




# Diagnosing and Discussing Sexual Abuse: A Scoping Review on Training Methods for Health Care Professionals

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**Purpose:** Sexual abuse is a health issue with many consequences. Recognizing and discussing past sexual abuse has proven to be challenging for health care professionals. To improve overall quality of health care for sexual abuse victims, health care professionals need to be properly trained. The aim of this paper is to provide an overview of training methods for health care professionals and to report on their effectiveness.

**Methods:** A scoping review was conducted. A broad search was executed in six databases in December 2022. Study selection was performed by two independent reviewers, followed by quality assessment and data extraction.

**Results:** After screening of titles and abstracts and later full-text assessment for quality appraisal, seven articles were selected, consisting mostly of non-randomized trials, performed among a total of 1299 health care professionals. All studies were assessed to be of moderate to poor quality. The participants attended training courses with a wide variety of durations, settings, formats and methods. The outcomes showed improvements in self-perceived or measured knowledge, skills and confidence to discuss sexual violence. Changes in clinical practice were scarcely investigated. Training courses were most effective when a mix of didactic passive methods, such as lectures and videos, and active participatory strategies, such as discussions and roleplay, were applied. Timely iteration to reinforce retention of gained knowledge and skills also contributed to effectiveness. Participants most enjoyed incorporating opportunities for receiving feedback in small settings and sharing personal experiences.

**Conclusion:** This scoping review summarizes on how to effectively train health care professionals. Flaws and difficulties in measuring the effectiveness of training courses were discussed. Recognition and discussion of past sexual abuse by health care providers can be effectively trained using an alternating mix of multiple active and passive training methods with room for feedback and personal experiences.

**Keywords:** sexual violence, disclosure, recognition, medical education, post-graduate training

## Introduction

Sexual abuse (SA) is a broad term describing all forms of sexual contact or behaviour without consent. More than 40% of women and nearly 25% of men have experienced some form of sexual violence in their lifetime.<sup>1–3</sup> Trauma, including sexual violence, is highly stressful and causes activation of the Hypothalamic-Pituitary-Adrenal (HPA) axis which initiates the interaction between cortisol and the immune system. Stress initially results in increased levels of cortisol. When stress is too high and persists for too long, the HPA axis becomes dysfunctional and may be related to several diseases. Dysregulation of the immune system is a known cause of autoimmune- and chronic diseases such as cardiovascular diseases, chronic pain syndromes and asthma.<sup>4</sup> With a quarter of victims experiencing short- and long-term physical, psychological, relational and/or sexual consequences, the acute and chronic health issues of SA victims are extensive.<sup>2</sup>

Only eight per cent of victims disclose to professional care, mostly to general practitioners, psychologists and social workers.<sup>2</sup>

Victims experience several barriers to disclosure that are also associated with post-traumatic stress, such as avoidance of painful memories, shame and inexpressibility. The fear of not being believed, of being blamed and of facing possible post-disclosure consequences are often reasons for victims to withhold their past SA.<sup>5–10</sup> Most importantly, patients themselves often fail to recognize the relation between a history of sexual trauma and their current physical or mental symptoms.<sup>7</sup>

HCPs in their turn do not sufficiently recognize or respond to a possible history of SA in their patients either, which is mostly due to lack of knowledge or to personal barriers. HCPs are often ignorant of SA indicators, lack a consistent approach in addressing suspected abuse and do not know where to refer patients for further treatment after disclosure.<sup>11–13</sup> Personal barriers include HCPs not feeling comfortable addressing this subject, not having enough time to engage with it during consultations and the commonly held misconception that they are not the right person to disclose to because they believe SA is not a medical problem.<sup>11,12,14</sup> HCPs also mention that asking about SA can be too invasive and distressing for patients, as it could open up “Pandora’s box”.<sup>11,15,16</sup> In contrast with these self-imposed feelings in HCPs, patients say they consider questions about past SA by HCPs as legitimate and appropriate.<sup>9</sup> When patients are explicitly asked about negative sexual experiences, disclosures increased by 25% compared to when they were not asked.<sup>16,17</sup>

When HCPs lack the competencies to identify and discuss sexual trauma in a correct way, they potentially fail to provide appropriate care to sexually abused patients. It is also important because health care settings can easily trigger sexually traumatized patients, which may lead to further revictimization and re-traumatization as health care givers do not always respond respectfully and with recognition of the trauma when a patient discloses sexual abuse. This can (unintentionally) give a victim the impression that she/he is to blame. Also physical examinations can trigger victims because of the physical contact, especially a gynecological examination.<sup>3,4</sup>

Appropriately trained HCPs, however, can help to alleviate the health consequences of sexual violence and even reduce its recurrence.<sup>18</sup> Studies on training methods geared towards recognizing and discussing intimate partner violence, a closely related subject, have seen successful results.<sup>16,19</sup> Little research has been done, however, on training methods regarding recognizing and discussing SA.<sup>12,20</sup>

In order to provide a concise overview of how to properly train HCPs, we conducted a scoping review addressing the following question: what training methods are there for health care providers to improve on recognizing and discussing sexual trauma in adult patients, and what is their effectiveness? The aims of this scoping review were: to (1) conduct a systematic search of published literature on training methods for health care providers on recognizing and discussing past SA in adult patients; (2) map out the characteristics and range of methodologies used in these training methods; (3) report on whether and how these training methods improve recognition and discussion of sexual abuse; and (4) propose recommendations for the future development of training curricula dealing with this subject.

