



Review article

Violence against children in humanitarian settings: A literature review of population-based approaches



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ABSTRACT

Children in humanitarian settings are thought to experience increased exposure to violence, which can impair their physical, emotional, and social development. Violence against children has important economic and social consequences for nations as a whole. The purpose of this review is to examine population-based approaches measuring violence against children in humanitarian settings. The authors reviewed prevalence studies of violence against children in humanitarian contexts appearing in peer-reviewed journals within the past twenty years. A Boolean search procedure was conducted in October 2014 of the electronic databases PubMed/Medline and PsychInfo. If abstracts contained evidence of the study's four primary themes – violence, children, humanitarian contexts and population-based measurement – a full document review was undertaken to confirm relevance. Out of 2634 identified articles, 22 met the final inclusion criteria. Across studies, there was varying quality and no standardization in measurement approach. Nine out of 22 studies demonstrated a relationship between conflict exposure and adverse health or mental health outcomes. Among studies that compared rates of violence between boys and girls, boys reported higher rates of physical violence, while girls reported higher rates of sexual violence. Children in infancy and early childhood were found to be among the most under-researched. Ultimately, the body of evidence in this review offers an incomplete picture regarding the prevalence, nature and impact of violence against children in emergencies, demonstrating a weak evidence base for some of the basic assumptions underpinning humanitarian practice. The development of standardized approaches to more rigorously measure violence against children is urgently needed in order to understand trends of violence against children in humanitarian contexts, and to promote children's healthy development and well-being.

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1. Introduction

Violence against children represents a global public health crisis. It is well documented that violence against children not only impairs individuals' physical, emotional, and social development, but also has important economic and social consequences for nations as a whole (Felitti et al., 1998; Pinheiro, 2006; Krug et al., 2002). Children in humanitarian settings are presumed to face an increased risk of exposure to violence. Humanitarian emergencies can be brought about by armed conflict, natural disasters or political unrest, and can span the scope of days, months and even years, depending on particular contextual factors (The Sphere Project,

2011). The Sphere Project defines a humanitarian “disaster” as:

“... a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts that exceeds the ability of the affected community or society to cope using its own resources and therefore requires urgent action ...” (The Sphere Project, 2012, p. 4).

The term thus covers natural and man-made disasters and conflicts and encompasses related terms such as ‘crisis’ and ‘emergency’. Such events disrupt social structures typically in place to protect children, and create circumstances within which multiple forms of harm and abuse can occur (Apfel and Simon, 1996; Boothby et al., 2006; Machel, 2001; Montgomery and Foldspang, 2005).

While awareness of these risks is widespread, efforts to monitor

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prevalence or trends of violence against children in emergencies are challenging. Large numbers of cases go unreported due to social stigma, lack of appropriate reporting mechanisms, and the fact that violence is often perpetrated by parents, relatives, or close acquaintances, making it particularly difficult for children to come forward (Pinheiro, 2006; Stark, 2010; Stark et al., 2013).

Recently, there has been increased recognition that population-based surveys have an important role to play in understanding child maltreatment (Hovdestad et al., 2015; Reza et al., 2009). Such surveys have the potential to isolate drivers of violence, identify protective factors and allow for the study of health-relevant outcomes that may be undocumented in medical and social services databases. In addition, such studies may provide important insights for developing and testing theories of change that can prevent childhood violence. Yet, such surveys are far from standard practice in emergency settings.

The current lack of evidence on the scope and magnitude of violence against children in these settings interferes with the ability of humanitarian practitioners to ensure that children in need receive appropriate targeted care, or that sufficient resources for effective interventions are put in place. This paper analyzes existing attempts to measure violence against children in humanitarian settings, representing a first step towards the development of research methodologies to more accurately measure, prevent, and respond to violence against children, and to promote the healthy development of children in humanitarian emergencies.

2. Methodology

A rigorous review of peer-reviewed literature was undertaken in accordance with the Meta-Analysis of Observational Studies in Epidemiology (MOOSE) guidelines (Stroup et al., 2000), focusing on the measurement of violence against children in humanitarian contexts. The purpose of this review was to investigate existing prevalence data pertaining to violence against children in humanitarian settings and to examine methodologies that have been used to measure these issues. A Boolean search procedure was conducted in October 2014 of the electronic databases PubMed/Medline and PsychInfo based on the terminology outlined in Table 1. All materials produced during the time period 1995–2014 were considered, and articles published in languages other than English were excluded.

Once potential articles were identified based on the search procedure outlined above, duplicate entries were removed, and the remaining titles and abstracts were examined in order to determine their relevance to the study. If abstracts contained evidence of the study's four primary themes – violence, children, humanitarian contexts and population-based measurement – a full document review was undertaken to confirm relevance. Those articles missing one or more of the key components of the study were excluded. Hand searching of the reference lists and citations was not conducted.

The study focused on four primary forms of intentional violence: physical violence, sexual violence, mental violence and neglect. Definitions of these forms of violence were drawn from the

2014 UNICEF report on violence against children (United Nations Children's Fund [UNICEF], 2014). “Physical violence” was defined as “... all corporal punishment and all other forms of torture, cruel, inhuman or degrading treatment or punishment as well as physical bullying and hazing by adults or by other children ...” (p. 4). “Sexual violence” was defined as “any sexual activities imposed by an adult on a child against which the child is entitled to protection by criminal law” or “... committed against a child by another child if the offender is significantly older than the victim or uses power, threat or other means of pressure” (p. 4). “Mental violence” was defined as “... psychological maltreatment, mental abuse, verbal abuse and emotional abuse or neglect” (p. 4). “Neglect” was defined as “... the failure to meet children's physical and psychological needs, protect them from danger or obtain medical, birth registration or other services when those responsible for their care have the means, knowledge and access to services to do so” (p. 4).

