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Navigating the complexity: unraveling the implementation of youth care guidelines

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Chapter 2

Determinants influencing the implementation of child abuse and neglect and domestic violence guidelines: a systematic review

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Abstract

Introduction

Despite ongoing effort, the implementation of child abuse and neglect, as well as domestic violence guidelines by care professionals, remains challenging. Various determinants influence guideline implementation, which may vary depending on research methods, guideline objectives, and contextual factors such as organization type or discipline of the implementer. The primary aim of this systematic review is to identify determinants influencing the implementation of child abuse and neglect and domestic violence guidelines. The secondary aim is to identify (differences in) determinants across specific contexts, guideline objectives, and research methods. Furthermore, we aim to assess the relative importance of identified determinants.

Methods

Seven electronic databases were searched for papers on determinants influencing child abuse and neglect as well as domestic violence guidelines implementation by care professionals. Data extraction was guided by the Consolidated Framework for Implementation Research. We utilized a star score system and evidence index to evaluate the relative importance of identified determinants.

Results

Sixteen papers met the inclusion criteria, with nine employing quantitative research methods, six using qualitative methods, and one employing a mixed-method approach. Overall, the quality of the included papers was moderate. Due to the diverse organization types and disciplines represented in the studies, creating meaningful comparable groups was challenging. Furthermore, within the studies, data from various perspectives were combined during the analysis, which made it challenging to stratify and explore contextual differences. We stratified the results by guideline objective and research method. Availability of resources, knowledge about the innovation, self-efficacy and skills, complexity, and interorganizational networks were identified as the most important determinants influencing guideline implementation.

Conclusion

Our findings emphasize the need for further research on contextual differences, as they are rarely considered. The determinants identified differed between quantitative and qualitative methods. Mixed methods are needed to better understand which determinants, in which contexts, and to what extent, influence guideline implementation. Understanding what influences guideline implementation is an essential step toward developing tailored implementation strategies, which, in turn, may improve implementation performance.

Introduction

Child abuse and neglect (CAN) and domestic violence (DV) pose significant challenges in child welfare. Evidence-based guidelines exist to safeguard children's well-being and provide a framework for professionals and agencies to identify, respond to, and intervene in cases of CAN and DV [1, 2]. Over the years, efforts have been made to improve the effective implementation of these guidelines [3-6]. Implementation is defined as: 'the degree to which settings and staff members deliver a program or apply a policy as intended' [7]. Various strategies, including active promotion, tailored training and mentoring, and the establishment of a national support desk, have been used to facilitate guideline implementation [8, 9].

Despite ongoing effort, care professionals (CPs) still face challenges in implementing guidelines [10-14]. A study assessing adherence to a CAN guideline among CPs revealed self-reported implementation rates ranging from 19.5% to 42.7% [12]. These rates were notably low considering that 83.7% of the professionals were familiar with the guideline and its content. Several factors influence guideline implementation including CPs' concerns about their own [15-19] and the safety of their clients [15-17, 20]. These concerns have been identified as barriers in studies focusing on CAN and DV during pregnancy.

Identifying the determinants influencing guideline implementation is crucial for developing tailored implementation strategies that can ultimately improve implementation outcomes [21, 22]. Various frameworks have been developed to categorize determinants and guide implementation efforts [23, 24]. The Consolidated Framework for Implementation Research (CFIR) is commonly utilized for systematically identifying determinants that may influence implementation systematically. The CFIR demarcates five domains based on context, which is defined as, '...the set of circumstances or unique factors that surround a particular implementation effort'. These domains include: 1) the innovation, 2) the outer setting (the broader external environment in which an organization operates), 3) the inner setting (the setting in which the innovation is implemented), 4) the individual, and 5) the implementation process [25].

Providing care to support children and families in cases of potential CAN and DV is complex and often requires integrated care that encompasses processes across different contextual levels (e.g., interorganizational and interprofessional collaboration). However, such collaboration can encounter obstacles due to differing priorities and objectives, cultural and professional differences, or issues related to accountability and responsibility [26-28]. These challenges can hinder the implementation of CAN and DV guidelines [29].

Despite numerous studies investigating the determinants influencing guideline implementation addressing CAN and DV, several gaps remain. First, there is no comprehensive summary detailing the determinants influencing guideline implementation for CAN and DV across different studies. This gap makes it difficult to gain an overall understanding of the factors at play and hampers the development of effective, evidence-based implementation strategies. Second, we know that implementation determinants may differ based on the research method used [30], the objective of the guidelines, organizational context (e.g., youth health care or social services), and the health discipline of the implementer (e.g., psychologists or medical doctors) [19]. However, these variations have not been systematically explored, leading to a fragmented understanding of how context influences implementation and determinants differs per research method. For example, in low-income countries, implementers may perceive determinants like resource availability and socio-cultural norms differently compared to those in high-income countries [31, 32]. Understanding these contextual nuances is important for interpreting and applying previous research findings effectively. By systematically reviewing determinants across various contexts and study designs, we seek to provide a more comprehensive understanding of implementation determinants. Last, no prior review has provided insights into the quality and relative importance determinants affecting CAN and DV guideline implementation. Understanding which determinants are most critical in guideline implementation is essential for prioritizing resources and efforts effectively. Our study aims to address these gaps by systematically reviewing the determinants influencing the implementation of CAN and DV guidelines. We will assess their quality and relative importance across different contexts and study designs. This approach will enable us to develop tailored strategies that account for these contextual nuances, thereby improving the effectiveness of interventions and ultimately enhancing outcomes for children and families affected by CAN and DV.

More specific, our primary aim is to:

- Identify determinants influencing the implementation of CAN and DV guidelines.

Our secondary aims are to:

- Identify (differences in) determinants for specific context and guideline objectives,
- Identify (differences in) determinants per research method used,
- Assess the relative importance of each determinant.

Methods

Search Strategy

On February 28, 2020, we conducted a literature search using the 'Perspective, Setting, Phenomenon of Interest, Environment, Control, Time, Findings' (PerSPECTiF) methodology (**Table 1**). This methodology is designed to enhance the inclusion of local context factors, such as setting, environment, and time, as well as perspectives from various stakeholders beyond the target population, in the search strategy [33]. We used search terms such as "(professional OR clinician) AND ((adoption OR dissemination) OR (child care OR community pediatric)) AND (determinant OR barrier) AND (care guideline OR health plan) AND (child abuse OR family violence)". Utilizing these criteria, we devised a search strategy for multiple databases including PubMed, Web of Science, PsychINFO, Social Services Abstracts, Sociological Abstracts, ERIC, Embase, Emcare, and the COCHRANE Library (**Appendix A**). These databases cover medical, psychological, social, educational, and allied health literature, providing a multidisciplinary approach to thoroughly explore the barriers and facilitators in implementing guidelines for CAN and DV. The review protocol was registered in PROSPERO (CRD42021223693) and adheres to PRISMA guidelines [34] (**Appendix B**).