## Materials and Methods

### Protocol

The methodology of this scoping review was based on the framework outlined by Arksey and O’Malley (2005) and guided by the PRISMA extension for scoping reviews (PRISMA-ScR).<sup>21,22</sup>

### Data Sources and Search Strategy

The initial search was conducted on December 5, 2022, in six electronic databases: PubMed, EMBASE, PsycINFO, CINAHL, Cochrane and Web of Science. The search query was built using MeSH terms ([Appendix 1](#)) and free text terms ([Appendix 2](#)), focusing on a broad range of articles. The database search was limited to articles published in the languages “English” or “Dutch”. No further limits for date, study design or type were applied. After the search had been performed, studies were collected in data manager “EndNote 20.3” and deduplicated until no further duplicates were found. The articles were imported into data managing and data streaming software “Covidence” (Covidence.org), after which seven more duplicates were manually removed. No additional literature was found through forward and backward citation.

## Eligibility Criteria

A two-stage screening process was used to assess the relevance of studies identified in the search. Studies needed to fit the following criteria to be eligible for inclusion: the article discussed a training course focusing on improving recognition and discussion of past sexual abuse presented by patients over 18 years of age; the training course was targeting HCPs and future HCPs; and the study was written in English or Dutch. Exclusion criteria were: training course focusing on improving recognition and discussion of SA in victims with intellectual or physical disabilities, victims of genital mutilation and victims of physical and psychological interpersonal violence other than sexual violence.

## Study Selection Process and Critical Appraisal

For the first level of study selection, the articles were screened by one reviewer (SL) on title and abstract based on the inclusion and exclusion criteria. Titles (n=3) for which an abstract was not available were included for subsequent review of the full article in the data characterization phase. During the second phase of screening, all articles deemed relevant after title and abstract screening were procured for review of the full-text article. If articles could not be obtained through institutional holdings available to the authors, attempts were made to contact the source author or journal for assistance. The article was excluded if its full-text version proved to be irretrievable.

The characteristics of each full text were first independently extracted by two reviewers (SL, FZ), after which they met to discuss and resolve any conflicts. To help ensure consistency with the research question and purpose, the supervisor (TT) subjoined three times as a third party to resolve disagreements. The interobserver agreement was estimated as kappa 0.72 (95% CI [0.426–1.00],  $p < 0.001$ ).

Because the included studies were single-arm and randomized controlled trials, the MINORS checklist was chosen to assess the quality of the articles.<sup>23</sup> To fit the feasibility of follow-up within this field of research, we decided to tailor item six on this checklist from a two-year into two-month follow-up. The reviewers (SL, FZ, TT) independently assessed an included article as a try-out, after which the quality assessment was discussed to ensure equal interpretation of the MINORS checklist. After pilot-testing, the quality of all articles was independently and blindly assessed by the two reviewers (SL, FZ).

## Data Characterization and Synthesis

To determine which variables to extract ([Appendix 3](#)), a simplified data-charting template was developed by the team based on the JBI Reviewers Manual, and this template was inserted in Covidence.<sup>24</sup> Two reviewers (SL, FZ) first independently charted the data before coming together to discuss and merge their findings. The data were extracted from Covidence and compiled in Microsoft Excel 2016.

