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Mandated Reporters' Experiences with Reporting Child Maltreatment: A Meta-Synthesis of Qualitative Studies

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Abstract

Objective: To systematically search for research about the effectiveness of mandatory reporting of child maltreatment and to synthesize qualitative research that explores mandated reporters' (MRs) experiences with reporting. Design: As no studies assessing the effectiveness of mandatory reporting were retrieved from our systematic search, we conducted a meta-synthesis of retrieved qualitative research. Searches in Medline (OVID), Embase, PsycINFO, CINAHL, Sociological Abstracts, ERIC, Criminal Justice Abstracts, and Cochrane Library yielded over 6000 citations, which were deduplicated and then screened by two independent reviewers. English-language, primary qualitative studies that investigated

MRs' experiences with reporting of child maltreatment were included. Critical appraisal involved a modified checklist from the Critical Appraisal Skills Programme (CASP) and qualitative meta-synthesis was used to combine results from the primary studies. Setting: All healthcare and social-service settings implicated by mandatory reporting laws were included. Included studies crossed nine high-income countries (United States, Australia, Sweden, Taiwan, Canada, Norway, Finland, Israel and Cyprus) and three middle-income countries (South Africa, Brazil, and El Salvador). Participants: The studies represent the views of 1088 MRs. Outcomes: Factors that influence MRs' decision to report and MRs' views towards and experiences with mandatory reporting of child maltreatment. Results: Forty-four articles reporting 42 studies were included. Findings indicate that MRs struggle to identify and respond to less overt forms of child maltreatment. While some articles (14%) described positive experiences MRs had with the reporting process, negative experiences were reported in 73% of articles and included accounts of harm to therapeutic relationships and child death following removal from their family of origin. Conclusions: The findings of this meta-synthesis suggest that there are many potentially harmful experiences associated with mandatory reporting and that research on the effectiveness of this process is urgently needed.

Strengths and limitations of this study

- This is the most comprehensive review to date of mandatory reporting of child maltreatment, focusing on MRs' experiences with reporting
- Although a systematic search was conducted, little information about mandatory reporting from low and middle income countries was retrieved
- Critical appraisal of included articles followed an established checklist and reporting of synthesis findings were done according to the ENTREQ statement
- This meta-synthesis used an established method for synthesizing study findings that enabled the creation of recommendations for MRs relating to the reporting process

1. INTRODUCTION

Global estimates of child maltreatment indicate that nearly a quarter of adults (22.6%) have suffered childhood physical abuse; over a third of adults (36.3%) have suffered childhood emotional abuse; 16.3% of adults have suffered childhood neglect; and 18% of women and 7.6% of men respectively have suffered childhood sexual abuse.[1-3] Given the high prevalence of child maltreatment and its potentially serious, long-term health and social consequences [4-7], many countries have taken steps to prevent child maltreatment and reduce its associated impairment, including through the introduction of mandatory reporting.

Mandatory reporting law, in the context of child maltreatment, "is a specific kind of legislative enactment which imposes a duty on a specified group or groups of persons outside the family to report suspected cases of designated types of child maltreatment to child welfare agencies".[8] The United States (U.S.) enacted the first mandatory reporting laws in 1963.[9 10] These laws were more narrowly conceived, requiring certain mandated professions to report "severe" or "significant" physical abuse by parents or caregivers. Over time, legislation has expanded in the U.S. and has been replicated in other countries. Across jurisdictions, mandatory reporting can include other forms of maltreatment (notably physical, sexual, and emotional abuse, neglect, children's exposure to intimate partner violence, and prenatal exposure to drug abuse), reporting by more than mandated professionals (e.g., by all citizens), reporting abuse perpetrated by non-caregivers, and reporting beyond "severe" or "significant" abuse.[11]

Some information about the international context of mandatory reporting is available, but in general little information about this process is available from low and middle income countries (LMICs) (see online supplementary file 1). Furthermore, while we began this project with the intent of doing a systematic review of studies of effectiveness about mandatory reporting, we were unable to find any

studies that could be used for this purpose (i.e., no prospective controlled trials, cohort studies, or case-control studies assessing the effectiveness of mandatory reporting in relation to child outcomes were retrieved from our systematic search). Instead, we found that while there are a handful of prospective studies assessing particular outcomes of mandatory reporting [12 13], most of the research discussing its impact relies on retrospective analysis of child protection services (CPS) reports [14-17] or is related to mandated reporters' (MRs), children's, and caregivers' perceptions about reporting, as discussed in surveys [18-26], qualitative literature [27-29], or case reports [30-32] (qualitative literature is summarized in this meta-synthesis). Given the paucity of data on effectiveness of mandatory reporting, this review examines qualitative research about MRs' experiences with reporting. A companion paper titled, *Caregivers' and children's experiences with mandatory reporting of child maltreatment: A meta-synthesis* (in preparation), will address caregivers' and children's experiences with mandatory reporting.

2. METHODS

This is a meta-synthesis of qualitative studies on mandatory reporting for child maltreatment. For this synthesis, we follow the work of Feder and colleagues [33] who synthesized qualitative research about women with histories of intimate partner violence (IPV) and in particular their experiences with healthcare professionals. The results are reported according to the ENTREQ [enhancing transparency in reporting the synthesis of qualitative research] statement[34] (see online supplementary file 2 for ENTREQ research checklist).

2.1. Search strategy

The systematic search was conducted by an information professional (JRM). Index terms and keywords related to mandatory reporting (e.g., "mandatory reporting", "mandated reporters", "duty to report", "failure to report") and child abuse (broadly defined) were used in the following databases from database inception to November 3, 2015: Medline (1947-), Embase (1947-), PsycINFO (1806-), CINAHL

(1981-), Criminal Justice Abstracts (1968-), ERIC (1966-), Sociological Abstracts (1952-), and Cochrane Libraries (see online supplementary file 3 for example search strategy). Forward and backward citation chaining was conducted to complement the search. All articles identified by our database searches were screened by two independent reviewers (JRM & AA) at the title and abstract level. At the level of title and abstract screening, an article suggested for inclusion by one screener was sufficient to put it forward to full-text review.

2.2. Study selection criteria

Our inclusion criteria were as follows: 1) primary studies that used a qualitative design; 2) published articles; 3) investigations of MRs' experiences with mandatory reporting of child maltreatment, including physical abuse, sexual abuse, emotional abuse, neglect, exposure to IPV, prenatal exposure to maternal drug abuse, or child sex trafficking; 4) presence of direct quotes from the participants to facilitate the formulation of the results; and 5) English-language articles only. Excluded studies include 1) all non-qualitative designs, including surveys with open response options; 2) studies that did not examine mandatory reporting in the context of child maltreatment (e.g., mandatory reporting for elder abuse or IPV only); and 3) qualitative methods that did not lend themselves to direct quotes from participants (e.g., forensic interviews).

2.3. Data analysis

Data analysis followed two parallel strands: a) first and second-order constructs (Table 1) were identified in each article and b) each article was appraised with a modified critical appraisal tool for qualitative literature from CASP. For data extraction, each article was analyzed for the perspectives of MRs (first-order constructs) and the conclusions offered by the author(s) of the article (second-order constructs). Two reviewers (JRM & MK) independently placed the primary data from each study and its corresponding code into an Excel file and these files were compared for consistency (JRM). Any

discrepancies were resolved by a third researcher (HLM). For critical appraisal, a modified appraisal tool from CASP was used to assess the quality of each article (see online supplementary file 4). Two independent authors (JRM & MK) appraised each article to assess if it addressed each CASP question (yes/no/unsure) and came to consensus about the final score for each article. Final conclusions (third-order constructs – Table 1) were all double checked (JRM) to ensure that they were supported by articles that ranked highly on the quality appraisal forms.

Table 1. First, second, and third order constructs

Construct order	***Definition***
First order constructs	First-order constructs were the experiences and understandings of MRs with respect to mandatory reporting processes
Second order constructs	Second-order constructs were the conclusions or interpretations of the article author(s) who reported the study findings – some of these interpretations were inferred from the author's recommendations.
Third order constructs	Views and interpretations of the meta-synthesis team

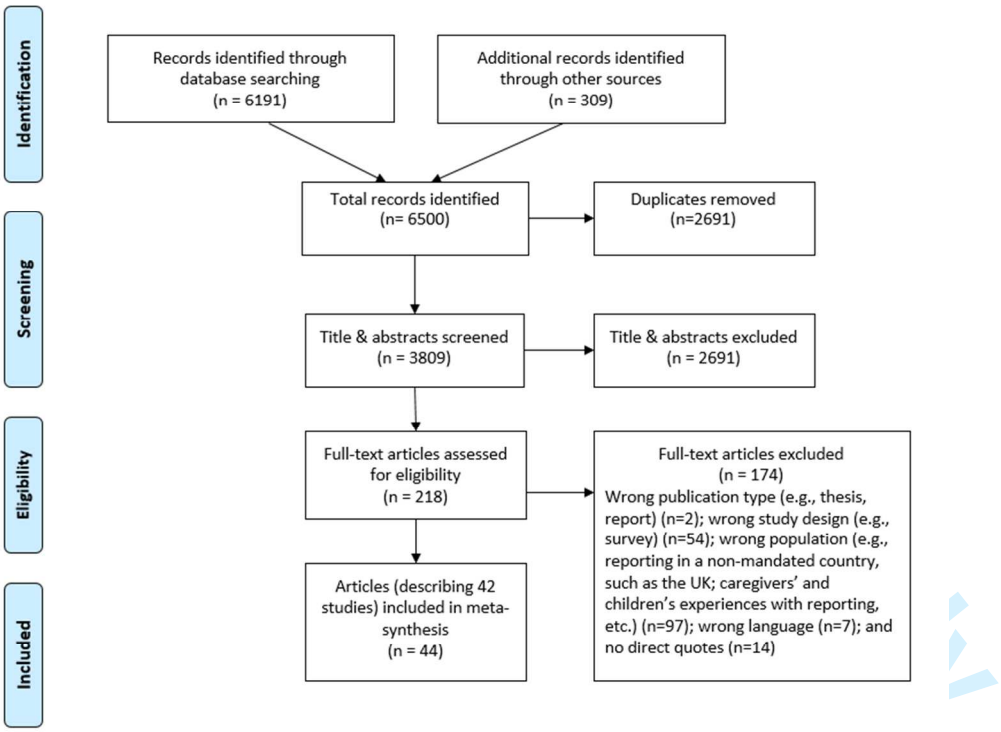
Data coding for this meta-synthesis was primarily inductive. Data analysis focused on identifying a) first-order and second-order constructs that appeared across studies (repeating themes); b) first-order or second-order constructs that were conflicting across studies or within studies; and c) unfounded second-order constructs, or researchers' conclusions or interpretations that were not supported by quotes from participants. First- and second-order constructs that appeared across studies were re-examined to develop the third-order constructs, or the conclusions of this meta-synthesis. Specifically, second-order themes that addressed strategies to improve MRs' experiences with the reporting process – especially when these themes were supported by strategies offered by MRs in first-order constructs – were, per Feder et al. [33], reworded as recommendations. For example, the recommendation that MRs should "Be aware of jurisdiction-specific legislation on reportable child maltreatment" combines a second-order construct that suggests MRs need better training about jurisdiction-specific mandatory

reporting legislation with the first-order construct in which MRs admitted they lacked knowledge about mandatory reporting legislation.

3. RESULTS

A total of 6500 records were identified and, after deduplication, 3809 title and abstracts were screened using the screening criteria. After full-text screening of 218 articles, 44 articles (representing 42 studies) were included in this review (see Figure 1). Details about participant and study characteristics are available here (see online supplementary file 5 for study characteristics).

Figure 1. PRISMA Flow Diagram



3.1 Study characteristics and methodological quality

The methodological quality of the studies varied and the total score percentages for each article (total possible score was 20 "yeses") are reported in Table 2. These studies represent the views of 1088 MRs, including 231 physicians, 224 nurses, 168 CPS professionals, 156 teachers, 114 psychologists and

therapists, 85 social workers, 19 dentists, 16 domestic violence workers, 16 police officers. This underestimates the number of participants included because it was challenging to determine exact number of participants in some of the studies (including one study with 10 focus groups). MRs' ages were reported in 25% of studies and ranged from 20 to 60 years of age; their years of experience were reported in just over 50% of the studies and ranged from 6 months to 41 years of experience. Over 80% of the articles had been published since the year 2000, with seven articles published between 1981 and 1999. The studies took place in nine high-income countries (U.S. (15), Australia (6), Sweden (5), Taiwan (5), Canada (2), Israel (2), and Norway (1), Finland (1), and Cyprus (1)) and three middle-income countries (South Africa (3), Brazil (2), and El Salvador (1)). Other studies from LMICs were identified [35-39] that did not meet all of the inclusion criteria; this limitation of our study is discussed further below.

Table 2. Methodological Quality of Studies

% of Total Score	49% and under	50-74%	75% or above
Study Reference	[40-51]	[27-29 52-70]	[71-80]

3.2 MRs' decisions to report and experiences with reporting (first-order constructs)

Seven first-order constructs (views of MRs) are detailed below; all except construct seven (experiences receiving a report) are supported by articles from the top quartile (see Table 2 above). As is shown in Table 3, most of the articles (91%) addressed factors that influenced MRs' decision to report (construct 1). These findings suggest that MRs struggle to identify less overt forms of maltreatment, including "mild" physical abuse, emotional abuse, children's exposure to IPV, and abuse experienced by children with disabilities. MRs also were reluctant to report their suspicions of abuse and preferred to report only when they found physical evidence of abuse.

Factors that influenced the decision to report were distinct from the reporters' judgements and views about mandated reporting (construct 2) and their experiences with reporting (construct 3), as expressed through specific accounts of positive or negative experiences. While six articles (14%)

reported positive experiences with the reporting process, 32 articles (73%) mentioned negative experiences with the reporting process, including 13 articles (30%) that offered concerning examples regarding negative child outcomes, such as: when the child was not removed from harm and the abuse continued or intensified; when the child was removed from harm, but the foster care environment was worse than the family-of-origin environment; and child death following a report or after being removed from the family of origin.

First-order constructs also addressed MRs' values and knowledge related to child maltreatment and reporting (construct 4), MRs' strategies for responding to disclosures of child maltreatment or for reporting (construct 5), and whether or not MRs felt personally responsible for reporting or passed this responsibility to others, such as a supervisor (construct 6). A handful of articles included CPS professional's experiences with receiving a report (construct 7).

Table 3. First-order constructs (views of MRs) and the number (n) and percent (%) of articles that address each construct

First-order construct	(n, %)	Description of construct	Illustrative quotes
1) Deciding when to report	**n=40, 91%**	Factors that influenced MRs' decision to report, including: • the amount of evidence of maltreatment (e.g., challenges identifying less overt forms of maltreatment), • the context of the reporter (e.g., institutional support; time burden), • preferred alternative responses (e.g., chart and follow child progress instead of reporting), • the perceived impact of the report on the child or family (e.g., concern regarding stigma), • consultation (i.e., MRs' decision or need to consult with a colleague or CPS before filing a report), and • family context (e.g., perceived parental skills)	"The most obvious [signs] are easy. It's the ones that are not so obvious, the ones that you have to dig for and explore to get to... those are the hardest ones... those are the ones that just haunt you" [54] "We need more time (than 24 hours) to interact with the child, evaluate the whole thing, and make a decision" [58] "If nothing comes out of it [report to CPS is unsubstantiated]…you're scared…thinking, I just bothered this family for no reason based on my assumptions" [52]
a) Evidence	n=32, 73%		
b) Context of reporter	n=28, 64%		
c) Alternative response	n=19, 43%		
d) Perceived impact	n=12, 27%		
e) Consultation	n=9, 20%		
f) Context of family	n=8, 18%		

2) Judgements and views towards the reporting process a) Negative b) Positive	**n=34, 77%** n=33, 75% n=11, 25%	Factors related to MRs' general satisfaction with the reporting process, including: • MRs' perceived level of trust or collaboration with other professionals in the reporting process (including their own colleagues or CPS), • any general burden MRs felt from the reporting process • MRs' perceptions of CPS's (in)effectiveness	"Knowing the child protection agency in our area, nothing would come of a report" [64] "It's pretty much a one way street as far as information goes. I find that really frustrating" [79]
3) Experiences with reporting a) Negative b) Positive	**n=33, 73%** n=32, 74% n=6, 14%	Examples of MRs' positive or negative experiences with the reporting process, including: • the amount of support MRs received when reporting (e.g., some MRs had little institutional support for their reporting duties), • responsiveness of the intake workers screening the report (e.g., some reporters discussed rude or dismissive intake workers), • the scope of CPS (e.g., some reporters were discouraged when their report fell outside of the scope of CPS), • MRs' positive or negative feelings about filing a report, • feedback from CPS (e.g., many reporters were discouraged when they received no feedback about their reported case from CPS), and • perceived outcomes of the report (MRs described positive or negative outcomes of the report for themselves, the child, or the family)	"You'll call and say, 'I have a such and such child who made an outcry that her uncle rubbed her breasts last night.' And they'll be like, 'Well, was it over the clothes or under the clothes?'…I know that's all part of their risk assessment and they have to get to the high-priority risk to be able to take a report, but it's really challenging to hear someone on the other line say, 'Well, you know, that's just not bad enough'" [63] "She made the student describe the sexual abuse experience again after they returned from the hospital. This is so [emphasized] wrong. The student should not have to experience secondary damage by going through this again and again" [75]
4) MRs' values and knowledge	**n=19, 43%**	Values and knowledge that informed MRs' throughout the reporting process: • Conflicting values included discussions of child rights and well-being, parental rights and well-being, cultural factors, and the desire to ensure family preservation • MRs' discussions about their lack of knowledge related to reporting legislation or about how to identify and respond to children in need.	"Many times, we don't have adequate knowledge about child abuse and the law. It is not extensively provided to every health care provider or to ordinary people. Without the knowledge, it is hard for us to be sensitive about the abuse or to find evidence of child abuse" [59]

5) Strategies for responding to disclosures of maltreatment and reporting	**n=16, 36%**	Practical strategies used by MRs during the reporting process, including: • strategies for responding to disclosures of abuse (e.g., listening and consoling) and • strategies for filing a report (e.g., informing a child or family of the limits of confidentiality before when starting a therapeutic relationship) This construct also related to MRs' struggles to engage non-judgementally with offending caregivers	"My sense was that this child just wanted to know that she was safe and that she could tell someone, so I used that to help, in questioning her, reassuring her that nothing would happen if she told…[When the report was made] I presented it to her as that she wouldn't get in trouble but that it was a secret that I couldn't keep, and that it was something that I could help her with...she was very aware of the decision...The child knew what was going on and she felt comfortable with my telling her I was going to make a report" [48]
6) Responsibility	**n=15, 34%**	• MRs' perceived responsibility in identifying and responding to child maltreatment (i.e., whether MRs' felt they were responsible for engaging with children, or felt that they needed to refer the case to another colleague)	"I reported my suspicions to the doctor that was looking after the child and he reported it to the consultant" [53]
7) Experiences receiving a report	**n=2, 5%**	• CPS professionals' positive and negative experiences receiving a report	"So part of the issue for us is because we got all of these mandated reporters and intake has to take the complaint regardless, that's the problem. It's that they're not permitted to say, well that's not enough information" [56]

3.3 Strategies for supporting MRs (second-order constructs)

All second-order constructs (views of study authors) listed in Table 4 below were supported by first-order constructs within the same study; all were also supported by articles from the top quartile of study quality score (see Table 2 above). These constructs represent study authors' suggestions for how MRs could improve their decision-making during the reporting process, including strategies for mitigating negative experiences. The majority of articles (86%) commented on the need for MRs to be

trained in how to best identify, respond, and report suspected child maltreatment (construct 1). Two other influential themes related to the need for increased consultation between MRs and between MRs and CPS (construct 2) and the need for increased communication among MRs, between MRs and children and families, and between MRs and CPS (construct 3). Study authors also emphasized that MRs needed to be better supported in their reporting process (construct 4) and that they needed clear protocols related to identifying and reporting child maltreatment (construct 5). Some study authors emphasized that child rights and well-being must be prioritized throughout the reporting process (construct 6). A few study authors suggested that MRs' and CPS's responses to child maltreatment needed to be culturally competent (construct 6) and emphasized that MRs must report suspicions of abuse when this is their legal obligation.