“Children” were defined as those under the age of 18, in accordance with the United Nations Convention on the Rights of the Child (UN CRC) (United Nations, 1989). Studies were included if they measured rates of violence for those under 18. Studies that presented aggregated rates of violence against children and adults were also included, as long as children were part of the sample. “Humanitarian settings” were defined as circumstances brought about by armed conflict, natural disasters or political unrest that caused “widespread human, material or environmental losses” and impaired the ability of a society “to cope using its own resources ...” (The Sphere Project, 2012, p. 4). In keeping with the Sphere Standards, this definition also allowed for both slow and rapid onset events as well as protected emergencies (The Sphere Project, 2011). In addition, a setting was considered “humanitarian” if it occurred within any phase of the humanitarian response cycle, ranging from acute response to early recovery and development (Inter-Agency Standing Committee [IASC], 2011). If it was not immediately clear from a particular article whether or not a study took place in a humanitarian context, the authors consulted the archives of “ReliefWeb” (<http://reliefweb.int>), an internationally-recognized humanitarian website sponsored by the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), in order to see if the country in question was classified as having a humanitarian emergency in the year in which the study took place.

With regard to “measurement,” studies were included if they examined the incidence or prevalence of violence against children using population-based approaches. This review thus excluded studies that employed passive surveillance (i.e. examining records from the police, hospitals, or service providers, etc.), as this approach fails to capture data on the large number of survivors who do not come forward or seek out services through formal channels. Among those selected for full review, studies were excluded if they did not meet all four of the criteria described above. In addition, studies were excluded if they did not provide rates of violence.

Among studies that met final inclusion criteria, rates of violence against children described in each article were extracted, and categorized according to the four primary forms of violence examined in this review (physical; sexual; mental; neglect). Rates of each type of violence were also examined to ascertain

Table 1
Search Terminology Used in PubMed/Medline (by primary theme).

Types of violence	Setting	Measurement
((rape) OR (domestic violence) OR (gender-based violence) OR (human rights violations) OR (violence against children) OR (violence against women) OR (family violence) OR (abuse) OR (neglect) OR (emotional abuse) OR (mental violence) OR (child maltreatment) OR (physical violence) OR (sexual violence))	AND ((humanitarian) OR (conflict) OR (refugee) OR (displaced) OR (complex emergency) OR (war))	AND ((prevalence) OR (incidence) OR (rates) OR (frequency) OR (percentage) OR (documenting) OR (measuring))

associations between children's experiences with violence and other health or development outcomes.

The authors used common quality metrics to assess the relative strength of included studies, based on similar approaches that have been used in other reviews (Loney et al., 1998; Mallen et al., 2006; Sanderson et al., 2007; Vu et al., 2014). These findings are included along with other study indicators in Table 3.

3. Results

The initial search produced 2634 articles, of which 2554 were removed after a review of title and abstracts. Eighty articles were selected for full review, of which 58 were excluded. The remaining 22 studies were determined to meet full inclusion criteria and were further analyzed. This process is depicted in Fig. 1.

3.1. Descriptive overview of included studies

Of the 22 articles that met our final inclusion criteria, one was a multi-country study (Ellsberg et al., 2008) carried out in ten countries, two of which (Bangladesh and Ethiopia) fit the review's definition of being humanitarian contexts. The remaining articles described single-country initiatives, with the majority (10) carried out in Sub-Saharan African countries, including Central African Republic (Potts et al., 2011), the Democratic Republic of the Congo (Kim et al., 2009; Mels et al., 2009, 2010), Liberia (Stark et al., 2013; Swiss et al., 1998), Rwanda (Rugema et al., 2013), Sierra Leone (Amowitz et al., 2002), Sudan (Morgos et al., 2007) and Uganda (Ertl et al., 2014). A total of six studies were carried out in Asia, including Afghanistan (Catani et al., 2009; Panter-Brick et al.,

2009); Pakistan (Qayum et al., 2012); Sri Lanka (Catani et al., 2008); and Thailand (Falb et al., 2014; Mollica et al., 1997). A smaller number of studies (4) were conducted in the Middle East, including the Gaza Strip (Thabet and Vostanis, 1999); Lebanon (Karam et al., 2014; Usta and Farver, 2010); and Jordan (Khawaja and Barazi, 2005). One study was conducted in Europe (Kosovo) (Hynes and Cardozo, 2000).

Eight of the studies involved school-based surveys (Catani et al., 2008, 2009; Karam et al., 2014; Mels et al., 2009, 2010; Morgos et al., 2007; Panter-Brick et al., 2009; Thabet and Vostanis, 1999), and one targeted social service agencies operating programs for children and youth (Usta and Farver, 2010). Another focused on multiple settings, with a sample derived from women and girls in schools, marketplaces, urban areas and camps for internally displaced persons (Swiss et al., 1998). The remaining twelve studies were standard household surveys. See Table 3 for an overview of included studies.

3.2. Types and rates of violence

The studies included in this review examined all four primary forms of violence (physical, sexual, mental and neglect), with most focusing on more than one type. Physical violence was measured the most frequently (in 17 out of 22 studies), followed by sexual and mental violence, each of which were measured in 16 out of 22 studies. Neglect was only measured in 3 out of 22 studies. A summary of the rates for each primary type of violence is included in Table 2.

Across these studies, there was a lack of consistency in how various forms of violence were defined, making precise comparisons difficult. In the case of physical violence, for example, certain studies focused on war-related incidents such as children being attacked by armed forces or physically injured with weapons, while others emphasized physical harm against children within the context of family or intimate partner relationships. Other studies used "physical violence" as a generic term without operationalizing it. Similarly, studies used various terminology to refer to sexual violence, although rape was referred to most frequently. In most cases, general rates of rape were provided without additional descriptions, although Stark et al. (2013) distinguished between "marital rape" and "rape outside of marriage," and Rugema et al. (2013) provided rates for "being raped by a stranger." As in the case of physical violence, many studies used generic terms such as "sexual violence" or "sexual abuse" without providing details on how they were being defined.

Mental violence faced the same definitional issues, but was most commonly described as children witnessing acts of violence. Most frequently, these acts took place within the context of children's households, although other studies specifically measured children witnessing acts of violence by or against strangers. A small number of studies also focused on children's experiences with various forms of verbal or emotional abuse. As previously mentioned, neglect was measured rarely, and in all cases, included children reporting inadequate access to food, water, clothing or shelter. The construct of neglect had significant overlap with measures of severe poverty, making it difficult to distinguish the true drivers of neglect in these studies.

Studies also utilized varied tools for measuring violence, with little standardization across articles included in this review. Three studies used the Harvard Trauma Questionnaire (HTQ), and two studies used the Gaza Traumatic Event Checklist. Other studies used a range of other tools for measuring violence, including specific tools developed for the studies in question. The tools used to measure violence across studies are listed in Table 3.