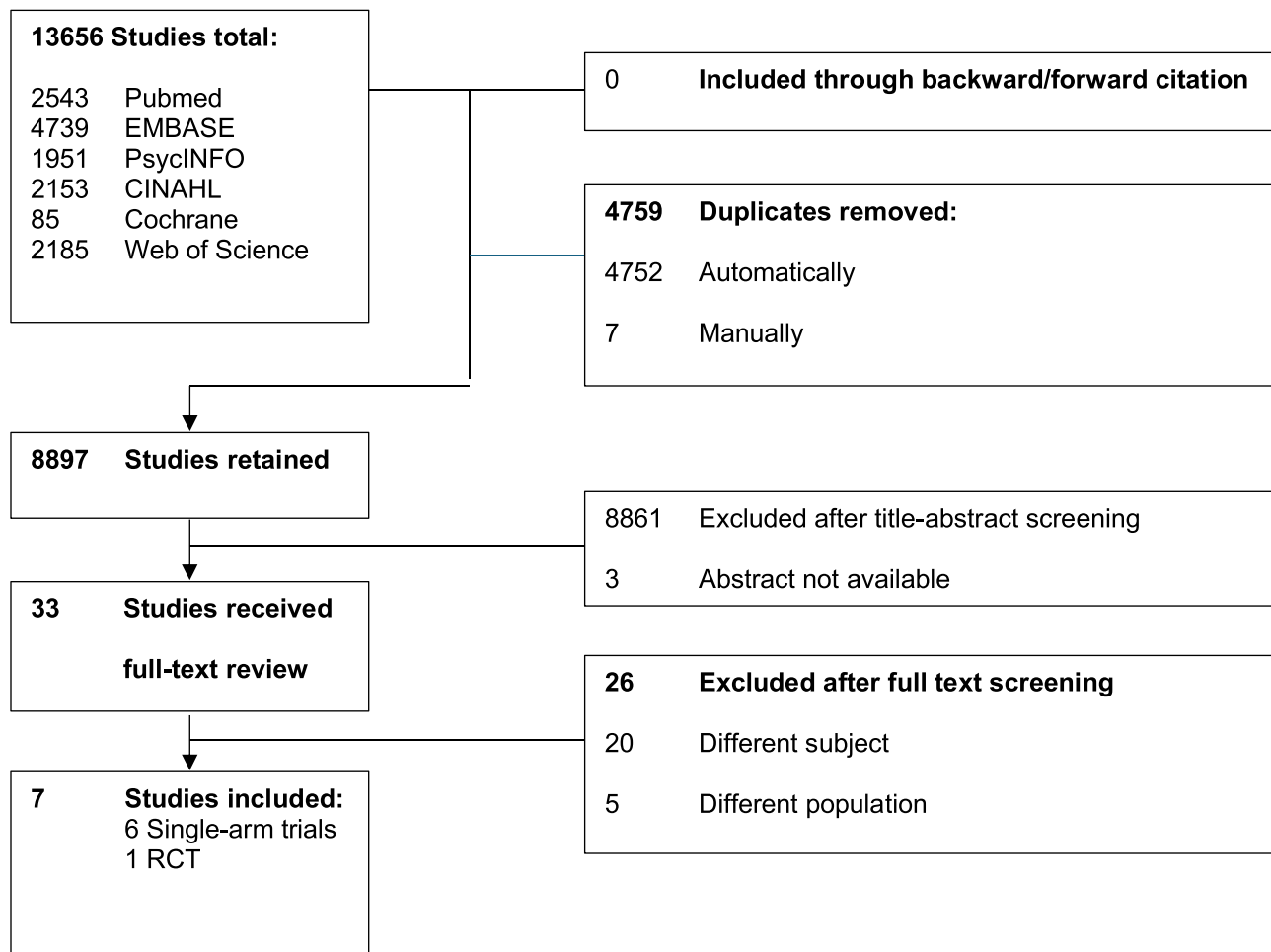
## Results

### Search and Selection of Studies

The database search conducted in December 2022 yielded 13,656 studies, 8897 of which remained after automatic and manual deduplication. After screening of title and abstract, 33 of these studies were considered potentially relevant. After full text assessment, 26 articles were excluded for discussing a topic or targeting a population that did not meet our inclusion criteria. Finally, a total of seven studies were selected that did meet the inclusion criteria. The flow of articles from identification to final inclusion is represented in [Figure 1](#).

### General Characteristics and Quality Appraisal

The general characteristics of articles included in this study are reported in [Table 1](#). All studies were published between 1990 and 2021.<sup>25–31</sup> The majority of studies were conducted in North America (United States and Canada), and the remaining two studies were conducted in Europe (Ireland) and in Oceania (New Zealand). Six studies used a pre- and post-test questionnaire, and two studies also followed up a third time after several weeks to several months. Six studies were single-arm non-randomized controlled trials (NRS), and one study was a multi-arm randomized controlled trial (RCT). According to the MINORS checklist ([Figure 2](#)), all studies were assessed as being of moderate to poor quality.



**Figure 1** Flowchart of literature search and study selection process.

## Characteristics of Participants

This scoping review included a total of 1299 (future) health care professionals, with Cavanagh (N=85), Siegel (N=32) and Wen (N=81) all having study samples of less than 100 participants. Six articles mentioned numbers lost to follow-up. Siegel had 3% loss of follow-up; Kennedy had 16% loss of follow-up; and the other articles had >20% loss of follow-up. The 1299 participants consisted of 1013 (78.0%) HCPs and 286 (22.0%) medical students. The former group consisted of 472 (46.6%) clinically working HCPs and 540 (53.4%) allied HCPs, with one study including only mental health professionals and another only family and internal medicine residents. Three studies mentioned the participants' gender, which showed a female predominance of 573 (83.4%) female versus 114 (16.6%) male participants.

## Characteristics of Interventions

The duration of interventions varied from one hour to one day, with Du Mont and Siegel having the shortest (one hour), and Cavanagh and Sullivan having the longest intervention (one day). Most studies utilized both didactic and participatory forms of conveying information during their training course. Didactic methods could consist of lectures, summaries, handouts, videos and/or audios. Participatory strategies could consist of scenarios or vignettes, discussions, specific exercises, simulation and/or roleplay. Siegel applied only didactic video and audio formats online. Kennedy's intervention incorporated some form of interaction suggesting a participatory element, although this was not specified any further. All other studies used an alternating mix of multiple active and passive training methods.

