareadi, 2013; Willott et al., 2020). Thus, this paper could provide some insight into which signs of abuse appear to be most accurate for this population.

References

Akbas, S., Turla, A., Karabekiroglu, K., Pazvantoglu, O., Keskin, T., & Böke, O. (2009). Characteristics of sexual abuse in a sample of Turkish children with and without mental retardation, referred for legal appraisal of the psychological repercussions. *Sexuality and Disability*, 27 (4), 205–213. <https://doi.org/10.1007/s11195-009-9139-7>

Berg, K. L. (2014). Assessment of multiple victimization and its effects among adolescents with disabilities in contact with the child welfare system (Vol. 75) [ProQuest

Information & Learning]. <http://search.ebscohost.com/login.aspx?direct=true&db=psyh&An=2014-99130-549&lang=sv&site=ehost-live&scope=site>

Berg, K. L., Shiu, C-S, Msall, M. E., & Acharya, K. (2015). Victimization and depression among youth with disabilities in the US child welfare system. *Child: Care, Health and Development*, 41(6), 989–999. <https://doi.org/10.1111/cch.12233>

Carroll Chapman, S. L., & Wu, L. T. (2012). Substance abuse among individuals with intellectual disabilities. *Research in Developmental Disabilities*, 33(4), 1147–1156. <https://doi.org/10.1016/j.ridd.2012.02.009>

Carter, S. L., & Wheeler, J. J. (2019). *The social validity manual : subjective evaluation of interventions*. Elsevier Science & Technology. <http://ebookcentral.proquest.com/lib/pretoria-ebooks/detail.action?docID=5788832>

Chyung, S. Y. Y., Roberts, K., Swanson, I., & Hankinson, A. (2017). Evidence-based survey design: The use of a midpoint on the Likert Scale. *Performance Improvement*, 56 (10), 15–23. <https://doi.org/10.1002/pfi.21727>

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE.

Debelle, G. (2012). Interpreting physical signs of child maltreatment: “Grey cases” and what is “reasonably possible”. *Paediatrics and Child Health*, 22(11), 470–475. <https://doi.org/10.1016/j.paed.2012.08.001> 10

Dion, J., Paquette, G., Tremblay, K.-N., Collin-Vézina, D., & Chabot, M. (2018). Child maltreatment among children with intellectual disability in the Canadian incidence study. *American Journal on Intellectual and Developmental Disabilities*, 123(2), 176–188. <https://doi.org/10.1352/1944-7558-123.2.176>

Edelson, M. G. (2010). Sexual abuse of children with autism: Factors that increase risk and interfere with recognition of abuse. *Disability Studies Quarterly*, 30(1). <https://doi.org/10.18061/dsq.v30i1.1058>

Elvik, S. L., Berkowitz, C. D., Nicholas, E., Lipman, J. L., & Inkelis, S. H. (1990). Sexual abuse in the developmentally disabled: Dilemmas of diagnosis. *Child Abuse & Neglect*, 14(4), 497–502. [https://doi.org/10.1016/0145-2134\(90\)90098-E](https://doi.org/10.1016/0145-2134(90)90098-E)

Firth, H., Balogh, R., Berney, T., Bretherton, K., Graham, S., & Whibley, S. (2001). Psychopathology of sexual abuse in young people with intellectual disability. *Journal of Intellectual Disability Research*, 45(3), 244–252. <https://doi.org/10.1046/j.1365-2788.2001.00314.x>

Flynn, S. (2020). Theorizing disability in child protection: Applying critical disability studies to the elevated risk of abuse for disabled children. *Disability and Society*, 35(6), 949–971. <https://doi.org/10.1080/09687599.2019.1669433>

Flynn, S., & McGregor, C. (2017). Disabled children and child protection: Learning from literature through a non-tragedy lens. *Child Care in Practice*, 23(3), 258–274. <https://doi.org/10.1080/13575279.2016.1259157>

Franklin, A., & Smeaton, E. (2017). Recognising and responding to young people with learning disabilities who experience, or are at risk of, child sexual exploitation in the UK. *Children and Youth Services Review*, 73, 474–481. <https://doi.org/10.1016/j.chilyouth.2016.11.009>

Hamel, C., Michaud, A., Thuku, M., Skidmore, B., Stevens, A., Nussbaumer-Streit, B., & Garritty, C. (2021). Defining rapid reviews: A systematic scoping review and thematic analysis of definitions and defining characteristics of rapid reviews. *Journal of Clinical Epidemiology*, 129, 74–85. <https://doi.org/10.1016/j.jclinepi.2020.09.041>

Hayes, S. (2009). The relationship between childhood abuse, psychological symptoms and subsequent sex offending. *Journal of Applied Research in Intellectual Disabilities*, 22 (1), 96–101. <https://doi.org/10.1111/j.1468-3148.2008.00459.x>

Hernon, J., Brandon, M., Cossar, J., & Shakespeare, T. (2015). Recognising and responding to the maltreatment of disabled children: A children's rights approach. *Social Work and Social Sciences Review*, 17(3), 61–77. <https://doi.org/10.1921/swssr.v17i3.799>

Hoffman, R. R. (1998). How can expertise be defined? Implications of research from cognitive psychology. In *Exploring expertise* (pp. 81–100). Springer.

