Research article

Burden, consequences and associate factors of childhood maltreatment in Ethiopia: A systematic review and meta-analysis

Demewoz Kefale [a,*], Tigabu Munye Aytenew [b], Yohannes Tesfahun [c], Amare Simegn [d], Mahilet Wondim [e], Shegaw Zeleke [b], Solomon Demis [f], Gashaw Kerebeh [a], Gebrehiwot Berie Mekonnen [a], Habtamu Shimels Hailemeskel [f], Muluken chanie Agimas [g], Mastewal Endalew [h], Worku Necho Asferie [f], Amare kassaw [a], Yeshiambaw Eshetie [b], Sintayehu Asnakew [i]

[a] Department of Pediatrics and Child Health Nursing, College of Health Sciences, Debre Tabor University, Debre Tabor, Ethiopia
[b] Department of Nursing, College of Health Science, Debre Tabor University, Debre Tabor, Ethiopia
[c] Department of Emergency and Critical Health Nursing, College of Health Sciences, Debre Tabor University, Debre Tabor, Ethiopia
[d] Department of Reproductive Health, College of Health Sciences, Debre Tabor University, Debre Tabor, Ethiopia
[e] Department of Midwifery, South Gondar Zone Health Office, Debre Tabor, Ethiopia
[f] Department of Maternal and Neonatal Health Nursing, College of Health Sciences, Debre Tabor University, Debre Tabor, Ethiopia
[g] Department of Epidemiology and Biostatistics, Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia
[h] Department of Environmental and Occupational Health and Safety, Institute of Public Health, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia
[i] Department of Psychiatry, College of Health Sciences, Debre Tabor University, Debre Tabor, Ethiopia

ARTICLE INFO

ABSTRACT

Introduction: Child maltreatment is any type of abuse or child negligence which results the concrete or prospective hurt for those under age of eighteen. It is a global issue which severely endangered children's physical, emotional, behavioral, developmental and mental well-being for immediate and later in life. Although, its magnitude and devastating burden are difficult to comprehend, much remains to be done to know its prevalence and comprehensive impact. This meta-analysis and comprehensive review will provide important light on the burden, consequences, and contributing factors for child maltreatment.
Methods: This meta-analysis and comprehensive review was coded at Prospero number of CRD42024503799. Universal online databanks including PubMed, Cochrane, Google, Google Scholar, SCOPUS, and Web of Science and Global Health were used to search for articles. Microsoft Excel was used for data extraction, and STATA17 was used to analyze this systematic review and meta-analysis. A random effect model exploration was employed when heterogeneity among included studies were evidenced.
Results: The pooled prevalence of childhood maltreatment was 57.0 % (95 % CI = 32.00, 83.00). Included studies revealed that childhood maltreatment has multiple child health-related consequences. Being female (AOR = 2.94, 95 % CI: 1.48, 4.41), being young (AOR = 1.22, 95%CI: 1.09, 3.35), paternal illiteracy (AOR = 2.16, 95%CI: 1.012, 3.302) and have an open family discussion

* Corresponding author.
  E-mail address: demewozk@yahoo.com (D. Kefale).

about sexual matters (AOR = 0.381 (95%CI: 0.121, 0.884) were considerably associated with child maltreatment.

Conclusion: This finding publicized that the burden and multiple consequences of childhood maltreatment need much attention. Childhood maltreatment has both immediate and life time consequences for children later in life. Being female, being young, having illiterate fathers, and open family discussion about sexual matters were associated factors of child maltreatment.

1. Introduction

Childhood maltreatment is any type of abuse or child negligence which results the concrete or prospective hurt for those under age of eighteen [1,2]. Child abuse is any mistreatment or deliberate harm of children by parents, caretakers, or someone around them which results in real or prospective hurt for child's health, development and dignity [3–5]. Child abuse can be stated in terms of physical, emotional and sexual maltreatment [6]. On the other hand, child negligence is an omission to fulfill child's basic needs or inadequate care results serious effect on the health and development of children [7,8]. A perpetrators' behavior of acts of commission or omission has hostile effect on the child overall health [9]. It is a major public health issue globally [10]. Which endangers children's immediate and long-term physical, emotional, behavioral, mental, and psychological well-being [11,12], that manifests as a social burden with expensive and terrible repercussions in many ways [13]. World Health Organization recognized as a major worldwide health problems impairing the current children's and teenagers' health and welfare [14].

Globally, one billion children experience some form of abuse annually and one child dies every 5 min as a result of this issue [15]. The evidence of World Health Organization showed that the prevalence of sexual abuse, physical abuse and emotional abuse was 9.6 %, 22.9 % and 29.1 % respectively [16]. An enquiry in United States uncover that nearly 676,000 children were faced different forms of abuse and neglect in 2016 [17]. Other Study done in Germany revealed that 2.3 % sexual abuse, 3.3 % physical abuse, 2.6 % emotional abuse and 9 % physical neglect [18]. And also United nations children's fund revealed that15 million girl child and 30 % of children globally faced forced sex and bullying respectively, furthermore over 75 % of children were challenged with forceful discipline [19,20]. Sexual abuse or assault occurs in childhood for one in nine girls and one in twenty boys under the age of eighteen, with females accounting for a higher proportion of victims (82 %), compared to males [21,22].

In Africa, child maltreatment is a jeopardize problem that executed in various forms like; domestic violence, child labor, corporal punishment, harsh physical punishment which really obstacle for the achievements of sustainable development goals [23]. In Ethiopia, CM in the past several years was least acknowledged, overlooked and undocumented due to its taboo nature [24]. Recent evidence in Ethiopia showed that 84 % of children experiences abuse and neglect in their life time [25]. Which can happen in school, home and in their communities [26]. Ethiopia currently facing political tension and conflict which enhance CM [27]. Nearly 5000 children are separated from their parents due to conflict that leads to live in dangerous and deplorable conditions where exposes them for CM [28].

Child maltreatment cause diverse negative consequence on individual, family, society and financial impact [29,30]. Depression, substance abuse, traumatic stress disorder, high-risk sexual behaviors and abused other children in adulthood is later fate of CM [31, 32]. It exposed children to develop; health harming behavior, physical inactivity, emotional and cognitive impairment, self-harm, psychiatric disorders, and no-communicable disease in their later life [16]. CM has immediate, lifelong and even intergenerational effect [33], With inconsistent impact of psychological, developmental, behavioral, academic and social relationships [34] including injury and death [19]. This detrimental effects needs serious attention nationally and Globally [11,35], Recognizing the growing consequences of CM as well as costs to society as a whole is important [36]. Evidences reached a common consensus that, it would not possible to timely respond and adequately protect with an individual or single stakeholders effort [37,38]. Multi-disciplinary collaboration has a pivotal role in tackling the problem through cooperation of several professional groups [39]. Which has the advantages to protect, early respond and improved quality of care and communication [40], to handle cases cooperatively and support them in the best way of possibilities [41].

Sustainable Development goal plan to cessation, all types of violence against children in 2030 [42]. In Ethiopia, several actions have been tried to tackle CM like Save the children program [43],UNICEF child protection program [44]. And government on this part has taken relevant measure allied with other partners too [45]. In spite of these efforts, the devastating condition of CM is still in its bottom to top stage [27]. Since there is inadequate transfer, event management, and fair services, numerous Ethiopian children face diverse forms of maltreatment in school, home and at their communities [46]. Limited Studies [47] in Ethiopia revealed that there is inconsistent findings [48,49]. Therefore, determining national burden, consequences and associated factors of CM in Ethiopia has pivotal role towards achieving SDGs. Children are our future resources who needs much attention [50]. But doing research, financial allocation, policy initiatives and public awareness is a big home work for developing countries including Ethiopia. Therefore, this systematic review and meta-analysis assessed burden, consequences and predictor factors of child maltreatment in Ethiopia. Consequently, this study will offer relevant information for future researchers, policymakers, clinicians, and concerned stakeholders which initiates for designing right approaches to early detect, prevent and treat child maltreatment in Ethiopia.