**Table 1** General Study Characteristics in Alphabetical Order Authors

Author, Reference, Year, Country	Aim of Study	Outcome Measures	Study Design and Method	Population, Number of participants, Follow-Up	Baseline Population Characteristics
Cavanagh et al <sup>25</sup> 2004, New Zealand	To improve confidence and competence, to inquire about abuse and respond to disclosures.	1. Satisfaction with the programme 2. changes approximately 6 weeks after the training in: 2a. confidence (about asking and responding) 2b. knowledge 2c. beliefs (including those identified as barriers to asking) 2d. actual clinical practice.	NRS, Pre- and post-training questionnaire on day of training and six weeks after training with use of a Likert scale (1 = strongly agree, 6 = strongly disagree)	Mental health professionals N = 85 FU = 28 (33%)	G: 73% F, 27% M. A: 24% under 30, 32% between 30–39, 31% between 40–49, 13% over 50. P: 14% therapist/psychotherapist, 10% psychologist, 7% social worker, 7% occupational therapist, 5% psychiatrist, 4% support worker. CE: 18% <3 years, 39% 3–9 years, 43% ≥ 10 years. country of origin: 78% European/Pakeha, 14% Māori, 5% Pacific Islander, 2% Indian, 1% Jewish.
Du Mont et al <sup>26</sup> 2017, Canada	To improve the competence of those working in healthcare settings, to respond to needs of women who present with a past history of sexual assault.	Self-perceived level of knowledge about and skills in responding to women who present with a past history of sexual assault. Training assessment: 1. improvement in knowledge about victims of sexual assault, and 2. being better prepared to a) identify, b) respond, c) provide appropriate support, and d) provide resources/referrals.	NRS, Pre- and post-training questionnaire on day of training with use of a Likert scale (1 = nothing/completely unprepared, 5 = everything/completely prepared)	Anyone working in healthcare settings N = 497 FU not reported	G: 91% F, 9% M. A: 14% 18–24 years, 40% 25–35 years, 20% 36–45 years, 26% ≥ 6 years. P: 54% allied health providers (physiotherapist, social worker, radiology technician), 9% nurses, 2% physicians, 2% administrative staff, 16% other professionals, and 18% trainees. CE: 55% <5 years, 15% 6–10 years, 12% 11–15 years, 18% >16 years.
Gore et al <sup>27</sup> 2021, United States	To provide medical students with an understanding of how to respond to sexual assault disclosures, collect medical information, avoid re-traumatization, and empower patients to feel in control of their care.	Self-reported comfort in communication skills regarding trauma-informed care and satisfaction regarding training.	NRS, Pre- and post-training questionnaire and satisfaction survey on day of training and two weeks after with use of a Likert scale (1 = very uncomfortable, 5 = very comfortable).	Second-year medical students N = 149 FU = 88 (59%)	None reported
Kennedy et al <sup>28</sup> 2013, Ireland	To design and deliver a reproducible teaching session on care of victims of sexual violence for undergraduate medical students and to measure change in their awareness and attitudes towards such patients.	Improvement of knowledge of the clinical and forensic aspects of sexual violence and their beliefs of common rape myths.	NRS, Pre- and post-training questionnaire on day of training before and after with statements and the use of a Likert scale (1 = strongly agree, 5 = strongly disagree).	Third-year medical students N = 105 FU = 88 (84%)	G: 56% F, 44% M. Country of origin: 65% Irish, 35% non-European.
Siegel et al <sup>29</sup> 2018, United States	To train medical students to provide trauma-informed care for adult female patients with history of sexual assault.	Improvement of individual test score on knowledge and improvement of comfort level concerning caring for patients following sexual assault.	NRS, Pre- and post-test on medical knowledge and questionnaire on attitudes before and within three weeks after training with use of a Likert scale (1 = very uncomfortable, 5 = very comfortable), satisfaction survey.	Undergraduate medical students, N = 32 FU = 31 (97%)	Study year: 34% first years, 9% second years, 28% third years, 25% fourth years.

(Continued)

Table 1 (Continued).

Author, Reference, Year, Country	Aim of Study	Outcome Measures	Study Design and Method	Population, Number of participants, Follow-Up	Baseline Population Characteristics
Sullivan et al <sup>30</sup> 1990, United States	To improve health practitioners' ability to recognize indicators of sexual abuse in the adolescents they serve, to increase the number of interviewing techniques available in approaching this subject, and to increase the likelihood of health practitioners making appropriate referrals.	Improvement of recognition of medical, psychological, and behavioural indicators and increase in number of sexual abuse cases.	RCT, Pre-, directly post-, after 3 months and/or after 6 months post- training questionnaire.	Health care employees N = 350 FU = 271 (77%)	P: 75% health practitioners (including nurse practitioners, family practice nurses, public health nurses, and medical doctors), 25% ancillary professions (predominantly social work and secondary health education). CE: 34% <2 years, 39% 2–8 years, 27% ≥8 years.
Wen et al <sup>31</sup> 2017, United States	To enhance primary care residents' ACE-related knowledge, sensitivity, and interpersonal communication skills in the context of established, longitudinal, patient-centred relationships.	Enhancement of understanding of ACE's, reflecting realistic encounters, helping to apply concepts and principles in practice.	NRS, Post-training questionnaire, between 2–5 months after programme.	Residents from Family Medicine and Internal Medicine N = 81 FU = 54 (67%)	None reported

**Note:** All percentages are rounded to whole numbers.

**Abbreviations:** NRS, Non Randomised Study; RCT, Randomised Controlled Trial; N, Number participants; FU, Follow-Up; G, Gender; F, Female; M, Male; A, Age; P, Profession; CE, Clinical Experience; ACE, Adverse Childhood Experience.