Table 1. Search terms based on the PerSPECTiF methodology

Per	S	P	E	(C)	Ti	F
<i>Perspective</i>	<i>Setting</i>	<i>Phenomenon of interest/problem</i>	<i>Environment</i>	<i>Comparison (optional)</i>	<i>Time/Timing</i>	<i>Findings</i>
From the perspective of health care professionals	In the setting of care for children and youth	What are barriers and facilitators	For the implementation of child abuse and neglect and domestic violence guidelines	Not applicable	During consultations and CP-client/parent interactions	Based on empirical research

Inclusion and exclusion criteria

We included papers that met the following criteria:

- Reported on determinants influencing the implementation of CAN and DV guidelines, including guidelines for conceived unborn children.
- Reported on a study performed in the member countries of 'Organization for Economic Cooperation and Development (OECD)' to ensure the selection of predominantly wealthy countries with comparable youth care.
- Reported on empirical research.
- Were written in English or Dutch.

- Published from the year 2000 onward, as this period marks the increased recognition of "implementation research" along with the development of systematic methodologies for identifying determinants and effective implementation strategies.

In addition to papers that did not meet the inclusion criteria, papers meeting the following criteria were also excluded:

- Focused solely on aspects of guideline implementation, such as implementation fidelity, and did not describe research on implementation determinants.
- Explored the potential/hypothetical implementation of guidelines (e.g., papers that explored guideline implementation and determinants based on vignettes).
- Focused solely on the mandatory aspect of reporting CAN and did not cover guideline implementation as a whole.

Selection of papers

After removing duplicates, title and abstract screening were conducted by one reviewer (EMD), while a second reviewer (RMJJK) screened a random sample of 20% of the articles. Inter-rater reliability was calculated at 0.77 (95% CI 0.71-0.82), indicating good reliability [35]. Full-text screening was performed by two researchers independently (EMD and ASA). Results were compared and discrepancies were resolved through discussion. Any discrepancies were resolved through discussion, with consultation from a third researcher (RMJJK) if consensus could not be reached. Endnote X9 was utilized to remove duplicates [36] and we performed title, abstract, and full texts screening using Covidence [37].

Quality assessment

Quantitative methods were evaluated using the Crowe Critical Appraisal Tool (CCAT), known for promoting validity and inter-rater reliability [38-40]. The CCAT evaluates eight categories: preliminaries, introduction, design, sampling, data collection, ethical matters, results, and discussion, encompassing a total of 22 items with 99 sub-items. Sub-items such as 'research design chosen and why' and 'method(s) to ensure/enhance quality of measurement/instrumentation' were evaluated by their presence, absence, or inapplicability. Each sub-item contributed to category ratings, which ranged from 0 to 5 based on their significance as outlined in the user manual. These ratings were then used to calculate an overall score for each category, with higher scores indicating better paper quality. The maximum achievable total score was 40.

We used the validated Critical Appraisal Skills Program (CASP) checklist to assess the quality of papers employing qualitative methods [41]. This checklist covers relevant quality indicators such as rigor, research methods, relevance, and research integrity. It comprises ten questions, such as 'Was the research design appropriate to address the aims of the research?' Each question was

answered with 'yes', 'no', and 'can't tell'. As the CASP does not offer an overall quality score, we decided to score each question as 0 (no), ½ (can't tell) and 1 (yes). These scores resulted in a total score ranging from 0 to 10, with a higher score indicating higher paper quality.

Four researchers (EMD, MS, RMJJK, and MRC) independently conducted quality assessments. EMD assessed all papers, MS nine, and RMJJK and MRC four papers each. Inter-rater reliability was calculated, and results were compared. Any discrepancies were resolved through discussion, with a third researcher consulted to resolve disagreement.

Data synthesis

Data from each included paper was extracted using a data extraction sheet including the following characteristics: author name, institution, year of publication, country (location of study), funding source, study aim, study design, guideline description, measurement method(s), population description, setting, age, sex, occupation, years of working experience, and identified determinants (i.e., barriers and facilitators influencing guideline implementation).

In qualitative studies, determinants were identified through qualitative data analysis, whereas in quantitative studies, determinants were identified through statistical analysis, including significance tests or descriptive statistics. These identified determinants were categorized using the CFIR [25], which includes 39 constructs organized into five domains: innovation, outer setting, inner setting, individual, and implementation process (**Figure 1**). The CFIR outlines implementation determinants and acknowledges the importance of multiple levels of influence, from individual to organizational and external environmental factors. It has been widely applied in research identifying key determinants impacting implementation processes across diverse settings and target populations [25, 31, 42]. Constructs not aligning with any CFIR constructs were inductively coded. Additionally, the construct 'self-efficacy' was adjusted to 'self-efficacy and skills' due to the absence of a specific construct for skills in the CFIR. Determinants were classified as facilitators, barriers, or having no clear direction, indicating their influence without definitive roles established. For example, in regression analysis, the identified determinant's role as a barrier or facilitator cannot be definitively determined based solely on the analysis results. It remains an influential determinant, but the study does not provide conclusive evidence of its specific role. Additionally, the term can indicate that the determinant is identified as both a facilitator and a barrier within a single study.

The second objective was to analyze differences in determinants across guideline objectives, contexts, and research methods. However, variations among the papers, such as differences in organization type or implementer discipline, posed challenges to establish meaningful comparable groups and explore contextual differences. Furthermore, within individual papers, determinants from diverse implementer perspectives were combined in the analysis, rather than

conducting separate analyses per discipline or organization type. For this study, determinants were categorized solely based on research methods (quantitative and qualitative) and guideline objectives (CAN and DV). Data extraction was independently conducted by four researchers: EMD extracted data from all papers, MS from nine papers, and RMJJK and MRC from four papers each. Discrepancies were resolved with the assistance of a third researcher.