Importantly, included studies provided no evidence of increased

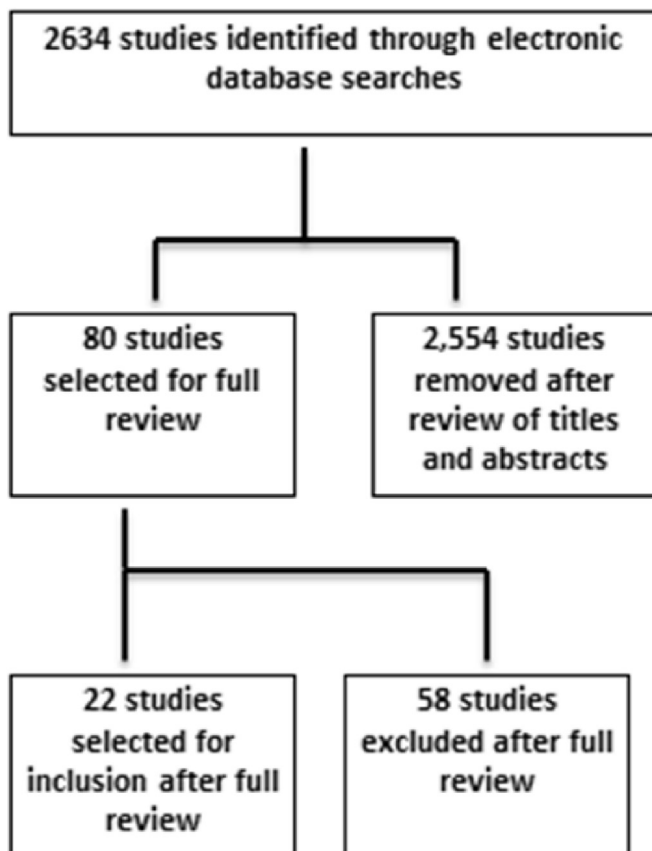


Fig. 1. Document selection process.

Table 2
Rates of violence against children in included studies.

Study	Outcome areas (as identified in included study)	Rates of violence against children (by primary type)
1 Amowitz et al. (2002)	Reported rates of war-related human rights abuses; Sexual assault	Physical violence: 7% reported beating; 2% reported torture; 1% reported gunshot wound; 0.9% reported bodily injury (stabbed, burnt, cut); 0.2% reported amputation of a limb or digits Sexual violence: 9% of respondents reported 1 or more form of war-related sexual assault; participants also reported war-related sexual assault among 8% of female household members and 0.1% of male household members; lifetime prevalence of non-war related sexual assault was also 9% Mental violence: 9.3% reported abduction
2 Catani et al. (2009)	War trauma; Family violence	Physical violence: 18.3% of children reported being beaten by militias or armed personnel; slapped (57% boys; 48% girls); hit with an object (38% boys; 28% girls); punched/kicked (35%; 19% girls); arms twisted/pulled by hair (32% boys; 21% girls); objects thrown at (18% boys; 7% girl); burned (17% boys; 8% girls) Mental violence: 22.5% reported witnessing someone else being beaten or tortured by armed personnel; threatened verbally (27% boys; 21% girls); family member being hit (23% boys; 21% girls); told you are not good (23% boys; 18% girls); ridiculed (21% boys; 19% girls); family member hit with an object (12% boys; 16% girls); family member burned (8% boys; 10% girls)
3 Catani et al. (2008)	Wartime events; Domestic violence incidents	Physical violence: 18% of children reported at least one injury from violent treatment at home; 92% reported being slapped; 69% reported being hit with an object; 29% reported arms twisted or pulled by hair; 13% reported objects thrown at; 12% reported being punched/kicked; 2% reported being burned Sexual violence: 4.3% reported having experienced or witnessed at least one incident of sexual violence at home Mental violence: 43.6% reported seeing a dead or mutilated body; 39.5% reported being close to a combat situation; 33.1% reported witnessing shelling or gunfire; 55.4% reported witnessing other family members being hit; 4.3% reported experiencing or witnessing at least one incident of sexual violence at home; 53% reported a family member being hit; 38% reported being threatened verbally; 36% reported being told they are no good; 28% reported family member hit by an object; 20% reported being shouted at; 13% reported being ridiculed; 3% reported a family member being burned Neglect: 12% reported going without food; 17% reported having to wear dirty/ragged clothes
4 Ellsberg et al. (2008)	Physical violence; Sexual violence	Physical/Sexual violence: Ever physical or sexual violence: (21% Bangladesh city; 15% Bangladesh province; 5% Ethiopia)
5 Ertl et al. (2014)	Experiences of former child soldiers; Experiences of war-affected youth	Physical violence: Former child soldiers who experienced: assault with a weapon (80% boys; 60% girls); being hit by parents/caretaker that left marks on body (30% boys; 39% girls); or physical assault (78% boys; 60% girls). War-affected youth who experienced assault with a weapon (22% boys; 12% girls); physical assault (30% boys; 20% girls); or being hit by parents/caretaker that left marks on body (22% boys; 23% girls) Sexual violence: Former child soldiers reporting sexual assault (9% boys; 38% girls); War-affected youth reporting sexual assault (2% boys; 10% girls) Mental violence: Former child soldiers reporting lives threatened (79% boys; 70% girls); seeing mutilated or dead bodies (78% boys; 80% girls); witnessing sexual assault (50% boys; 60% girls); being forced to eat human flesh (5% boys; 10% girls); witnessing family members hitting family members that left marks (38% boys; 42% girls); being forced to attack a settlement (48% boys; 40% girls); being forced to abduct children/adults (42% boys; 38% girls); being forced to beat, injure or mutilate someone (40% boys; 30% girls); being forced to kill someone (22% boys; 20% girls); being forced to skin, chop or cook dead bodies (5% boys; 5% girls); or being forced to sexually assault/violate someone (3% boys; 2% girls). War-affected youth reporting lives threatened (18% boys; 10% girls); seeing people being mutilated or dead bodies (48% boys; 42% girls); witnessing sexual assault (20% boys; 20% girls); or witnessing family members hitting family members that left marks (32% boys; 38% girls).
6 Falb et al. (2014)	Violence reported by ages 15-24	Physical/Sexual/Mental violence: 5.3% (lifetime conflict victimization- included physical, sexual and emotional violence); 9.7% (lifetime IPV victimization, included physical, sexual and emotional violence)
7 Hynes and Cardozo (2000)	Rape reported by females ages 15 and older	Sexual violence: 6.1% experiencing rape Mental violence: 4.3% reported witnessing rape
8 Khawaja and Barazi (2005)	Reported rates of wife beating among males and females ages 15 and older	Physical violence: Reported rates of wife beating among men and women ages 15 and older: Men: at least one violent behavior reported (48.9%); Women: at least one violent behavior reported (42.5%)
9 Kim et al. (2009)	Rates of sexual violence during conflict	Sexual violence: Sexual violence during conflict (1.0% river population; 11.1% internally displaced persons)
10 Karam et al. (2014)	War exposure; Psychosocial stressors other than war	Mental violence: 58.7% reported family quarrels; 52.4% reported fear of being beaten; 33.3% reported family member beaten
11 Mels et al. (2010)	Traumatic exposure for ages 13–21 (by displacement category)	Physical violence: Experienced gunfire attacks (69.1% IDPs; 60.3% returnees; 52.8% non-displaced; Injured during war (23.0% IDPs; 12.5% returnees; 7.5% non-displaced) Sexual violence: Have been sexually abused (12.9% IDPs; 5.6% returnees; 4.6% non-displaced) Mental violence: have witnessed violence acts against family members or friends (25.3% IDPs; 19.0% returnees; 10.4% non-displaced; seen dead bodies or mutilated)