These second-order constructs show that MRs need better support at all social-ecological levels: a) personally, in terms of better training, including skills to identify and respond to child maltreatment, as well as skills for stress and coping management; b) interpersonally, in terms of better opportunities for dialogue between colleagues about child maltreatment generally, as well as specific cases; c) organizationally, in terms of more support for the time it takes to report (and the potential 'costs' to other patients when taking this time), safeguards for MRs' personal safety when reporting, and access to staff experts in child maltreatment; d) in the community, especially in terms of better feedback about reported cases from CPS and in general better dialogue between different agencies involved in the reporting process; and e) nationally, in terms of national protocols about identifying, responding to, and reporting child maltreatment.

Table 4. Second-order constructs (views of study authors) and the number (n) and percent (%) of articles that address each construct

Second-order construct	(n, %)	Description and citations for supporting articles from the top quartile	Illustrative quotes
1. Training & Knowledge	**n=38, 86%**	• MRs must know how to identify all forms of child maltreatment, including	"All practitioners whose patients include children

		common and less overt forms of child maltreatment (emotional maltreatment, physical neglect, emotional neglect, abuse against children with disabilities) [52 54 71 74 76 77 80] • MRs must know how to best respond to a child and family when child maltreatment is identified or disclosed [71 76 80] • MRs must know common issues encountered when reporting, such as ethical conflicts; moments where MRs hesitate to report; confidentiality issues; jurisdiction-specific legislation; risks and benefits of reporting; strong feelings that arise from child maltreatment cases; consequences of failure to report [53 71 77] • MRs must know the purpose of mandatory reporting, i.e., child safety & well-being [71 75] • MRs must know their duty to report and how this differs from their moral responsibility to respond [71 76]	should avail themselves regularly of educational opportunities to increase their knowledge of the epidemiology and evaluation of child abuse and neglect" [80] "Professionals and authorities should have increased awareness of the legislation and their duties in all forms of violence" [67] "Good guidelines are important, but missing guidelines must not be an excuse not to care" [71] "Reporting, a legal requirement, must be separated from responding, which is a moral duty" [58]
2. Consultation	**n=23, 52%**	• For child protection to be successful, there needs to be better collaboration between all professionals in the reporting process [71 74-76 79] • MRs should be able to discuss cases of suspected child maltreatment with others, whether that be members of their own team, a child maltreatment team at their institution, or CPS personnel [52 53]	"Another important finding from the study is the urgent need to improve systematic collaboration and a trustful relationship with CPS" [76] "An important resource to develop in an effort to improve child abuse and neglect detection and reporting may be the identification and ongoing support of child abuse and neglect content experts within nonpediatric and nonacademic hospital" [52]
3. Communication	**n=21, 47%**	• MRs should communicate clearly with the child or family about their reporting duties and the limits of confidentiality [73 80] • MRs require feedback from CPS about reported cases [52 53] • MRs should be afforded opportunities to formally and informally talk about child maltreatment with other MRs [52 54 71 74 75 77 78]	"Forewarning is critical for ensuring that clients do not feel deceived into thinking that superior levels of confidentiality exist" [73] "Mandated professionals require feedback from child protection agencies" [53]

4. Support	**n=12, 27%**	• MRs should be supported in their reporting process by their respective institutions, both in terms of the time and costs of reporting (including support of their personal safety). Support may require additional staff experts in child maltreatment [52 53 71 78] • MRs should partake in self-care and be supported in stress and coping management [53 77]	"Employing bodies are encouraged to provide a suitable support mechanism to decrease the stress and anxiety of individuals who are emotionally traumatised by the process of mandatory reporting" [53]
5. Structural concerns	**n=7, 16%**	• MRs need clear protocols for identifying child maltreatment and reporting it, as well as methods for reviewing and updating protocols [52 53 74 77]	"It is recommended that a formalised national framework for reporting and feedback be established, which incorporates exemplar cases to demonstrate processes and outcomes which will positively influence future decision-making of mandated professionals" [53]
6. Child rights & well-being	**n=6, 14%**	• MRs should prioritize children's rights & well-being throughout the reporting process [81]	"If the intention is for children to have the full status of victim, the focus should not only be on reporting but also on the responses following reporting" [67]
7. Cultural competence	**n=4, 9%**	• MRs' and CPS responses to child maltreatment should be culturally competent and family's preferences for alternative ways of dealing with abuse (e.g., restorative justice) should not be dismissed [72]	"People's preference for traditional ways of dealing with problem should not be taken lightly, especially as any dismissal of it could be taken as constituting a lack of trust and understanding by the establishment of the current African ways of dealing with abuse" [72]
8. Evidence	**n=4, 9%**	• MRs should report suspicions of abuse rather than wait for evidence of abuse, when this is their legislative duty [71]	"Physicians and other health care workers are legally required to report cases if they have *reasonable suspicion* of child abuse" [49]

3.4 Apparent contradictions

All of the apparent contradictions found within the studies (or constructs that conflicted within or across studies) are examples of correlates of reporting that have been discussed previously in the literature (e.g., MRs' decisions to report should or should not be influenced by the context of the family, the level of evidence available, the context of the reporter, or the perceived impact of reporting on the child or family; MRs should or should not report children's exposure to IPV or corporal punishment; MRs should or should not intervene with the family instead of reporting; the MR who identifies maltreatment should report it, or refer it to a senior personnel). The solutions to these contradictions are more straight-forward to resolve legally, but less so ethically. For example, in cases where MRs suspect that harm may come to a child from the reporting process (based on their experience or their expert judgement), they are still required to report *legally* (when the type and severity of child maltreatment falls within their jurisdiction's legislation).

3.5 Recommendations for MRs (third-order constructs)

The first-order constructs draw attention to a significant number of negative experiences MRs had with the reporting process, as well as a number of factors that influenced their decision to report. The second-order constructs summarize some institutional and cross-disciplinary responses to these concerns (offered by study authors), such as the need for increased feedback from CPS about reported cases; the need for clear protocols for identifying child maltreatment and reporting it; and the need for MRs to be better supported in their reporting process. Most of the second-order constructs, however, discuss how MRs' negative experiences with the reporting process can be addressed through increased training and better communication or consultation among MRs, their colleagues, and CPS. The third-order constructs found in Table 5 represent our interpretation, across the studies, of MRs' and study authors' strategies for mitigating negative experiences with the reporting process, which includes the level of knowledge about child maltreatment that is required by all MRs. Restriction of the analysis to studies in the top quartile of quality ratings did not change these third-order constructs.

Table 5. Third order constructs in terms of recommendations to MRs	
When	**What/How**
Before identification or disclosure of child maltreatment	• Be aware of jurisdiction-specific legislation on reportable child maltreatment. Most reporting legislation requires that you report suspicions of child maltreatment and not wait for physical evidence of maltreatment • Be aware of the level of evidence that CPS requires to substantiate a report in your jurisdiction; acquiring this knowledge which will likely require discussions with your local CPS • Be aware of child maltreatment experts in your institution or jurisdiction that you can consult with about suspected cases of child maltreatment • Be aware of the roles of your colleagues and CPS in the reporting process. Try to arrange times to communicate with both groups about issues related to child maltreatment and reporting, in order to increase opportunities for collaboration and trust • Take training related to how to identify child maltreatment, especially less overt forms of child maltreatment; how to best respond to children exposed to maltreatment; and best practices for filing a report • Be aware of the limitations of your decision-making about child maltreatment, in terms of conflicting values about parental rights, family preservation, and other cultural factors. The child's rights and well-being should always be prioritized in cases of suspected child maltreatment
At the beginning of a relationship with a child or family	• When you start a relationship with a child or family, disclose your reporting duties and the limits of your confidentiality to whomever is in your care
Immediate response to disclosure	• Respond in a nonjudgmental way, showing compassion, support, and belief of the child's experiences • If you are unsure if the form of maltreatment is reportable, first consult with colleagues or CPS about the case, ensuring the confidentiality of your patient is maintained • If the identified form of maltreatment is reportable in your jurisdiction and it is safe to do so, take time to remind the child and parent of your role as a mandated reporter. Discuss how you will file a report and what likely CPS responses to your report will entail. • Be sensitive to the parent's needs and well-being during the reporting process. Be professional and non-judgemental with the offending caregiver • Ensure that the child is safe during the reporting process, such as reporting at the beginning of the school day or when the accused will be otherwise occupied • Remember that your moral responsibility to respond to the child or family in need is separate from your responsibility to report maltreatment
Debriefing after report	• In a confidential manner, take time to debrief about the reported case with a trusted colleague. Self-care is important

4. DISCUSSION

This research raises important questions about the effectiveness of mandatory reporting by drawing on studies reporting the experiences of MRs across nine high-income and three middle-income

countries. While some MRs have had positive experiences with reporting, the negative experiences reported in the individual studies are very concerning, especially those related to child outcomes. Some of these include accounts of children being revictimized by the reporting process, children whose abuse intensified after a report was filed, foster care environments that were perceived to be worse than family of origin environments, and reports of child death after CPS intervention. Whether or not these negative experiences are reflective of national or international experiences must be assessed. Studies addressing MRs' attitudes towards reporting address perceptions of negative experiences, but are not able to address child-specific outcomes. [82-84] For example, Flaherty and colleague's [82] 2006 U.S. national survey of pediatricians found that 56% of physicians experienced negative consequences from reporting, including 40% who lost patients after reporting and 2% who were sued for malpractice. Some of these concerns are likely to be especially salient for MRs in countries where child protection systems are not well developed, or do not function properly. MRs may have real concerns that reporting cases of child maltreatment to poorly trained or poorly resourced service providers could lead to adverse outcomes for children (see, for example, the concerns raised by Devries and colleagues [36] about the very poor response of local services to children in Uganda). Particularly in these contexts, further research on the harms and benefits of mandatory reporting is needed.

Given that negative experiences with reporting discussed in this meta-synthesis spanned decades, nine high-income and three middle-income countries, it is not surprising that some authors have suggested that the interface between MRs and CPS agencies "requires renewed attention, in terms of both research and programming".[64] We were unable to find any high-quality research studies suggesting that mandatory reporting and associated responses do more good than harm. The lack of evidence about the effectiveness of mandatory reporting has been noted by others, including the World Health Organization.[85] Research related to alternative processes to mandatory reporting, such as

differential response, also requires more research that addresses child-specific outcomes (see online supplementary file 1).

Researchers citing the benefits of mandatory reporting note that mandatory reporting laws are an "essential means of asserting that a society is willing to be informed of child abuse and to take steps to respond to it" [10]; they also note that mandatory reporting laws have resulted in the identification of more cases of child maltreatment [86-88] and an increase in reporting from reluctant reporter groups. [89 90] It has been argued by some authors [91 92] that identification is not a sufficient justification given the problems with mandatory reporting process; as described in this meta-synthesis, negative experiences seem to involve the reporting process itself and the associated responses (or lack of response). A key issue is the number of children identified by MRs who receive either no services, or of greater concern - inappropriate, ineffective, or harmful responses. MRs' discussions of ineffective responses seem to be related most closely to their reports of "mild" physical violence, neglect, emotional abuse, or children's exposure to IPV, which may lend credence to the suggestion that mandatory reporting is most appropriate for cases of *severe* abuse and neglect.[10] More research about the effectiveness of mandatory reporting across abuse types and severity, as well as associated responses and strategies for mitigating harm (including strategies for including children and family in the reporting process), is urgently needed.

4.1 Implications for clinicians and policy makers

Much of the research included in this meta-synthesis did not question the need for mandatory reporting (as many of the studies aimed to address MRs' decision-making process with regards to reporting); instead, included studies addressed MRs' negative experiences and reluctance to report with suggestions about the need for increased support, training, consultation, and communication. The third-

order constructs (final conclusions) of this study therefore offer recommendations for how MRs' can mitigate negative experiences with the reporting process.

Analysis of recommendations by study authors suggest that MRs need better support for the reporting process at many levels: personally, interpersonally, institutionally, in the community, and nationally. Personal support for reporters can include training or support for secondary traumatic stress – which many healthcare professionals experience – through, for example, strategies for debriefing. [93-95] Among studies of training programs for mandatory reporting with controlled designs, Kenny [96] argues that Alvarez and colleagues' [97] training program shows the most promise. The components of the training program, discussed further by Donohue et al. [98], include discussions about identifying child maltreatment, reporting requirements and procedures, strategies for involving caregivers in the reporting process, and information about consultation with colleagues and CPS – all identified as important components of training in this review. Whether or not the training program can be successfully modified to address the training needs of different countries and multi-disciplinary trainees has yet to be assessed.

Interpersonal support can include increased opportunity for communication and teamwork between inter- and multidisciplinary colleagues through, for example, interdisciplinary training [74] or multi-disciplinary conferences. [99] Relatedly, community support can include increased communication and collaboration between reporting professionals; the need for increased feedback from CPS about reported cases is also important. [52 53 82-84] Poor communication or collaboration between CPS and MRs has long been cited as an area for much needed improvement. [99-103] How exactly to improve collaboration, however, is complex and under-researched. As Winkworth and White [104] argued in relation to Australian initiatives to increase collaboration between Child Protection, Family Relationship and Family Support service systems, "So ubiquitous is reference to collaboration in policy documents that it is in danger of being ignored altogether by service deliverers who are not clear about its rationale,

how it is built, or its real value". Finally, national support necessitates national protocols about identifying, responding to and reporting abuse, as well as increased clarity around specific reporting requirements (including increased clarity around national or jurisdictional reporting legislation). Whether or not national protocols improve the reporting process for MRs or help to improve child outcomes would need to be tested. [105-107]

4.2 Strengths, limitations and future research

The strengths of our review include a systematic search to inform the meta-synthesis; the use of clear *a priori* study inclusion and exclusion criteria; use of an established study appraisal checklist; and transparent and reproducible methods for analysis. This review focused on MRs' direct experiences with, or views about, the mandatory reporting process and as such does not reflect complete findings about a) appropriate MR responses to the disclosures or identification of child maltreatment; b) CPS workers' experiences substantiating reports; c) children's and caregivers' experiences with mandatory reporting; and d) professionals' experiences with reporting in a non-mandated context (such as the UK). Reviews on these topics would be complementary to the findings of this review. While only English-language studies were included and only a handful of included articles discussed reporting processes in LMICs, the limited availability of research from LMICs suggests an ever greater need to invest in research in these settings. Research about voluntary or policy-based reporting processes, as well as responses to mandatory reporting, may provide more information about reporting process from LMICs.

4.3 Conclusion

Mandatory reporting of child maltreatment has been variously implemented across jurisdictions and high-quality research on the effectiveness of this process is severely lacking. Along with focusing on approaches to improve mandatory reporting, the field needs to address whether or not mandatory

reporting actually improves children's health outcomes through research that is sensitive to both severe and less overt forms of maltreatment.

Contributors

Conceptualization: HLM, KD, MC, JRM, JCDM; Analyzed the data: JRM, MK, AA, HLM; Writing – Original draft preparation: JRM; Writing – Review and editing: JRM, MK, KD, MC, JCDM, CNW, HLM; ICMJE criteria for authorship read and met: JRM, MK, KD, MC, JCDM, CNW, AA, HLM; Agree with manuscript results and conclusions: JRM, MK, KD, MC, JCDM, CNW, AA, HLM

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Competing interests

The authors report no competing interests.

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Data sharing statement

Extra data can be accessed via the Dryad data repository.

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Mandatory reporting internationally

Broad and narrow versions of mandatory reporting laws – in terms of the types and severity of reportable abuse and the specific persons deemed to be mandated to report – have been taken up internationally. A recent survey by the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) [1] is summarized in Table 1; the findings are organized according to World Bank country groups. The results of this survey should be interpreted with caution as it is limited in design (in most instances the country profiles are tabulated from the answers of one respondent who was thought to be familiar with child protection) and for low-income countries, the survey is limited in representation (includes data from only seven of 31 low-income countries); however, it is the most comprehensive report about the availability of mandatory reporting in low- and middle-income countries (LMICs).