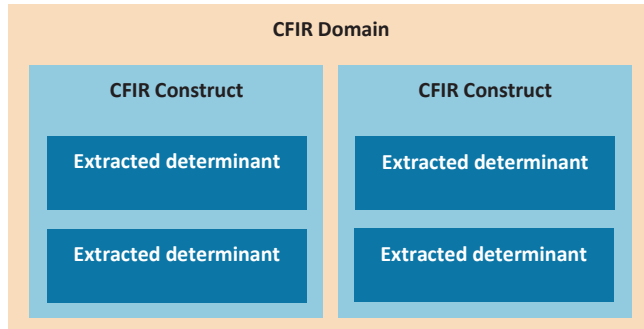


Figure 1. Classification of domains, constructs, and extracted determinants.

Star score system and evidence index

We did not exclude papers based on quality assessment; instead, we integrated the results of the quality assessment to evaluate the relative importance of determinants using a star score system and evidence index [43]. We chose this approach because it offers a novel way to assess the relative importance of determinants, which has not been extensively executed before. Developed by our research group, this method has been applied in previous studies [43, 44].

Firstly, we computed the mean score and standard deviation from the CCAT and CASP assessments. Based on these values, we assigned a star score to each paper. Papers with a quality score more than one standard deviation below the mean received one star. Those with a score between one standard deviation below the mean and the mean itself received two stars. Papers with a score between the mean and one standard deviation above the mean received three stars, while those with a score more than one standard deviation above the mean received four stars. Subsequently, we calculated an evidence index for each determinant by summing the star scores of all papers that identified that specific determinant. For instance, if a determinant was identified by three 1-star papers, one 2-star paper, and two 4-star papers, we calculated an evidence index of 13 points $([3*1] + [1*2] + [2*4])$. A higher score on the evidence index indicates that the determinant in question was identified more frequently and/or in high-quality papers. In this study, we regarded determinants with a higher score in the evidence index as more important.

Results

Inclusion of papers

In total, 2854 unique papers were retrieved. Screening of titles and abstracts led to the exclusion of 2733 papers, while full-text screening resulted in the exclusion of another 105 papers. Consequently, sixteen papers were included in this review (**Figure 2**). Reasons for exclusion in full-text screening were mostly that papers did not focus on determinants (n=18), only focused on mandatory reporting (n=16), did not evaluate any guideline (n=15), or did not focus on CAN or SV guidelines (n=13). The main discrepancy in full-text screening involved papers addressing guidelines for the care of unborn children and whether these guidelines were considered relevant. Following discussion with the third reviewer, these papers were included.

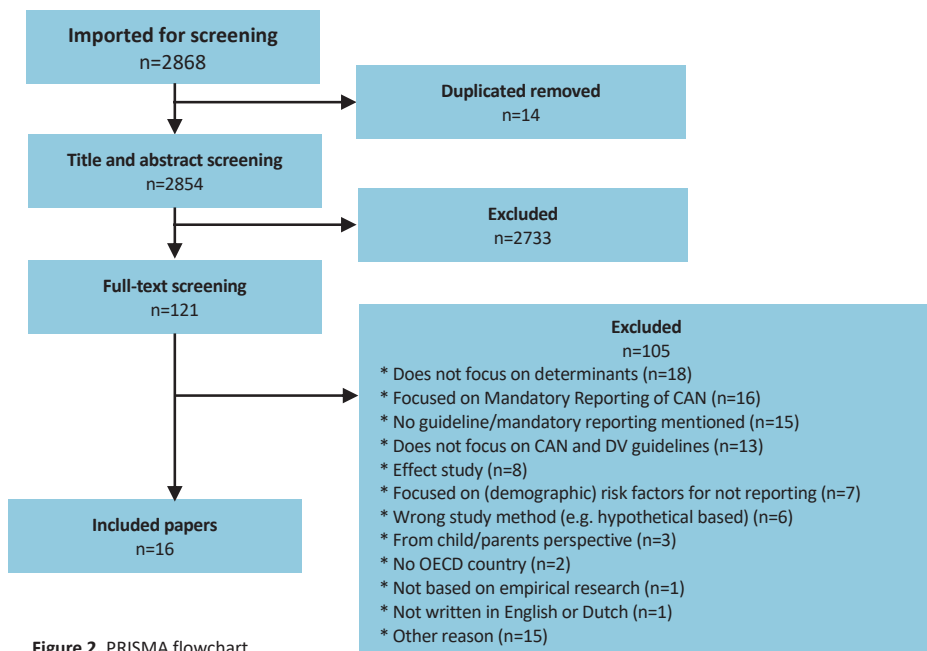


Figure 2. PRISMA flowchart.

General characteristics

The sixteen included papers were published between 2000 and 2019 (**Table 2**). Among them, nine employed quantitative methods; all employing a cross-sectional design based on questionnaires [12, 15, 16, 45-50]. In six papers, qualitative methods were used, involving semi-structured interviews [17, 18, 20, 51] and/or focus groups [18, 19, 52]. Additionally, one paper employed a mixed-method design, combining questionnaires and focus groups [53]. Ten papers evaluated guidelines regarding CAN [12, 15, 16, 19, 47, 49-53] and six regarding DV [17, 18, 20, 45, 46, 48].

Table 2. Characteristics of evaluated papers on barriers and facilitators to the implementation of CAN and DV guidelines

Study	Year	Country	Methods and techniques		Guideline			n	Objective
			Name of guideline	Population (setting)	objective	Population (setting)	n		
Chamberlain and Perham-Hester [41]	2000	United States	Quantitative: survey	The Diagnostic Guidelines and Treatment Guidelines on Domestic Violence	DV	Primary care physicians (private practices)	157	To examine physicians' screening practices for female partner abuse during prenatal visits and to identify barriers to screening.	
Clarke et al. [16]	2019	United Kingdom	Quantitative: survey	Child Protection and the Dental Team	CAN	General dental practitioners (general dental practices)	36	To assess the experience of pediatric safeguarding reporting among GPs in Greater Manchester and investigate the current barriers to reporting safeguarding concerns.	
Diderich et al. [49]	2014	The Netherlands	Mixed method: survey and focus groups	The Hague Protocol	CAN	Emergency department doctors, nurses, and nurses in training (emergency departments and reporting centers for CAN)	76	To reveal facilitators and barriers to the countrywide implementation of the Hague Protocol.	
Erickson et al. [42]	2001	United States	Quantitative: survey	Routine Screening According to Recommendation of American Academy of Pediatric	DV	Pediatric residents, family practitioners, and community pediatricians (not specified)	310	to determine what pediatricians and family physicians perceive as barriers to the American Academy of Pediatrics Recommendation on domestic violence Screening.	
Gómez-Fernandez et al. [17]	2019	Spain	Qualitative: semi-structured interviews	Protocol for Detecting Gender Violence	DV	Midwives (primary care hospitals)	12	To use the reflections of primary care midwives to know the barriers and facilitators for detecting domestic violence during pregnancy.	
Henricksen et al. [18]	2017	Norway	Qualitative: semi-structured interviews	National Guidelines on Domestic Violence	DV	Midwives (mother and child health centers)	8	To gain an in-depth understanding of midwives' experiences with routine enquiry for intimate partner violence during the antenatal period.	
Konijnendijk et al. [48]	2014	The Netherlands	Qualitative: semi-structured focus groups	Child Abuse Prevention Guidelines	CAN	Health care doctors and nurses (preventive child health care organization)	3(14) [#]	To identify factors related to characteristics of the guidelines, the user, the organization, and the socio-political context that facilitate or impede adherence to the child abuse prevention guidelines.	