	Cavanagh 2004 <sup>25</sup>	Du Mont 2017 <sup>26</sup>	Gore 2021 <sup>27</sup>	Kennedy 2013 <sup>28</sup>	Siegel 2018 <sup>29</sup>	Wen 2017 <sup>31</sup>	Sullivan 1990 <sup>30</sup>
1. A clearly stated aim	1	2	2	2	1	2	2
2. Inclusion of consecutive patients	2	2	2	2	1	2	2
3. Prospective collection of data	2	2	2	2	2	2	2
4. Endpoints appropriate to the aim of the study	1	2	2	2	2	1	2
5. Unbiased assessment of the study endpoint	0	0	0	0	0	0	1
6. Follow-up period appropriate to the aim of the study	1	0	1	1	0	2	2
7. Loss to follow-up less than 5%	1	0	1	1	2	1	1
8. Prospective calculation of the study size	0	0	0	0	0	0	0
Additional criteria in the case of comparative study							
9. An adequate control group							2
10. Contemporary groups							2
11. Baseline equivalence of groups							0
12. Adequate statistical analysis							2
Total MINORS score	8	8	10	10	8	10	18
Maximum possible score	16	16	16	16	16	16	24

**Figure 2** Quality Assessment of selected articles with the MINORS checklist. The items are scored 0 (not reported), 1 (reported but inadequate) or 2 (reported and adequate). Red = poor quality, yellow = moderate quality, green = good quality. The global ideal score being 16 for non-comparative studies and 24 for comparative studies.

## Characteristics of Outcome Measures

The studies assessed a wide variety of outcome measures with some overlap in between. Kennedy focused almost entirely on changing beliefs and attitudes in students, by asking them whether they would agree with statements such as “women who wear certain types of clothing are responsible for being raped”. Cavanagh included common misconceptions among mental health professionals that may act as barriers to discussing SA, such as fear of offending or distressing patients. Whereas Du Mont measured the self-perceived level of certain skills, such as how to respond and provide adequate support and resources for referral, Sullivan assessed the actual skill of identifying indicators of SA. Both Kennedy and Siegel measured knowledge of recognition of SA before and after the intervention through pre- and post-testing, whereas Du Mont measured self-perceived knowledge of SA before and after and Wen only after. Four studies evaluated changes in confidence and comfort in recognizing, discussing and responding to past SA. Two studies asked participants whether they expected a change in their clinical practice after the intervention, whereas Sullivan assessed actual change by asking participants to report on the number of victims identified after the intervention compared to before. Four studies also evaluated the training course itself.

## Outcomes

The collection of outcomes can be found in Table 2. All included studies showed a statistically significant improvement on the outcome measures according to their aims. Siegel reported a significant increase of two more correctly answered knowledge-based questions in post-testing compared to pre-testing. Du Mont had an overall increase of 1.1 points on the 5-point Likert scale in increase of perceived knowledge of SA. In the study by Cavanagh, the number of mental health professionals who believed that SA disclosures were the result of psychotic delusions decreased by 2.7%. When rape myths were addressed, Kennedy showed a reduction of misconceptions about sexual violence (numbers not reported). Wen found that 65.6% (2014–2015) and 72.7% (2015–2016) of the participants agreed that the intervention helped to apply concepts and principles in practice, and 62.5% and 65.6% planned to implement these skills in their clinical