Table 1. Proportion of mandatory reporting laws and provision for voluntary reporting across countries, as reported in the 2014 ISPCAN report*

	Low income countries	Lower middle income countries	Upper middle income countries	LMICs Combined	High income countries
Did the country answer the ISPCAN survey?					
Yes	7/31 (22.6%)	12/51 (23.5%)	19/91 (20.9%)	38/149 (25.5%)	35/80 (43.8%)
Is there a national mandatory reporting law?					
Yes	3/7 (42.9%)	7/12 (66.7%)	18/19 (94.7%)	28/38 (73.7%)	22/35 (62.8%)
What types of maltreatment are covered by mandatory reporting law?					
Physical, sexual, and emotional abuse, neglect, and exposure to intimate partner violence	2/3 (66.7%)	2/8 (25%)	5/18 (27.8%)	9/28 (32.1%)	13/22 (59.1%)
Physical, sexual, and emotional abuse and neglect	0/3 (0%)	4/8 (50%)	7/18 (38.9%)	11/28 (39.3%)	6/22 (27.3%)
3 or fewer types of maltreatment	1/3 (33.3%)	2/8 (25%)	2/18 (11.1%)	5/28 (17.9%)	1/22 (4.5%)
Not answered	0/3 (0%)	0/8 (0%)	0/18 (0%)	0/28 (0%)	2/22 (9.1%)

or don't know					
For mandated reporting of suspected CM for specific groups of professionals or individuals, what is the enforcement rate?					
Wide	1/3 (33.3%)	2/8 (25%)	5/18 (27.8%)	8/28 (28.6%)	8/22 (36.4%)
Inconsistent	1/3 (33.3%)	4/8 (50%)	8/18 (44.4%)	13/28 (46.4%)	9/22 (40.9%)
Never or almost never	0/3 (0%)	1/8 (12.5%)	2/18 (11.1%)	3/28 (10.7%)	1/22 (4.5%)
Not answered or don't know	1/3 (33.3%)	1/8 (12.5)	3/18 (16.7%)	5/28 (17.9%)	4/22 (18.2%)
*Statistics in this table were tabulated from the country profiles from the ISPCAN [1] report.					

Results from the ISPCAN survey indicate that 73.7% of responding LMICs and 62.8% of high-income countries (HICs) have national mandatory reporting laws for child maltreatment, although the enforcement of these laws is inconsistent or completely absent in 57.1% of LMICs and 45.4% of HICs. The mandatory reporting laws for the responding countries include physical abuse, sexual abuse, neglect, emotional maltreatment and exposure to intimate partner violence (IPV) in 59.1% of the HICs and 32.1% of the LMICs. The comprehensiveness with which these exposure types are addressed in county-specific legislation is not discussed in the ISPCAN report. For example, in the ISPCAN country profile for Canada, the respondent(s) indicated that "yes" Canada has a law mandating that suspected child maltreatment must be reported and that this law applies to physical abuse, sexual abuse, neglect, emotional maltreatment, and exposure to IPV. Mandatory reporting legislation in Canada (and many other federated countries), however, is complicated, as what is considered to be reportable maltreatment varies across states/provinces and territories [2].

Beyond the ISPCAN survey, we found little in the English-language literature about mandatory reporting and its associated processes in LMICs [3]. Some authors have suggested that evaluation is needed to address the utility and feasibility of mandatory reporting laws in LMICs [4]. Others have suggested that it is more appropriate for individual nations to develop their own focus and priorities

regarding mandatory reporting so that specific sociocultural and economic conditions are addressed; these authors have suggested that some forms of abuse must be prioritized, such as severe physical abuse, sexual abuse and exploitation, child trafficking, and severe neglect [5 6].

Differential response

Melton [7] has argued that alternative strategies to mandatory reporting "should pass muster if they are less intrusive than mandated reporting and have fewer side effects and, overall, they are more effective in ensuring children's safety". Differential response, also referred to as alternative response, family assessment response, or multiple-track response [8], is a method to restructure the CPS system to have multiple ways to respond to reports of child maltreatment [9]. It is an example of an alternative strategy that is being implemented in the U.S., Canada, and Australia that enables CPS to respond differently depending on the type and severity of maltreatment. The effectiveness of this method of response has been widely debated [8-11]. The Child Advocacy Center Model, which arose from the need to improve experiences with sexual abuse investigations, is another strategy that needs further research to better address child outcomes [12].

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ENTREQ Research Checklist

Enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) statement items			
No	**Item**	**Guide and description**	**Reported on page #**
1	Aim	State the research question the synthesis addresses.	3-4 (MRs' experiences reporting child maltreatment)
2	Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology (e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).	4 (meta-synthesis)
3	Approach to searching	Indicate whether the search was pre-planned (comprehensive search strategies to seek all available studies) or iterative (to seek all available concepts until they theoretical saturation is achieved).	4 (pre-planned, systematic search)
4	Inclusion criteria	Specify the inclusion/exclusion criteria (e.g. in terms of population, language, year limits, type of publication, study type).	5 (English-language, qualitative studies with direct quotes about MRs' experiences reporting child maltreatment)
5	Data sources	Describe the information sources used (e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists) and when the searches conducted; provide the rationale for using the data sources.	4-5 (Medline, Embase, PsycINFO, CINAHL, Criminal Justice Abstracts, ERIC, Sociological Abstracts, and Cochrane Libraries from database inception to November 3, 2015; citation chaining)
6	Electronic Search strategy	Describe the literature search (e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).	4, online supplementary file 3

7	Study screening methods	Describe the process of study screening and sifting (e.g. title, abstract and full text review, number of independent reviewers who screened studies).	5 (double-independent reviewers)
8	Study characteristics	Present the characteristics of the included studies (e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions).	Online supplementary file 4
9	Study selection results	Identify the number of studies screened and provide reasons for study exclusion (e,g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications t the research question and/or contribution to theory development).	6 (total of 6500 records screened, 215 full-text articles assessed for eligibility, 44 articles met all criteria)
10	Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings (e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings).	8 (modified CASP)
11	Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings (e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope [25]; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).	5, online supplementary file 4 (modified CASP)
12	Appraisal process	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.	6 (double-independent appraisal)
13	Appraisal results	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the assessment and give the rationale.	6 (most first- and second-order constructs supported by articles in the top quartile; other articles supported identified constructs)
14	Data extraction	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? (e.g. all text under the headings “results /conclusions” were extracted electronically and entered into a computer software).	5-6 (analyzed direct quotations of participants for first-order constructs and recommendations of study authors for second-order constructs)

15	Software	State the computer software used, if any.	N/A
16	Number of reviewers	Identify who was involved in coding and analysis.	5-6 (JRM & MK)
17	Coding	Describe the process for coding of data (e.g. line by line coding to search for concepts).	5-6
18	Study comparison	Describe how were comparisons made within and across studies (e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).	6 (analyzed constructs that appeared across studies, constructs that were conflicting across studies or within studies unfounded constructs)
19	Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.	6 (primarily inductive)
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author's interpretation.	Table 3 and 4, all extracted and coded data available from author upon request
21	Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).	12-13, Table 4

Example Search Strategy

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to Present>
Search Strategy:
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1 Mandatory Reporting/ (2710)
2 exp Child Abuse/lj [Legislation & Jurisprudence] (2891)
3 Incest/lj [Legislation & Jurisprudence] (88)
4 or/2-3 (2926)
5 limit 4 to yr="1860 - 1997" (1465)
6 (report* or tell or duty or duties or obligat* or require* or protect* or CPS or investigation? or inquiry or inquiries).tw. (4943274)
7 5 and 6 (535)
8 ((mandate? or mandatory) adj5 report*).mp. (4068)
9 ((duty or duties or failure or obligat* or require* or responsibility or responsibilities or law? or "child protect*" or CPS or investigation? or inquiry or inquires) adj5 report*).tw. (29695)
10 (failure adj5 (protect* or comply)).tw. (1855)
11 must report.tw. (139)
12 reasonable suspicion.tw. (65)
13 or/1,7-12 (35565)
14 exp Child Abuse/ or Shaken Baby Syndrome/ or Incest/ or exp Child Welfare/ or Infant Welfare/ (54722)
15 ((child* or girl? or boy? or infant* or baby or babies or toddler* or preschool* or pre-school* or pre school* or young person or young people or minor? or teen* or adolescen* or youth* or preteen* or tween* or kid? or son or sons or daughter? or grandchild* or grandson? or granddaughter?) adj5 (abuse? or abusing or maltreat* or neglect* or abandon* or harm* or offence? or offens* or assault* or rape? or raping or molest* or exploit* or spank* or hit or hitting or hits or (sex* adj2 abus*))).tw. (29293)
16 (parent* adj3 (violen* or aggression* or aggressive* or harsh*)).tw. (1324)
17 (child* adj3 (welfare or aid)).tw. (3562)
18 (child* protect* adj3 (service? or agenc* or organi?ation?)).tw. (941)
19 or/14-18 (70709)
20 battered women/ or domestic violence/ or spouse abuse/ (12077)
21 ((spous* or partner?? or wife or wives or husband? or family or families or domestic* or intimate* or conjugal* or marital* or interparent* or interpartner*) adj3 (abus* or violen* or batter or battered or batters or batterer? or battering or harm or harms or harmed or harming or harmful* or exploit* or victim* or mistreat* or maltreat*)).tw. (13612)
22 or/20-21 (17778)
23 (expose* or exposure or witnes*).mp. (930487)
24 growing up.tw. (1747)
25 ((child* or adolesc*) adj3 "living with").tw. (1328)
26 ((child* or adolesc*) adj5 (violen* adj2 (home*1 or household*))).tw. (37)
27 ((child* or adolesc*) adj5 (domestic* adj2 violen*)).tw. (484)
28 or/23-27 (933477)
29 22 and 28 (2596)
30 19 or 29 (72149)
31 13 and 30 (1796)

MODIFIED CASP Appraisal questions [author date]	Yes/No/Unsure
A. Appropriateness of research methodology & design	
Use of qualitative methodology: **1.** Does the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants?	1)
2. Is qualitative research the right methodology for addressing the research goal?	2)
Research design: **3.** Is the research design appropriate to address the aims of the research?	3)
4. Has the researcher justified the research design (e.g. have they discussed how they decided which method to use)?	4) SS:
B. Ethical considerations	
5. Did the researcher use **TWO** of the following strategies to ensure ethical issues have been taken into consideration (is there are sufficient details of a) how the research was explained to participants for the reader to assess whether ethical standards were maintained; b) did the researcher discuss issues raised by the study, such as issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study; c) was approval sought from an ethics committee)?	5) a.) b.) c.)
C. Credibility (akin to internal validity), Do participants and those with similar experiences recognize the experiences contained with the study? *Strategies for establishing credibility:*	
6. Did the research use **one or more** of the following strategies to establish credibility (has the researcher discussed saturation of data; attempt to triangulate data by using different data collection methods; member checking to see if participants agreed with the interpretations of the researcher; peers or consultants experienced in qualitative research review their coding process; full descriptions of member's words in their final paper)?	6)
D. Transferability (akin to external validity), How does one determine the extent to which the findings of the study are applicability in other contexts or with other participant types? *Strategies for establishing transferability:*	
7. Did the researchers use any of the following strategies to establish transferability (use of dense description of the population studied through descriptions of demographics and geographic boundaries of the study? Note: the author must describe at least **TWO specific sample descriptors**	7)

(eg. age range, gender, setting from which sample was selected, SES, etc.)	
E. Consistency (akin to reliability), Can another researcher follow the decision trail used by the researcher? *Strategies for establishing consistency:*	
Purpose: **8.** Did the researcher use any of the following strategies to establish the purpose of the research (was there a clear statement of aims of the research; what was the goal of the research; why was it thought important; its relevance)?	8)
Participant selection: **9.** Was the recruitment strategy appropriate to the aims of the research? (e.g. does the population from which the sample was selected resonate with the research objectives, was the sample selection ethnically implemented).	9)
10. Did the researcher explain how participants were selected?	10)
11. Did they explain why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study (*note: if not in the methods section, rate a 'no'*)?	11)
12. Were there any discussions around recruitment (e.g. why some people chose not to take part)? (*note: if not in the methods section, rate a 'no'*)	12)
Data collection: **13.** Was the setting for data collection was justified?	13)
14. Is it clear how data were collected (e.g. focus group, semi-structured interview etc.)?	14)
15. Did the researcher has justify the methods chosen?	15) SS:
16. Did the researcher make the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)?	16)
17. If the form of data is clear (e.g. tape recordings, video material, notes etc)?	17)
Data analysis: **18.** Did the researcher explain how the data were reduced or transformed for analysis?	18)
19. Did they discuss their interpretation and presentation of their findings?	19) SS:

F. Neutrality (akin to objectivity), Did overall credibility, transferability, and consistency occur? *Strategies for establishing neutrality*:	
Reflexivity: **20.** Did the researcher use **one or more** of the following strategies to ensure neutrality (has the relationship between researcher and participants been adequately considered; has the researcher critically examined their own role, potential bias and influence during the formulation of the research questions or data collection, including sample recruitment and choice of location; did the researcher discuss how they responded to events during the study and whether they considered the implications of any changes in the research design; did the researcher employ field notes to record their personal reactions and biases after each interview/focus group; did they make a conscious effort to follow rather than lead the direction of interviews/focus groups)?	20)

Modified CASP Appraisal Checklist from
http://media.wix.com/ugd/dded87_29c5b002d99342f788c6ac670e49f274.pdf

The questions listed in the CASP Appraisal Checklist were rearranged according to standard conceptions of rigour in qualitative research: credibility, transferability, consistency, and neutrality (and these four areas of assessing rigour are briefly defined). Other CASP questions that did not fit into these areas included questions about appropriateness of research (appropriateness of qualitative research and appropriateness of research design) and ethical considerations of research. Other strategies for establishing credibility, transferability, and neutrality that are not discussed in the CASP tool but are found in other discussions of qualitative rigour (see, for example, [1 2]) were included.

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2. Thomas E, Magilvy JK. Qualitative Rigor or Research Validity in Qualitative Research. Journal for Specialists in Pediatric Nursing 2011;**16**(2):151-55 doi: 10.1111/j.1744-6155.2011.00283.x[published Online First: Epub Date]|.

Study and participant characteristics for included articles							
	Study Characteristics			Participant Characteristics			Country
Article	Objective	Method; Participant sampling strategy	Theories informing analysis	Sample	Context	Age/Experience	
Liou et al. [1], 2016	To determine the factors which affect the decision of special education teachers' in Taiwan to file a report when confronted with a case of sexual victimization among their students	Individual interviews; participants responded to a notice on Facebook or PPT, which is a well-known bulletin board system in Taiwan	Thematic analysis	12 teachers	Some worked at special education schools; others worked at various school levels, including elementary schools, junior high schools, and senior high schools; some held administrative positions	30 to 44 years old (6 to 20 years of experience)	Taiwan
Skarsaune et al. [2], 2016	To describe the nurses' experiences when they had suspected child abuse in their encounters with children and their families in various health care contexts	Individual, semi-structure interviews; strategic selection	Qualitative content analysis	8 nurses	Hospital, various units	35 to 60 years old (all over 10 years of experience)	Norway
Tiyyagura et al. [3], 2015	To understand general ED providers'	One-to-one semi-structured	Grounded theory	29 mandated reporters (9 physicians, 16	Emergency Departments, Hospitals	(physician's median experience was	U.S.

	experiences with child abuse and neglect	interviews; purposive sampling and snowball sampling		nurses, 4 physician assistants)		7 years, nurses median experience was 12.5 years)	
Ellonen et al.[4], 2014	To study the institutional processes of identifying, responding to and reporting abuse experienced by children	Interviews; participants were randomly selected from document data from authorities, such as data about who made notifications	Thematic analysis (Coffey and Atkinson)	33 mandated reporters (9 police officers, 11 social workers, 9 doctors, and 4 school and day care personnel)	Not stated	Not stated	Finland
Gallagher-Mackay [5], 2014	To analyze decision making by educators about reporting child abuse and neglect	Interviews; parents with recently closed children's aid cases were recruited first and then aid workers and teachers associated with their case were recruited. 'Unlinked' teachers, principals, aid workers, and leaders from both groups were also recruited.	Institutional ethnography, grounded theory, regulatory theory	49 mandated reporters (10 teachers, 8 family service workers, 6 school principals, 6 student support workers, and 19 'leaders' in these areas)	Various	Not stated	Canada

Itzhaky et al. [6], 2014	To examine the impact of an intensive training program for hospital-pediatricians in identifying and treating young victims of abuse or neglect and how this training impacted cooperation between pediatricians and social workers, seeking to determine whether the doctors' increased familiarity with the social work profession enhanced team-work	In person, semi-structured, in-depth interviews; purposive sampling	Phenomenological approach	32 mandated reporters (18 pediatricians, 14 social workers)	Physicians worked in various capacities (first-year interns, directors of children's wards, directors of children's emergency wards, and specialists); social workers worked in children's wards or children's emergency wards	(physicians not stated; social workers 1-20 years of experience)	Israel
Kraft et al. [7], 2014	To explore how school nurses detect maltreated children and initiate support measures	Focus groups; strategic sampling	Grounded theory	23 school nurses	Worked in various municipalities and with various age groups	46 to 57 years of age (3 to 38 years of experience as school nurses)	Sweden
Kvist et al. [8], 2014	To examine what factors cause specialists in pediatric dentistry	Focus groups; specialists and postgraduates from the	Thematic analysis (Braun and Clarke)	19 specialists and postgraduate students in	Unclear	Not stated	Sweden

	to suspect child abuse or neglect and to determine what considerations influence the decision to report these suspicions to social services	Swedish Academy of Pediatric Dentistry and others told by them (snowball) were invited. Participants were 'strategically selected' from this sample.		pediatric dentistry			
Svard et al. [9], 2014	To explore how hospital social workers describe assessment processes for children at risk at their inter-professional workplaces	Semi-structured interviews; not stated	First-stage analysis (Gillham, 2005) and content analysis (Kvale, 2009)	14 social workers	Inpatient wards, children's hospitals or pediatric wards	(6 months to 30 years of experience)	Sweden
Zannettino et al. [10], (2014)	To examine how and in what ways child protection and domestic violence workers conceptualise and respond to children and families affected by domestic violence, and how do they consider that their service sectors could operate more	Focus groups; surveys were offered to workers from child protection authorities and from domestic violence agencies and respondents were invited to attend focus groups	Unclear	Total number of mandated reporters unclear (14 child protection workers, 16 domestic violence workers, and a mix of the two groups (n=20) in a second focus group)	Child protection or domestic violence workers whose offices were located in one of the most socially and economically disadvantaged areas in Australia	(most child protection workers had less than 2 years of experience; domestic violence workers had a range of experience from "new graduates" to those who had worked "many years")	Australia

	collaboratively as a means to improve service responses						
Angelo et al. [11], 2013	To understand the experience of the nurses in their care of child victims of domestic violence, in pediatric emergency, intensive care and inpatient units	Semi-structured interviews; snowball sampling	Theoretical-methodology consistent with phenomenology	15 nurses	Nurses working in pediatric inpatient care units	27 to 48 years of age (3 to 12 years since graduation)	Brazil
Hurtado et al. [12], 2013	To assess experiences and barriers associated with teaching child sexual abuse prevention and with reporting child sexual abuse	Focus groups; teachers and students attended a child sexual abuse exhibit and some of these teachers were included in the focus groups	Not stated	19 teachers	Unclear	Unclear	El Salvador
Lee et al. [13], 2013	To learn first-hand from CPS workers how CPS investigations could be improved	Focus groups; voluntary sample from Department of Human Services offices in a Midwestern state	Manual content coding	39 CPS workers	Urban Department of Human Service workers	Not stated	U.S.