Table 2. Characteristics of evaluated papers on barriers and facilitators to the implementation of CAN and DV guidelines [continued]

Study	Year	Country	Methods and				n	Objective
			techniques	Name of guideline	Population (setting)	Guideline objective		
Konijnenrijk et al. [12]	2016	The Netherlands	Quantitative: survey	Child Abuse and Neglect Guidelines	Child health care providers (well-baby clinics, school health care organization, and organizations that provide service to children of all ages)	164	To assess the adherence of Dutch child health care professionals to seven key activities described in a national guideline on preventing CAN. This study also examined the presence and strengths of determinants of guideline adherence.	
Konijnenrijk et al. [43]	2017	The Netherlands	Quantitative: survey	Child Abuse Prevention Guidelines	Physicians and nurses, specialized in public preventive health care for children (mother and child health centers)	154	To examine the presence and strengths of determinants associated with consultation of an in-house expert on child abuse and neglect by preventive child health care professionals who suspect CAN.	
Louwers et al. [47]	2012	The Netherlands	Qualitative: semi-structured interviews	Protocol within the Child Abuse Framework	Emergency department staff and members of the hospital Board (emergency departments)	27	To identify facilitators of, and barriers to, screening for child abuse in emergency departments.	
Lynne et al. [15]	2015	United States	Quantitative: survey	Office for Emergency Medical Services Policies for Reporting Child Maltreatment	Emergency department doctors (not specified)	444	To understand why emergency medical services professionals may fail to report suspicions of maltreatment.	
Rideout [45]	2016	United Kingdom	Quantitative: survey	Shaken Baby Syndrome/Abusive Head Trauma Guideline	Nurses (birthing hospitals and birthing center)	155	To assess nurses' perceptions of barriers to and facilitators of implementation of the shaken baby syndrome/abusive head trauma public policy.	
Roelens et al. [44]	2006	Belgium	Quantitative: survey	Abuse Assessment Screen form	Obstetricians and gynecologists (hospitals)	249	To identify potential barriers to intimate partner violence screening in a context where no guidelines have been instigated yet.	
Schols et al. [20]	2013	The Netherlands	Qualitative: focus groups	National Guidelines on Reporting Child Abuse	Public child health care providers and primary school teachers (local health service organizations and primary schools)	6(33) [#]	To investigate Dutch frontline workers' child abuse detection and reporting behaviors.	

Table 2. Characteristics of evaluated papers on barriers and facilitators to the implementation of CAN and DV guidelines [continued]

Study	Year	Country	Methods and techniques		Name of guideline	Guideline		
			Methods and techniques	Guideline objective		Population (setting)	n	Objective
Taylor et al. [19]	2007	United States	Qualitative: semi-structured interviews and focus groups	DV and substance abuse	Best Practice Booklet for Prenatal Screening for Substance Use and Violence	Obstetricians (not specified)	8, 4(28) [#]	To identify physician perceptions on the importance of screening, barriers to effective prenatal screening, awareness of resources from the Washington State Department of Health, and the effectiveness of various provider training strategies.
Wißmann et al. [46]	2019	Germany	Quantitative: survey	CAN	National Guidelines on Child Abuse and Neglect	Primary care pediatricians and pediatric psychiatrists (private practices)	157	To examine pediatricians' reporting behavior in cases of CAN and what their attitudes are toward mandatory reporting.

DV= Domestic Violence; CAN=Child Abuse and Neglect; SBS/AHT=Shaken Baby Syndrome/Abusive Head Trauma; GDP=General Dental Practitioner; # number described as: focus groups(participants).

Quality assessment

The overall quality scores of the papers varied (**Tables 3 and 4**). Four papers were awarded a 4-star rating [17, 20, 47, 49], five a 3-star rating [12, 19, 45, 50, 52], three a 2-star rating [15, 16, 18], and three a 1-star rating [46, 48, 51]. The mixed method study conducted by Diderich [53] was awarded a 2-star rating for both its qualitative and quantitative components.

Among papers reporting quantitative research, seven lacked sufficient detail on ethical considerations [12, 15, 16, 45-48]: six did not describe informed consent procedures [15, 16, 45-48], and four did not report obtaining ethical approval [15, 45, 46]. Additionally, sampling methods were not reported in three papers [15, 46, 48]. Intraclass correlation coefficient between EMD and the other reviewers was 0.84 (95% CI 0.18-0.97), indicating good reliability [35].

Table 3. Quality assessment scores for quantitative methods using the Crowe Critical Appraisal Tool

	Total	Score*	Prelim	Intro	Design	Sample	Data	Ethics	Results	Discus
Erickson et al. [42]	16		3	1	1	2	2	1	3	3
Roelens et al. [44]	18	★	2	5	3	1	1	1	2	3
Clarke et al. [16]	19		3	5	1	2	3	1	2	2
Diderich et al. [49]	22		3	3	3	3	3	3	2	2
Lynne et al. [15]	22	★★	4	5	2	1	3	1	3	3
Wißmann et al. [46]	26		4	3	3	4	3	3	3	3
Chamberlain and Perham-Hester [41]	27	★★★	3	5	3	3	3	2	4	4
Konijnendijk et al. [12]	27		3	5	3	3	3	2	4	4
Rideout [45]	28	★★★	3	5	3	2	4	4	3	4
Konijnendijk et al. [43]	30	★★★	4	5	4	3	4	2	4	4

* One star=more than one standard deviation below average; two stars=between one standard deviation below average and average; three stars=between average and one standard deviation above average; four stars=more than one standard deviation above average. Prelim=Preliminaries; Intro=Introduction; Sample=Sampling; Data=Data collection; Discus=Discussion.