2. Method

2.1. Search strategy and study design

This systematic review and meta-analysis were devoted to evaluate the prevalence, consequences and predictor factors of childhood maltreatment in Ethiopia. The preferred reporting item for systematic review and meta-analysis (PRISMA) guide line was designed as a standard protocol [51]. The protocol was equipped and submitted to the international Prospective Register of Systematic Reviews (PROSPER) under registering number of CRD42024503799 before this review was completed.

2.1.1. Search strategy and databases

An extensive pursuit of electronic databanks, including PubMed, Cochrane, Google, Google Scholar, SCOPUS, Web of Science and Global Health, was implemented on January January 4, 2024(**Supplementary file-2**), and an updated search was performed on January 14//1/2024. The references of involved studies were also saved to contain extra suitable researches. A search for unpublished articles to include gray literature was also considered. Concerned experts were involved to search for complementary Articles, that were not rescued by pursuing electronic data files or reference lists. A population, intervention, outcome and comparison (PIOC) search design was used. The relevant search terms used a combination of pertinent Medical Subject Headings (MeSH) and database overt terms with an Ethiopian search filter. The search terms "(Child OR Children OR Childhood) AND (Abuse OR Neglect OR Maltreatment) AND Ethiopia AND (Systematic Review OR Meta-Analysis)" and "(Burden OR prevalence OR incidence) AND (child sexual Abuse OR child Neglect OR child emotional abuse OR Child physical abuse) AND Ethiopia" were used. To create the search string, Boolean operators \AND\ and \OR\ were used. The exploration approach and also quantity of rescued articles to PubMed data files has been offered.

2.2. Inclusion and exclusion criteria

The review included cross-sectional, case-control and qualitative but all observational (cross-sectional) articles that were involved in this meta-analysis that was written in English, conducted among all children, and that reported on the prevalence of childhood maltreatment among children and/or one or more associated factors. However, studies lacking full text, abstract without full access, studies that did not report the outcome of interest, case reports, articles with methodological problems and non-English publications were excluded**.**

2.3. Study selection procedure

The duplicate studies were eliminated once all of the recovered articles which were exported to the Endnote reference manager version seven. In order to ascertain each study's eligibility, two independent reviewers first evaluated the titles and abstracts before moving on to the full text reviews. Discussion resolved the discrepancy between the two reviews.

2.4. Data extraction

Two authors independently extracted all necessary data via a standardized Microsoft Excel 2010 worksheet, then after cross-checking were performed to sustain consistency. A third author was incorporated to solve the problems when inconsistencies occur between two authors who can't come on a certain agreement via conversation. Data that were extracted: First author name, year of publication, Study region, child age, Study design, Sample size, child sex, Marital status of parents, paternal education, Birth order, Open discussion of family about sexual issue, watching pornography, cigarette smoking, alcohol consumption, mental illness and prevalence of maltreatment among children and adjusted odds ratio of predictor factors for maltreatment and its consequences. When disagreements and inconsistencies encountered among the authors, discussion and repeating the procedure were primary option to resolve this concern. If appropriate data couldn't detect from the involved articles, assessors communicated corresponding author and excluded when satisfactory response was not recognized.

3. Outcomes of concern or interest

The main outcome variables were echoed in this research. These variables include the burden, consequences and associated factors of childhood maltreatment among children. The odds ratio (OR) and standard error (SE) was used as measures of prevalence and its associated variables.

3.1. Conceptual and operational definitions of childhood maltreatment

Child maltreatment is any abuse or neglect of children which causes real and prospective damage to a person under age of eighteen. Maltreatment is broad word that contains child neglect and child abuse which defined clearly as an act of omission and commission respectively [52]. Child maltreatment in this study contains physical, sexual, and emotional abuse including child neglect.

3.2. Data analysis

Both lifetime and past-year childhood maltreatment were used to compute the prevalence of child maltreatment. Heterogeneity of the included articles was possibly lessens by using a random effects model for this meta-analysis [53]. Stata version seventeen software were used to analyze extracted data for this meta-analysis. A weighted inverse-variance random-effects model [54] was used to compute the overall pooled prevalence of child maltreatment and determine the effect of its predictor factors. Forest plot was used to evaluate the influence of independent variables on the incidence of child maltreatment, and the 95 % confidence interval was used to measure the association. The I^2 statistic was used to assess the proportion of the entire variation across studies (heterogeneity). The I^2 statistics were calculated as 0, 25, 50, and 75 percent which is equivalent to No, low, moderate, and high heterogeneity, consecutively [53]. P value of $I^2 < 0.05$ was used to estimate substantial heterogeneity [55]. The presence of publication bias was verified by noting the symmetry of the funnel plot. Egger's test with p value < 0.05 was also employed to determine if there was significant publication bias [56]. Result will be presented through tables, figures and text.

4. Result

4.1. Search result

With the total of 1122 Articles were found using the search technique from different electronic databases. After eliminating 370 duplicated articles, 752 articles remained. This 752 studies were extensively screed which resulted that 476 studies were excluded. From the residual 276 studies included in the full-text evaluation, 258 studies were put under the excluded section due to pre-established criteria (complete manuscript not in English, published offshore Ethiopia, undefined outcome, and unclear diagnostic standards). Overall, 18 primary articles were identified to be suitable and involved for this systematic review and 10 primary articles were suitable and included for meta-analysis. We sketched the PRISMA flow diagram to display the special procedure from primarily recognized records to final involved articles (Fig. 1).

5. Features of the involved studies

Most of Ethiopian regions were denoted in this Systematic review and meta-analysis. An overall eighteen primary articles were included in systematic review but ten studies stated the prevalence in meta-analysis of maltreatment among children [24,25,48, 57–71]. Seven of the included studies were from Oromo [24,57,58,65,66,68,71], 2 were from the Southern Nations and Nationalities [60,63], 4 were from the Amara region [25,59,61,69], 4 were from Addis Ababa [48,62,64,70], and one was from the Tigre region [67]. Ten studies were cross-sectional and 1 was a case–control study; the remaining seven studies were qualitative studies, 17 (94 %) of which were institutional (e.g., schools, hospitals, and police offices) and 1 (5 %) was community based study setting [63]. The study population included all children [24,25,48,57–71]. Sample sizes of the involved articles extended from 29 [70] to 718 [60]. Regarding the year of publication, all incorporated primary studies were published between 2003 and 2023 [24,25,48,57–71]. The total number
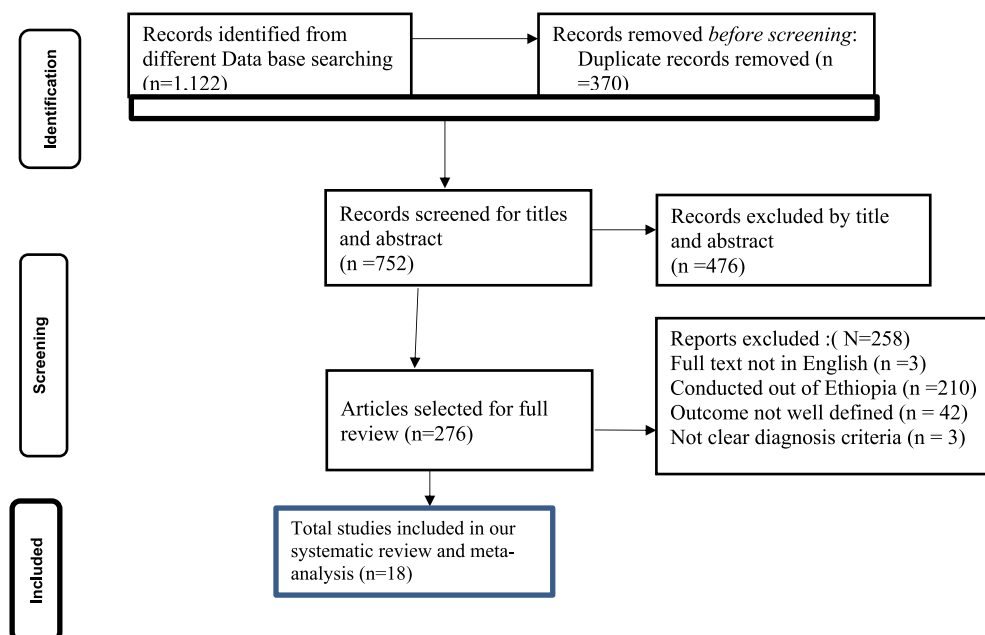