Inkinen, M. (2015). Hur mänskliga rättigheter, mäns våld mot kvinnor och våld mot barn beaktas i högre utbildning (2015:25). Universitetskanslersämbetet. <https://www.uka.se/download/18.12f25798156a345894e4cb3/1487841874281/rapport-2015-12-01-manskligarattigheter.pdf>

Jones, L., Bellis, M. A., Wood, S., Hughes, K., McCoy, E., Eckley, L., Bates, G., Mikton, C., Shakespeare, T., & Officer, A. (2012). Prevalence and risk of violence against children with disabilities: A systematic review and metaanalysis of observational studies. *The Lancet*, 380(9845), 899–907. [https://doi.org/10.1016/S0140-6736\(12\)60692-8](https://doi.org/10.1016/S0140-6736(12)60692-8)

Khangura, S., Konnyu, K., Cushman, R., Grimshaw, J., & Moher, D. (2012). Evidence summaries: The evolution of a rapid review approach. *Systematic Reviews*, 1(1), 10. <https://doi.org/10.1186/2046-4053-1-10>

Kildahl, A. N., Bakken, T. L., Iversen, T. E., & Helverschou, S. B. (2019). Identification of post-traumatic stress disorder in individuals with autism spectrum disorder and intellectual disability: A systematic review. *Journal of Mental Health Research in Intellectual Disabilities*, 12(1–2), 1–25. <https://doi.org/10.1080/19315864.2019.1595233>

Kildahl, A. N., Helverschou, S. B., & Oddli, H. W. (2020). Clinicians' retrospective perceptions of failure to detect sexual abuse in a young man with autism and mild intellectual

disability. *Journal of Intellectual & Developmental Disability*, 45(2), 194–202.

<https://doi.org/10.3109/13668250.2019.1680821>

King, G., Bartlett, D., Currie, M., Gilpin, M., Baxter, D., Willoughby, C., Tucker, M. A., & Strachan, D. (2008). Measuring the expertise of paediatric rehabilitation therapists. *International Journal of Disability, Development & Education*, 55(1), 5–26. <http://10.0.4.56/10349120701654522>

Koppenhaver, P. L. (1994). Perceptions of the behavioral effects of sexual abuse on latency-aged normal and low cognitive ability children [Doctoral dissertation]. Walden University.

Martorell, A., & Tsakanikos, E. (2008). Traumatic experiences and life events in people with intellectual disability. *Current Opinion in Psychiatry*, 21(5), 445–448. <https://doi.org/10.1097/YCO.0b013e328305e60e>

McCarthy, J. (2001). Post-traumatic stress disorder in people with learning disability. *Advances in Psychiatric Treatment*, 7(3), 163–169. <https://doi.org/10.1192/apt.7.3.163>

McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, 22(3), 276–282. <https://doi.org/10.11613/BM.2012.031>

Miller, D., & Brown, J. (2014). “We have the right to be safe”: Protecting disabled children from abuse. (October, 56). <https://www.nspcc.org.uk/services-and-resources/research-and-resources/2014/right-to-be-safe/%0Ahttp://www.nspcc.org.uk/globalassets/documents/researchreports/right-safe-disabled-children-abuse-summary.pdf>

Nareadi, P. T. (2013). Influences on under reporting of sexual abuse of teenagers with intellectual disability: Results and implications of a South African study. *Journal of Psychology in Africa*, 23(4), 625–629. <https://doi.org/10.1080/14330237.2013.10820677>

Nowak, C. B. (2015). Recognition and prevention of child abuse in the child with disability. *American Journal of Medical Genetics Part C: Seminars in Medical Genetics*, 169(4), 293–301. <https://doi.org/10.1002/ajmg.c.31458>

Nyberg, A., Ferm, U., & Bornman, J. (2021). School-based abuse prevention programs for children: A scoping review. *International Journal of Disability, Development and Education*. <https://doi.org/10.1080/1034912X.2020.1865522>

Over, R. (1988). Does scholarly impact decline with age? *Scientometrics*, 13(5), 215–223. <https://doi.org/10.1007/BF02019959>

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>

Park, E. Y., & Blair, K. S. C. (2019). Social validity assessment in behavior interventions for young children: A systematic review. *Topics in Early Childhood Special Education*, 39(3), 156–169. <https://doi.org/10.1177/0271121419860195>

Reinke, D. C. (2005). Similarities and differences between children with and without disabilities on identified clinical findings. *Developmental Disabilities Bulletin*, 33(1–2), 44–70.

Reinke, D. C. (2006). *Child maltreatment in Canada: A developmental-ecological perspective* [Doctoral dissertation]. ProQuest Information & Learning.