In papers reporting on qualitative research, none met Q6's criteria for considering the researcher-participant relationship. While all papers detailed research methods, only three justified their method choice [17, 19, 20]. Three papers lacked ethical detail: none described participant informed consent [18, 19, 51] and two omitted confidentiality/anonymity information [18, 51]. Regarding data analysis (Q8), four papers lacked sufficient supporting quotations [18, 51-53] and two omitted coding system and analysis details [51, 53]. Intraclass correlation coefficient between EMD and the other reviewers was 0.88 (95% CI 0.27-0.98), indicating good reliability [35].

Table 4. Quality assessment scores for qualitative methods using the Critical Appraisal Skills Program for Qualitative Methods

	Total	Score*	Section A					Section B			Section C	
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Louwers et al. [47]	3.5	★	1	1	0	1	1	0	0	0	0	0
Diderich et al. [49]	5.5	★★	1	1	0	1	0.5	0	1	0	0.5	1
Taylor et al. [19]	5.5		1	1	0	1	1	0.5	0	0	0	1
Konijnendijk et al. [48]	7.5	★★★	1	1	0	1	1	0	1	0.5	1	1
Schols et al. [20]	8.5	★★★	1	1	1	1	1	0	0.5	1	1	1
Gómez-Fernandez et al. [17]	9	★★★	1	1	1	1	1	0	1	1	1	1
Henriksen et al. [18]	9	★★★	1	1	1	1	1	0	1	1	1	1

* One star=more than one standard deviation below average; two stars=between one standard deviation below average and average; three stars=between average and one standard deviation above average; four stars=more than one standard deviation above average.

Determinants influencing guideline implementation

A total of 162 determinants influencing the implementation of CAN and DV guidelines were extracted from the included papers (**Appendix C**). After categorization, determinants were organized within 33 distinct constructs. The majority of determinants identified were organized in the domain of the individual professional ($n=66$), followed by the inner setting determinants ($n=37$), the outer setting ($n=28$), the innovation ($n=18$), and the process ($n=13$). The availability of resources was identified as the relatively most important construct across all domains (evidence index=50). This was followed by knowledge about the innovation (evidence index=36), self-efficacy and skills (evidence index=34), complexity (evidence index=29), and cosmopolitanism i.e., interorganizational networks (evidence index=24).

Determinants identified in papers regarding CAN and DV guidelines.

In CAN guidelines, 109 determinants were identified and in DV guidelines, 53 determinants were identified. These determinants were categorized into 30 and 22 distinct constructs respectively (**Appendix D**). **Table 5** presents the top five constructs for each guideline objective.

Table 5. Top five of constructs influencing the implementation of child abuse and neglect guidelines and domestic violence guidelines stratified by guideline objective

Child abuse and neglect guidelines (n=10)	Evidence index	# determinants per star score					Direction of influence		No direction*
		★	★★	★★★	★★★★	★★★★★	Barrier	Facilitator	
Innovation characteristics									
Complexity	17	1	5				Lack of procedural clarity [20], poor concreteness of guideline [48], guideline too complex [48]	Procedural clarity [49]	Level of procedural clarity [48] and feasibility [48]
Outer setting									
Cosmopolitanism	24	2	6				Communication issues [12, 20], lack of confidence in external organizations [15, 20], not taken serious [20], poor bureaucracy [20]		Level of inter-agency cooperation [48, 49], level of inter-organizational communication [49]
Inner setting									
Available resources	37	3	4	6	2		Lack of time [15, 47-49], procedures [20] monetary [47, 49], human [49], privacy [47], and other resources [20]		Availability of time [45], procedures [48] and human [48] and other practical [45, 48] resources
Characteristics of the individual									
Knowledge and beliefs about the innovation [knowledge]	23	1	3	4	1		Lack of knowledge about guideline-related activities [15, 16, 47]	Knowledge about the guideline-related activities [43, 46]	Level of familiarity [48] and knowledge about the guideline and its use [20, 48, 49]
Self-efficacy and skills	21	2	2	5			Insufficient communication skills [20, 47], uncertain about their diagnosis [15, 16, 20, 46, 47], don't feel they can provide support [20]		Level of confidence in the ability to perform the behavior needed to use the guideline [48]

Table 5. Top five of constructs influencing the implementation of child abuse and neglect guidelines and domestic violence guidelines stratified by guideline objective [continued]

Domestic violence guidelines (n=6)	Evidence index	# determinants per star score			Direction of influence		Facilitator	No direction
		★	★★	★★★	Barrier			
Outer setting								
Patient needs and resources ¹	13	1	1	2	Fear that women/child will suffer more harm [17, 18]	Believe in positive outcomes [19, 46]		
Inner setting								
Available resources	13	1	3	3	Lack of time [17, 18], and privacy [17]		Availability of referral resources [42]	
Characteristics of the individual								
Knowledge and beliefs about the innovation [knowledge]	13	1	1	2	Lack of knowledge about the guideline objective [18] and related activities [17, 19]	Knowledge about the guideline objective [41]		
Self-efficacy and skills	13	1	3	3	Don't feel they can provide support [18] or feel skilled enough to use the guideline [18, 44]		Communication skills [18]	
Professional obligation	13	1	1	2		Moral and professionals duty [17-19, 41]		

Italicized determinants are inductively added to the CFIR [25]; CPS=Child Protection Services; * No direction means the determinant is 1) acknowledged as having an important influence, the study does not provide a clear indication of whether it hinders or supports the intended outcome or 2) identified as both a facilitator and a barrier within a single study; # This determinant is mentioned in both the quantitative as the qualitative part of the mixed-method study [49]; 1 Perceived need for the innovation based on the needs of those served by the organization and if the innovation will meet those needs; 2 Determinants related to barriers and facilitators of those served by the organization to participating in the innovation.

Cosmopolitanism emerged as important to the implementation of CAN guidelines (evidence index=22). A notable concern was the perceived lack of communication between the CP and external organizations (e.g., Child Protection Services or the Reporting Center for Child Abuse and Neglect) [12, 19, 53]. CPs also mentioned they were not taken seriously and expressed lack confidence in follow-up care when a client needs to be referred [15, 19]. No determinants related to cosmopolitanism were identified in papers reporting on DV guidelines. Additionally, complexity within CAN guideline was also identified as an important construct (evidence index=17). Complexity primarily referred to the guideline's content, such as procedural clarity [19, 52, 53] or concreteness [52]. In contrast, for DV guidelines, complexity referred to the context in which the guidelines were applied. CPs noted it is challenging to use the guideline and raise the topic when the partner is present at the consultation [17, 18, 20]. However, these complexities were not ranked among the top five most important determinants.