Phasha [14] 2013	To investigate influences on under-reporting of sexual abuse involving teenagers with intellectual disability and the reason thereof	Individual interviews and focus groups; convenience sampling and theoretical sampling	Thematic analysis	32 mandated reporters (18 teachers, 6 staff caregivers, 2 psychologists, 3 social workers, 2 school nurses, 1 speech language pathologist	Special schools catering specifically for learners with intellectual disability	Unclear	South Africa
Davidov et al. [15], 2012	To identify and describe issues related to mandatory reporting within the context of Nurse Family Partnership (NFP) home visitation	Two consecutive focus groups; all nurses who reported home visiting abused NFP clients were invited (4 sites from all NFP sites were included in study)	Content analysis	Total number of mandated reporters unclear (23 nurses in first focus group and 25 nurses in second focus group)	Nurses working in the NFP home visitation program	Mean age of 46.2 years (5 to 38 years of experience)	U.S.
Feng et al. [16], 2012	To understand the ethical and legal challenges of reporting child abuse	Structured interviews; purposive, snowball sampling	Grounded theory	18 mandated reporters (4 social workers, 3 physicians, 6 nurses, and 5 teachers)	Social workers: 3 worked in hospitals, 1 worked for CPS	28 to 53 years old (3 to 27 years of practice)	Taiwan
Francis et al. [17], 2012	To understanding the circumstances and thence the decision-making processes of mandated professionals employed in rural communities	Face to face or phone interviews; advertisements in regional newspapers, followed by snowball sampling	Grounded theory	17 mandated reporters (1 medical practitioner, 7 nurses, 3 police officers, 6 teachers)	Rural region, but not otherwise stated	Not stated	Australia

Mallén [18], 2011	To discuss why some cases of abuse and neglect of disabled children are considered difficult to report by the Child and Youth Habilitation Services	Individual and group semi-structured interviews	Not stated	14 mandated reporters (all staff were Youth and Rehabilitation Service Workers, including psychologists, social workers, speech therapists, nurses, paediatricians, and divisional heads)	Not stated	Not stated	Sweden
Panayiotopoulos [19], 2011	To describe and understand on the one hand the importance of mandatory reporting through the professionals' lens and on the other hand to consider the obstacles to its effective implementation	In depth, semi-structured interviews with individuals or groups; sampling strategy unclear	Process evaluation (Riger)	Total numbers of MRs sampled unclear (educational psychologists from two districts, 10 school teachers, 11 family social workers, he previous and current public prosecutor responsible for mandatory reporting)	Various	Not stated	Cyprus
Sege et al. [20], 2011	To examine the validity of primary health care providers' assessment of suspicion that an	Telephone interviews; stratified sampling of primary health care providers	Formal qualitative analysis of themes obtained from the interviews was not performed	110 physicians	Primary health care providers	Not stated	U.S.

	injury was caused by child abuse and their decision to report suspected child abuse to child protective services	from the CARES study by level of suspicion and reporting decisions					
Eisbach et al. [21], 2010	To (a) describe the process of reporting child maltreatment from the perspective of pediatric nurses and (b) gain insight into mediating and/or moderating influences on the reporting process	In person or phone interviews; maximum variation sampling of nurses from 3 statewide nursing organizations in Iowa	Grounded theory	23 nurses	10 school nurses, 7 pediatric nurse practitioners, and 6 pediatric mental health nurse practitioners	(10-41 years nursing experience, 2-40 years pediatric experience)	U.S.
Feng et al. [22], 2010	To explore the collaborative experiences and perspectives in reporting child abuse of four primary mandated reporting disciplines in Taiwan	Interviews; purposive sampling of MRs recruited from calls to hospitals, Department of Child Welfare and schools	Grounded theory	21 mandated reporters (5 physicians, 5 nurses, 6 social workers, and 5 teachers)	16 worked directly with children, 5 were administrators	25-59 years old (3-34 years of experience)	Taiwan
Chanmugam [23], 2009	To explore school social workers relationships during instances	In-depth face to face or phone semi-structured	Ecomapping, thematic analysis (Braun and Clark; Miles and	10 school social workers	5 worked in elementary schools, 4 worked in	(mean 5 years of experience)	U.S.

	of abuse and neglect reporting, focusing on reports made for children and adolescents already receiving school social work services	interviews and a focus group; convenience, maximum variation, and snowball sampling techniques	Huberman)		middle schools, and 1 worked in high-school		
Feng et al. [24], 2009	To explore kindergarten teachers' experience and perspectives of working with abused children and their families	Focus groups with an interview guide; purposive sampling	Grounded theory	20 teachers	All kindergarten teachers	20-45 years old (6 months-32 years of experience)	Taiwan
Phasha [25], 2009	To describe responses to situations of sexual abuse involving teenagers with intellectual disability	Individual interviews and focus groups; referral and theoretical sampling	Grounded theory	16 mandated reporters (4 police officers, 2 nurses, 4 staff caregivers and 10 educators)	Police officers from the Social Crime and Victim empowerment unit; nurses, caregivers, and educators from the special schools	Not stated	South Africa
Jones et al. [26], 2008	(1) To identify factors clinicians weighed when deciding whether to report injuries they suspected might have been caused by child abuse; (2) to	Structured telephone interviews; subsample of physicians in CARES study were invited to participate based on an	Ethnographic techniques (Jones)	75 physicians	Primary care physicians	Not stated	U.S.

	describe clinicians' management strategies for children with injuries from suspected child abuse that were not reported; and (3) to describe how clinicians explained not reporting high-suspicion injuries	informative sampling scheme					
Land et al. [27], 2008	To investigate if dilemmas arise for nurses in their mandated requirement to report cases of suspected child abuse in the Northern Territory of Australia and in their effectiveness in their role protecting children	Interviews (with semi-structured and open-ended questions); purposive sampling	Manual, thematic coding	10 nurses	Acute, community and school practice settings	Unclear (more than two years of experience)	Australia
Phasha [28], 2008	To provide a detailed description of participants' perceptions regarding the roles that	Snowball sampling	Not stated	Unclear	Teachers involved in guidance or life skills education at primary schools or high	Not stated	South Africa

	teachers can play in helping learners overcome the negative impact of their experiences of child sexual abuse				schools		
Tingberg et al. [29], 2008	To identify nurses' experiences in encountering abused children and their parents	Interviews; sampling strategy unclear	Critical incident technique	11 nurses	Emergency department nurses from tertiary care children's hospital	Not stated	Sweden
McLaren [30] 2007	To report exploratory research into social workers' perceptions and actions regarding ''forewarning'' clients of their child abuse reporting obligations as a limitation of confidentiality at relationship onset	In-depth interviews; snowball sampling	Discovery approach, phenomenological analysis	6 social workers	Social workers from six different welfare agencies that provide both primary and ancillary counselling support services to parents and their families; one each from education, hospital-based health, mental health, family support, domestic violence and refugee services	Not stated	Australia
Silva et al. [31], 2007	To identify and analyze	Semi-structured	Dialectic hermeneutics	10 mandated reporters (2	Not stated	Not stated	Brazil

	notifications of domestic violence against children at the Guarulhos Regional Health Divisions, the limits and gaps in health professionals' actions and the meaning of domestic violence against children in their daily work	interviews; not stated		psychologists, 2 nurses, 2 community health agents, 2 nursing aids and 2 pediatricians)			
VanBergeijk et al. [32], 2006	To analyze the experiences of school personnel who report child abuse along the United States-Mexico border and to add to what is known about Secondary Traumatic Stress (STS) through an exploration of qualitative data	Face to face interviews; not stated	Grounded theory	28 school personnel (17 general education teachers, 4 special education teachers, 1 acting administrator, 3 social workers, 2 school psychologists, 1 speech therapist, 1 speech therapist and secretary)	School personnel from San Ysidro and neighboring communities in the bilingual or English-only programs	Unclear	U.S.
Feng et al. [33], 2005	To explore nurses' experiences and perspectives regarding child abuse in Taiwan	Interviews; purposive sample	Thematic analysis (Morse & Field) and grounded theory	18 nurses	8 ER nurses and 10 pediatric nurses (all in hospitals)	23-46 years old (3-24 years of experience)	Taiwan

Shalhoub-Kevorkian [34], 2005	To examine the effect of such sociopolitical factors on the sexually abused Palestinian Israeli girl and on the application of the child protection laws in Israel	Focus groups; not stated	Not stated	20 mandated reporters (3 social workers, 4 heads of social units within the Welfare Department, 6 school counselors, 6 helpers who answer calls to rape crisis hotlines and centers [2 of which were social workers], 1 administrator)	Unclear	Not stated	Israel
VanBergeijk et al. [35], 2005	To understand school personnel's experiences reporting child maltreatment	Semistructured interviews; theoretical sampling	Grounded theory	28 school personnel (17 general education teachers, 4 special education teachers, 1 acting administrator, 3 social workers, 2 school psychologists, 1 speech therapist, 1 secretary)	Public school personnel	(2-20 years of experience)	U.S.
Nayda [36], 2002	To compare the decision making of teachers and nurses in cases of	Structured interviews; purposive	Not stated	10 nurses	Community child and youth health	Not stated	Australia

	suspected child abuse	sample					
Waugh et al. [37], 2002	To explore possible ways in which child protection practitioners and domestic violence practitioners could work collaboratively to promote the safety, well-being and welfare of children, young people and women who live in domestic violence situations	Individual, semi-structure interviews and focus groups	Thematic analysis	Total number of mandated reporters is unclear (interviews with 14 CPS workers interviews and focus groups with staff from family support services, physical abuse and neglect of children services, the Department of Community Services, child and family teams in community health, women's community legal centres, Relationships Australia, women's housing schemes, child protection teams, early intervention programmes, non-government child protection	Various	Not stated	Australia

				services, specialist domestic violence services and women's migrant services)			
Deisz et al. [38], 1996	To understand the way therapists and child protection workers approach the requirements of mandated reporting and differ in their perspectives of what constitutes a legitimate report, child maltreatment, and the ensuing relationship between the reporter and the CPS worker	Open-ended, semi-structures interviews; convenience sample	Not stated	49 mandated reporters (29 therapists and 20 CPS workers)	Therapists were from 6 different nonprofit social service agencies	Therapists: Late 20s-early 50s; (recent graduates-over 10 years of experience) Child protection workers: not stated; (1-14 years of experience)	U.S.
Anderson et al. [39], 1993	To investigate therapists and child protective workers experiences with reporting in therapeutic relationships	Semi-structured interviews;	Thematic analysis	30 psychotherapists and 25 CPS workers	Therapists were from 6 agencies	Therapists: not stated; (new workers-over 10 years of experience) Child protective service workers: not stated; not stated	U.S.

Tite [40], 1993	To explore teachers' definitions of abuse and examine the relationship between definitions and intervention	Semi-structured interviews (phase 1) followed by survey (phase 2, not included) followed by focused telephone interviews; unclear sampling (phase 1) and random sample of subgroup of survey participants (phase 2)	Qualitative process and pattern data	10 teachers (phase 1); 8 teachers and 2 principles (phase 2)	Elementary schools	Not stated	Canada
Anderson [41], 1992	To explore if mandatory reporting laws are serving therapeutic or anti-therapeutic aims or if they are neutral with respect to therapy	Semi-structured interviews	Thematic analysis	30 psychotherapists who made a report in the previous 12 months on a client	6 agencies across 2 countries	Not stated; (new workers-over 10 years of experience)	U.S.
Giovannoni [42], 1991	To study CPS workers' attitudes about reporting, screening, and substantiation of cases as they	Semi-structured interviews; sampling strategy	Content analysis	81 CPS workers	Unclear	Not stated	U.S.

	relate to the "unsubstantiated" report	unclear					
Barksdale [43], 1989	To investigate the decision making process of a small sample of psychotherapists who discovered child abuse in their clinical practice, as well as the possible effects of the reporting decision	Semi-structured interviews; sampling strategy unclear	Qualitative, content analysis	10 psychotherapists	Psychotherapists were employed in private not-for-profit agencies	Unclear (minimum of 3 years post-masters or doctoral experience)	U.S.
Muehleman et al. [44], 1981	To investigate the reasoning of practicing psychologists in response to a hypothetical child abuse reporting dilemma and to study to study why psychologists make the choices they do (when discovering child abuse in therapy) by examining the relative importance of the issues of life, law, and confidentiality)	Face to face interviews and phone interviews; sampled from participants of the convention of the Tennessee and Kentucky Psychological Associations plus 10 practicing psychologists (sampling unspecified)	Not stated	39 mandated reporters (2 psychology students, 18 psychologists with their masters, 19 with doctoral degrees in psychology)	Unclear	Not stated	U.S.

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Mandated Reporters' Experiences with Reporting Child Maltreatment: A Meta-Synthesis of Qualitative Studies

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Abstract

Objective: To systematically search for research about the effectiveness of mandatory reporting of child maltreatment and to synthesize qualitative research that explores mandated reporters' (MRs) experiences with reporting. Design: As no studies assessing the effectiveness of mandatory reporting were retrieved from our systematic search, we conducted a meta-synthesis of retrieved qualitative research. Searches in Medline (OVID), Embase, PsycINFO, CINAHL, Sociological Abstracts, ERIC, Criminal Justice Abstracts, and Cochrane Library yielded over 6000 citations, which were deduplicated and then screened by two independent reviewers. English-language, primary qualitative studies that investigated

MRs' experiences with reporting of child maltreatment were included. Critical appraisal involved a modified checklist from the Critical Appraisal Skills Programme (CASP) and qualitative meta-synthesis was used to combine results from the primary studies. Setting: All healthcare and social-service settings implicated by mandatory reporting laws were included. Included studies crossed nine high-income countries (United States, Australia, Sweden, Taiwan, Canada, Norway, Finland, Israel and Cyprus) and three middle-income countries (South Africa, Brazil, and El Salvador). Participants: The studies represent the views of 1088 MRs. Outcomes: Factors that influence MRs' decision to report and MRs' views towards and experiences with mandatory reporting of child maltreatment. Results: Forty-four articles reporting 42 studies were included. Findings indicate that MRs struggle to identify and respond to less overt forms of child maltreatment. While some articles (14%) described positive experiences MRs had with the reporting process, negative experiences were reported in 73% of articles and included accounts of harm to therapeutic relationships and child death following removal from their family of origin. Conclusions: The findings of this meta-synthesis suggest that there are many potentially harmful experiences associated with mandatory reporting and that research on the effectiveness of this process is urgently needed.

Strengths and limitations of this study

- This is the most comprehensive review to date of mandatory reporting of child maltreatment, focusing on MRs' experiences with reporting
- Although a systematic search was conducted, little information about mandatory reporting from low and middle-income countries was retrieved
- Critical appraisal of included articles followed an established checklist and reporting of synthesis findings was done according to the ENTREQ statement
- This meta-synthesis used an established method for synthesizing study findings that enabled the creation of recommendations for MRs relating to the reporting process

1. INTRODUCTION

Global estimates of child maltreatment indicate that nearly a quarter of adults (22.6%) have suffered childhood physical abuse; over a third of adults (36.3%) have suffered childhood emotional abuse; 16.3% of adults have suffered childhood neglect; and 18% of women and 7.6% of men respectively have suffered childhood sexual abuse.[1-3] These estimates vary across countries. For example, according to 2015 United States (U.S.) child protective services (CPS) reports, 63.4% of reported children experienced neglect.[4] Given the high prevalence of child maltreatment and its potentially serious, long-term health and social consequences [5-8], many countries have taken steps to prevent child maltreatment and reduce its associated impairment, including through the introduction of mandatory reporting.