Fig. 1. – PRISMA flow diagram of the included studies in the meta-analysis of child maltreatment in Ethiopia.

of respondents was 4115. Childhood maltreatment type had one to eight different distributions. Eight (44.4 %) of the included studies mainly involved sexual abuse, whereas one (5.5 %) of the studies involved physical and psychological Child maltreatment. Five studies assessed the lifetime prevalence of sexual abuse, physical abuse, emotional abuse and child hood neglect [24,25,58,63,66]. Eight studies measured the life time incidence of sexual abuse alone [48,59,62,64,68–71]. One study measured lifespan incidence of sexual abuse, physical abuse and emotional abuse [57], whereas three included studies assessed the lifetime prevalence of childhood physical abuse [60,65,67]. Additionally, one study showed the prevalence and its predictor factors of physical and Emotional childhood maltreatment in Ethiopia [61] (Table-1).

5.1. Data quality assessment

EndNote version seven reference managers were used to disregard duplicate studies. Unclear evidence or differences were solved through dialogue. Extensive screening of titles, abstracts and full-text review was performed by paired independent authors to decide the eligibility of each research. Any inconsistency was resolved by two other authors. Each study was examined to identify its quality via the Joanna Briggs Institute (JBI) quality appraisal criteria using the cross-sectional, case-control and quantitative Joanna Briggs Institute (JBI) quality appraisal checklist respectively [72–74]. Quality evaluation for the included studies centered on the appropriateness of the participants, study settings, designs as well as appropriateness of measurements. Finally, studies that scored 50 % or more on the checklist criteria used for quality assessment were considered to meet high-quality standards. Consequently, the included articles were selected depending on quality based evaluation which ranged from 77.8 to 100 %. JBI's critical appraisal Checklist for cross-sectional or prevalence studies (Table -2).

Quality evaluation for the included studies centered on the appropriateness of the participants, study settings, designs as well as appropriateness of measurements. Finally, studies that scored 50 % or more on the checklist criteria used for quality assessment were considered to meet high-quality standards. Consequently, the included article was selected depending on quality based evaluation which scored 80 %. JBI's critical appraisal Checklist for case-control studies (Table -3).

Quality evaluation for the included studies centered on the appropriateness of the participants, study settings, designs as well as appropriateness of measurements. Finally, studies that scored 50 % or more on the checklist criteria used for quality assessment were considered to meet high-quality standards. Consequently, the included articles were selected depending on quality based evaluation which ranged from 80 to 100 %. JBI's critical appraisal Checklist for qualitative studies (Table -4).

6. Meta-analysis

6.1. Prevalence of childhood maltreatment among children

The lifespan prevalence of childhood maltreatment extended from 23 % to 97.3 %. Overall child hood maltreatment prevalence was found to be 62.5 % [(95%CI: 47.6, 77.4), $I^2 = 99.3$, P = 0.00]. The percentage and p value of the I^2 statistic indicated that there is observed heterogeneity (Fig. 2a).

Table 1
General characteristic of the included studies for the systematic review and meta-analysis of Burden, Consequences and Associate Factors of Childhood Maltreatment in Ethiopia.

ID	Author (Year)	Study Region	Study Design	Sample size	Study Setting	CM type	Prevalence	Quality
1.	Demewoz et al., 2023	Amhara	cross- sectional	423	Institutional	SA,PA,EA&CN	84.4	Low risk
2.	Fanta et al., 2020	Oromia	cross-sectional	423	Institutional	SA,PA,EA	62.5	Low risk
3.	Indryas. L,2003	Oromia	cross-sectional	246	Institutional	SA,PA,EA&CN	80	Low risk
4.	Nardos.C,2019	Oromia	Qualitative	NA	Institutional	SA,PA,EA&CN	NA	Low risk
5.	Wassie. K et al., 2020	Amhara	Qualitative	NA	Institutional	SA	NA	Low risk
6.	Yohannes. et al., 2017	SNNP	cross-sectional	718	Institutional	PA	64	Low risk
7.	Missaye,2014	Amhara	cross-sectional	321	Institutional	PA,EA	73.4	Low risk
8.	Belayneh.,2022	Addis Ababa	cross-sectional	422	Institutional	SA	42.7	Low risk
9.	Jibril.J,2012	Addis Ababa	cross-sectional	64	Institutional	SA	23	Low risk
10.	Muka,2020	SNNP	cross-sectional	199	Community	SA,PA,EA&CN	64.8	Low risk
11.	Timketa,2014	Addis Ababa	cross-sectional	275	Institutional	SA	97.3	Low risk
12.	Tadesse,2019	Oromia	Qualitative	NA	Institutional	PA	NA	Low risk
13.	Megersa. et al., 2021	Oromia	Qualitative	NA	Institutional	SA,PA,EA&CN	NA	Low risk
14.	Gebreslassie.,et al., 2017	Tigray	Qualitative	NA	Institutional	PA	NA	Low risk
15.	Dereje.,et al., 2006	Oromia	Qualitative	323	Institutional	SA	NA	Low risk
16.	Yemataw.,2011	Amhara	Case-control	318	Institutional	SA	NA	Low risk
17.	Asnake,2013	Addis Ababa	Qualitative	29	Institutional	SA	NA	Low risk
18.	Israel.B.,2017	Oromia	cross-sectional	354	Institutional	SA	31.9	Low risk

Abbreviations: SNNP, Southern nations, nationality of people, NA: Not applicable, CM: Child Maltreatment, SA: Sexual Abuse, PA: Physical Abuse, EA: Emotional Abuse and CN: Child Neglect.

Table 2

General characteristics of the included cross-sectional studies for the systematic review and meta-analysis for Burden, Consequences and Associate factors of Childhood Maltreatment in Ethiopia.

Primary studies	JBI'S Critical Appraisal Questions									Total quality result (100 %)	Included
	q1	q2	q3	q4	q5	q6	q7	q8	q9		
Demewoz et al., 2023	y	y	y	y	y	y	y	y	y	100	✓
Fanta et al., 2020	y	y	y	y	y	y	n	y	y	88.9	✓
Indryas.L,2003	y	y	y	y	y	y	y	y	y	100	✓
Yohannes.,et al., 2017	y	n	y	y	y	y	n	y	y	77.8	✓
Missaye,2014	y	y	y	y	y	y	n	y	y	88.9	✓
Belayneh.,2022	y	y	y	y	n	y	n	y	y	77.8	✓
Jibril.J,2012	y	y	y	y	y	y	y	y	y	100	✓
Muka,2020	y	y	y	y	y	y	y	y	y	100	✓
Timketa,2014	y	y	y	y	y	y	n	y	y	88.9	✓
Israel.B.,2017	y	y	y	y	y	y	n	y	y	88.9	✓

y: yes, n: no, u: unclear, q: question. The total quality result is calculated by counting the number of y in each row. q1: Was the sample frame appropriate to address the target population? q2: Were study participants sampled in an appropriate way?/Are the patients at a similar point in the course of their condition/illness? q3: Was the sample size adequate? q4: Were the study subjects and the setting described in detail?/Are confounding factors identified and strategies to deal with them stated? q5: Was the data analysis conducted with sufficient coverage of the identified sample?/Are outcomes assessed using objective criteria? q6: Were valid methods used for the identification of the condition? q7: Was the condition measured in a standard, reliable way for all participants? q8: Was there appropriate statistical analysis?/Were outcomes measured in a reliable way? q9: Was the response rate adequate, and if not, was the low response rate managed appropriately?.