In papers on DV guidelines, determinants concerning client needs and resources¹ were identified as important (evidence index=13). While some CPs believed clients will benefit [18, 50], others believed that using the guideline might yield adverse consequences [17, 20]. Furthermore, CPs' obligation, believing that DV screening is part of their moral and professional duty, was valued as important (evidence index=13). Determinants relating to client needs and resources¹ and professional obligation were also identified for CAN guidelines, but were not ranked among the top five.

Determinants related to availability of resources emerged as important irrespective of guideline objective (evidence index CAN=37 and DV=13). Lack of time was often cited as a barrier to implementation [15, 17, 20, 49, 51-53]. CPs explained that the demanding workload impedes their capacity to integrate the guideline into daily practice [17, 49, 52] or to complete all steps included in the guideline [53]. Additionally, situations where clients disclosed issues or when CPs identified problems necessitated time for resolution –a resource often insufficient for comprehensive addressing [15, 20, 51]. Furthermore, knowledge was also identified as important regardless of whether the guidelines pertained to CAN (evidence index=23) or DV (evidence index=13) [15-20, 45, 47, 50-53]. CPs lacked a comprehensive understanding of the guideline objectives, including aspects such as prevalence rates and risk factors, along with knowledge about guideline-related activities such as referral procedures. Lastly, self-efficacy and skills was identified as an important construct in papers reporting on CAN (evidence index=21) and DV guidelines (evidence index=13). More specifically, CPs mentioned they lacked communication skills, [19, 20], were uncertain about their diagnosis [19, 51], and felt they were not able to provide support [19, 20].

Determinants identified in papers reporting on quantitative and qualitative research.

A total of 46 determinants were obtained through quantitative research methodologies, while 116 determinants were identified through qualitative research approaches. These determinants were categorized into 23 and 30 discrete constructs (**Appendix E**). **Table 6** shows the top five constructs, categorized by their corresponding research methods.

In quantitative research papers, the type of guideline emerged as an important construct (evidence index=8). CPs' perceived CA and DV as sensitive yet crucial topics [49]. The same concerns were also reported in qualitative research, although the evidence index in those studies was not sufficient to include these determinants in the top five. Additionally, client needs and resources¹ were identified as important (evidence index=7). While some CPs believed clients will benefit [50], others believed that using the guideline will have negative consequences [15, 16]. These concerns were also raised in qualitative research but did not reach the top five in terms of importance. Last, CPs' emphasized the importance of engagement though training (evidence index=7), including training related to guideline use [46, 53] and understanding guideline such as prevalence rates and referral procedures [45, 48]. Although determinants associated with engagement were identified in qualitative research, the evidence index was insufficient to include them among the top five determinants.

In papers reporting on qualitative research, client needs and resources² were identified as important (evidence index=18). More specifically, CPs mentioned that clients did not disclose issues around DV due to financial problems, shame [17], fear of reprisal from Child Protection Services, or the absence of a female CP [18]. No such determinants were identified in papers reporting on quantitative research. In addition, determinants regarding guideline complexity were also identified as important in papers reporting on qualitative research (evidence index=27) [17-20, 52]. In papers reporting on qualitative research, determinants relating to client needs and resources² and complexity were not identified.

CPs' self-efficacy and skills [15, 16, 19, 20, 46-48, 50, 51], knowledge [15-20, 45, 47, 50-53], and the availability of resources [15, 17, 20, 51-53] were identified as important irrespective of research method.

Table 6. Top five of constructs influencing the implementation of child abuse and neglect and domestic violence guidelines stratified by research methods research methods

	Evidence index	# determinants per star score			Direction of influence	
		★	★★	★★★	Barrier	Facilitator
Quantitative research methods (n=11)		★	★★	★★★	★★★	No direction *
Innovation characteristics						
Type of guideline	8		2		Sensitive topic [45]	Important topic [45]
Outer setting						
Patient needs and resources ¹	7	2	1		Negative consequences for the child or family [15, 16]	Children will benefit [46]
Inner setting						
Available resources	11	1	1	2	Lack of time [15]	Availability of time [45], brochures [45], and referral resources [42].
Characteristics of the individual						
Knowledge and beliefs about the innovation [knowledge]	16	3	2	1	Lack of knowledge about referral procedures [15, 16]	Knowledge about the guideline objective [41] and related activities [43, 46]
Self-efficacy and skills	8	1	2	1	Uncertain about their diagnosis [15, 16, 46] or feel skilled enough to use the guideline [44].	Level of knowledge about the objective and related activities [49]
Process						
Engaging [training]	7	2	1	1	Training about the guideline objective [41]	Training about the guideline [42, 49] or guideline objective [44]

Table 6. Top five of constructs influencing the implementation of child abuse and neglect and domestic violence guidelines stratified by research methods [continued]

Qualitative research methods (n=8)	Evidence index	# determinants per star score					Direction of influence		
		★	★★	★★★	★★★★	★★★★★	Barrier	Facilitator	No direction*
Innovation characteristics									
Complexity	29	3	5	2			Lack of procedural clarity [20], presence of partner [18, 19], poor concreteness of guideline [48], guideline too complex [48]	Procedural clarity [19, 49]	Level of procedural clarity [48] and feasibility [48], presence of partner [17]
Outer setting									
Patient needs and resources ²	18	2	2	2			Parents' lack of motivation [20], financial constraints [17], shame [17], reprisal from CPS [19], no female nurse available [19]		Client cooperation [48]
Inner setting									
Available resources	39	3	3	6	3		Lack of time [17, 18, 47-49], privacy [17, 47], and procedures [20] and monetary [47, 49], human [49], and other practical resources [20]		Availability of procedures [48] and human [48] and other practical [48] resources
Characteristics of the individual									
Knowledge and beliefs about the innovation [knowledge]	20	1	1	3	2		Lack of knowledge about the guideline objective [18] and related activities [17, 19, 47]		Level of familiarity [48] and knowledge about the guideline objective [20] and its use [48]
Self-efficacy and skills	25	2	5	2			Insufficient communication skills [20, 47], uncertain about their diagnosis [20, 47], don't feel they can provide support [18, 20] or feel skilled enough to use the guideline [18]		Level of confidence in the ability to perform the behavior needed to use the guideline [48], communication skills [18]

CPS=Child Protection Services; * No direction means the determinant is 1) acknowledged as having an important influence, the study does not provide a clear indication of whether it hinders or supports the intended outcome or 2) identified as both a facilitator and a barrier within a single study; † Perceived need for the innovation based on the needs of those served by the organization and if the innovation will meet those needs; ‡ Determinants related to barriers and facilitators of those served by the organization to participating in the innovation.