Mandatory reporting law, in the context of child maltreatment, "is a specific kind of legislative enactment which imposes a duty on a specified group or groups of persons outside the family to report suspected cases of designated types of child maltreatment to child welfare agencies".[9] The U.S. enacted the first mandatory reporting laws in 1963.[10 11] These laws were more narrowly conceived, requiring certain mandated professions to report "severe" or "significant" physical abuse by parents or caregivers. Over time, legislation has expanded in the U.S. and has been replicated in other countries. Across jurisdictions, mandatory reporting can include other forms of maltreatment (notably physical, sexual, and emotional abuse, neglect, children's exposure to intimate partner violence (IPV), and prenatal exposure to drug abuse), reporting by more than mandated professionals (e.g., by all citizens), reporting abuse perpetrated by non-caregivers, and reporting beyond "severe" or "significant" abuse.[12]

Some information about the international context of mandatory reporting is available, but in general little information about this process is available from low and middle-income countries (LMICs)

(see online supplementary file 1). Furthermore, while we began this project with the intent of doing a systematic review of studies of effectiveness about mandatory reporting, we were unable to find any studies that could be used for this purpose (i.e., no prospective controlled trials, cohort studies, or case-control studies assessing the effectiveness of mandatory reporting in relation to child outcomes were retrieved from our systematic search). Instead, we found that while there are a handful of prospective studies assessing particular outcomes of mandatory reporting [13 14], most of the research discussing its impact relies on retrospective analysis of CPS reports [15-18] or is related to mandated reporters' (MRs), children's, and caregivers' perceptions about reporting, as discussed in surveys [19-27], qualitative literature [28-30], or case reports [31-33] (qualitative literature is summarized in this meta-synthesis). Given the paucity of data on effectiveness of mandatory reporting, the purpose of this meta-synthesis is to summarize qualitative research about MRs' experiences with reporting. A companion paper titled, *Caregivers' and children's experiences with mandatory reporting of child maltreatment: A meta-synthesis* (in preparation), will address caregivers' and children's experiences with mandatory reporting.

2. METHODS

Various methods for synthesizing qualitative literature exist depending on the purpose of the review [34] or the philosophical [35] or epistemological [36] stance of the researcher. As there is no standard way to summarize qualitative literature, for this meta-synthesis we follow the methods of Feder and colleagues [37], whose work builds on Noblit and Hare's (43) approach to meta-ethnography. Meta-ethnography does not offer suggestions for sampling or appraising articles and at times can be criticized for lack of transparency.[34] A benefit of Feder and colleagues' [37] method is that they conducted a systematic search of qualitative studies with clear inclusion and exclusion criteria, thus enhancing the transparency of their study selection process. While the benefit of appraising qualitative research is still debated [38], Feder and colleagues' approach to appraising qualitative literature prioritizes studies that

are ranked as of higher quality, which supports increasing recommendations to consider study quality, but also does not inappropriately exclude so-called lower quality studies that make 'surface mistakes' that would not otherwise invalidate their study findings.[34] Finally, like Noblit and Hare's (43) work, Feder et al.'s [37] approach to synthesizing qualitative literature allows for the inductive creation of a set of higher-order constructs (third-order constructs, discussed below) that reflect concepts identified in individual studies, but also extends beyond them. While the quantification of qualitative work has been criticized, in this study individual concepts are "counted" in order to let the reader decide about the relative importance of the themes. We suggest that themes that appear at a lower frequency are not necessarily less important (e.g., one account of harm to a child is significant and must be considered), but rather that this theme was less of a focus for MRs and study authors. For example, the theme of "cultural competence" is not discussed by as many MRs as compared to all of the various factors that impact their decision to report, which is partially explained by the fact that 11 (25%) of included articles set out specifically to investigate factors that impact MRs' decision to report. The results of this meta-synthesis are reported according to the ENTREQ [enhancing transparency in reporting the synthesis of qualitative research] statement[35] (see online supplementary file 2 for ENTREQ research checklist).

2.1. Search strategy

The systematic search was conducted by an information professional (JRM). Index terms and keywords related to mandatory reporting (e.g., "mandatory reporting", "mandated reporters", "duty to report", "failure to report") and child abuse (broadly defined, including, but not limited to terms for child welfare, physical abuse, emotional abuse, neglect, sexual abuse/exploitation, and children's exposure to IPV) were used in the following databases from database inception to November 3, 2015: Medline (1947-), Embase (1947-), PsycINFO (1806-), CINAHL (1981-), Criminal Justice Abstracts (1968-), ERIC (1966-), Sociological Abstracts (1952-), and Cochrane Libraries (see online supplementary file 3 for

example search strategy). Forward and backward citation chaining was conducted to complement the search. All articles identified by our database searches were screened by two independent reviewers (JRM & AA) at the title and abstract level. At the level of title and abstract screening, an article suggested for inclusion by one screener was sufficient to put it forward to full-text review. Full-text articles were screened for relevance and put forward for consideration by one author (JRM); relevance for inclusion was confirmed by a second author (MK), with discrepancies being resolved by consensus.

2.2. Study selection criteria

Our inclusion criteria were as follows: 1) primary studies that used a qualitative design; 2) published articles; 3) investigations of MRs' experiences with mandatory reporting of child maltreatment, including physical abuse, sexual abuse, emotional abuse, neglect, exposure to IPV, prenatal exposure to maternal drug abuse, or child sex trafficking; 4) presence of direct quotes from the participants to facilitate the formulation of the results; and 5) English-language articles only. Excluded studies include 1) all non-qualitative designs, including surveys with open response options; 2) studies that did not examine mandatory reporting in the context of child maltreatment (e.g., mandatory reporting for elder abuse or IPV only); and 3) qualitative methods that did not lend themselves to direct quotes from participants (e.g., forensic interviews).

2.3. Data analysis

Data analysis followed two parallel strands: a) first and second-order constructs (Table 1) were identified in each article and b) each article was appraised with a modified critical appraisal tool for qualitative literature from CASP. For data extraction, each article was analyzed for the perspectives of MRs (first-order constructs) and the conclusions offered by the author(s) of the article (second-order constructs). For first-order constructs, only direct quotes from participants (and any clarifying text provided by the study author), found in the Results sections of included articles, were considered for

analysis. For second-order constructs, only study author recommendations (often worded as “should” or “ought” statements and found in the Discussion of the article) were considered for analysis.

Two reviewers (JRM & MK) independently placed the primary data from each study and its corresponding code into an Excel file and these files were compared for consistency (JRM). After reviewing discrepancies across excel files one author (JRM) developed a master list of codes and after discussion with a second author (MK) (where both authors reviewed all codes and corresponding data together) this list of codes was further modified. Any discrepancies identified by the two authors were resolved by a third researcher (HLM). After this point, one author (JRM) went back through and recoded all data in the excel file according to the master list of codes and a second author reviewed all recoding (MK). Readers are able to view this final excel file, which includes all extracted data, codes (including master list of codes), and overall quality rating of included articles. Final conclusions (third-order constructs – Table 1) were all double checked (JRM) to ensure that they were supported by articles that ranked highly on the quality appraisal forms.

For critical appraisal, a modified appraisal tool from CASP was used to assess the quality of each article (see online supplementary file 4). Two independent authors (JRM & MK) appraised each article to assess if it addressed each CASP question (yes/no/unsure) and came to consensus about the final score for each article. Only the total CASP scores were considered and studies were not excluded for poor study design, as a) according to our inclusion criteria we only included articles with full quotes from MRs, b) we coded all MRs’ quotes as first-order constructs, and c) we felt that the exclusion of any articles could exclude a valuable quote/perspective from an MR and that this exclusion could impact the meta-synthesis findings.

Table 1. First, second, and third order constructs

Construct order	***Definition***
First order constructs	First-order constructs were the experiences and understandings of MRs with respect

	to mandatory reporting processes
Second order constructs	Second-order constructs were the conclusions or interpretations of the article author(s) who reported the study findings – some of these interpretations were inferred from the author's recommendations.
Third order constructs	Views and interpretations of the meta-synthesis team

Data coding for this meta-synthesis was primarily inductive. Data analysis focused on identifying a) first-order and second-order constructs that appeared across studies (repeating themes); b) first-order or second-order constructs that were conflicting across studies or within studies; and c) unfounded second-order constructs, or researchers' conclusions or interpretations that were not supported by quotes from participants. First- and second-order constructs that appeared across studies were re-examined to develop the third-order constructs, or the conclusions of this meta-synthesis. Specifically, one author (JRM) identified third-order constructs that addressed strategies to improve MRs' experiences with the reporting process – especially when these themes were supported by strategies offered by MRs in first-order constructs – and these themes were, per Feder et al. [37], reworded as recommendations. For example, the recommendation that MRs should "Be aware of jurisdiction-specific legislation on reportable child maltreatment" combines a second-order construct that suggests MRs need better training about jurisdiction-specific mandatory reporting legislation with the first-order construct in which MRs admitted they lacked knowledge about mandatory reporting legislation. These third-order constructs were first discussed with the two authors (MK, HLM) involved in developing the first- and second-order constructs, in order to ensure they reflected their understanding of the data. Following this, a table that showed a "tally" of which first- and second-order constructs were combined to generate each third-order construct (and a brief rationale for combining them) was reviewed by all study authors and a discussion followed. Minor adjustments to the third-order constructs were made after this discussion. The biggest discrepancy across all authors of this meta-synthesis was whether or not we should offer recommendations specific to mandatory reporting at all, given that a) we didn't find

any effectiveness data and b) the qualitative studies suggest many negative experiences with reporting. However, the third-order constructs represent what is found in the included studies that we synthesized (i.e., included studies did not recommend against mandatory reporting) and their presentation as recommendations is faithful to the approach used by Feder et al., which we set out to follow, and the experiences of MRs, as summarized in the included articles.

3. RESULTS

A total of 6500 records were identified and, after deduplication, 3809 titles and abstracts were screened using the screening criteria. After full-text screening of 218 articles, 44 articles (representing 42 studies) were included in this review (see Figure 1). Details about participant and study characteristics are available here (see online supplementary file 5 for study characteristics).

Figure 1. PRISMA Flow Diagram

[Insert PRISMA_Flow_Chart.tiff here]

3.1 Study characteristics and methodological quality

The methodological quality of the studies varied and the total score percentages for each article (total possible score was 20 “yeses”) are reported in Table 2. These studies represent the views of 1088 MRs, including 231 physicians, 224 nurses, 168 CPS professionals, 156 teachers, 114 psychologists and therapists, 85 social workers, 19 dentists, 16 domestic violence workers, 16 police officers. This underestimates the number of participants included because it was challenging to determine exact number of participants in some of the studies (including one study with 10 focus groups). MRs’ ages were reported in 25% of studies and ranged from 20 to 60 years of age; their years of experience were reported in just over 50% of the studies and ranged from 6 months to 41 years of experience. Only six articles [39-44] discussed any training that MRs received about recognizing and responding to child maltreatment; aside from one study [42] that was examining the impact of child maltreatment training,

it is hard to determine if or how training (or lack of training) influenced MRs' responses. Over 80% of the articles had been published since the year 2000, with seven articles published between 1981 and 1999. The studies took place in nine high-income countries (U.S. (15), Australia (6), Sweden (5), Taiwan (5), Canada (2), Israel (2), and Norway (1), Finland (1), and Cyprus (1)) and three middle-income countries (South Africa (3), Brazil (2), and El Salvador (1)). Other studies from LMICs were identified [45-49] that did not meet all of the inclusion criteria; this limitation of our study is discussed further below.

Table 2. Methodological Quality of Studies

% of Total Score	49% and under	50-74%	75% or above
Study Reference	[41 50-60]	[28-30 39 44 61-77]	[40 42 43 78-84]

3.2 MRs' decisions to report and experiences with reporting (first-order constructs)

Seven first-order constructs (views of MRs) are detailed below; all except construct seven (experiences receiving a report) are supported by articles from the top quartile (see Table 2 above). As is shown in Table 3, most of the articles (91%) addressed factors that influenced MRs' decision to report (construct 1). These findings suggest that MRs struggle to identify less overt forms of maltreatment, including "mild" physical abuse, emotional abuse, children's exposure to IPV, and abuse experienced by children with disabilities. MRs also were reluctant to report their suspicions of abuse and preferred to report only when they found physical evidence of abuse, such as physical injuries, bruises, broken bones, caries (and corresponding lack of treatment), or "total" changes in behaviour. Unfortunately, most MRs did not clarify their reporting decisions in relation to specific forms of maltreatment. For example, only five articles [28 51 69 70 79] discussed decisions to report (including hesitance to report) in relation to sexual abuse and four of these articles discussed maltreatment of children with disabilities (suggesting particular challenges they faced in reporting maltreatment of children with disabilities).

Factors that influenced the decision to report were distinct from the reporters' judgements and views about mandated reporting (construct 2) and their experiences with reporting (construct 3), as

expressed through specific accounts of positive or negative experiences. While six articles (14%) reported positive experiences with the reporting process, 32 articles (73%) mentioned negative experiences with the reporting process, including 13 articles (30%) that offered concerning examples regarding negative child outcomes, such as: when the child was not removed from harm and the abuse continued or intensified; when the child was removed from harm, but the foster care environment was worse than the family-of-origin environment; and child death following a report or after being removed from the family of origin.

First-order constructs also addressed MRs' values and knowledge related to child maltreatment and reporting (construct 4), MRs' strategies for responding to disclosures of child maltreatment or for reporting (construct 5), and whether or not MRs felt personally responsible for reporting or passed this responsibility to others, such as a supervisor (construct 6). A handful of articles included CPS professional's experiences with receiving a report (construct 7).

Table 3. First-order constructs (views of MRs) and the number (n) and percent (%) of articles that address each construct

First-order construct	(n, %)	Description of construct	Illustrative quotes
1) Deciding when to report	**n=40, 91%**	Factors that influenced MRs' decision to report, including: • the amount of evidence of maltreatment (e.g., challenges identifying less overt forms of maltreatment), • the context of the reporter (e.g., institutional support; time burden), • preferred alternative responses (e.g., chart and follow child progress instead of reporting), • the perceived impact of the report on the child or family (e.g., concern regarding stigma), • consultation (i.e., MRs' decision or need to consult with a colleague or CPS before filing a report), and • family context (e.g., perceived parental skills)	"The most obvious [signs] are easy. It's the ones that are not so obvious, the ones that you have to dig for and explore to get to... those are the hardest ones... those are the ones that just haunt you" [63] "We need more time (than 24 hours) to interact with the child, evaluate the whole thing, and make a decision" [67] "If nothing comes out of it [report to CPS is unsubstantiated]…you're scared…thinking, I just bothered this family for no reason based on my
a) Evidence	n=32, 73%		
b) Context of reporter	n=28, 64%		
c) Alternative response	n=19, 43%		
d) Perceived impact	n=12, 27%		
e) Consultation	n=9, 20%		
f) Context of family	n=8, 18%		

			assumptions" [61]
2) Judgements and views towards the reporting process a) Negative b) Positive	**n=34, 77%** n=33, 75% n=11, 25%	Factors related to MRs' general satisfaction with the reporting process, including: • MRs' perceived level of trust or collaboration with other professionals in the reporting process (including their own colleagues or CPS), • any general burden MRs felt from the reporting process • MRs' perceptions of CPS's (in)effectiveness	"Knowing the child protection agency in our area, nothing would come of a report" [72] "It's pretty much a one way street as far as information goes. I find that really frustrating" [83]
3) Experiences with reporting a) Negative b) Positive	**n=33, 73%** n=32, 74% n=6, 14%	Examples of MRs' positive or negative experiences with the reporting process, including: • the amount of support MRs received when reporting (e.g., some MRs had little institutional support for their reporting duties), • responsiveness of the intake workers screening the report (e.g., some reporters discussed rude or dismissive responses from intake workers), • the scope of CPS (e.g., some reporters were discouraged when their report fell outside of the scope of CPS), • MRs' positive or negative feelings about filing a report, • feedback from CPS (e.g., many reporters were discouraged when they received no feedback about their reported case from CPS), and • perceived outcomes of the report (MRs described positive or negative outcomes of the report for themselves, the child, or the family)	"You'll call and say, 'I have a such and such child who made an outcry that her uncle rubbed her breasts last night.' And they'll be like, 'Well, was it over the clothes or under the clothes?'…I know that's all part of their risk assessment and they have to get to the high-priority risk to be able to take a report, but it's really challenging to hear someone on the other line say, 'Well, you know, that's just not bad enough'" [71] "She made the student describe the sexual abuse experience again after they returned from the hospital. This is so [emphasized] wrong. The student should not have to experience secondary damage by going through this again and again" [81]
4) MRs' values and knowledge	**n=19, 43%**	Values and knowledge that informed MRs' throughout the reporting process: • Conflicting values included discussions of child rights and well-being, parental rights and well-being, cultural factors, and the desire to ensure family preservation • MRs' discussions about their lack of knowledge related to reporting legislation or about how to identify and	"Many times, we don't have adequate knowledge about child abuse and the law. It is not extensively provided to every health care provider or to ordinary people. Without the knowledge, it is hard for us to be sensitive about the abuse or to find evidence of child abuse" [39]

		respond to children in need.	
5) Strategies for responding to disclosures of maltreatment and reporting	**n=16, 36%**	Practical strategies used by MRs during the reporting process, including: • strategies for responding to disclosures of abuse (e.g., listening and consoling) and • strategies for filing a report (e.g., informing a child or family of the limits of confidentiality before when starting a therapeutic relationship) This construct also related to MRs' struggles to engage non-judgementally with offending caregivers	"My sense was that this child just wanted to know that she was safe and that she could tell someone, so I used that to help, in questioning her, reassuring her that nothing would happen if she told…[When the report was made] I presented it to her as that she wouldn't get in trouble but that it was a secret that I couldn't keep, and that it was something that I could help her with...she was very aware of the decision...The child knew what was going on and she felt comfortable with my telling her I was going to make a report" [57]
6) Responsibility	**n=15, 34%**	• MRs' perceived responsibility in identifying and responding to child maltreatment (i.e., whether MRs' felt they were responsible for engaging with children, or felt that they needed to refer the case to another colleague)	"I reported my suspicions to the doctor that was looking after the child and he reported it to the consultant" [62]
7) Experiences receiving a report	**n=2, 5%**	• CPS professionals' positive and negative experiences receiving a report	"So part of the issue for us is because we got all of these mandated reporters and intake has to take the complaint regardless, that's the problem. It's that they're not permitted to say, well that's not enough information" [65]

3.3 Strategies for supporting MRs (second-order constructs)

All second-order constructs (views of study authors) listed in Table 4 below were supported by first-order constructs within the same study; all were also supported by articles from the top quartile of study quality score (see Table 2 above). These constructs represent study authors' suggestions for how MRs could improve their decision-making during the reporting process, including strategies for

mitigating negative experiences. The majority of articles (86%) commented on the need for MRs to be trained in how to best identify, respond, and report suspected child maltreatment (construct 1). Two other influential themes related to the need for increased consultation between MRs and between MRs and CPS (construct 2) and the need for increased communication among MRs, among MRs, children and families, and between MRs and CPS (construct 3). Study authors also emphasized that MRs needed to be better supported in their reporting process (construct 4) and that they needed clear protocols related to identifying and reporting child maltreatment (construct 5). Some study authors emphasized that child rights and well-being must be prioritized throughout the reporting process (construct 6). A few study authors suggested that MRs' and CPS' responses to child maltreatment needed to be culturally competent (construct 6) and emphasized that MRs must report suspicions of abuse when this is their legal obligation.