**Table 2** Study Outcomes in Alphabetical Order Authors

Article	Intervention Description	Relevant Outcomes Regarding our Research Question
Cavanagh et al <sup>25</sup> 2004	Length: 1 day. Content: 1. Discussions in small groups. 2. Research summaries on prevalence. 3. Effects and current practice. 4. Observing and participating in role play on asking and responding. 5. Handouts on policy and resources.	<u>Prior to training:</u> Participants with prior training claimed to know how to respond to disclosure and provide information, compared to untrained participants (76% versus 48%). <u>Directly after training:</u> 94% experienced general benefit from the training, and increased confidence in ability to inquire and to respond. Agreement to statement 1 'I have the knowledge and skills to inquire about sexual abuse in a sensitive and effective manner' and statement 2 'I have the knowledge and skills to respond appropriately to disclosures of sexual abuse pre-training' both shifted 1 point on a 6-point scale toward strongly agree in post-testing compared to pre-testing, which was statistically significant. All programme components were found to be between 'somewhat useful' and 'very useful', with improving confidence in one's abilities perceived as most useful. <u>6 weeks after training:</u> Significant decrease (5.5% to 2.8%) in proportion of disclosures believed to be the 'result of psychotic delusions'. Confidence in ability to ask about sexual abuse increased significantly following the training, as did confidence in ability to respond. 67% of the participants agreed with the statement 'The training session has changed my clinical practice'. 33% reported behavioural changes. In an open-ended question on how to respond immediately following disclosure the following responses increased: 1. Affirming that it is a good thing that the client has disclosed (36% to 82%). 2. asking how the client feels about having disclosed (27% to 45%). 3. checking whether the perpetrator poses a current risk to anyone (safety check) (0% to 36%)
Du Mont et al <sup>26</sup> 2017	Length: 1 hour. Content: 1. Series of interactive clinical case scenarios and vignettes. 2. Scripted and filmed practitioner-patient interaction demonstrating both helpful and unhelpful ways of responding to sexual assault survivors	Improvements in mean content domain scores for both perceived knowledge (2.8 pretraining vs 3.9 post-training) and skills (3.1 vs 4.1) following completion of the online curriculum. 97.2% noted increased knowledge about survivors who have experienced a past assault, 96.4% being better prepared to identify, 96.8% to respond, 94.6% to provide appropriate support and 87.5% to provide resources/referrals.
Gore et al <sup>27</sup> 2021	Length: 3 hours. Content: 1. Didactic lecture (1h): background information on definition and effects of SA and important considerations for physicians caring for SA survivors. 2. Small-Group activities (2h): videos, worksheets, class discussions, role-plays focused on practicing skills essential to caring for SA survivors.	Statistically significant increase in self-reported comfort in each of the nine assessed communication skills regarding trauma-informed care, as well as in the composite results of all nine survey questions. 97% of the completers of the post-training survey agreed or strongly agreed that the overall quality of the workshop was excellent, 93% agreed or strongly agreed that the quality of the self-study materials was excellent, 92% agreed or strongly agreed that the session activities were excellent. Qualitative feedback: students enjoyed debriefing and discussing each activity, counsellors sharing their experiences working with survivors, small groups in role-play sessions.
Kennedy et al <sup>28</sup> 2013	Length: 2 hours. Content: Interactive lecture on the care of the victim of sexual violence.	Significant improvement of knowledge in clinical and forensic aspects of sexual violence and their insight to common rape myths, with a strong shift to 'disagree' on rape myths. No significant additional shift toward 'disagree' was observed for "A woman cannot be raped by somebody that she is in a sexual relationship with" and "Rape cannot occur within marriage".
Siegel et al <sup>29</sup> 2018	Length: 1 hour. Content: 1. Facilitator guide. 2. Student guide. 3. Module 1: initial medical management of sexual assault in the adult female patients (11 min. video). 4. Module 2: patient interview simulation (7 min. video). 5. Module 3: suggestions for practice (26 min. audio).	Statistically increase of score of 2.0 (95% CI, 1.6–2.3) for the knowledge-based questions from pre- to post-test, on average the students answered 2 additional questions correctly. This difference in scores was relatively higher for preclinical students, who scored 0.7 higher than clinical students. Knowledge questions: questions 3.4 and 5 (about prophylactic medication and incidence of new disease) improved significantly. Comfort level rated significantly higher on post-test compared to pre-test. 96.9% of the students enjoyed the video format of module 1, 100% reported enjoying the video format of module 2, 84.4% reported enjoying the audio format of module 3. Qualitative feedback: 1. The programme only uses the pronouns she/her, which is not gender sensitive to all victims. 2. The audio module felt long, did not hold their attention, increased speed version was preferred

(Continued)



Table 2 (Continued).

Article	Intervention Description	Relevant Outcomes Regarding our Research Question
Sullivan et al <sup>30</sup> 1990	Length: 1 day. Content: 1. lecture and 2. discussion format focusing on identification of indicators in children and adolescents and reporting procedures to follow during an investigation 3. experiential exercises for practice of interviewing techniques to facilitate disclosure (no demonstration of practice of skills).	No significant differences on post-test scores between the post-test-only group (group 1) and the pre-test and immediate post-test group (group 2), thus the effects of the pre-test were ruled out as an explanation of any improvement in post-test scores. No relationship between length of time in job and performance on pre- or post-test. An overall improvement in the identification of sexual abuse indicators from pre-test to post-test was revealed ( $t=-4.59$ , $p<0.001$ ). This difference was sustained at the 3-month follow-up ( $t=3.89$ , $p<0.001$ ). The effect of the training had deteriorated at 6 months. Improvements in physical and psychological indicators were seen at post-test: Medical staff gained the least from training on physical indicators, no gains in their identification of behavioural indicators and the greatest gains in their identification of psychological indicators. Nonmedical professionals registered the greatest improvement in their identification of physical indicators (this reflects differences in background) and gains in identifying behavioural indicators were significant, no gains in recognition of psychological indicators were made. For both medical and other professionals interviewing skills improved, both groups were able to describe more specific actions they could take in an interview to make disclosing easier. Gains in medical personnel were stronger than for other professionals. Of the medical staff 15% noted at pre-test having at least 1 case last 3 months, at post-test (6 months) 20% noted this. Other staff 10% at pre-test and 37% at post-test.
Wen et al <sup>31</sup> 2017	Length: 4 hours. Content: 1. Didactic presentation with participant discussion: overview of the programme. 2. Lecture/discussion of the original ACEs study and the effects of ACEs on physiology, health, and behaviour.* 3. Physician and patient video and discussion. 4. Video presentation of a model 15-min encounter with additional examples and discussion. 5. Simulation experience with standardized patients. 6. Debriefing and formative feedback. 7. Discussion of the simulation, self-care and vicarious trauma.	2014–2015: 32 respondents. 1) knowledge: 64.5% agreed that the PATH training enhanced understanding of ACEs, 68.8% agreed that it reflected realistic encounters. 2) communication: 65.6% agreed that it helped them to apply concepts and principles in practice. 3) relationship: 62.5% planned on implementing the skills learned through simulation in their clinical practice. Overall: 77.4% said the faculty feedback was helpful. Modifications for next version were made based on the feedback. 2015–2016: 22 respondents. 1) knowledge: 81.8% agreed that the training enhanced understanding of ACEs, 54.5% agreed that it reflected realistic encounters. 2) communication: 72.7% agreed that it helped them to apply concepts and principles in practice. 10 of the 12 participants found that the workshop provided motivation to expand their ACEs-related clinical, educational and research activities, including assessing and educating patients about ACEs. 3) relationship: 63.6% planned on implementing the skills learned through simulation in their clinical practice. Overall: 95.5% said the faculty feedback was helpful.