Discussion

The primary aim of this study was to review the determinants influencing the implementation of CAN and DV guidelines. Furthermore, we aimed to identify any differences in determinants across specific contexts, guideline objectives, and research methods, and to determine the relative importance of the identified determinants.

The majority of determinants identified belonged to the domain of the individual, followed by the inner setting, the outer setting, the innovation, and the process. The availability of resources (e.g., lack of time) was identified as the most important construct across all domains, followed by knowledge (e.g., about the guideline objectives and related activities), self-efficacy and skills (e.g., communication skills), complexity (e.g., procedural clarity), and cosmopolitanism (e.g., interorganizational communication and collaboration).

Findings compared with previous research

In this study, the availability of resources emerged as the most important construct. Specifically, time constraints were often cited as a barrier, consistent with findings from previous reviews [54, 55]. Screening for and managing child problems, as well as engaging in interprofessional collaboration, are activities that demand significant time. Addressing time constraints and ensuring the availability of supporting personnel are crucial steps in enhancing CPs' capacity to fulfill their roles in providing comprehensive and high-quality care to children in need.

Cosmopolitanism (i.e., interorganizational networks) was identified as important for the implementation of CAN guidelines, aligning with previous systematic review findings [32, 55]. Professional groups may vary in behaviors, norms, and values, making interprofessional collaboration challenging [28]. Boundaries between professional cultures and a lack of trust can hinder implementation progress [29]. Although guidelines concerning DV also involve interprofessional collaboration, it was not identified as a significant determinant. One possible explanation is that studies focusing on CAN guideline implementation employed frameworks, questionnaires, or interview topics explicitly mentioning or inquiring about interprofessional collaboration. In contrast, only one study regarding DV included this aspect in a questionnaire, where it was not identified as a barrier [46].

Other important constructs in this review were knowledge and skills, self-efficacy, and complexity, aligning with previous reviews concerning identification and managing CAN and DV [32, 55, 56]. In contrast, our study focusing exclusively on high-income countries found that determinants such as "societal attitudes enable blaming women" were less prominent [32]. By excluding low- and middle-income countries, we may have minimized the significance of these

determinants, which stem from societal beliefs that discourage women from reporting DV or seeking help from CPs. In such contexts, patriarchal gender norms, normalization of violence, and cultural expectations hinder reporting willingness. The variability in the organization type and discipline of implementers across studies was too heterogeneous to establish meaningful comparable groups. Additionally, within studies, determinants from different perspectives were explored and combined in the analysis, making it challenging to stratify and explore contextual differences. However, previous research has demonstrated that contextual differences in implementation determinants exist in implementation research [19, 29, 46]. A study on determinants influencing the identification and reporting of CAN by CPs and primary school teachers showed discrepancies between the two professions [19]. The authors showed that the most salient differences were related to attitude and skills. CPs stated they had sufficient communication skills to talk about CAN, while primary school teachers revealed it was challenging to raise the subject. Regarding attitudes, CPs were more proactive in identifying CAN compared to teachers. This reaffirms the critical role of context to understand the determinants influencing guideline implementation addressing CAN and DV.

Strengths and limitations

Using the CFIR as a guidance for data analysis is a strength of this review, ensuring systematic identification of implementation determinants [25, 42]. However, some remarks regarding the CFIR should be noted. For determinants that did not fit existing CFIR constructs, additional constructs were inductively coded. The CFIR construct 'other personal attributes' within the domain of the individual is broadly defined to include traits like tolerance of ambiguity, intellectual ability, motivation, values, competence, capacity, and learning style. We argue this construct is overly broad and lacks specificity to capture the unique aspects of individual implementation determinants. Consequently, we added six constructs to the domain of the individual (i.e., professional obligation, peer support, personal (dis)advantage, subjective norm, descriptive norm, and the relationship with client). This addition of sub-constructs may provide enhanced clarity and depth, as supported by findings from a systematic review on the combined use of the CFIR and the Theoretical Domains Framework (TDF). The review highlighted that combining frameworks complements the CFIR's focus on organizational context with the TDF's emphasis on individual behavior change, offering a more comprehensive understanding of implementation processes [57].

Another notable strength of our review is the absence of restriction on a specific research method during the search process. This approach allowed us to include papers employing a variety of methods, enriching the diversity of insights gathered. Consequently, we were equipped to stratify determinants based on papers employing both quantitative and qualitative methods, thereby enabling a more thorough analysis of potentially significant determinants.

Furthermore, integrating quality assessment into the data analysis can be considered a strength. This approach allowed us to assign greater importance to identified determinants when interpreting the results, rather than solely relying on descriptive interpretation and comparison.

Some limitations should be noted too. Although we assessed quantitative and qualitative research methods for methodological quality using the CCAT and the CASP, respectively, the resulting quality scores were treated equally when calculating the evidence index. As a result, we did not consider the level of evidence associated with the extracted determinants. To address this limitation, it would be beneficial to incorporate tools such as the Grading of Recommendations Assessment, Development, and Evaluation [58] and the Scottish Intercollegiate Guidelines Network [59], which assess confidence in the evidence. By combining these tools with those that evaluate methodological quality, we can enhance the interpretation of results by considering both quality and confidence in the evidence.

Additionally, our study lacked a clear differentiation between perceived implementation determinants and those statistically related to implementation performance. Determinants deemed important in descriptive analyses may lose their statistical significance when subjected to regression analysis. Furthermore, during the data extraction process involving both univariate and multivariate methods, we selectively retained only those determinants that maintained statistical significance in the multivariate model. It is plausible that certain variables lost their statistical significance due to potential interrelationships among determinants, a phenomenon known as multicollinearity. In the presence of strong correlations among determinants within a regression model, the model's capacity to discern their individual impacts on the studied outcome becomes compromised.

Another limitation is that a single researcher conducted the title and abstract screening, which could introduce subjectivity and errors in study selection. To mitigate this concern, a second reviewer independently screened a random sample of 20% of the studies to evaluate inter-rater agreement. Although this approach enhances the credibility of our results, the lack of dual screening for the entire set of studies is a limitation that readers should keep in mind when interpreting our findings.