Table 3

General characteristics of the included case–control study for the systematic review and meta-analysis of Burden, Consequences and Associate factors of Childhood Maltreatment in Ethiopia.

| Primary studies	JBI's Critical Appraisal Question										Total quality result (100 %)	Included
	q1	q2	q3	q4	q5	q6	q7	q8	q9	q10		
Yemataw.,2011	y	n	y	y	y	y	y	y	n	y	80	✓

y: yes, n: no, u: unclear, q: question. The total quality result is calculated by counting the number of y's in each row. q1: Were the groups comparable other than the presence of disease in cases or the absence of disease in controls? q2: Were cases and controls matched appropriately? q3: Were the same criteria used for identification of cases and controls? q4: Was exposure measured in a standard, valid and reliable way? q5: Was exposure measured in the same way for cases and controls? q6: Were confounding factors identified? q7: Were strategies to deal with confounding factors stated? q8: Were outcomes assessed in a standard, valid and reliable way for cases and controls? q9: Was the exposure period of interest long enough to be meaningful? q10: Was appropriate statistical analysis used?.

Table 4

General characteristics of the included qualitative articles for this systematic review and meta-analysis of Burden, Consequences and its Associate factors of Childhood Maltreatment in Ethiopia.

Primary Articles	JBI's critical appraisal questions										Overall quality score (100 %)	Included
	q1	q2	q3	q4	q5	q6	q7	q8	q9	q10		
Nardos.C,2019	y	y	y	y	y	y	y	y	y	y	100	✓
Wassie. K et al., 2020	y	y	y	y	y	y	n	y	y	y	90	✓
Tadesse,2019	y	y	y	y	y	y	y	y	y	y	100	✓
Megersa.,et al., 2021	y	n	y	y	y	y	n	y	y	y	80	✓
Gebreslassie.,et al., 2017	y	y	y	y	y	y	n	y	y	y	90	✓
Dereje.,et al., 2006	y	y	y	y	n	y	n	y	y	y	80	✓
Asnake,2013	y	y	y	y	y	y	y	y	y	y	100	✓

y: yes, n: no, u: unclear, na: not applicable q: question. The overall score is calculated by counting the number of ys in each row. q1: Is there congruity between the stated philosophical perspective and the research methodology? q2: Is there congruity between the research methodology and the research question or objectives? q3: Is there congruity between the research methodology and the methods used to collect data? q4: Is there congruity between the research methodology and the representation and analysis of data? q5: Is there congruity between the research methodology and the interpretation of results? q6: Is there a statement locating the researcher culturally or theoretically? q7: Is the influence of the researcher on the research, and vice-versa, addressed? q8: Are participants, and their voices, adequately represented? q9: Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body? q10: Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?.
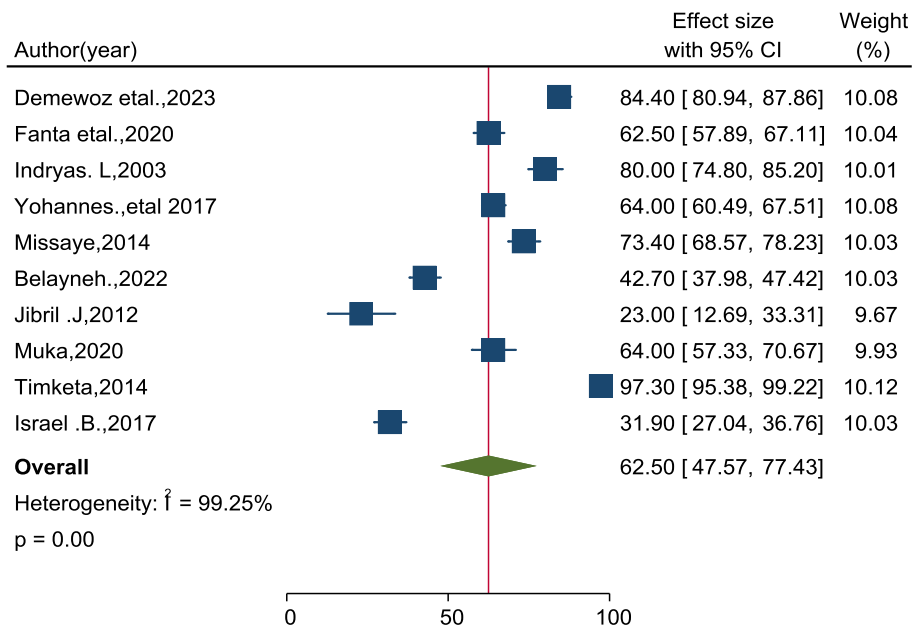
Figure-2a. Forest plot of the prevalence of Childhood maltreatment among children in Ethiopia, 2024.
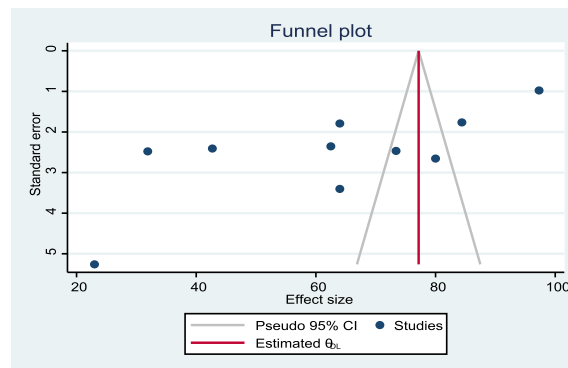

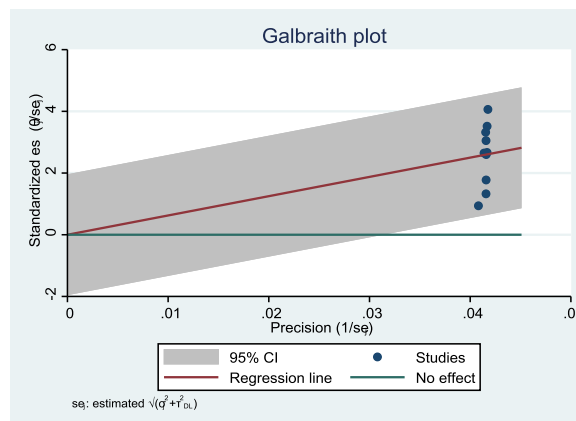**Figure -2b.** funnel plot to show publication biases on childhood maltreatment among children.

Figure -2c. Galbraith plot to show after trim and fill analysis done on child maltreatment.

6.2. Associated factors of childhood maltreatment

The pooled determinant factors of childhood maltreatment among children, A meta-analysis was performed. Adjusted factors which explored in at least two articles and similar factors must compare through involved articles. Consequently, sex, children's age, illiteracy of the father and open family discussion met the criteria and involved in this systematic review and meta-analysis.

In order to determine the relationship between childhood maltreatment with child sex, three articles were included. Hence, the combining of three articles [25,61,62] showed that females were more likely to experience childhood maltreatment than male children [AOR = 2.94 [95 % CI; 1.48, 4.41]; I^2 = 95.31 %, p = 0.000] (Fig. 3). Two articles were comprised in this study to see the relationship concerning childhood maltreatment with child age [60,62]. Therefore, the random effects model in this analysis specified that young children were more likely to develop maltreatment than older children (AOR = 1.22 (95%CI: 1.09, 3.35), I^2 = 92.34 %, p = 0.00) (Fig. 4). To calculate the relationship childhood maltreatment with paternal illiteracy, double articles were nominated for this analysis [25,57]. Collective results for this study revealed that having illiterate fathers were more significantly associated with childhood maltreatment compared with their counter parts ([AOR = 2.16 (95 % CI: 1.01, 3.30), I^2 = 85.10 %, p = 0.01]) (**Figure-5**). Pooled analysis of two articles by means of a random effects model [25,57] showed that 62 % of children who didn't have significant dialogue on sexual matters openly within the family was more likely to develop child hood maltreatment than children who had open discussion on sexual issues within family (AOR = 0.38 (95%CI: 0.12, 0.88); I^2 = 0.00 %, P = 0.97) (Fig. 6).