Table 2 (continued)

Study	Outcome areas (as identified in included study)	Rates of violence against children (by primary type)
		bodies (71.9% IDPs; 63.5% returnees; 48.1% non-displaced); Kidnapped by armed group (27.6% IDPs; 15.5% returnees; 7.5% non-displaced); Forced to kill, injure or rape (7.8% IDPs; 5.2% returnees; 8.5% non-displaced); have witnessed a rape (40.6% IDPs; 28.6% returnees; 28.3% non-displaced); seen someone being killed (71% IDPs; 62.7% returnees; 48.1% non-displaced)
12 Mels et al. (2009)	Exposure to wartime events (boys v. girls)	Physical violence: experienced gunfire attacks (63.2% girls; 67.7% boys); has been injured during the war (12.3% girls; 19.6% boys) Sexual violence: has been sexually abused (10.5% girls; 9% boys) Mental violence: Witnessed violent acts against family members or friends (19.7% girls; 23.8% boys); has witnessed a killing (59.5% girls; 70.9% boys); has seen dead or mutilated bodies (62.0% girls; 67.5% boys); has been kidnapped by an armed group (12.6% girls; 23.6% boys); has been forced to kill, injure or rape (3% girls; 9.8% boys); has witnessed a rape (35% girls; 31.8% boys)
13 Mollica et al. (1997)	Exposure to traumatic events reported by boys and their parents; Exposure to traumatic events reported by girls and their parents	Physical violence: Shelling or bombings (52.8%- boys; 13.5%- parents; Severe beating or other serious injury: (15.7%-boys; 19.1%- boys' parents; 11.8%-girls; 3.2%-girls' parents) Mental violence: Saw family member or friend killed or seriously injured (10.1%- boys; 6.7%-parents); locked up or in prison (3.4% boys; 1.1% parents); Saw family member or friend killed or seriously injured (9.7%-girls; 11.8%-parents); locked up or imprisoned (4.3% girls; 1.1% parents) Neglect: Not enough food, water or shelter (43.8% boys; 52.8% parents); Not enough food, water or shelter (52.7% girls; 58.1% parents)
14 Morgos et al. (2007)	War experiences (boys v. girls)	Sexual violence: 14.8% reported being raped (12.8% boys; 17.4% girls) Mental violence: 98.8% reported being forced to leave their home (98.9% boys; 98.6% girls); 90.9% reported witnessing shooting (89.8% boys; 92% girls); 75.5% reported witnessing torture (74.3% boys; 77.1% girls); 50.8% reported witnessing someone being burned alive (51.3% boys; 50% girls); 49.5% reported being threatened to be killed (52.7% boys; 45.8% girls); 43.8% reported abduction/separation (43.9% boys; 43.8% girls); 42.6% reported witnessing rape 41.2% boys; 44.4% girls); 21.5% reported being forced to kill/hurt family (24.1% boys; 18.1% girls); 13.9% reported being forced to fight (16.6% boys; 10.4% girls). Neglect: 77.9% reported fear of starvation (79.7% boys; 75.5% girls)
15 Panter-Brick et al. (2009)	Exposure to traumatic events and distressing lifetime events reported by respondents ages 11–16	Physical violence: severe physical injury (27.3%) Mental violence: witnessed severe violence to another person (25.9%); forced displacement (34.8%)
16 Potts et al. (2011)	Grave violations reported for children ages 5–17	Physical violence: found a rate of 1.13/1000/year for intentional injury Sexual violence: found a rate of 10.72/1000 girls/year for rape, and 4.80/1000 girls/year for sexual abuse Mental violence: found a rate of 2.56/1000/year for abduction
17 Qayum et al. (2012)	Reported rates of violence by respondents ages 15–49	Physical violence: 42% of participants reported physical violence Sexual violence: 18% reported child sexual abuse in the past 6 months Mental violence: 56% reported emotional violence
18 Rugema et al. (2013)	Traumatic events during genocide period (when respondents were ages 3–18)	Physical violence: 21.8% reported experiencing a life-threatening injury; 19.9% reported being robbed, mugged or threatened with a weapon Sexual violence: 8.7% reported being raped by a stranger; 3.2% reported feeling forced to have sex in exchange for money or benefits Mental violence: 8.7% reported being imprisoned, kidnapped or held captive; 13.4% reported witnessing a traumatic event to a loved one; 17.6% reported witnessing repeated violence between family members; 16.7% reported witnessing physical or sexual violence against a family member by someone outside the family; 38.5% reported witnessing someone being bodily injured or killed; 61.7% reported witnessing atrocities
19 Stark et al. (2013)	Any violence; Domestic violence; Rape outside of marriage; Marital rape	Physical violence: 15.0% of females under 18 in Montserrat reported domestic violence; 14.4% of females under 18 in Nimba reported in domestic violence Sexual violence: Females under 18 reporting rape outside of marriage (13.5% in Montserrat; 11% in Nimba); Marital rape (72.3% Montserrat; 73.8% Nimba)
20 Swiss et al. (1998)	Reported rates of violence by females 15–25	Physical violence: Females 15–25 reporting being beaten (5.7%); Females 15–15 reporting being tied up (1%); Females 15–25 reporting being locked up (10.5%) Sexual violence: strip-searched (19%); raped (4.8%); attempted rape (12.4%); sexual coercion (6.7%)
21 Thabet and Vostanis (1999)	Traumatic events experienced during the war	Physical violence: Shot by rubber/plastic or real bullets: (2.5%); Beaten up: (5.4%); having limbs broken (1.2%) Mental violence: Witnessing beating of close relative (22.2%); Witnessing beating of friend (34.3%); witnessing killing of close relative (4.6%); Witnessing shooting of close relative (12.6%); Witnessing shooting of friend (24.7%); imprisonment (0.8%)
22 Usta and Farver (2010)	Rates of child sexual abuse before, during and after the war	Sexual violence: 24% of children reported at least one incident of child sexual abuse (CSA); 11% occurred before the war, 8% took place in the 1-year period after the war to the time of the data collection and 5% occurred during the 33-day war. There were no gender differences in CSA reports before or after the war, but boys reported more incidents during the war than did girls.