Our search strategy, though extensive, may have overlooked relevant studies not indexed in the searched databases, potentially limiting the comprehensiveness and interpretation of our review findings. Including a wider array of databases and grey literature in future reviews could address this limitation and ensure a more thorough collection of relevant studies. Additionally, our focus on English and Dutch papers from OECD-affiliated countries may have excluded pertinent research from other languages and regions, restricting insights from diverse contexts and the applicability of our findings to developing countries with different healthcare systems. Future

research should strive to encompass studies in multiple languages and from a broader range of countries to enhance the global understanding of determinants influencing CAN and DV guideline implementation.

Implications for practice and future research

In addition to focusing on individual and inner setting characteristics (the setting where the innovation is implemented), this review emphasizes the critical role of the outer setting (the broader external environment in which an organization operates) during the implementation process. Simply ensuring that child CPs have adequate time, knowledge, self-efficacy, and skills is insufficient. Effective child and youth care requires seamless collaboration among multiple organizations to ensure comprehensive support for families. Challenges arise when organizations fail to collaborate, impacting CPs' ability to implement guidelines effectively. CPs have raised concerns about inadequate follow-up care, slow response times, unclear communication, and feeling disregarded, which can worsen a child's situation after reporting [19, 52]. Strategies such as setting shared goals, sharing information, and fostering collaborative problem-solving within and across organizations can promote better cooperation among stakeholders [60, 61]. However, additional research is needed to thoroughly understand the underlying issues and reasons behind interorganizational and interprofessional challenges. Future studies should prioritize exploring organizational culture and structure between inner and outer settings, engaging key stakeholders—from policymakers to frontline professionals—to illuminate barriers and facilitate the development of practical, policy-relevant solutions.

Managing child issues and promoting interprofessional collaboration require substantial time, a frequently cited barrier in guideline implementation. However, lack of time poses a significant challenge that proves difficult to address in practice [62]. Integrating a computerized support tool into electronic health records, as studied by Konijnendijk et al., did not show changes in actual guideline adherence, but significantly optimized time spent seeking information on CAN guidelines compared to controls [63]. This suggests digitalizing guidelines can save crucial time in a field often constrained by time limits. However, the impact of digitalization within youth care needs further exploration, especially in Dutch settings where fragmented organizational approaches prioritize regional over sector-wide collaboration, leading to disparities in funding and IT structures [64]. Other effective strategies include financial incentives, clear role definitions for professionals, and standardized procedures, all proven to mitigate time constraints and support guideline implementation [65, 66].

CPs often struggle with managing emotions and concerns of clients and their families addressing sensitive issues such as DV and CAN. Clients frequently withhold information due to shame, fear, lack of awareness, or financial constraints. This review emphasizes the critical role of CPs' self-efficacy and skills in effectively addressing these challenges. Notably, a significant barrier arises

from a lack of communication skills, particularly when parents are hesitant to cooperate [19, 51]. According to Perry and colleagues, dynamic and interactive trainings are most suitable to improve skills [67]. This is supported by previous research in the field of primary care and mental health care using standardized patients and role play. These training methods improved CPs' communication skills and confidence to use the skills in practice [68]. Importantly, improved communication skills are mediated by the amount of training received [69], which emphasizes the importance of ongoing training [60].

While addressing individual determinants offers potential benefits, it is essential to recognize that determinants are interconnected. As described in the previous section regarding communication skills and client cooperation, these factors can influence each other.. Recognizing this interplay is crucial. Various analyses, such as Latent Profile Analysis (LPA), can help identify distinct professional subgroups based on their determinant profiles [70]. In the realm of implementation research, different professional groups may exhibit diverse patterns or combinations of determinants. Addressing these determinants collectively within each subgroup can lead to more targeted, efficient, and effective implementation strategies.

As previously highlighted, to enhance our comprehension of the impact of context on implementation, researchers should incorporate contextual factors into study design, analysis, and interpretation. Including such contextual considerations will provide deeper insights into the dynamics influencing implementation processes and outcomes. For example, guidelines implemented in low-income countries may face different challenges compared to those in high-income countries, such as resource availability, community support systems, and socio-cultural norms [31, 32]. Additionally, healthcare systems may have different structures and priorities compared to social service agencies, affecting how guidelines are integrated into daily practice. The disciplinary background of CPs involved, whether they are psychologists, social workers, or medical doctors, can also impact their approach to implementing guidelines and addressing CAN and DV cases [19].

The identified determinants varied between quantitative and qualitative research methods, underscoring the importance of utilizing both approaches to comprehensively understand the barriers and facilitators to guideline implementation. Mixed-methods studies can employ different designs: 1) explanatory sequential design starts with quantitative data and uses qualitative data to explain; 2) convergent design validates findings by collecting qualitative and quantitative data concurrently; and 3) exploratory sequential design explores a phenomenon with qualitative data first, extending to quantitative data. The choice of design should be guided by the specific research question, the relationship between qualitative and quantitative data, and whether the researcher aims to explain, validate, or explore the research topic in depth [71].

Conclusion

This study enhances our understanding of the challenges CPs encounter in implementing CAN and DV guidelines, representing a crucial initial step in developing effective implementation strategies. Time, knowledge, skills, self-efficacy, and interprofessional collaboration have been identified as key determinants of CAN and DV guideline implementation. However, further research is necessary to fully elucidate the intricate interplay among these determinants. Additionally, current studies often neglect to incorporate contextual factors into their study designs, analyses, and interpretations, hindering a comprehensive understanding and the formulation of tailored strategies. The adoption of mixed methods is essential to gain a thorough understanding of both the barriers and facilitators to guideline implementation.

Abbreviations

CP	Care professional
CAN	Child abuse and neglect
DV	Domestic violence
CFIR	Consolidated Framework for Implementation Research
CCAT	Crowe Critical Appraisal Tool
CASP	Critical Appraisal Skills Program
OECD	Organization for Economic Cooperation and Development

Competing interests

None of the authors had known financial or other conflicts of interest that could have appeared to influence the work reported in this paper.

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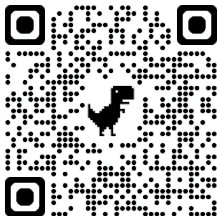
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CRedit authorship contribution statement

Eveline M. Dubbeldeman: Conceptualization, Methodology, Writing – original draft. Rianne M.J.J. van der Kleij: Conceptualization, Methodology, Supervision, Writing – review & editing. Merel Sprenger: Methodology, Writing – review & editing. Ahmed S. Aslam: Methodology, Writing – review & editing. Jessica C. Kiefte-de-Jong: Writing – review & editing. Mathilde R. Crone: Conceptualization, Methodology, Supervision, Writing – review & editing.

Supplementary materials

Scan the QR code to view supplementary materials.



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