These second-order constructs show that MRs need better support at all social-ecological levels: a) personally, in terms of better training, including skills to identify and respond to child maltreatment, as well as skills for stress and coping management; b) interpersonally, in terms of better opportunities for dialogue among colleagues about child maltreatment generally, as well as specific cases; c) organizationally, in terms of more support for the time it takes to report (and the potential 'costs' to other patients when taking this time), safeguards for MRs' personal safety when reporting, and access to staff experts in child maltreatment; d) in the community, especially in terms of better feedback about reported cases from CPS and in general better dialogue between different agencies involved in the reporting process; and e) nationally, in terms of national protocols about identifying, responding to, and reporting child maltreatment.

Table 4. Second-order constructs (views of study authors) and the number (n) and percent (%) of articles that address each construct

Second-order construct	(n, %)	Description and citations for supporting articles from the top quartile	Illustrative quotes

1. Training & Knowledge	**n=38, 86%**	• MRs must know how to identify all forms of child maltreatment, including common and less overt forms of child maltreatment (emotional maltreatment, physical neglect, emotional neglect, abuse against children with disabilities) [42 43 61 63 78 82 84] • MRs must know how best to respond to a child and family when child maltreatment is identified or disclosed [43 78 84] • MRs must know common issues encountered when reporting, such as ethical conflicts; moments where MRs hesitate to report; confidentiality issues; jurisdiction-specific legislation; risks and benefits of reporting; strong feelings that arise from child maltreatment cases; consequences of failure to report [62 78 82] • MRs must know the purpose of mandatory reporting, i.e., child safety & well-being [78 81] • MRs must know their duty to report and how this differs from their moral responsibility to respond [43 78]	"All practitioners whose patients include children should avail themselves regularly of educational opportunities to increase their knowledge of the epidemiology and evaluation of child abuse and neglect" [84] "Professionals and authorities should have increased awareness of the legislation and their duties in all forms of violence" [75] "Good guidelines are important, but missing guidelines must not be an excuse not to care" [78] "Reporting, a legal requirement, must be separated from responding, which is a moral duty" [67]
2. Consultation	**n=23, 52%**	• For child protection to be successful, there needs to be better collaboration between all professionals in the reporting process [42 43 78 81 83] • MRs should be able to discuss cases of suspected child maltreatment with others, whether that be members of their own team, a child maltreatment team at their institution, or CPS personnel [61 62]	"Another important finding from the study is the urgent need to improve systematic collaboration and a trustful relationship with CPS" [43] "An important resource to develop in an effort to improve child abuse and neglect detection and reporting may be the identification and ongoing support of child abuse and neglect content experts within nonpediatric and nonacademic hospital" [61]
3. Communication	**n=21, 47%**	• MRs should communicate clearly with the child or family about their reporting duties and the limits of confidentiality [80 84] • MRs require feedback from CPS about reported cases [61 62] • MRs should be afforded opportunities to formally and informally talk about child maltreatment with other MRs [40	"Forewarning is critical for ensuring that clients do not feel deceived into thinking that superior levels of confidentiality exist" [80] "Mandated professionals require feedback from child protection agencies" [62]

		42 61 63 78 81 82]	
4. Support	**n=12, 27%**	• MRs should be supported in their reporting process by their respective institutions, both in terms of the time and costs of reporting (including support of their personal safety). Support may require additional staff experts in child maltreatment [40 61 62 78] • MRs should partake in self-care and be supported in stress and coping management [62 82]	"Employing bodies are encouraged to provide a suitable support mechanism to decrease the stress and anxiety of individuals who are emotionally traumatised by the process of mandatory reporting" [62]
5. Structural concerns	**n=7, 16%**	• MRs need clear protocols for identifying child maltreatment and reporting it, as well as methods for reviewing and updating protocols [42 61 62 82]	"It is recommended that a formalised national framework for reporting and feedback be established, which incorporates exemplar cases to demonstrate processes and outcomes which will positively influence future decision-making of mandated professionals" [62]
6. Child rights & well-being	**n=6, 14%**	• MRs should prioritize children's rights & well-being throughout the reporting process [85]	"If the intention is for children to have the full status of victim, the focus should not only be on reporting but also on the responses following reporting" [75]
7. Cultural competence	**n=4, 9%**	• MRs' and CPS responses to child maltreatment should be culturally competent and families' preferences for alternative ways of dealing with abuse (e.g., restorative justice) should not be dismissed [79]	"People's preference for traditional ways of dealing with problem should not be taken lightly, especially as any dismissal of it could be taken as constituting a lack of trust and understanding by the establishment of the current African ways of dealing with abuse" [79]
8. Evidence	**n=4, 9%**	• MRs should report suspicions of abuse rather than wait for evidence of abuse, when this is their legislative duty [78]	"Physicians and other health care workers are legally required to report cases if they have *reasonable suspicion* of child abuse" [58]

3.4 Apparent contradictions

All of the apparent contradictions found within the studies (or constructs that conflicted within or across studies) are examples of correlates of reporting that have been discussed previously in the literature (e.g., MRs' decisions to report should or should not be influenced by the context of the family, the level of evidence available, the context of the reporter, or the perceived impact of reporting on the child or family; MRs should or should not report children's exposure to IPV or corporal punishment; MRs should or should not intervene with the family instead of reporting; the MR who identifies maltreatment should report it, or refer it to a senior personnel). The solutions to these contradictions are more straight-forward to resolve legally, but less so ethically. For example, in cases where MRs suspect that harm may come to a child from the reporting process (based on their experience or their expert judgement), they are still required to report *legally* (when the type and severity of child maltreatment falls within their jurisdiction's legislation).

3.5 Recommendations for MRs (third-order constructs)

The first-order constructs draw attention to several negative experiences MRs had with the reporting process, as well as a number of factors that influenced their decision to report. The second-order constructs summarize some institutional and cross-disciplinary responses to these concerns (offered by study authors), such as the need for increased feedback from CPS about reported cases; the need for clear protocols for identifying child maltreatment and reporting it; and the need for MRs to be better supported in their reporting process. Most of the second-order constructs, however, discuss how MRs' negative experiences with the reporting process can be addressed through increased training and better communication or consultation among MRs, their colleagues, and CPS. The third-order constructs found in Table 5 represent study authors' interpretation, across the studies, of MRs' and study authors' strategies for mitigating negative experiences with the reporting process, which includes the level of knowledge about child maltreatment that is required by all MRs. Restriction of the analysis to studies in the top quartile of quality ratings did not change these third-order constructs.

Table 5. Third-order constructs in terms of recommendations to MRs	
When	**What/How**
Before identification or disclosure of child maltreatment	• Be aware of jurisdiction-specific legislation on reportable child maltreatment. Most reporting legislation requires that you report suspicions of child maltreatment and not wait for physical evidence of maltreatment • Be aware of the level of evidence that CPS requires to substantiate a report in your jurisdiction; acquiring this knowledge which will likely require discussions with your local CPS • Be aware of child maltreatment experts in your institution or jurisdiction that you can consult with about suspected cases of child maltreatment • Be aware of the roles of your colleagues and CPS in the reporting process. Try to arrange times to communicate with both groups about issues related to child maltreatment and reporting, in order to increase opportunities for collaboration and trust • Take training related to how to identify child maltreatment, especially less overt forms of child maltreatment; how best to respond to children exposed to maltreatment; and best practices for filing a report • Be aware of the limitations of your decision-making about child maltreatment, in terms of conflicting values about parental rights, family preservation, and other cultural factors. The child's rights and well-being should always be prioritized in cases of suspected child maltreatment
At the beginning of a relationship with a child or family	• When you start a relationship with a child or family, disclose your reporting duties and the limits of your confidentiality to whomever is in your care
Immediate response to disclosure	• Respond in a nonjudgmental way, showing compassion, support, and belief of the child's experiences • If you are unsure if the form of maltreatment is reportable, first consult with colleagues or CPS about the case, ensuring the confidentiality of your patient is maintained • If the identified form of maltreatment is reportable in your jurisdiction and it is safe to do so, take time to remind the child and parent of your role as a mandated reporter. Discuss how you will file a report and what CPS responses to your report may entail. • Be sensitive to the parent's needs and well-being during the reporting process. Be professional and non-judgemental with the offending caregiver • Ensure that the child is safe during the reporting process; for example, report at the beginning of the school day or when the accused will be otherwise occupied • Remember that your moral responsibility to respond to the child or family in need is separate from your responsibility to report maltreatment
Debriefing after report	• In a confidential manner, take time to debrief about the reported case with a trusted colleague. Self-care is important

4. DISCUSSION

While our search retrieved no evidence about the effectiveness of mandatory reporting, and qualitative research cannot be mistaken for evaluation of effectiveness, findings from this review raise

important questions about the effects of mandatory reporting by drawing on studies reporting the experiences of MRs across nine high-income and three middle-income countries. While some MRs have had positive experiences with reporting, the negative experiences reported in the individual studies are very concerning, especially those related to child outcomes. Some of these include accounts of children being revictimized by the reporting process, children whose abuse intensified after a report was filed, foster care environments that were perceived to be worse than family-of-origin environments, and reports of child death after CPS intervention. Whether or not these negative experiences are reflective of national or international experiences must be assessed. Studies addressing MRs' attitudes towards reporting address perceptions of negative experiences, but are not able to address child-specific outcomes. [86-88] For example, Flaherty and colleagues' [86] 2006 U.S. national survey of pediatricians found that 56% of physicians experienced negative consequences from reporting, including 40% who lost patients after reporting and 2% who were sued for malpractice. Some of these concerns are likely to be especially salient for MRs in countries where child protection systems are not well developed, or do not function properly. MRs may have real concerns that reporting cases of child maltreatment to poorly trained or poorly resourced service providers could lead to adverse outcomes for children (see, for example, the concerns raised by Devries and colleagues [46] about the very poor response of local services to children in Uganda). Particularly in these contexts, further research on the harms and benefits of mandatory reporting is needed.

Given that negative experiences with reporting discussed in this meta-synthesis spanned decades, nine high-income and three middle-income countries, it is not surprising that some authors have suggested that the interface between MRs and CPS agencies "requires renewed attention, in terms of both research and programming".[72] We were unable to find any high-quality research studies suggesting that mandatory reporting and associated responses do more good than harm. The lack of evidence about the effectiveness of mandatory reporting has been noted by others, including the World

Health Organization.[89] Research related to alternative processes to mandatory reporting, such as differential response, also requires more research that addresses child-specific outcomes (see online supplementary file 1).

Researchers citing the benefits of mandatory reporting note that mandatory reporting laws are an "essential means of asserting that a society is willing to be informed of child abuse and to take steps to respond to it" [11]; they also note that mandatory reporting laws have resulted in the identification of more cases of child maltreatment [90-92] and an increase in reporting from reluctant reporter groups. [93 94] It has been argued by some authors [95 96] that identification is not a sufficient justification given the problems with the mandatory reporting process; as described in this meta-synthesis, negative experiences seem to involve the reporting process itself and the associated responses (or lack of response). A key issue is the number of children identified by MRs who receive either no services, or of greater concern - inappropriate, ineffective, or harmful responses. MRs' discussions of ineffective responses seem to be related most closely to their reports of "mild" physical violence, neglect, emotional abuse, or children's exposure to IPV, which may lend credence to the suggestion that mandatory reporting is most appropriate for cases of *severe* abuse and neglect.[11] More research about the effectiveness of mandatory reporting across abuse types and severity, as well as associated responses and strategies for mitigating harm (including strategies for including children and family in the reporting process), is urgently needed.

4.1 Implications for clinicians and policy makers

Much of the research included in this meta-synthesis did not question the need for mandatory reporting (as many of the studies aimed to address MRs' decision-making process with regards to reporting); instead, it included studies that addressed MRs' negative experiences and reluctance to report with suggestions about the need for increased support, training, consultation, and

communication. The third-order constructs (final conclusions) of this study therefore offer recommendations for how MRs' can mitigate negative experiences with the reporting process.

Analysis of recommendations by study authors suggests that MRs need better support for the reporting process at many levels: personally, interpersonally, institutionally, in the community, and nationally. Personal support for reporters can include training or support for secondary traumatic stress – which many healthcare professionals experience – through, for example, strategies for debriefing. [97-99] Emerging work is examining the methods by which health and social service providers can be trained to recognize and respond to child maltreatment disclosures and suspicions of child maltreatment (for example, see [100-102]). Given that the evaluation of these training programs falls outside the scope of this review, and that mandatory reporting is but one of many components of appropriate recognition of and response to children exposed to maltreatment, further work and evaluation is needed to understand the extent to which existing training programs are capable of improving MRs' recognition and response to children exposed to maltreatment or if further specialized training is needed. Among studies of training programs for mandatory reporting with controlled designs, Kenny [103] argues that Alvarez and colleagues' [104] training program shows the most promise. The components of the training program, discussed further by Donohue et al. [100], include discussions about identifying child maltreatment, reporting requirements and procedures, strategies for involving caregivers in the reporting process, and information about consultation with colleagues and CPS – all identified as important components of training in this review. Whether or not the training program can be successfully modified to address the training needs of different countries and multi-disciplinary trainees has yet to be assessed.

Interpersonal support can include increased opportunity for communication and teamwork between inter- and multidisciplinary colleagues through, for example, interdisciplinary training [42] or multi-disciplinary conferences. [105] Relatedly, community support can include increased communication and

collaboration between reporting professionals; the need for increased feedback from CPS about reported cases is also important. [61 62 86-88] Poor communication or collaboration between CPS and MRs has long been cited as an area for much needed improvement. [105-109] How exactly to improve collaboration, however, is complex and under-researched. As Winkworth and White [110] argued in relation to Australian initiatives to increase collaboration between child protection, family relationship and family support service systems, "So ubiquitous is reference to collaboration in policy documents that it is in danger of being ignored altogether by service deliverers who are not clear about its rationale, how it is built, or its real value". Finally, national support necessitates national protocols about identifying, responding to and reporting abuse, as well as increased clarity around specific reporting requirements (including increased clarity around national or jurisdictional reporting legislation). Whether or not national protocols improve the reporting process for MRs or help to improve child outcomes would need to be tested. [111-113]

4.2 Strengths, limitations and future research

The strengths of our review include a systematic search to inform the meta-synthesis; the use of clear *a priori* study inclusion and exclusion criteria; use of an established study appraisal checklist; and transparent and reproducible methods for analysis. This review focused on MRs' direct experiences with, or views about, the mandatory reporting process and as such does not reflect complete findings about a) appropriate MR responses to the disclosures or identification of child maltreatment; b) CPS workers' experiences substantiating reports; c) children's and caregivers' experiences with mandatory reporting; and d) professionals' experiences with reporting in a non-mandated context (such as the UK). Reviews on these topics would be complementary to the findings of this review. While only English-language studies were included and only a handful of included articles discussed reporting processes in LMICs, the limited availability of research from LMICs suggests an ever greater need to invest in research

in these settings. Research about voluntary or policy-based reporting processes, as well as responses to mandatory reporting, may provide more information about reporting process from LMICs.

4.3 Conclusion

Mandatory reporting of child maltreatment has been variously implemented across jurisdictions and high-quality research on the effectiveness of this process is severely lacking. While our search retrieved no evidence about the effectiveness of mandatory reporting, through this meta-synthesis of MRs' experiences with reporting we have summarized many accounts of harm associated with reporting. Along with focusing on approaches to improve mandatory reporting, the field needs to address whether or not mandatory reporting actually improves children's health outcomes through research that is sensitive to both severe and less overt forms of maltreatment. Our findings in no way imply that the recognition and response to children exposed to maltreatment is not a significant public health concern that requires coordinated responses. Rather, it implies that we must work to ensure that all of our methods for recognizing and responding to children exposed to maltreatment demonstrate that they benefit children's safety and well-being and do no additional harm.

Contributors

Conceptualization: HLM, KD, MC, JRM, JCDM; Analyzed the data: JRM, MK, AA, HLM; Writing – Original draft preparation: JRM; Writing – Review and editing: JRM, MK, KD, MC, JCDM, CNW, HLM; ICMJE criteria for authorship read and met: JRM, MK, KD, MC, JCDM, CNW, AA, HLM; Agree with manuscript results and conclusions: JRM, MK, KD, MC, JCDM, CNW, AA, HLM

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Competing interests

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Data sharing statement

Extra data can be accessed via the Dryad data repository.