violence as a result of particular emergencies. All of the studies were cross-sectional, and were not repeated, making it impossible to

confirm an increase or decrease in rates of violence. Only nine out of the 22 studies examined the impact of exposure to various forms

Table 3
Overview of included studies and quality indicators.

Study	Country/Region	Humanitarian context	Methods	Use of probability sampling (Y/N)	Instruments used	Use of pilot testing (Y/N)	Response rate (%)	Adequate sample size (Y/N)
1 Amowitz et al. (2002)	Sierra Leone (Sub-Saharan Africa)	Post-conflict reconstruction	Study Purpose: To assess the prevalence and impact of war-related sexual violence and other human rights abuses among IDPs; Design: Cross-sectional survey; Sample: 991 women providing information on 9166 household members; Participants: Females ages 14–80 randomly selected from research sites (n = 991); Selected Respondents: respondents reporting on themselves and their households; Recall period: lifetime	Y	Survey/Questionnaire (Interviewer-administered)	Y	95%	Y
2 Catani et al. (2009)	Afghanistan (South Asia)	Protracted armed conflict	Study Purpose: To examine the extent of cumulative adverse childhood experiences of school children; Design: School-based survey; Sample: children ages 7–17 from two schools; Participants: 287 children (122 girls; 165 boys) ages 7–15) attending selected schools; Selected Respondents: Respondents reporting on themselves; Recall period: lifetime	N	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: UCLA PTSD Index (UPIID)	Not reported	Not reported	Not reported
3 Catani et al. (2008)	Sri Lanka (South Asia)	Protracted armed conflict/post-tsunami	Study Purpose: Establish prevalence and predictors of traumatic stress related to war, family violence and the tsunami among children in a conflict-affected region; Design: School-based survey; Sample: 296 school children, representing 15 schools; Participants: children ages 9–15, with random selection used to identify participants; Selected Respondents: Respondents reporting on themselves; Recall Period: last month and ever (family violence); last 12 months and ever (wartime events)	N	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: UCLA PTSD Index (UPIID) Tamil version	Not reported	Not reported	Y
4 Ellsberg et al. (2008)	Ethiopia (Sub-Saharan Africa); Bangladesh (South Asia)	Flood/Food Crisis/ Protracted Refugee Context (Ethiopia); Cyclone/Food Crisis/ Protracted Refugee Context (Bangladesh)	Study Purpose: To establish prevalence rates of intimate partner violence and associated health and mental health outcomes; Sample: population-based samples of women ages 15–49; Participants: women ages 15–49 who ever had an intimate partner; Selected Respondents: Respondents reporting on themselves; Recall period: lifetime and past year	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: WHO multi-country study standardized questionnaire on women's health and domestic violence	Y	97%	Not reported
5 Ertl et al. (2014)	Uganda (Sub-Saharan Africa)	Post-conflict reconstruction	Study Purpose: Assess PTSD and probable depression in war-affected and formerly abducted individuals; comparison between formal child soldiers and war-affected respondents; Design: Cross-sectional survey; Sample: 357 households in Awer; 514 households in Padibe; 572 households in Anaka; Participants: 1113 adolescents and young adults ages 12–25 in selected households;; Selected Respondents: Respondents reporting on themselves; Recall period: not specified	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Violence, War and Abduction Exposure Scale (VWAES), Post-traumatic Stress Diagnostic Scale (PDS), Depression section of the Hopkins Symptom Checklist (DHSC), module C of the Mini International Neuropsychiatric Interview (MINI), Luo Functioning Scale (LFS), Perceived Stigmatization Questionnaire (PSQ), Aggression Questionnaire by Buss and Perry	Y	84.8%	Not reported
6 Falb et al. (2014)	Thailand (Southeast Asia)	Protracted refugee context	Study Purpose: Examine association between lifetime violence victimization and self-reported symptoms associated with pregnancy complication; Design: Cross-sectional survey; Sample: All women 15–49 living in three refugee camps; Participants: Ever-partnered women	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Reproductive Health Assessment Toolkit for Conflict-Affected Women	Not reported	98%	Not reported

Table 3 (continued)