**Notes:** All percentages are rounded to one decimal. \*Felitti VJ, Anda RF The lifelong effects of adverse childhood experiences. In: Chadwick DL, Giardino AP, Alexander R, Thackeray JD, Esernio-Jenssen D (eds). Chadwick's child maltreatment: sexual abuse and psychological maltreatment Vol 2, 4th ed. St. Louis: STM Learning, Inc., 2014, pp. 203–215.

**Abbreviations:** Min, minutes; ACEs, Adverse Childhood Experiences.

practice. In the study by Cavanagh, HCPs experienced a 94% increase in confidence to inquire about and respond to SA. Du Mont showed that 96.4% of participants felt better prepared to identify and 96.8% to respond to SA. Students showed a significant change in self-reported comfort in communication skills in Gore (numbers not reported). In Siegel, comfort levels regarding care for sexually abused patients improved ranging from 19% to 27%. Three studies showed either participants' change or expectation to change in their clinical practice. In Cavanagh, 67% of the participants agreed with the statement "The training session has changed my clinical practice", and 33% reported behavioural changes in their clinical practice. In Sullivan, the number of HCPs who had dealt with at least one case in the last three months prior to training rose from 15% to 20% six months after the intervention.

While post-training improvement on their defined outcome measures was universal for all studies, only one study evaluated whether this result could be maintained. Sullivan measured a significant improvement of identification of SA indicators in the post-test, a sustained significant improvement after three-months of follow-up, but a slight deterioration of this improvement after six months (numbers not reported).

In the studies that also evaluated the intervention itself, the training course was judged by participants as being enjoyable, of excellent quality, useful and motivating for applying knowledge in practice. Online-only training was experienced as isolating, while an alternating mix of active and passive training methods was found to be stimulating.

Participatory components of the training course that were enjoyed most, were those in small settings and those incorporating a form of feedback, such as role play, discussions and debriefing. Participants also appreciated it when those conducting the training course shared their personal experiences with SA victims. Video materials of model patients and simulations with standardized patients were found to resemble realistic encounters. In Siegel's exclusively online format, video materials were preferred to audio-only materials as the latter were not able to hold attention for long enough. Other criticisms concerned the lack of gender diversity in the use of victim pronouns and the duration of the training course being too limited to cover all aspects of SA.

## Discussion

In conclusion, our search yielded seven studies that addressed our intended subject, consisting mostly of non-randomized trials. All participants were either active or training to be active in health care and were subjected to training courses with a wide variety of durations, settings, formats and methods. Most training courses focused on increasing knowledge. The outcomes showed improvements in self-perceived or measured knowledge, skills, confidence in addressing SA or, if measured, a beneficial change in clinical practice. Some decline was measured as time passed by. If assessed, interventions were rated as useful to the participants when both participatory and didactic methods, an element of feedback and personal experience sharing were incorporated into the training course. On-line training was experienced as isolating.

## Strengths and Limitations of Included Studies

The studies included in this review used a wide range of methodologies to measure the effect of their training course. However, not all endpoints hold the same validity. We question whether evaluating subjective outcomes such as changes in knowledge and skills through participants' self-report, as was done in three studies, has value for measuring actual change in their own clinical setting. Although self-reports are more accessible and easier to measure, drawing conclusions from self-perception is open to biasing influences, even under anonymity.<sup>25</sup> Measuring confidence is even more challenging in this respect. No correlation between self-perceived confidence and formally assessed performance has been found, making the outcome of "self-perceived improvement" of limited usefulness in translation to practice.<sup>32</sup> The ability to demonstrate and perform in practice is a more reliable indicator that the newly acquired knowledge, skills and attitudes have actually been integrated.<sup>33</sup>

All articles used surveys as an instrument for investigating their endpoints. As surveys are an inexpensive and simple means for extracting information such as preferences, opinions or facts, they are a suitable and predictable way of analysing this type of intervention. However, one should take into account that, due to their optional character, surveys contain both selection and non-response biases.<sup>34,35</sup> Likert scales are a popular instrument for measuring attitudes, beliefs and perceptions in surveys, which is also reflected in this review as five out of seven articles used one or multiple Likert scales. Their popularity, however, does not necessarily equate to its validity as a data collection method.<sup>36</sup> Depending on how questions are formulated, Likert scales can carry potential for bias as respondents tend to tick the middle answers and avoid the end of the scale. Also because of information loss as opposed to qualitative interviews, which are able to prevent such loss of information but, on a great scale, are immensely time-consuming and do not offer the same quantitative outcomes as surveys.<sup>37</sup>

Only one study used a randomized controlled trial design (evidence level II), while the remaining studies were single-arm NRS providing a lower level of evidence (level III-3). All included studies were rated by the MINORS checklist as being of moderate to poor quality, which was mostly based on the lack of blind assessment of endpoints (statement five), the loss of follow-up of more than 5% (statement seven) and the lack of prospective calculation of study size (statement eight). Although blinding and the use of control groups can help minimize bias in the analysis, this is very difficult to achieve when studies are conducted in an educational setting. A more attainable way, therefore, is to conduct testing before the intervention as well as after, which was done in all studies except one. The same holds true for what the MINORS checklist considers an acceptable amount of loss to follow-up. Only one study maintained 97% participants during follow-up, and one study maintained 84%, but the rest lost over 20% of its participants during follow-up, which would normally be considered a threat to validity.<sup>38</sup> However, due to the above-mentioned optional character of survey studies, some loss to follow-up is to be expected and should, therefore, be judged less severely in our opinion.