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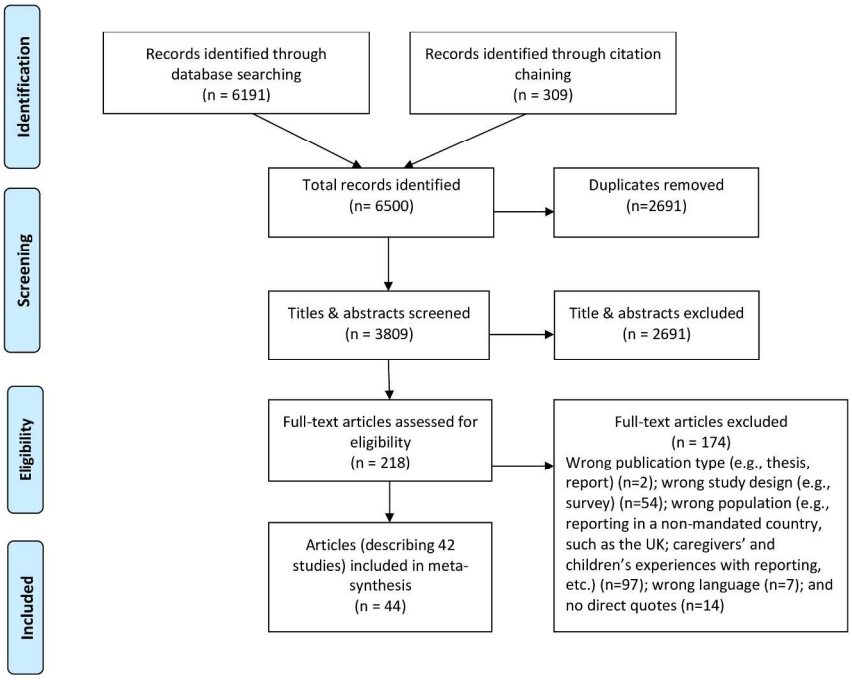

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Mandatory reporting internationally

Broad and narrow versions of mandatory reporting laws – in terms of the types and severity of reportable abuse and the specific persons deemed to be mandated to report – have been taken up internationally. A recent survey by the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) [1] is summarized in Table 1; the findings are organized according to World Bank country groups. The results of this survey should be interpreted with caution as it is limited in design (in most instances the country profiles are tabulated from the answers of one respondent who was thought to be familiar with child protection) and for low-income countries, the survey is limited in representation (includes data from only seven of 31 low-income countries); however, it is the most comprehensive report about the availability of mandatory reporting in low- and middle-income countries (LMICs).

Table 1. Proportion of mandatory reporting laws and provision for voluntary reporting across countries, as reported in the 2014 ISPCAN report*

	Low income countries	Lower middle income countries	Upper middle income countries	LMICs Combined	High income countries
Did the country answer the ISPCAN survey?					
Yes	7/31 (22.6%)	12/51 (23.5%)	19/91 (20.9%)	38/149 (25.5%)	35/80 (43.8%)
Is there a national mandatory reporting law?					
Yes	3/7 (42.9%)	7/12 (66.7%)	18/19 (94.7%)	28/38 (73.7%)	22/35 (62.8%)
What types of maltreatment are covered by mandatory reporting law?					
Physical, sexual, and emotional abuse, neglect, and exposure to intimate partner violence	2/3 (66.7%)	2/8 (25%)	5/18 (27.8%)	9/28 (32.1%)	13/22 (59.1%)
Physical, sexual, and emotional abuse and neglect	0/3 (0%)	4/8 (50%)	7/18 (38.9%)	11/28 (39.3%)	6/22 (27.3%)
3 or fewer types of maltreatment	1/3 (33.3%)	2/8 (25%)	2/18 (11.1%)	5/28 (17.9%)	1/22 (4.5%)

Not answered or don't know	0/3 (0%)	0/8 (0%)	0/18 (0%)	0/28 (0%)	2/22 (9.1%)
For mandated reporting of suspected CM for specific groups of professionals or individuals, what is the enforcement rate?					
Wide	1/3 (33.3%)	2/8 (25%)	5/18 (27.8%)	8/28 (28.6%)	8/22 (36.4%)
Inconsistent	1/3 (33.3%)	4/8 (50%)	8/18 (44.4%)	13/28 (46.4%)	9/22 (40.9%)
Never or almost never	0/3 (0%)	1/8 (12.5%)	2/18 (11.1%)	3/28 (10.7%)	1/22 (4.5%)
Not answered or don't know	1/3 (33.3%)	1/8 (12.5)	3/18 (16.7%)	5/28 (17.9%)	4/22 (18.2%)
*Statistics in this table were tabulated from the country profiles from the ISPCAN [1] report.					

Results from the ISPCAN survey indicate that 73.7% of responding LMICs and 62.8% of high-income countries (HICs) have national mandatory reporting laws for child maltreatment, although the enforcement of these laws is inconsistent or completely absent in 57.1% of LMICs and 45.4% of HICs. The mandatory reporting laws for the responding countries include physical abuse, sexual abuse, neglect, emotional maltreatment and exposure to intimate partner violence (IPV) in 59.1% of the HICs and 32.1% of the LMICs. The comprehensiveness with which these exposure types are addressed in county-specific legislation is not discussed in the ISPCAN report. For example, in the ISPCAN country profile for Canada, the respondent(s) indicated that "yes" Canada has a law mandating that suspected child maltreatment must be reported and that this law applies to physical abuse, sexual abuse, neglect, emotional maltreatment, and exposure to IPV. Mandatory reporting legislation in Canada (and many other federated countries), however, is complicated, as what is considered to be reportable maltreatment varies across states/provinces and territories [2].

Beyond the ISPCAN survey, we found little in the English-language literature about mandatory reporting and its associated processes in LMICs [3]. Some authors have suggested that evaluation is needed to address the utility and feasibility of mandatory reporting laws in LMICs [4]. Others have suggested that it is more appropriate for individual nations to develop their own focus and priorities

regarding mandatory reporting so that specific sociocultural and economic conditions are addressed; these authors have suggested that some forms of abuse must be prioritized, such as severe physical abuse, sexual abuse and exploitation, child trafficking, and severe neglect [5 6].

Differential response

Melton [7] has argued that alternative strategies to mandatory reporting "should pass muster if they are less intrusive than mandated reporting and have fewer side effects and, overall, they are more effective in ensuring children's safety". Differential response, also referred to as alternative response, family assessment response, or multiple-track response [8], is a method to restructure the CPS system to have multiple ways to respond to reports of child maltreatment [9]. It is an example of an alternative strategy that is being implemented in the U.S., Canada, and Australia that enables CPS to respond differently depending on the type and severity of maltreatment. The effectiveness of this method of response has been widely debated [8-11]. The Child Advocacy Center Model, which arose from the need to improve experiences with sexual abuse investigations, is another strategy that needs further research to better address child outcomes [12].

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PRISMA 2009 Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	1 (meta-synthesis)
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	1-2
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3-4
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	4
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	N/A
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	6
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	5-6
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Supplementary file # 3
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	6
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	6-7
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	6-7 (Constructs, not variables)
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	7 (CASP)
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	N/A

Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	N/A – qual meta-synthesis approach (8)

Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	N/A
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	N/A
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	9 (figure 1)
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Supplementary file #5
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	10 (table 2)
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	N/A (Table 3, 4 summary of constructs)
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	N/A (Table 5, summary of meta-synthesis)
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	N/A
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	N/A
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	19
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	22-23
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	23
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	24

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

ENTREQ Research Checklist

Enhancing transparency in reporting the synthesis of qualitative research (ENTREQ) statement items

No	Item	Guide and description	Reported on page #
1	Aim	State the research question the synthesis addresses.	4 (MRs' experiences reporting child maltreatment)
2	Synthesis methodology	Identify the synthesis methodology or theoretical framework which underpins the synthesis, and describe the rationale for choice of methodology (e.g. meta-ethnography, thematic synthesis, critical interpretive synthesis, grounded theory synthesis, realist synthesis, meta-aggregation, meta-study, framework synthesis).	4-5 (meta-synthesis)
3	Approach to searching	Indicate whether the search was pre-planned (comprehensive search strategies to seek all available studies) or iterative (to seek all available concepts until they theoretical saturation is achieved).	4-5 (pre-planned, systematic search)
4	Inclusion criteria	Specify the inclusion/exclusion criteria (e.g. in terms of population, language, year limits, type of publication, study type).	6 (English-language, qualitative studies with direct quotes about MRs' experiences reporting child maltreatment)
5	Data sources	Describe the information sources used (e.g. electronic databases (MEDLINE, EMBASE, CINAHL, psycINFO, Econlit), grey literature databases (digital thesis, policy reports), relevant organisational websites, experts, information specialists, generic web searches (Google Scholar) hand searching, reference lists) and when the searches conducted; provide the rationale for using the data sources.	5-6 (Medline, Embase, PsycINFO, CINAHL, Criminal Justice Abstracts, ERIC, Sociological Abstracts, and Cochrane Libraries from database inception to November 3, 2015; citation chaining)
6	Electronic Search strategy	Describe the literature search (e.g. provide electronic search strategies with population terms, clinical or health topic terms, experiential or social phenomena related terms, filters for qualitative research, and search limits).	5, online supplementary file 3

7	Study screening methods	Describe the process of study screening and sifting (e.g. title, abstract and full text review, number of independent reviewers who screened studies).	9 (double-independent reviewers)
8	Study characteristics	Present the characteristics of the included studies (e.g. year of publication, country, population, number of participants, data collection, methodology, analysis, research questions).	Online supplementary file 4
9	Study selection results	Identify the number of studies screened and provide reasons for study exclusion (e,g, for comprehensive searching, provide numbers of studies screened and reasons for exclusion indicated in a figure/flowchart; for iterative searching describe reasons for study exclusion and inclusion based on modifications t the research question and/or contribution to theory development).	6 (total of 6500 records screened, 215 full-text articles assessed for eligibility, 44 articles met all criteria)
10	Rationale for appraisal	Describe the rationale and approach used to appraise the included studies or selected findings (e.g. assessment of conduct (validity and robustness), assessment of reporting (transparency), assessment of content and utility of the findings).	7 (modified CASP)
11	Appraisal items	State the tools, frameworks and criteria used to appraise the studies or selected findings (e.g. Existing tools: CASP, QARI, COREQ, Mays and Pope [25]; reviewer developed tools; describe the domains assessed: research team, study design, data analysis and interpretations, reporting).	6, online supplementary file 4 (modified CASP)
12	Appraisal process	Indicate whether the appraisal was conducted independently by more than one reviewer and if consensus was required.	7 (double-independent appraisal resolved by consensus)
13	Appraisal results	Present results of the quality assessment and indicate which articles, if any, were weighted/excluded based on the assessment and give the rationale.	7 (most first- and second-order constructs supported by articles in the top quartile; other articles supported identified constructs)
14	Data extraction	Indicate which sections of the primary studies were analysed and how were the data extracted from the primary studies? (e.g. all text under the headings “results /conclusions” were extracted electronically and entered into a computer software).	6-7 (analyzed direct quotations of participants for first-order constructs and recommendations of study authors for second-order constructs)
15	Software	State the computer software used, if any.	N/A
16	Number of reviewers	Identify who was involved in coding and analysis.	7 (JRM, MK, HLM)

17	Coding	Describe the process for coding of data (e.g. line by line coding to search for concepts).	7-8
18	Study comparison	Describe how were comparisons made within and across studies (e.g. subsequent studies were coded into pre-existing concepts, and new concepts were created when deemed necessary).	8 (analyzed constructs that appeared across studies, constructs that were conflicting across studies or within studies unfounded constructs)
19	Derivation of themes	Explain whether the process of deriving the themes or constructs was inductive or deductive.	8 (primarily inductive)
20	Quotations	Provide quotations from the primary studies to illustrate themes/constructs, and identify whether the quotations were participant quotations of the author's interpretation.	Table 3 and 4, all extracted and coded data available from Dryad
21	Synthesis output	Present rich, compelling and useful results that go beyond a summary of the primary studies (e.g. new interpretation, models of evidence, conceptual models, analytical framework, development of a new theory or construct).	18-19, Table 5

Example Search Strategy

Database: Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to Present>
Search Strategy:
---

1 Mandatory Reporting/ (2710)
2 exp Child Abuse/lj [Legislation & Jurisprudence] (2891)
3 Incest/lj [Legislation & Jurisprudence] (88)
4 or/2-3 (2926)
5 limit 4 to yr="1860 - 1997" (1465)
6 (report* or tell or duty or duties or obligat* or require* or protect* or CPS or investigation? or inquiry or inquiries).tw. (4943274)
7 5 and 6 (535)
8 ((mandate? or mandatory) adj5 report*).mp. (4068)
9 ((duty or duties or failure or obligat* or require* or responsibility or responsibilities or law? or "child protect*" or CPS or investigation? or inquiry or inquires) adj5 report*).tw. (29695)
10 (failure adj5 (protect* or comply)).tw. (1855)
11 must report.tw. (139)
12 reasonable suspicion.tw. (65)
13 or/1,7-12 (35565)
14 exp Child Abuse/ or Shaken Baby Syndrome/ or Incest/ or exp Child Welfare/ or Infant Welfare/ (54722)
15 ((child* or girl? or boy? or infant* or baby or babies or toddler* or preschool* or pre-school* or pre school* or young person or young people or minor? or teen* or adolescen* or youth* or preteen* or tween* or kid? or son or sons or daughter? or grandchild* or grandson? or granddaughter?) adj5 (abuse? or abusing or maltreat* or neglect* or abandon* or harm* or offence? or offens* or assault* or rape? or raping or molest* or exploit* or spank* or hit or hitting or hits or (sex* adj2 abus*))).tw. (29293)
16 (parent* adj3 (violen* or aggression* or aggressive* or harsh*)).tw. (1324)
17 (child* adj3 (welfare or aid)).tw. (3562)
18 (child* protect* adj3 (service? or agenc* or organi?ation?)).tw. (941)
19 or/14-18 (70709)
20 battered women/ or domestic violence/ or spouse abuse/ (12077)
21 ((spous* or partner?? or wife or wives or husband? or family or families or domestic* or intimate* or conjugal* or marital* or interparent* or interpartner*) adj3 (abus* or violen* or batter or battered or batters or batterer? or battering or harm or harms or harmed or harming or harmful* or exploit* or victim* or mistreat* or maltreat*)).tw. (13612)
22 or/20-21 (17778)
23 (expose* or exposure or witnes*).mp. (930487)
24 growing up.tw. (1747)
25 ((child* or adolesc*) adj3 "living with").tw. (1328)
26 ((child* or adolesc*) adj5 (violen* adj2 (home*1 or household*))).tw. (37)
27 ((child* or adolesc*) adj5 (domestic* adj2 violen*)).tw. (484)
28 or/23-27 (933477)
29 22 and 28 (2596)
30 19 or 29 (72149)
31 13 and 30 (1796)

MODIFIED CASP Appraisal questions [author date]	Yes/No/Unsure
A. Appropriateness of research methodology & design	
Use of qualitative methodology: **1.** Does the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants?	1)
2. Is qualitative research the right methodology for addressing the research goal?	2)
Research design: **3.** Is the research design appropriate to address the aims of the research?	3)
4. Has the researcher justified the research design (e.g. have they discussed how they decided which method to use)?	4) SS:
B. Ethical considerations	
5. Did the researcher use **TWO** of the following strategies to ensure ethical issues have been taken into consideration (is there are sufficient details of a) how the research was explained to participants for the reader to assess whether ethical standards were maintained; b) did the researcher discuss issues raised by the study, such as issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study; c) was approval sought from an ethics committee)?	5) a.) b.) c.)
C. Credibility (akin to internal validity), Do participants and those with similar experiences recognize the experiences contained with the study? *Strategies for establishing credibility:*	
6. Did the research use **one or more** of the following strategies to establish credibility (has the researcher discussed saturation of data; attempt to triangulate data by using different data collection methods; member checking to see if participants agreed with the interpretations of the researcher; peers or consultants experienced in qualitative research review their coding process; full descriptions of member's words in their final paper)?	6)
D. Transferability (akin to external validity), How does one determine the extent to which the findings of the study are applicability in other contexts or with other participant types? *Strategies for establishing transferability:*	
7. Did the researchers use any of the following strategies to establish transferability (use of dense description of the population studied through descriptions of demographics and geographic boundaries of the study?	7)

Note: the author must describe at least **TWO specific sample descriptors (eg. age range, gender, setting from which sample was selected, SES, etc.**)	
E. Consistency (akin to reliability), Can another researcher follow the decision trail used by the researcher? *Strategies for establishing consistency:*	
Purpose: **8.** Did the researcher use any of the following strategies to establish the purpose of the research (was there a clear statement of aims of the research; what was the goal of the research; why was it thought important; its relevance)?	8)
Participant selection: **9.** Was the recruitment strategy appropriate to the aims of the research? (e.g. does the population from which the sample was selected resonate with the research objectives, was the sample selection ethnically implemented).	9)
10. Did the researcher explain how participants were selected?	10)
11. Did they explain why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study (*note: if not in the methods section, rate a 'no'*)?	11)
12. Were there any discussions around recruitment (e.g. why some people chose not to take part)? (*note: if not in the methods section, rate a 'no'*)	12)
Data collection: **13.** Was the setting for data collection was justified?	13)
14. Is it clear how data were collected (e.g. focus group, semi-structured interview etc.)?	14)
15. Did the researcher has justify the methods chosen?	15) SS:
16. Did the researcher make the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)?	16)
17. If the form of data is clear (e.g. tape recordings, video material, notes etc)?	17)
Data analysis: **18.** Did the researcher explain how the data were reduced or transformed for analysis?	18)
19. Did they discuss their interpretation and presentation of their findings?	19) SS:

F. Neutrality (akin to objectivity), Did overall credibility, transferability, and consistency occur? *Strategies for establishing neutrality*:	
Reflexivity: **20.** Did the researcher use **one or more** of the following strategies to ensure neutrality (has the relationship between researcher and participants been adequately considered; has the researcher critically examined their own role, potential bias and influence during the formulation of the research questions or data collection, including sample recruitment and choice of location; did the researcher discuss how they responded to events during the study and whether they considered the implications of any changes in the research design; did the researcher employ field notes to record their personal reactions and biases after each interview/focus group; did they make a conscious effort to follow rather than lead the direction of interviews/focus groups)?	20)

Modified CASP Appraisal Checklist from
http://media.wix.com/ugd/dded87_29c5b002d99342f788c6ac670e49f274.pdf

The questions listed in the CASP Appraisal Checklist were rearranged according to standard conceptions of rigour in qualitative research: credibility, transferability, consistency, and neutrality (and these four areas of assessing rigour are briefly defined). Other CASP questions that did not fit into these areas included questions about appropriateness of research (appropriateness of qualitative research and appropriateness of research design) and ethical considerations of research. Other strategies for establishing credibility, transferability, and neutrality that are not discussed in the CASP tool but are found in other discussions of qualitative rigour (see, for example, [1 2]) were included.