Study	Country/ Region	Humanitarian context	Methods	Use of probability sampling (Y/N)	Instruments used	Use of pilot testing (Y/N)	Response rate (%)	Adequate sample size (Y/N)
7 Hynes and Cardozo (2000)	Kosovo (Europe)	Post-conflict reconstruction	ages 15–49 who reported a live birth within the past two years (n = 337); Selected Respondents: Respondents reporting on themselves; Recall period: lifetime Study Purpose: To examine rates of violence against women; Design: cross-sectional survey; Sample: population-based sample of 1358 displaced Kosovar Albanians; Participants: women from the larger survey ages 15 and older; Selected Respondents: Respondents reporting on themselves; Recall period: lifetime	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: General Health Questionnaire-28 (GHQ-28), Harvard Trauma Questionnaire (HTQ), Medical Outcomes Study 20 (MOS-20)	Not reported	Not reported	Y
8 Khawaja and Barazi (2005)	Jordan (Middle East)	Protracted refugee context	Study Purpose: to examine the prevalence of wife beating; Sample: 2590 households selected randomly from 12 refugee camps; Participants: adults ages 15 and older who were currently married and living with a spouse (n = 395; 262 women; 133 men); Selected Respondents: Respondents reporting on themselves; Recall period: lifetime and past year	Y	Survey/Questionnaire (Interviewer-administered)	Not reported	95%	Not reported
9 Kim et al. (2009)	DRC (Sub-Saharan Africa)	Protracted armed conflict/ Protracted refugee context;	Study Purpose: Examine reproductive health outcomes among women; Design: two-stage random household survey; Sample: Households randomly selected from total population in community and total number of people in household; Participants: one woman per household, ages 15–49; Selected Respondents: Respondents reporting on themselves; Recall period: conflict period	Y	Survey/Questionnaire (Interviewer-administered)	Not reported	87% for subsample 1, 98.7% for subsample 2, 91.8% for subsample 3	Y
10 Karam et al. (2014)	Lebanon (Middle East)	Post-conflict reconstruction	Study Purpose: Examine the prevalence of various psychosocial disorders among war-affected children and adolescents one year after a ceasefire; Design: Structured interviews with children; Sample: Stratified random sample of 386 students; Participants: a subsample of randomly selected students (n = 143); Selected Respondents: Respondents reporting on themselves; Recall period: wartime	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Diagnostic Interview for Children and Adolescents Revisited (DICA-R), War Events Questionnaire (WEQ)	Y	Not reported	N
11 Mels et al. (2010)	DRC (Sub-Saharan Africa)	Protracted armed conflict/ Protracted refugee context	Study Purpose: Examine the impact of war-induced displacement and related risk factors on the mental health of adolescents; Design: School-based survey; Sample: All 819 s grade pupils from 10 secondary schools in three areas; Participants: students ages 13–21; Selected Respondents: Respondents reporting on themselves; Recall period: not specified	N	Survey/Questionnaire (Self-administered) Including use of/components based on: Impact of Event Scale-Revised (IES-R), Hopkins Symptoms Checklist-37 for Adolescents (HSCL-37A), Adolescent Complex Emergency Exposure Scale, Adolescent Complex Emergency Daily Stressors Scale,	Y	100%	Not reported
12 Mels et al. (2009)	DRC (Sub-Saharan Africa)	Protracted armed conflict/ Protracted refugee context	Study Purpose: Explore adolescent mental health since 1996; Design: Cross-sectional survey; Sample: Adolescents and young adults ages 13–21 from 13 secondary schools; Participants: 1046 adolescent and young adults, ages 13–21; Selected Respondents: Respondents reporting on themselves; Recall period: wartime to present	Y	Survey/Questionnaire (Self-administered) Including use of/components based on: Adolescent Complex Emergency Exposure Scale, Impact of Event Scale-Revised (IES-R)	Y	99.5%	Not reported

(continued on next page)

Table 3 (continued)

Study	Country/ Region	Humanitarian context	Methods	Use of probability sampling (Y/N)	Instruments used	Use of pilot testing (Y/N)	Response rate (%)	Adequate sample size (Y/N)
13 Mollica et al. (1997)	Thailand (Southeast Asia)	Protracted refugee context	Study Purpose: To measure the effect of war trauma on the functional health and mental health status; Design: household survey; Sample: multi-stage probability sample; Participants: all adolescents ages 12–13 living in selected households, and one parent of each adolescent participant (n = 182 adolescents; 94 girls; 88 boys); Selected Respondents: Respondents reporting on themselves; Recall period: lifetime	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Child Behavior Checklist (CBCL) Cambodia version, Youth Self-Report (YSR)	Not reported	100%	Not reported
14 Morgos et al. (2007)	Sudan (Sub-Saharan Africa)	Protracted armed conflict	Study Purpose: To assess the psychosocial effects of conflict on children; Design: School-based survey; Sample: children ages 6–17 living in IDP camps, identified through random sampling in selected schools; Participants: 331 IDP children ages 6–17; Selected Respondents: Respondents reporting on themselves; Recall period: not specified	N	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Demographic Questionnaire, Child Post-Traumatic Stress Reaction Index (CPTSD-RI), Child Depression Inventory (CDI), Expanded Grief Inventory (EGI)	Not reported	100%	Not reported
15 Panter-Brick et al. (2009)	Afghanistan (South Asia)	Protracted armed conflict	Study Purpose: To assess trauma exposure in children, and to identify risk factors for poor mental health outcomes in multiple psychosocial dimensions; Design: school-based cross-sectional survey; Sample: sample randomly selected from 257 state-operated schools in 3 sites; Participants: 1011 students between the ages of 11–15 (grades 5–10); Selected Respondents: Respondents reporting on themselves; Recall period: lifetime	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Strength and Difficulties Questionnaire (SDQ), Birlerson Depression Self-Rating Scale (DSRS), Child Revised Impact of Events Scale (CRIES), Self-Reported Questionnaire (SRQ-20), Afghan Symptom Checklist (ASCL), Harvard Trauma Questionnaire (HTQ), Gaza Traumatic Event Checklist	Y	100%	Y
16 Potts et al. (2011)	CAR (Sub-Saharan Africa)	Protracted armed conflict	Study Purpose: Estimate prevalence of grave violations against children; Design: Nationwide household survey; Sample: 599 women; Participants: Females 18 years old and older; Selected Respondents: Respondents reporting on all children in their homes and in neighboring homes; Recall period: past 18 months	Y	Survey/Questionnaire (Interviewer-administered) Including use of the Neighborhood Method	Y	Not reported	N
17 Qayum et al. (2012)	Pakistan (South Asia)	Protracted armed conflict	Study Purpose: To assess rates of GBV in an IDP camp; Design: Cross-sectional household survey; Sample: 62 women; Participants: Females ages 15–49 reporting on their household; Selected Respondents: respondents reporting on themselves and their households; Recall period: 6 months for child sexual abuse; not specified for other types of violence	Y	Survey/Questionnaire (Interviewer-administered)	Y	Not reported	Not reported
18 Rugema et al. (2013)	Rwanda (Sub-Saharan Africa)	Post-conflict reconstruction	Study Purpose: Estimate the prevalence and frequency of traumatic episodes and associated psychosocial effects; Design: Cross-sectional survey; Sample: 917 participants randomly selected from villages in eight districts; Participants: males and females who were between the ages of 3–18 during the Rwandan genocide in 1994; Selected Respondents: Respondents reporting on themselves; Recall period: lifetime; genocide period; past 3 years	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: Harvard Trauma Questionnaire (HTQ)	Not reported	99.8%	Y
19 Stark et al. (2013)	Liberia (Sub-Saharan Africa)	Post-conflict reconstruction	Study Purpose: Examine prevalence of various forms of GBV; Design: household survey; Sample: 7015 females in Montserrado and 6632 in	Y	Survey/Questionnaire (Interviewer-administered) Including use of the Neighborhood Method	Y	99.4% in Montserrado, 87.7% in Nimba	Y