6.3. Consequences of childhood maltreatment

Among all, eighteen involved Articles, eleven studies revealed that childhood maltreatment has emotional, behavioral, physical, developmental and mental problems consequences [24,25,48,57–59,63,65,67,70,71]. Two studies have shown that child maltreatment has the effects of unwanted pregnancy, sexually transmitted infection and psychosocial problems [63,68]. Four studies showed that child hood maltreatment has psychosocial, medical, educational and financial problems [48,65–67]. Furthermore, one study revealed that childhood maltreatment has acute and chronic physical health consequences for children [64]. Finally, a single study indicated that maltreatment has a bitter health impact and leads to child streetism [67].

6.4. Publication bias among the studies

Asymmetry of the incorporated primary articles on the funnel plot and p-value of Egger's regression test (P < 0.001) showed the presence of publication bias (Fig. 2b). Therefore, trim and fill analysis was done to treat the publication bias (Fig. 2c).

7. Analysis of heterogeneity

Percentage of I^2 statistics of forest plot signposts a noticeable heterogeneity among the involved articles (I^2 = 99.3 %, P < 0.00) (Fig. 2b). To resolve this heterogeneity problem, sensitivity and sub-group analysis were conducted.

8. Analysis of sensitivity

In order to decide the effect of specific articles on the overall meta-analysis, Sensitivity analysis was performed. Galbraith plot indicated that the assessment from a single study is closer to the pooled effect, which in turn implied the absence of single study effect on the overall pooled effect. Hence, it has been established that a solitary articles has no significant effect on the overall outcome of the study (Fig. 2c)

9. Sub group analysis by the sample size

Sub-group analysis by sample size revealed that high pooled prevalence of child maltreatment with less than 350 sample sizes
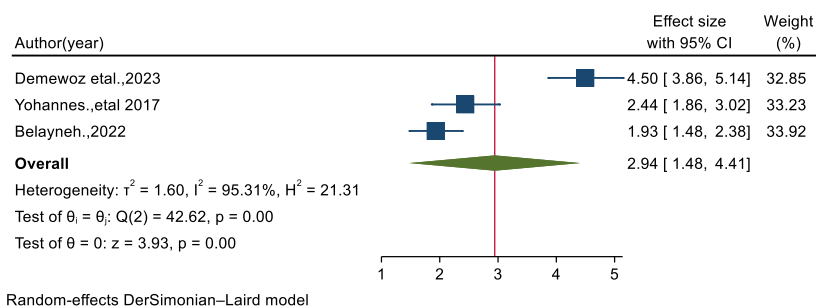

Figure-3. Forest plot of the association of childhood maltreatment and child sex among children in Ethiopia, 2024.
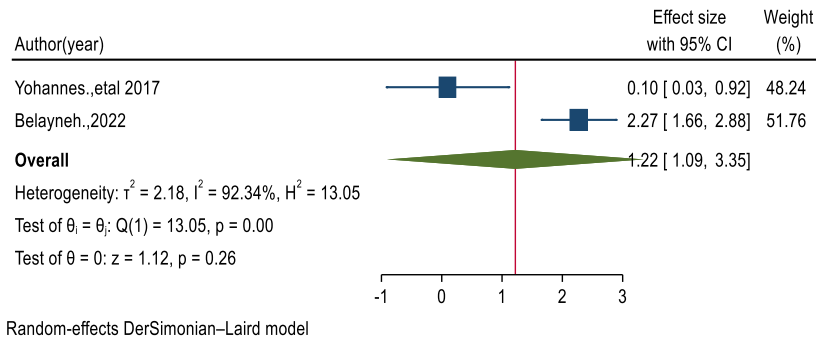
Figure-4. Forest plot of the association of childhood maltreatment and child age among children in Ethiopia, 2024.
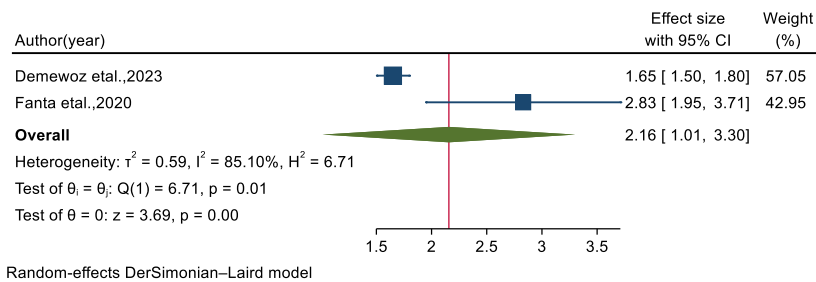

Figure-5. Forest plot of the association of childhood maltreatment and illiteracy of fathers among children in Ethiopia, 2024.
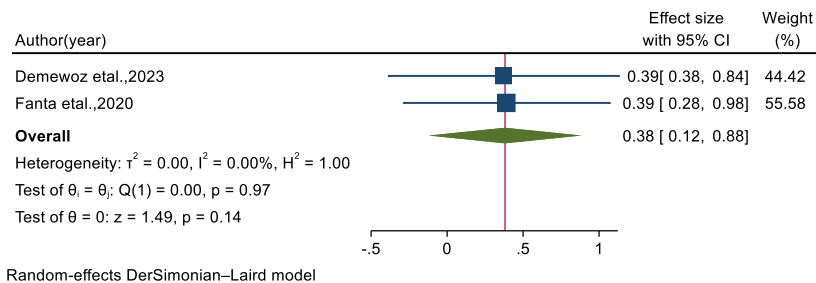

Figure-6. Forest plot of the association of childhood maltreatment and open family discussion of sexual matters among children in Ethiopia, 2024.

Table −5

Subgroup analyses for the systematic review and meta-analysis of Burden, Consequences and Associate factors of Childhood maltreatment in Ethiopia, 2024.

Variables	Outcome variables	Sub-group	No. of studies	Model	Prevalence	I²	P-value
Publication year	Prevalence of child maltreatment	<2019	6	Random	61.8 %(CI:39.8, 83.9)	99.4	0.000
		≥2019	4	Random	63.4(CI: 44.3, 82.6)	98.5	0.000
Sample size	Prevalence of child maltreatment	<350	5	Random	68.0(CI:48.7,87.3)	98.8	0.000
		≥350	5	Random	57.2(CI:39.2,75.1)	98.9	0.000
Type of child maltreatment	Prevalence of child maltreatment	All types	3	Random	76.5(CI: 65.6, 87.3)	92.9	0.000
		Sexual abuse only	4	Random	48.9(CI: 8.1, 89.6)	99.7	0.000
		Others	3	Random	66.5(CI: 60.3, 72.7)	83.9	0.000

All types (sexual abuse, physical abuse, emotional abuse and child neglect), **others** (physical and emotional abuse, physical abuse alone and sexual, physical, emotional abuse).

[68.0, 95%CI: 48.7, 87.3, $I^2 = 98.8$ %, P < 0.000] compared with ≥350 [57.2, 95%CI: 39.2, 75.1, $I^2 = 98.9$ %, P < 0.000] (**Table-5**).

10. Subgroup analysis by the study period

A pooled prevalence of child maltreatment of studies conducted after 2019 years was 63.4 [95 % CI: 44.3, 82.6) $I^2 = 98.5$ %, P < 0.000], which was slightly greater than the studies conducted in the year before 2019 [61.8, 95%CI: 39.8, 83.9; $I^2 = 99.4$ %; P < 0.000 (Table 5).

11. Sub-group analysis by the type of child maltreatment

Having all type of child abuse and/or neglect could determine the highest prevalence of child maltreatment [76.5, 95%CI: 65.6, 87.3; $I^2 = 92.9$ %; P < 0.000] which compared from having sexual alone and other types of child abuse and/or neglect respectively [48.9, 95%CI: 8.1.6, 89.6; $I^2 = 99.7$ %; P < 0.000, 66.5, 95%CI: 60.3, 72.7; $I^2 = 83.9$ %; P < 0.000] (**Table -5**). This analysis indicated that the heterogeneity of this article might be variances in sample sizes, study period and type of child maltreatment among primary articles that were involved.