Sequeira, H., & Hollins, S. (2003). Clinical effects of sexual abuse on people with learning disability: Critical literature review. *British Journal of Psychiatry*, 182(1), 13–19. <https://doi.org/10.1192/bjp.182.1.13>

Shabalala, N., & Jasson, A. (2011). PTSD symptoms in intellectually disabled victims of sexual assault. *South African Journal of Psychology*, 41(4), 424–436. <https://doi.org/10.1177/008124631104100403>

Shanteau, J., Weiss, D., Thomas, R., & Pounds, J. (2002). Performance-based assessment of expertise: How to decide if someone is an expert or not. *European Journal of Operational Research*, 136(2), 253–263. [https://doi.org/10.1016/S0377-2217\(01\)00113-8](https://doi.org/10.1016/S0377-2217(01)00113-8)

Soylu, N., Alpaslan, A. H., Ayaz, M., Esenyel, S., & Oruç, M. (2013). Psychiatric disorders and characteristics of abuse in sexually abused children and adolescents with and without intellectual disabilities. *Research in Developmental Disabilities*, 34(12), 4334–4342. <https://doi.org/10.1016/j.ridd.2013.09.010>

Stalker, K., Green Lister, P., Lerpiniere, J., & McArthur, K. (2010). Child protection and the needs and rights of disabled children and young people: A scoping study. In *Education* (Issue February). <http://strathprints.strath.ac.uk/27036/>

Strickler, H. L. (2001). Interaction between family violence and mental retardation. *Mental Retardation*, 39(6), 461–471. [https://doi.org/10.1352/0047-6765\(2001\)0392.0.CO;2](https://doi.org/10.1352/0047-6765(2001)0392.0.CO;2)

Sue, V., & Ritter, L. (2012). *Conducting online surveys* (2nd ed.). Sage. <https://doi.org/10.4135/9781506335186>

Sullivan, P. M., & Knutson, J. F. (1998). Maltreatment and behavioral characteristics of youth who are deaf and hard-of-hearing. *Sexuality and Disability*, 16(4), 295–319. <https://doi.org/10.1023/A:1023019912548>

Tricco, A. C., Antony, J., Zarin, W., Striffler, L., Ghassemi, M., Ivory, J., Perrier, L., Hutton, B., Moher, D., & Straus, S. E. (2015). A scoping review of rapid review methods. *BMC Medicine*, 13(1), 224. <https://doi.org/10.1186/s12916-015-0465-6>

Tricco, A. C., Zarin, W., Antony, J., Hutton, B., Moher, D., Sherifali, D., & Straus, S. E. (2016). An international survey and modified Delphi approach revealed numerous rapid

review methods. *Journal of Clinical Epidemiology*, 70 (2016), 61–67.

<https://doi.org/10.1016/j.jclinepi.2015.08.012>

van der Put, C. E., Asscher, J. J., Wissink, I. B., & Stams, G. J. (2014). The relationship between maltreatment victimisation and sexual and violent offending: Differences between adolescent offenders with and without intellectual disability. *Journal of Intellectual Disability Research*, 58(11), 979–991. <https://doi.org/10.1111/jir.12031>

Verdugo, M. A., Bermejo, B. G., & Fuertes, J. (1995). The maltreatment of intellectually handicapped children and adolescents. *Child Abuse & Neglect*, 19(2), 205–215. [https://doi.org/10.1016/0145-2134\(94\)00117-D](https://doi.org/10.1016/0145-2134(94)00117-D)

Vervoort-Schel, J., Mercera, G., Wissink, I., Mink, E., van der Helm, P., Lindauer, R., & Moonen, X. (2018). Adverse childhood experiences in children with intellectual disabilities: An exploratory case-file study in Dutch residential care. *International Journal of Environmental Research and Public Health*, 15(10). <https://doi.org/10.3390/ijerph15102136>

Walters, A. S., Barrett, R. P., Knapp, L. G., & Borden, M. C. (1995). Suicidal behavior in children and adolescents with mental retardation. *Research in Developmental Disabilities*, 16(2), 85–96. [https://doi.org/10.1016/0891-4222\(94\)00029-8](https://doi.org/10.1016/0891-4222(94)00029-8)

Willott, S., Badger, W., & Evans, V. (2020). People with an intellectual disability: Under-reporting sexual violence. *Journal of Adult Protection*, 22(2), 75–86. <https://doi.org/10.1108/JAP-05-2019-0016>

Winters, N., Langer, L., & Geniets, A. (2017). Physical, psychological, sexual, and systemic abuse of children with disabilities in East Africa: Mapping the evidence. *PloS One*, 12(9), e0184541.

Wissink, I. B., van Vugt, E. S., Smits, I. A. M., Moonen, X. M. H., & Stams, G. J. J. M. (2018). Reports of sexual abuse of children in state care: A comparison between children

with and without intellectual disability. *Journal of Intellectual and Developmental Disability*, 43(2), 152–163. <https://doi.org/10.3109/13668250.2016.1269881>

Wolf, M. M. (1978). Social validity: The case for subjective measurement or how applied behavior analysis is finding its heart 1. *Journal of Applied Behavior Analysis*, 11(2), 203–214. <https://doi.org/10.1901/jaba.1978.11-203>