Table 3 (continued)

Study	Country/ Region	Humanitarian context	Methods	Use of probability sampling (Y/N)	Instruments used	Use of pilot testing (Y/N)	Response rate (%)	Adequate sample size (Y/N)
20 Swiss et al. (1998)	Liberia (Sub-Saharan Africa)	Protracted armed conflict	Nimba; Participants: Women ages 18 and older; Selected Respondents: Respondents reporting on all females in their homes and in neighboring homes; Recall period: 18 months Study Purpose: To document women's experiences of violence, including rape and sexual coercion, from a soldier or fighter during the civil war; Humanitarian Context: Protracted armed conflict; Sample: random sample of women and girls between the ages of 15–70 selected from 9 representative sites; Participants: Women and girls between the ages of 15–70 (n = 205); Selected Respondents: Respondents reporting on themselves; Recall period: during the period 1989–1994	Y	Survey/Questionnaire (Interviewer-administered)	Y	88%	Not reported
21 Thabet and Vostanis (1999)	Gaza Strip (Middle East)	Post-conflict reconstruction	Study Purpose: Estimate the rate of post-traumatic stress reactions in children who experienced war traumas, and to investigate the relationship between trauma-related factors and PTSD reactions; Design: School-based survey; Sample: Children ages 6–11 selected by quasi-randomization from 97 elementary schools in the Gaza strip; Participants: children ages 6–11 (n = 239); Selected Respondents: Respondents reporting on themselves; Recall period: wartime	Y	Survey/Questionnaire Including use of/components based on: Rutter Scale A2, Rutter Scale B2, Gaza Traumatic Event Checklist, Child Post-Traumatic Stress Reaction Index (CPTSD-RI)	Y	100%	Not reported
22 Usta and Farver (2010)	Lebanon (Middle East)	Post-conflict reconstruction	Study Purpose: To examine rates of CSA during and after conflict; Design: Self-administered questionnaire; Sample: 1028, from an estimated 5000 possible participants various youth programs; Participants: Children aged 8–17 years old; every third child was invited to participate from the selected sites; Selected Respondents: Respondents reporting on themselves; Recall period: before the start of the war; after the war to the time of the survey (approximately a 1-year period)	Y	Survey/Questionnaire (Interviewer-administered) Including use of/components based on: IPSCAN Child Abuse Screening Tool (ICAST), Trauma Symptom Checklist for Children (TSC-C), Family Functioning in Adolescence Questionnaire	Not reported	99.3%	Y

of violence on children's health and psychosocial well-being. In general in these studies, children who reported experiencing a greater number of violent events were more likely also to report subsequent negative health or mental health outcomes. For example, [Ertl et al. \(2014\)](#) found that former child soldiers reported higher rates of post-traumatic stress disorder (PTSD) as compared to war-affected youth who had not been conscripted (25% vs. 7%), and that the number of violent or traumatic events experienced by former child soldiers was associated with higher rates of psychosocial distress. Similarly, [Morgos et al. \(2007\)](#) and [Thabet and Vostanis \(1999\)](#) found that children who experienced a greater number of traumatic events were more likely to experience psychosocial distress. [Panter-Brick et al. \(2009\)](#) documented that childhood exposure to five or more traumatic events – which included violence not directly related to armed conflict – was predictive of probable psychiatric disorders as well as symptoms of depression and post-traumatic stress.

In studies that provided comparative rates of violence perpetrated against males versus females ([Catani et al., 2009](#); [Ertl et al.,](#)

[2014](#); [Mels et al., 2009](#); [Mollica et al., 1997](#); [Morgos et al., 2007](#)), males generally reported slightly higher rates of physical violence and females generally reported higher rates of sexual violence. The one exception is the [Usta and Farver \(2010\)](#) study, in which boys (71%) reported higher rates of child sexual abuse as compared to girls (28%) during the conflict period. Rates of mental violence based on sex were mixed across studies, although reported rates were slightly higher for boys than girls in the majority of cases.

Only three out of 22 studies ([Catani et al., 2008, 2009](#); [Usta and Farver, 2010](#)) included an analysis of the risk and protective factors associated with children's exposure to various forms of violence. In [Catani et al. \(2008\)](#), for example, prior exposure to conflict and alcohol use by fathers were associated with more reported incidents of family violence, while factors such as high family income and high levels of exposure to the December 2004 Tsunami were protective against the same forms of violence. In [Catani et al. \(2009\)](#), the risk and protective factors associated with family violence were found to vary by sex. Among girls, prior exposure to armed conflict, weekly involvement in forced labor, and the

number of prior traumatic events all represented risk factors to multiple forms of violence. Among boys, however, the number of prior traumatic events represented the only demonstrated risk factor of exposure to violence. Finally, [Usta and Farver's \(2010\)](#) study found that an increase in age and, surprisingly, better family functioning were associated with a higher risk of children's exposure to sexual violence, while father's higher education and smaller family size were associated with a lower risk of sexual violence.

3.3. Age and sex of children

Included studies were analyzed to determine the age of children studied, based on the following stages of growth: infancy and early childhood (0–8 years old); middle childhood (9–11 years old); and adolescence (12–18 years old). All studies covered more than one stage of growth, with adolescence being the most commonly measured, followed by middle childhood.

Violence against children in early childhood was examined in seven studies. Of these, only two included children of all ages within this growth stage ([Potts et al., 2011](#); [Stark et al., 2013](#)). Children below the age of five were excluded from consideration in all but three studies examined in this review.