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Study and participant characteristics for included articles							
	Study Characteristics			Participant Characteristics			Country
Article	Objective	Method; Participant sampling strategy	Theories informing analysis	Sample	Context	Age/Experience	
Liou et al. [1], 2016	To determine the factors which affect the decision of special education teachers' in Taiwan to file a report when confronted with a case of sexual victimization among their students	Individual interviews; participants responded to a notice on Facebook or PPT, which is a well-known bulletin board system in Taiwan	Thematic analysis	12 teachers	Some worked at special education schools; others worked at various school levels, including elementary schools, junior high schools, and senior high schools; some held administrative positions	30 to 44 years old (6 to 20 years of experience)	Taiwan
Skarsaune et al. [2], 2016	To describe the nurses' experiences when they had suspected child abuse in their encounters with children and their families in various health care contexts	Individual, semi-structure interviews; strategic selection	Qualitative content analysis	8 nurses	Hospital, various units	35 to 60 years old (all over 10 years of experience)	Norway
Tiyyagura et al. [3], 2015	To understand general ED providers'	One-to-one semi-structured	Grounded theory	29 mandated reporters (9 physicians, 16	Emergency Departments, Hospitals	(physician's median experience was	U.S.

	experiences with child abuse and neglect	interviews; purposive sampling and snowball sampling		nurses, 4 physician assistants)		7 years, nurses median experience was 12.5 years)	
Ellonen et al.[4], 2014	To study the institutional processes of identifying, responding to and reporting abuse experienced by children	Interviews; participants were randomly selected from document data from authorities, such as data about who made notifications	Thematic analysis (Coffey and Atkinson)	33 mandated reporters (9 police officers, 11 social workers, 9 doctors, and 4 school and day care personnel)	Not stated	Not stated	Finland
Gallagher-Mackay [5], 2014	To analyze decision making by educators about reporting child abuse and neglect	Interviews; parents with recently closed children's aid cases were recruited first and then aid workers and teachers associated with their case were recruited. 'Unlinked' teachers, principals, aid workers, and leaders from both groups were also recruited.	Institutional ethnography, grounded theory, regulatory theory	49 mandated reporters (10 teachers, 8 family service workers, 6 school principals, 6 student support workers, and 19 'leaders' in these areas)	Various	Not stated	Canada

Itzhaky et al. [6], 2014	To examine the impact of an intensive training program for hospital-pediatricians in identifying and treating young victims of abuse or neglect and how this training impacted cooperation between pediatricians and social workers, seeking to determine whether the doctors' increased familiarity with the social work profession enhanced team-work	In person, semi-structured, in-depth interviews; purposive sampling	Phenomenological approach	32 mandated reporters (18 pediatricians, 14 social workers)	Physicians worked in various capacities (first-year interns, directors of children's wards, directors of children's emergency wards, and specialists); social workers worked in children's wards or children's emergency wards	(physicians not stated; social workers 1-20 years of experience)	Israel
Kraft et al. [7], 2014	To explore how school nurses detect maltreated children and initiate support measures	Focus groups; strategic sampling	Grounded theory	23 school nurses	Worked in various municipalities and with various age groups	46 to 57 years of age (3 to 38 years of experience as school nurses)	Sweden
Kvist et al. [8], 2014	To examine what factors cause specialists in pediatric dentistry	Focus groups; specialists and postgraduates from the	Thematic analysis (Braun and Clarke)	19 specialists and postgraduate students in	Unclear	Not stated	Sweden

	to suspect child abuse or neglect and to determine what considerations influence the decision to report these suspicions to social services	Swedish Academy of Pediatric Dentistry and others told by them (snowball) were invited. Participants were 'strategically selected' from this sample.		pediatric dentistry			
Svard et al. [9], 2014	To explore how hospital social workers describe assessment processes for children at risk at their inter-professional workplaces	Semi-structured interviews; not stated	First-stage analysis (Gillham, 2005) and content analysis (Kvale, 2009)	14 social workers	Inpatient wards, children's hospitals or pediatric wards	(6 months to 30 years of experience)	Sweden
Zannettino et al. [10], (2014)	To examine how and in what ways child protection and domestic violence workers conceptualise and respond to children and families affected by domestic violence, and how do they consider that their service sectors could operate more	Focus groups; surveys were offered to workers from child protection authorities and from domestic violence agencies and respondents were invited to attend focus groups	Unclear	Total number of mandated reporters unclear (14 child protection workers, 16 domestic violence workers, and a mix of the two groups (n=20) in a second focus group)	Child protection or domestic violence workers whose offices were located in one of the most socially and economically disadvantaged areas in Australia	(most child protection workers had less than 2 years of experience; domestic violence workers had a range of experience from "new graduates" to those who had worked "many years")	Australia

	collaboratively as a means to improve service responses						
Angelo et al. [11], 2013	To understand the experience of the nurses in their care of child victims of domestic violence, in pediatric emergency, intensive care and inpatient units	Semi-structured interviews; snowball sampling	Theoretical-methodology consistent with phenomenology	15 nurses	Nurses working in pediatric inpatient care units	27 to 48 years of age (3 to 12 years since graduation)	Brazil
Hurtado et al. [12], 2013	To assess experiences and barriers associated with teaching child sexual abuse prevention and with reporting child sexual abuse	Focus groups; teachers and students attended a child sexual abuse exhibit and some of these teachers were included in the focus groups	Not stated	19 teachers	Unclear	Unclear	El Salvador
Lee et al. [13], 2013	To learn first-hand from CPS workers how CPS investigations could be improved	Focus groups; voluntary sample from Department of Human Services offices in a Midwestern state	Manual content coding	39 CPS workers	Urban Department of Human Service workers	Not stated	U.S.

Phasha [14] 2013	To investigate influences on under-reporting of sexual abuse involving teenagers with intellectual disability and the reason thereof	Individual interviews and focus groups; convenience sampling and theoretical sampling	Thematic analysis	32 mandated reporters (18 teachers, 6 staff caregivers, 2 psychologists, 3 social workers, 2 school nurses, 1 speech language pathologist	Special schools catering specifically for learners with intellectual disability	Unclear	South Africa
Davidov et al. [15], 2012	To identify and describe issues related to mandatory reporting within the context of Nurse Family Partnership (NFP) home visitation	Two consecutive focus groups; all nurses who reported home visiting abused NFP clients were invited (4 sites from all NFP sites were included in study)	Content analysis	Total number of mandated reporters unclear (23 nurses in first focus group and 25 nurses in second focus group)	Nurses working in the NFP home visitation program	Mean age of 46.2 years (5 to 38 years of experience)	U.S.
Feng et al. [16], 2012	To understand the ethical and legal challenges of reporting child abuse	Structured interviews; purposive, snowball sampling	Grounded theory	18 mandated reporters (4 social workers, 3 physicians, 6 nurses, and 5 teachers)	Social workers: 3 worked in hospitals, 1 worked for CPS	28 to 53 years old (3 to 27 years of practice)	Taiwan
Francis et al. [17], 2012	To understanding the circumstances and thence the decision-making processes of mandated professionals employed in rural communities	Face to face or phone interviews; advertisements in regional newspapers, followed by snowball sampling	Grounded theory	17 mandated reporters (1 medical practitioner, 7 nurses, 3 police officers, 6 teachers)	Rural region, but not otherwise stated	Not stated	Australia

Mallén [18], 2011	To discuss why some cases of abuse and neglect of disabled children are considered difficult to report by the Child and Youth Habilitation Services	Individual and group semi-structured interviews	Not stated	14 mandated reporters (all staff were Youth and Rehabilitation Service Workers, including psychologists, social workers, speech therapists, nurses, paediatricians, and divisional heads)	Not stated	Not stated	Sweden
Panayiotopoulos [19], 2011	To describe and understand on the one hand the importance of mandatory reporting through the professionals' lens and on the other hand to consider the obstacles to its effective implementation	In depth, semi-structured interviews with individuals or groups; sampling strategy unclear	Process evaluation (Riger)	Total numbers of MRs sampled unclear (educational psychologists from two districts, 10 school teachers, 11 family social workers, he previous and current public prosecutor responsible for mandatory reporting)	Various	Not stated	Cyprus
Sege et al. [20], 2011	To examine the validity of primary health care providers' assessment of suspicion that an	Telephone interviews; stratified sampling of primary health care providers	Formal qualitative analysis of themes obtained from the interviews was not performed	110 physicians	Primary health care providers	Not stated	U.S.

	injury was caused by child abuse and their decision to report suspected child abuse to child protective services	from the CARES study by level of suspicion and reporting decisions					
Eisbach et al. [21], 2010	To (a) describe the process of reporting child maltreatment from the perspective of pediatric nurses and (b) gain insight into mediating and/or moderating influences on the reporting process	In person or phone interviews; maximum variation sampling of nurses from 3 statewide nursing organizations in Iowa	Grounded theory	23 nurses	10 school nurses, 7 pediatric nurse practitioners, and 6 pediatric mental health nurse practitioners	(10-41 years nursing experience, 2-40 years pediatric experience)	U.S.
Feng et al. [22], 2010	To explore the collaborative experiences and perspectives in reporting child abuse of four primary mandated reporting disciplines in Taiwan	Interviews; purposive sampling of MRs recruited from calls to hospitals, Department of Child Welfare and schools	Grounded theory	21 mandated reporters (5 physicians, 5 nurses, 6 social workers, and 5 teachers)	16 worked directly with children, 5 were administrators	25-59 years old (3-34 years of experience)	Taiwan
Chanmugam [23], 2009	To explore school social workers relationships during instances	In-depth face to face or phone semi-structured	Ecomapping, thematic analysis (Braun and Clark;	10 school social workers	5 worked in elementary schools, 4 worked in	(mean 5 years of experience)	U.S.

	of abuse and neglect reporting, focusing on reports made for children and adolescents already receiving school social work services	interviews and a focus group; convenience, maximum variation, and snowball sampling techniques	Miles and Huberman)		middle schools, and 1 worked in high-school		
Feng et al. [24], 2009	To explore kindergarten teachers' experience and perspectives of working with abused children and their families	Focus groups with an interview guide; purposive sampling	Grounded theory	20 teachers	All kindergarten teachers	20-45 years old (6 months-32 years of experience)	Taiwan
Phasha [25], 2009	To describe responses to situations of sexual abuse involving teenagers with intellectual disability	Individual interviews and focus groups; referral and theoretical sampling	Grounded theory	16 mandated reporters (4 police officers, 2 nurses, 4 staff caregivers and 10 educators)	Police officers from the Social Crime and Victim empowerment unit; nurses, caregivers, and educators from the special schools	Not stated	South Africa
Jones et al. [26], 2008	(1) To identify factors clinicians weighed when deciding whether to report injuries they suspected might have been caused by child abuse; (2) to	Structured telephone interviews; subsample of physicians in CARES study were invited to participate based on an	Ethnographic techniques (Jones)	75 physicians	Primary care physicians	Not stated	U.S.

	describe clinicians' management strategies for children with injuries from suspected child abuse that were not reported; and (3) to describe how clinicians explained not reporting high-suspicion injuries	informative sampling scheme					
Land et al. [27], 2008	To investigate if dilemmas arise for nurses in their mandated requirement to report cases of suspected child abuse in the Northern Territory of Australia and in their effectiveness in their role protecting children	Interviews (with semi-structured and open-ended questions); purposive sampling	Manual, thematic coding	10 nurses	Acute, community and school practice settings	Unclear (more than two years of experience)	Australia
Phasha [28], 2008	To provide a detailed description of participants' perceptions regarding the roles that	Snowball sampling	Not stated	Unclear	Teachers involved in guidance or life skills education at primary	Not stated	South Africa

	teachers can play in helping learners overcome the negative impact of their experiences of child sexual abuse				schools or high schools		
Tingberg et al. [29], 2008	To identify nurses' experiences in encountering abused children and their parents	Interviews; sampling strategy unclear	Critical incident technique	11 nurses	Emergency department nurses from tertiary care children's hospital	Not stated	Sweden
McLaren [30] 2007	To report exploratory research into social workers' perceptions and actions regarding ''forewarning'' clients of their child abuse reporting obligations as a limitation of confidentiality at relationship onset	In-depth interviews; snowball sampling	Discovery approach, phenomenological analysis	6 social workers	Social workers from six different welfare agencies that provide both primary and ancillary counselling support services to parents and their families; one each from education, hospital-based health, mental health, family support, domestic violence and refugee services	Not stated	Australia
Silva et al. [31], 2007	To identify and analyze	Semi-structured	Dialectic hermeneutics	10 mandated reporters (2	Not stated	Not stated	Brazil

	notifications of domestic violence against children at the Guarulhos Regional Health Divisions, the limits and gaps in health professionals' actions and the meaning of domestic violence against children in their daily work	interviews; not stated		psychologists, 2 nurses, 2 community health agents, 2 nursing aids and 2 pediatricians)			
VanBergeijk et al. [32], 2006	To analyze the experiences of school personnel who report child abuse along the United States-Mexico border and to add to what is known about Secondary Traumatic Stress (STS) through an exploration of qualitative data	Face to face interviews; not stated	Grounded theory	28 school personnel (17 general education teachers, 4 special education teachers, 1 acting administrator, 3 social workers, 2 school psychologists, 1 speech therapist, 1 speech therapist and secretary)	School personnel from San Ysidro and neighboring communities in the bilingual or English-only programs	Unclear	U.S.
Feng et al. [33], 2005	To explore nurses' experiences and perspectives regarding child abuse in Taiwan	Interviews; purposive sample	Thematic analysis (Morse & Field) and grounded theory	18 nurses	8 ER nurses and 10 pediatric nurses (all in hospitals)	23-46 years old (3-24 years of experience)	Taiwan

Shalhoub-Kevorkian [34], 2005	To examine the effect of such sociopolitical factors on the sexually abused Palestinian Israeli girl and on the application of the child protection laws in Israel	Focus groups; not stated	Not stated	20 mandated reporters (3 social workers, 4 heads of social units within the Welfare Department, 6 school counselors, 6 helpers who answer calls to rape crisis hotlines and centers [2 of which were social workers], 1 administrator)	Unclear	Not stated	Israel
VanBergeijk et al. [35], 2005	To understand school personnel's experiences reporting child maltreatment	Semistructured interviews; theoretical sampling	Grounded theory	28 school personnel (17 general education teachers, 4 special education teachers, 1 acting administrator, 3 social workers, 2 school psychologists, 1 speech therapist, 1 secretary)	Public school personnel	(2-20 years of experience)	U.S.
Nayda [36], 2002	To compare the decision making of teachers and nurses in cases of	Structured interviews;	Not stated	10 nurses	Community child and youth health	Not stated	Australia

	suspected child abuse	purposive sample					
Waugh et al. [37], 2002	To explore possible ways in which child protection practitioners and domestic violence practitioners could work collaboratively to promote the safety, well-being and welfare of children, young people and women who live in domestic violence situations	Individual, semi-structure interviews and focus groups	Thematic analysis	Total number of mandated reporters is unclear (interviews with 14 CPS workers interviews and focus groups with staff from family support services, physical abuse and neglect of children services, the Department of Community Services, child and family teams in community health, women's community legal centres, Relationships Australia, women's housing schemes, child protection teams, early intervention programmes, non-government child protection	Various	Not stated	Australia

				services, specialist domestic violence services and women's migrant services)			
Deisz et al. [38], 1996	To understand the way therapists and child protection workers approach the requirements of mandated reporting and differ in their perspectives of what constitutes a legitimate report, child maltreatment, and the ensuing relationship between the reporter and the CPS worker	Open-ended, semi-structures interviews; convenience sample	Not stated	49 mandated reporters (29 therapists and 20 CPS workers)	Therapists were from 6 different nonprofit social service agencies	Therapists: Late 20s-early 50s; (recent graduates-over 10 years of experience) Child protection workers: not stated; (1-14 years of experience)	U.S.
Anderson et al. [39], 1993	To investigate therapists and child protective workers experiences with reporting in therapeutic relationships	Semi-structured interviews;	Thematic analysis	30 psychotherapists and 25 CPS workers	Therapists were from 6 agencies	Therapists: not stated; (new workers-over 10 years of experience) Child protective service workers: not stated; not stated	U.S.

Tite [40], 1993	To explore teachers' definitions of abuse and examine the relationship between definitions and intervention	Semi-structured interviews (phase 1) followed by survey (phase 2, not included) followed by focused telephone interviews; unclear sampling (phase 1) and random sample of subgroup of survey participants (phase 2)	Qualitative process and pattern data	10 teachers (phase 1); 8 teachers and 2 principles (phase 2)	Elementary schools	Not stated	Canada
Anderson [41], 1992	To explore if mandatory reporting laws are serving therapeutic or anti-therapeutic aims or if they are neutral with respect to therapy	Semi-structured interviews	Thematic analysis	30 psychotherapists who made a report in the previous 12 months on a client	6 agencies across 2 countries	Not stated; (new workers-over 10 years of experience)	U.S.
Giovannoni [42], 1991	To study CPS workers' attitudes about reporting, screening, and substantiation of cases as they	Semi-structured interviews; sampling	Content analysis	81 CPS workers	Unclear	Not stated	U.S.

	relate to the "unsubstantiated" report	strategy unclear					
Barksdale [43], 1989	To investigate the decision making process of a small sample of psychotherapists who discovered child abuse in their clinical practice, as well as the possible effects of the reporting decision	Semi-structured interviews; sampling strategy unclear	Qualitative, content analysis	10 psychotherapists	Psychotherapists were employed in private not-for-profit agencies	Unclear (minimum of 3 years post-masters or doctoral experience)	U.S.
Muehleman et al. [44], 1981	To investigate the reasoning of practicing psychologists in response to a hypothetical child abuse reporting dilemma and to study to study why psychologists make the choices they do (when discovering child abuse in therapy) by examining the relative importance of the issues of life, law, and confidentiality)	Face to face interviews and phone interviews; sampled from participants of the convention of the Tennessee and Kentucky Psychological Associations plus 10 practicing psychologists (sampling unspecified)	Not stated	39 mandated reporters (2 psychology students, 18 psychologists with their masters, 19 with doctoral degrees in psychology)	Unclear	Not stated	U.S.

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