12. Discussion

Based on this meta-analysis, over half of all children encounter maltreatment once up on their survives, and children in Ethiopia are particularly vulnerable to it. To the best of our understanding, this is the first broad national synthesis where results gathered from different research including those on the various forms of child maltreatment have been broken down. Thus, the inclusive combined prevalence of child maltreatment resulted with 57.0 % (95%CI: 32.0, 83.0, $I^2 = 0.00$ %, p = 0.000), higher than the reported prevalence from a research done in Pakistan [75], Malaysia [76]. These nations may now have more affluent populations, and more advanced in the demographic, cultural, and health-nutrition indices which help them have better systems for protecting and delivering child protection. Furthermore, variations in study environments, study designs, data collection techniques, and sample sizes could be additional causes of this heterogeneity.

Across several study factors, there was a noticeable extent of variation in the lifetime prevalence of childhood maltreatment. In Ethiopia, emotional abuse is the most common kind of child maltreatment, followed by physical abuse, child neglect, and sexual abuse [25]. This study revealed that being a girl was associated with an increased risk of maltreatment during childhood; hence it is important to pay special attention to a female child's sex in any situation. This result is in line with the findings of the USA, Pakistan and Ethiopia [25,77–79]. This could be because women are more likely than men to be employed as domestic servants, where they are expected to take care of their siblings and perform indoor tasks. They are also trained to be more obedient and sensitive to the needs of others. In Ethiopia, it is customary for parents, guardians, family members, and relatives to discipline their children. In addition, girls are more prone than boys to experience abuse at the hands of elder siblings, parents, teachers, and other people in general. Studies have shown that males are less likely than girls to report maltreatment, which is another factor contributing to the inability to identify and investigate incidents of male maltreatment [80,81]. These results, however, disagree with those of a study carried out in Germany and Pakistan [82,83]. This could be the result of the social norms of serious parental punishment prevalent in Pakistan; male children are especially subjected to more extreme physical maltreatment, which is believed to be an appropriate form of discipline. In addition, there may be community-based disparities in the study sites.

The youngest children in this study had a higher likelihood of experiencing maltreatment as a youngster than the oldest. These results aligned with research piloted in Ethiopia and United States of America [62,84,85]. Because they depend so heavily on others to provide their basic needs, children are especially susceptible. In addition, their benefits and voices are frequently ignored or under-valued in the adult world. Furthermore, young children have no control over the social and physical contexts in which they are raised; instead, their parents, older siblings, caregivers, and relatives set the rules for them.

According to this finding, children who had illiterate fathers were more likely than children with literate fathers to experience maltreatment as children. Because fathers are typically the head of the household and control the majority of family living conditions in Ethiopia, they are the primary perpetrators of maltreatment against children. Furthermore, uneducated fathers are untrained caregivers who lack knowledge of proper childrearing techniques; instead, they enforce serious punishments within the household. This result is in line with research from Ethiopia and India [25,86].

Compared to their counterparts, children whose family had open conversations about sexual issues were less likely to experience maltreatment. Open discussion within the family regarding sexual matters can impact how well the family functions, start conversations about the child's current emotional needs have an impact on the child's conduct in the future. Potential issues with child maltreatment can be avoided by helping children and their families have open and developmentally appropriate conversations. Still, little is known about what parents in underdeveloped nations do to keep their children safe outside of schooling. This result is consistent with a study directed in different nations [25].

In different studies, maltreatment of children has detrimental effects and is linked to a variety of emotional, behavioral, physical, developmental, and mental health issues, such as substance abuse, eating disorders, depression, anxiety, and suicidal thoughts and actions [9,87,88]. According to this research, industrialized and developing countries did not significantly differ in the repercussions of child maltreatment. Additionally, this review demonstrated the social, developmental, and educational impacts of child maltreatment, which is supported by research done in South Africa and new work [34,89,90]. This study adds to the growing body of evidence on child maltreatment prevention and intervention by revealing its prevalence, factors, and consequences. And it underlines the extensive

impact of maltreatment on children's well-being and health which highlights the significance of addressing this intricate issue through multifaceted approaches. Furthermore, it elucidates the role of age, sex, parental educational level and parent-child interaction in terms of open family discussion on sexuality issue factors in shaping the experiences of maltreatment and the importance of contextually sensitive approaches to prevention and intervention.

12.1. Limitations

The absence of a standardized explanation for maltreatment of children was a challenge to the publications' inclusion. Furthermore, relatively few published articles have been identified due to the lack of comprehensive study on the subject in the nation. However, several variables were not examined in all of the investigations, making it challenging to various researches. Furthermore, despite our best efforts to reduce risks, there is a chance that bias contributed to our overestimation of the frequency of childhood maltreatment and its effects. Not only that, but getting precise information has been difficult to come by because child maltreatment is socially taboo.

13. Conclusion

From this meta-analysis, we can conclude that childhood maltreatment needs much attention which is clearly a high public health pressing problems in terms of its burden and consequences in Ethiopia. Child maltreatment has both prompt and long-lasting effects for children later in life. Child age, sex, paternal illiteracy and open discussion on sexual issues with in family were determined to be associated with childhood maltreatment in this study. Based on these findings we suggest that parents and/or caregivers provide support to their children. It is crucial to educate parents on healthy, good child-rearing practices and child development.

Ethics approval and consent to participate

Not applicable because the study uses secondary data analysis and adheres to ethical guidelines for systematic reviews.

Data availability declaration

Data sets in this systematic review and met-analysis can be obtain and access from corresponding author during rational request.

CRediT authorship contribution statement

Demewoz Kefale: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Formal analysis, Data curation, Conceptualization. **Tigabu Munye Aytenew:** Data curation, Conceptualization. **Yohannes Tesfahun:** Data curation, Conceptualization. **Amare Simegn:** Data curation, Conceptualization. **Mahilet Wondim:** Data curation, Conceptualization. **Shegaw Zeleke:** Writing – review & editing, Writing – original draft. **Solomon Demis:** Writing – review & editing, Writing – original draft. **Gashaw Kerebeh:** Data curation, Conceptualization. **Gebrehiwot Berie Mekonnen:** Conceptualization. **Habtamu Shimels Hailemeskel:** Data curation, Conceptualization. **Muluken chanie Agimas:** Data curation, Conceptualization. **Mastewal Endalew:** Methodology, Data curation, Conceptualization. **Worku Necho Asferie:** Formal analysis, Data curation, Conceptualization. **Amare kassaw:** Validation, Methodology, Formal analysis, Data curation, Conceptualization. **Yeshiambaw Eshetie:** Data curation, Conceptualization. **Sintayehu Asnakew:** Data curation, Conceptualization.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Demewoz Kefale reports administrative support and travel were provided by Debre Tabor University. Co-authors play agreat role in the preparation of this munscript If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Abbreviations

CM	Childhood maltreatment
JBI	Joanna Briggs institute
PIOC	population, intervention, outcome and comparison
SDGS	Sustainable developmental goals
UNICEF	United nations children's fund
WHO	World health organization
PRISMA	Preferred Reporting Items for Systematic Review and Meta-analysis
AOR	Adjusted Odds ratio
CI	Confidence interval

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.heliyon.2024.e36776.