## Strengths and Limitations of This Review

To our knowledge, no review of any kind has been performed on training methods about SA, making this review the first to enhance our knowledge of training methods for HCPs to improve recognizing and discussing SA. Another strength of this scoping review is its use of guidance by validated PRISMA-ScR protocol and its supervisors with expertise on SA as well as on educational science. Transparency in the review process was provided. A broad scope was ensured by performing an extensive search using six search engines. The number and heterogeneity of the included articles showed that conducting a scoping review on the subject matter was the correct format. Because the applied training methods were so diverse, the subject could be evaluated from different angles, offering insight into a variety of training methods. For obvious reasons, assessments of the different interventions could not be compared, leaving room for future research to establish what duration, setting, format or method is preferred. Lastly, the scoping review was conducted independently by two researchers and intensively guided by two expert supervisors, confirming the validity of the outcomes.

## Recommendations for Practice

Teaching HCPs to identify and respond to SA victims takes more than the mere transfer of knowledge. As Miller pointed out, what is needed to accomplish measurable change in practice is to know how to use the knowledge that has been acquired and to develop the skills to interpret and apply such knowledge.<sup>32</sup> As a more intricate skillset is required, training courses using only didactic, or passive, learning techniques will have limited effect on changing practice. Based on the studies we compiled in this review, we recommend the use of mixed intervention methods, consisting of both didactic and participatory elements. Active learning techniques, also known as experiential learning, are said to increase engagement and motivation in students and are particularly important in the acquisition of skills. Though not impossible, experiential learning is hard to accomplish in a setting that is strictly online. Online-only training does not have the same benefits as classic face-to-face learning, is said to have isolating effects and can hamper the quality of discussion and debriefing.<sup>29,39</sup> This is a challenge as online courses are more easily accessible to HCPs, and more and more postgraduate medical education courses are being offered online. That said, we propose that a training course on improving recognition and discussion of SA is not done online exclusively but at least partly in a live setting.

Role-play as part of active learning, as was used in three studies, is a training method that is well-known to medical education for practice and evaluation of skills. Using actors or scripts acted out by participants as standardized patients, role-play is a form of simulation that underlines the importance of the social context of learning. It is said to help participants gain better involvement, self-esteem and empathy as well as increased learning.<sup>40</sup> It can also give more insight into their own as well as their patients' feelings, which is especially helpful when it concerns a sensitive subject such as SA. In the studies we included, receiving feedback from educators on participatory exercises was particularly appreciated. Feedback during debriefing has been marked as the single most important feature of simulation-based education.<sup>41</sup> To receive feedback has been shown to have motivational benefits for participants and to improve performance and speed in acquiring and applying knowledge.<sup>33</sup> We suggest, therefore, that SA training for HCPs should involve a form of simulation or role-play that includes debriefing opportunities.

There was only one study that carried out a follow-up beyond five months and showed deterioration of skills six months after training.<sup>25</sup> As it is a well-known fact that significant effects on health care knowledge are only achieved through repetition and reinforcement, this further confirms the need for reinforcement to maintain the impact of training courses.<sup>41</sup> Consequently, a training course aiming to have lasting effects should also offer the possibility of a refresher course after six months.

It is vital to the enhancement of care to effectively train HCPs on how to diagnose and discuss a history of sexual abuse with patients. When developing new curricula for HCPs on this subject, training courses should employ alternating didactic and participatory learning methods and implement reinforcement within a time span of six months for sustainability. Training courses should preferably be face-to-face, showing how to apply knowledge and skills in practice, and their duration should be at least three hours to allow for transfer of knowledge and skills, feedback and role play practice to take place. With these insights, we hope to contribute to the further development of training courses aiming to equip health care professionals with better responses to the needs of victims of sexual abuse.

## Conclusion

Most training courses for diagnosing and discussing sexual abuse for health care professionals focused on increasing knowledge. The outcomes showed improvements in self-perceived or measured knowledge, skills, confidence in addressing SA or, if measured, a beneficial change in clinical practice. If assessed, interventions were rated as useful to the participants when both participatory and didactic methods, an element of feedback and personal experience sharing were incorporated into the training course. On-line training was experienced as isolating. Recognition and discussion of past sexual abuse by health care providers can be effectively trained using an alternating mix of multiple active and passive training methods with room for feedback and personal experiences.

## Abbreviations

HCPs, Health care professionals; NRS, Non-randomized study; RCT, Randomized controlled trial; SA, Sexual abuse.

## Disclosure

The authors report no conflicts of interest in this work.

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