References

[1] WHO, Investing in Children: the European Child Maltreatment Prevention Action Plan 2015–2020, WHO Regional Office for Europe, 2014.
[2] A. Lamont, R. Price-Robertson, t, Risk and protective factors for child abuse and neglec (2013).
[3] D. Antai, P. Braithwaite, G. Clerk, Social determinants of child abuse: evidence of factors associated with maternal abuse from the Egypt demographic and health survey, Journal of injury and violence research 8 (1) (2016) 25.
[4] T. Girgira, B. Tilahun, T. Bacha, Time to presentation, pattern and immediate health effects of alleged child sexual abuse at two tertiary hospitals in Addis Ababa, Ethiopia, BMC Publ. Health 14 (2014) 1–6.
[5] H. Glaesmer, Assessing childhood maltreatment on the population level in Germany: findings and methodological challenges, Child Adolesc. Psychiatr. Ment. Health 10 (2016) 1–6.
[6] B. Sandison, Australian Institute of health and welfare, Impact 2018 (2) (2018) 80–81.
[7] L. Bullock, et al., Identifying and responding to child neglect: exploring the professional experiences of primary school teachers and family support workers, Child Abuse Rev. 28 (3) (2019) 209–224.
[8] R.N. Okonya, The Role of Family Structure in the Abuse of Children, Walden University, 2018.
[9] R.T. Leeb, T. Lewis, A.J. Zolotor, A review of physical and mental health consequences of child abuse and neglect and implications for practice, Am. J. Lifestyle Med. 5 (5) (2011) 454–468.
[10] J. Gubbels, et al., Why healthcare and education professionals underreport suspicions of child abuse: a qualitative study, Soc. Sci. 10 (3) (2021) 98.
[11] R.E. Norman, et al., The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis, PLoS Med. 9 (11) (2012) e1001349.
[12] M. Vilariño, et al., Consequences of child maltreatment victimisation in internalising and externalising mental health problems, Leg. Criminol. Psychol. 27 (2) (2022) 182–193.
[13] J. Currie, C. Spatz Widom, Long-term consequences of child abuse and neglect on adult economic well-being, Child. Maltreat. 15 (2) (2010) 111–120.
[14] P.K. Trickett, et al., Child maltreatment and adolescent development, J. Res. Adolesc. 21 (1) (2011) 3–20.
[15] W. Colglazier, Sustainable development agenda: 2030, Science 349 (6252) (2015) 1048–1050.
[16] W.H. Organization, Strengthening intersectoral collaboration for the prevention of violence against children: tallinn, Estonia, 14–15 January 2020, in: Strengthening Intersectoral Collaboration for the Prevention of Violence against Children, Tallinn, Estonia, 2020. *14–15 January 2020*.
[17] C.H. Zeanah, K.L. Humphreys, Child abuse and neglect, J. Am. Acad. Child Adolesc. Psychiatr. 57 (9) (2018) 637–644.
[18] A. Witt, et al., Child maltreatment in Germany: prevalence rates in the general population, Child Adolesc. Psychiatr. Ment. Health 11 (2017) 1–9.
[19] S. Backhaus, et al., WHO Guidelines on Parenting Interventions to Prevent Maltreatment and Enhance Parent–Child Relationships with Children Aged 0–17 Years: Report of the Systematic Reviews of Evidence, World Health Organization, Geneva, 2023.
[20] R. Evans, P. Garner, A.S. Honig, Prevention of violence, abuse and neglect in early childhood: a review of the literature on research, policy and practice, Early Child. Dev. Care 184 (9–10) (2014) 1295–1335.
[21] T.O. Afifi, et al., Child Abuse and Physical Health in Adulthood, Statistics Canada, 2016.
[22] C. Mikton, A. Butchart, Child maltreatment prevention: a systematic review of reviews, Bull. World Health Organ. 87 (2009) 353–361.
[23] E. Badoe, A critical review of child abuse and its management in Africa, African journal of emergency medicine 7 (2017) S32–S35.
[24] N. Chuta, et al., Understanding violence affecting children in Ethiopia: a qualitative study (2019).
[25] D. Kefale, et al., Lifetime experience of childhood abuse and neglect among high school students at Debre Tabor Town, South Gondar Zone, Northwest Ethiopia: an institution-based cross-sectional study, J. Multidiscip. Healthc. (2023) 3991–4001.
[26] H.A. Endalew, S. Sen, Effects of climate shocks on Ethiopian rural households: an integrated livelihood vulnerability approach, J. Environ. Plann. Manag. 64 (3) (2021) 399–431.
[27] N.N.R. Lima, et al., Abuse and neglect among Ethiopian children and adolescents, Child Abuse Neglect 127 (2022) 105571.
[28] m. Gebrekristos, Assessment of Sexual Violence Trauma, Social and Economic Strain in Armed Conflicts: the Case of Girls and Women Survivors of Conflict in Tigray, st. mary's university, 2023.
[29] S. Habetha, et al., A prevalence-based approach to societal costs occurring in consequence of child abuse and neglect, Child Adolesc. Psychiatr. Ment. Health 6 (2012) 1–10.
[30] S. Weber, A. Jud, M.A. Landolt, Quality of life in maltreated children and adult survivors of child maltreatment: a systematic review, Qual. Life Res. 25 (2016) 237–255.
[31] C.P. McNulty, D.L. Roseboro, "I'm not really that bad": alternative school students, stigma, and identity politics, Equity & Excell. Educ. 42 (4) (2009) 412–427.
[32] X. Fang, et al., The burden of child maltreatment in China: a systematic review, Bull. World Health Organ. 93 (2015) 176–185C.
[33] B. Mathews, et al., Improving measurement of child abuse and neglect: a systematic review and analysis of national prevalence studies (CRD42017068120) (2017).
[34] A. Al Odhayani, W.J. Watson, L. Watson, Behavioural consequences of child abuse, Can. Fam. Physician 59 (8) (2013) 831–836.
[35] E. Vizard, J. Gray, A. Bentovim, The impact of child maltreatment on the mental and physical health of child victims: a review of the evidence, BJPsych Adv. 28 (1) (2022) 60–70.
[36] L. Strathearn, et al., Long-term cognitive, psychological, and health outcomes associated with child abuse and neglect, Pediatrics 146 (4) (2020).

[37] J.L. Herbert, L. Bromfield, Multi-disciplinary teams responding to child abuse: common features and assumptions, Child. Youth Serv. Rev. 106 (2019) 104467.
[38] E. Bregua, Dimensions of interdisciplinary collaboration in child protection work—a collection and analysis of practices in southeast Europe, Sociology 8 (3) (2018) 112–122.
[39] W. Antwi, Multidisciplinary Approach in Child Protection: Healthcare Concerns, vol. 2021, Academia Letters, 2021, p. e1063, e1063.
[40] M. Ishii, et al., Interprofessional collaborative practice for child maltreatment prevention in Japan: a literature review, Kobe J. Med. Sci. 66 (2) (2020) E61.
[41] M. Psarrakou, A. Vasilakopoulou, G. Nikolaidis, PROCHILD: protection and support of abused children through multidisciplinary intervention: development of a services collaboration protocol in Greece, Dialogues in Clinical Neuroscience & Mental Health 3 (2) (2020) 109–116.
[42] N. Wijegoonawardana, Goal 16 of agenda 2030-peace, justice and strong institutions: a case study of Sri Lanka, Colombo Journal of Multi-Disciplinary Research 4 (1) (2019).
[43] M. Tefera, Magnitude and patterns of child sexual abuse: a retrospective cross-sectional study among male pediatric patients at Tikur Anbessa Specialized Hospital, Ethiopia, Ethiop. J. Health Dev. 31 (4) (2017) 221–227.
[44] T. Teferra, Early childhood care and education in Ethiopia, Ethiopian Journal of Teacher Education and Leadership 1 (1) (2022) 1–18.
[45] K.A. O'Connell, et al., Meeting the sexual and reproductive health needs of internally displaced persons in Ethiopia's Somali region: a qualitative process evaluation, Glob. Health Sci. Pract. 10 (5) (2022).
[46] E. Presler-Marshall, et al., Girls don't shout if they are raped… that is taboo': exploring barriers to Ethiopian adolescents' freedom from age-and gender-based violence, Report. London: Gender and Adolescence: Global Evidence (2020).
[47] N. Jones, et al., Supporting resilience among young people at risk of child abuse in Ethiopia: the role of social system alignment, Child Abuse Neglect 119 (2021) 105137.
[48] J. Jemal, The child sexual abuse epidemic in Addis Ababa: some reflections on reported incidents, psychosocial consequences and implications, Ethiopian journal of health sciences 22 (1) (2012) 59–66.
[49] A. Panhurst, Violence affecting children and youth in Ethiopia: Insights from a qualitative study (2019).
[50] C.L. Miller-Perrin, R.D. Perrin, Child Maltreatment: an Introduction, Sage Publications, 2012.
[51] D.V. Parums, Review articles, systematic reviews, meta-analysis, and the updated preferred reporting items for systematic reviews and meta-analyses (PRISMA) 2020 guidelines, Med. Sci. Mon. Int. Med. J. Exp. Clin. Res.: international medical journal of experimental and clinical research 27 (2021) e934475, 1.
[52] G. Zlatkute, et al., ERICA (Stopping Child Maltreatment through Pan-European Multiprofessional Training Programme: Early Child Protection Work with Families at Risk) Training Programme Design (2021).
[53] J.P. Higgins, et al., Measuring inconsistency in meta-analyses, Br. Med. J. 327 (7414) (2003) 557–560.
[54] R. DerSimonian, R. Kacker, Random-effects model for meta-analysis of clinical trials: an update, Contemp. Clin. Trials 28 (2) (2007) 105–114.
[55] J.P. Higgins, S.G. Thompson, Quantifying heterogeneity in a meta-analysis, Stat. Med. 21 (11) (2002) 1539–1558.
[56] J.L. Peters, et al., Comparison of two methods to detect publication bias in meta-analysis, JAMA 295 (6) (2006) 676–680.
[57] F.A. Disasa, et al., Violence Against Children and Associated Factors Among High School Students in Jimma Town (2020).
[58] I. Lemma, Child maltreatment among elementary school children in jimma town, Ethiopian Journal of Health Sciences 13 (1) (2003).
[59] W. Kebede, S. Belay, Factors contributing to child sexual abuse in Bahir Dar, Ethiopia: police and perpetrators' perspectives, Int. Soc. Work 65 (3) (2022) 539–556.
[60] Y. Unasho, M. Mekuria, A. Gube, Prevalence and contributing factors of childhood physical abuse in households and at schools among school adolescents in Arba Minch town, Southern Ethiopia, J Child Adolesc Behav 5 (331) (2017) 2.
[61] M. Mulatie, Physical and psychological child abuse in Ethiopia: implications for intervention, J. Psychol. Psychother. 4 (2) (2014) 2161, 0487.1000137.
[62] B. Alemayehu, N. Tafesse, E. Chanyalew, Magnitude of child sexual abuse and its associated factors among children treated in public hospitals of Addis Ababa Ethiopia, Adolesc. Health Med. Therapeut. (2022) 67–76.
[63] m. Mulatu, causes and consequences of child abuse in the case of damot weyede woreda, wolaytta zone, snnpr (2020).
[64] T. Girgira, B. Tilahun, T. Bacha, Time to presentation, pattern and immediate health effects of alleged child sexual abuse at two tertiary hospitals in Addis Ababa, Ethiopia, BMC Publ. Health 14 (1) (2014) 1–6.
[65] M.E. Tadesse, Corporal punishment against children in the home setting in Ethiopia, Afr. J. Soc. Work 9 (2) (2019) 107–115.
[66] M.T. Abdi, K. Mamo, T. Esmael, Assessment of Child Violence Status in Oromia Special Zone Surrounding Finfinne (2023).
[67] G.K. Hailu, G.G. Gebregzabiher, D.K. Tesfay, A child-rights-based approach to corporal punishment of children in primary schools in the eastern zone of the Tigray region, Ethiopia, International Journal of Educational Development in Africa 3 (1) (2016) 24, 24.
[68] D. Worku, A. Gebremariam, S. Jayalakshmi, Child sexual abuse and its outcomes among high school students in southwest Ethiopia, Trop. Doct. 36 (3) (2006) 137–140.
[69] Y. Wondie, et al., The psychosocial consequences of child sexual abuse in Ethiopia: a case-control comparative analysis, J. Interpers Violence 26 (10) (2011) 2025–2041.
[70] A. Tilahun, Child Sex Ual Abuse Psychosocial Impact, Coping Mechanisms and Implicat Ions for Social Work Practice at Bale-Goba Hospital, South-Eastern Ethiopia, St. Mary's University, 2013.
[71] I. Bekele, W. Zewde, A. Neme, Assessment of prevalence, types and factors associated with adolescent sexual abuse in high school in Limmu Gnet High School, Health Sci. J. 11 (2017) 1–7.
[72] K. Porritt, J. Gomersall, C. Lockwood, JBI's systematic reviews: study selection and critical appraisal, AJN The American Journal of Nursing 114 (6) (2014) 47–52.
[73] A. Pearson, J. Field, JBI Critical Appraisal Checklist for Qualitative Research, Joanna Briggs Institute, Adelaide, Australia, 2011.
[74] J.W. Song, K.C. Chung, Observational studies: cohort and case-control studies, Plast. Reconstr. Surg. 126 (6) (2010) 2234–2242.
[75] A. Niloufer, et al., Magnitude and factors associated with child abuse in a mega city of developing country Pakistan (2014).
[76] A. Ahmed, et al., Child maltreatment experience among primary school children: a large scale survey in Selangor state, Malaysia, PLoS One 10 (3) (2015) e0119449.
[77] M.I. Sanchez-Rodriguez, Gender differences in child maltreatment: Child sexual and physical abuse (2021).
[78] J.J. Asscher, C.E. Van der Put, G.J.J. Stams, Gender differences in the impact of abuse and neglect victimization on adolescent offending behavior, J. Fam. Violence 30 (2015) 215–225.
[79] N.S. Ali, et al., Magnitude and factors associated with child abuse in a mega city of developing country Pakistan, Iran. J. Pediatr. (Persian Ed.) 24 (2) (2014) 140.
[80] K.C. Faller, Characteristics of a clinical sample of sexually abused children: how boy and girl victims differ, Child Abuse Neglect 13 (2) (1989) 281–291.
[81] Unicef, Gender dimensions of violence against children and adolescents (2021).
[82] M.P.A. Lakhdir, et al., Factors associated with child maltreatment among children aged 11 to 17 years in community settings of Karachi, Pakistan, using Belsky Ecological Framework, J. Interpers Violence 36 (1–2) (2021) 297–313.
[83] M.K. Akmatov, Child abuse in 28 developing and transitional countries—results from the Multiple Indicator Cluster Surveys, Int. J. Epidemiol. 40 (1) (2011) 219–227.
[84] A.E. Austin, A.M. Lesak, M.E. Shanahan, Risk and protective factors for child maltreatment: a review, Current epidemiology reports 7 (2020) 334–342.
[85] V.J. Palusci, Risk factors and services for child maltreatment among infants and young children, Child. Youth Serv. Rev. 33 (8) (2011) 1374–1382.
[86] S. Daral, A. Khokhar, S. Pradhan, Prevalence and determinants of child maltreatment among school-going adolescent girls in a semi-urban area of Delhi, India, J. Trop. Pediatr. 62 (3) (2016) 227–240.
[87] D. Vachon, et al., Assessment of the harmful psychiatric and behavioral effects of different forms of child maltreatment. JAMA Psychiatry 72 (11) (2015) 1135–1142.

[88] C. Heim, et al., Neurobiological and psychiatric consequences of child abuse and neglect, Dev. Psychobiol. 52 (7) (2010) 671–690.
[89] L.M. Youngblade, J. Belsky, Social and emotional consequences of child maltreatment, in: Children at Risk: an Evaluation of Factors Contributing to Child Abuse and Neglect, Springer, 1990, pp. 109–146.
[90] D. Pieterse, Childhood maltreatment and educational outcomes: evidence from South Africa, Health Econ. 24 (7) (2015) 876–894.