Ten studies investigated violence in middle childhood ([Catani et al., 2008, 2009](#); [Karam et al., 2014](#); [Potts et al., 2011](#); [Rugema et al., 2013](#); [Stark et al., 2013](#); [Thabet and Vostanis, 1999](#); [Utsa and Farver, 2010](#)), while 21 studies (all except [Thabet and Vostanis, 1999](#)) examined violence in adolescence. Among studies that measure violence against adolescents, 11 out of 22 did not disaggregate rates of violence between children and adults, making it difficult to determine the degree to which findings were referring to violence against those under 18. For example, five studies ([Ellsberg et al., 2008](#); [Kim et al., 2009](#); [Qayum et al., 2012](#); [Hynes and Cardozo, 2000](#); [Khawaja and Barazi, 2005](#)) only provide rates for those 15 and older, and, two studies ([Ertl et al., 2014](#); [Swiss et al., 1998](#)) provide rates for those between the ages of 12–25.

Together, these findings underscore that infancy and early childhood have received the least emphasis among studies seeking to measure violence against children, with children below the age of five particularly under-researched. Findings also suggest that there has been the greatest focus on older adolescents (15–18), with the number of studies on those below the age of 15 decreasing with children's age.

Also examined as part of this review was an analysis of sex. Six studies focused exclusively on measuring violence against females ([Ellsberg et al., 2008](#); [Falb et al., 2014](#); [Hynes and Cardozo, 2000](#); [Kim et al., 2009](#); [Stark et al., 2013](#); [Swiss et al., 1998](#)). In one study ([Qayum et al., 2012](#)), the sex of the children is not specified for the findings related to child sexual abuse, although only females were considered for other forms of gender-based violence. The remaining 15 studies measured violence equally in male and female populations.

3.4. Selected respondents

Selected study participants were also analyzed. The most common approach, used in 18 out of 22 studies, was to ask respondents to report on their own experiences of violence. In 11 of these studies ([Catani et al., 2008, 2009](#); [Ertl et al., 2014](#); [Karam et al., 2014](#); [Mels et al., 2009, 2010](#); [Mollica et al., 1997](#); [Morgos et al., 2007](#); [Panter-Brick et al., 2009](#); [Thabet and Vostanis, 1999](#); [Usta and Farver, 2010](#)) respondents included those in early and middle childhood, while in 7 studies ([Ellsberg et al., 2008](#); [Falb et al., 2014](#); [Hynes and Cardozo, 2000](#); [Khawaja and Barazi, 2005](#); [Kim et al., 2009](#); [Rugema et al., 2013](#); [Swiss et al., 1998](#)) only older

adolescents (ages 15–18) and adults were included as respondents. A second approach, used in two studies ([Amowitz et al., 2002](#); [Qayum et al., 2012](#)), involved respondents reporting on violence against themselves as well as others (including younger children) in their households. Both of these studies included respondents who were either older adolescents or adults. A related approach, used in two studies ([Potts et al., 2011](#); [Stark et al., 2013](#)), involved asking respondents to report on violence against all members of their household (including themselves), as well as the households of their closest neighbors. This approach, known as the “Neighborhood Method,” engaged respondents ages 18 and older.

4. Discussion

4.1. What do we know and what gaps remain?

Although the review allowed for inclusion of publications between 1995 and 2014, more than half (13 out of 22 papers) have been published during the past five years (2009–2014), suggesting that efforts to measure the prevalence of violence against children in humanitarian settings are relatively recent. In addition, the small number of studies that met final inclusion criteria suggests a limited evidence base by which to determine trends of violence against children in humanitarian contexts.

Prior research on violence has amassed a solid evidence base on drivers of interpersonal violence in non-humanitarian settings. For example, communities characterized by low levels of social cohesion often place children at an increased risk of exposure to child maltreatment, neglect, and intimate partner violence ([Coulton et al., 2007](#); [Freisthler et al., 2006](#); [Pinchevsky and Wright, 2012](#); [Wilkins et al., 2014](#)). In addition, research indicates that individuals with inadequate economic resources, or who experience social isolation, are more likely to perpetrate various forms of violence against intimate partners and children ([Runyan et al., 2002](#); [Tjaden and Thoennes, 2000](#); [Wilkins et al., 2014](#)). Harmful social norms – such as those that condone violence or coercion – are likewise associated with acts of physical and sexual violence against children as well as intimate partner violence ([Centers for Disease Control and Prevention, 2015](#); [Jackson et al., 1999](#); [Pinchevsky and Wright, 2012](#); [Runyan et al., 2002](#); [Zolotor et al., 2011](#)). Finally, research has shown that witnessing acts of community violence increases the risk of experiencing subsequent bullying or becoming a perpetrator of sexual violence ([Basile et al., 2013](#); [Wilkins et al., 2014](#)).

By contrast given the paucity of data, it is difficult to determine whether, how and under what conditions these and other risk factors may apply in settings involving armed conflict or other emergencies. One may reasonably hypothesize that some of these risk factors will be exacerbated in humanitarian settings. For example, there is ample evidence that community cohesion is weakened following conflict or displacement ([Jablensky et al., 1994](#); [Lustig et al., 2003](#); [Mollica et al., 1989](#); [Pedersen, 2002](#); [Smith et al., 2002](#)). Similarly, it is not uncommon for families to lose their livelihoods and suffer from economic vulnerability in emergencies ([Brück and Schindler, 2009](#); [Holland et al., 2002](#)).

On the other hand, there are risk factors that are likely unique to humanitarian settings. Such risk factors may include the length of time spent in a camp setting or the length of overall displacement; who is accompanying or caring for a child following an emergency; the type of shelter in which children and families are residing; the likelihood of recruitment of children into fighting factions; and a family's access to food rations, to name just a few examples. In addition, children's age, sex, and other socio-cultural factors are also likely to contribute significantly to their risk of exposure to various forms of violence in humanitarian contexts, as well as the

degree to which they report their cases or access needed services in the event that violence occurs. Once again, the dearth of information available from the existing literature leaves the humanitarian community unable to identify or to mitigate these risks, or to identify protective factors that may contribute to children's resilience. As has been noted previously, we need to know under what conditions specific social and health interventions work best to prevent and expunge the effects of violence (Panter-Brick, 2010).

4.2. How can a better evidence base inform programming and policy reform?

In recent years, research on the prevalence of gender-based violence (GBV) against women has shown that the majority of cases of violence are perpetrated inside the home (Ellsberg et al., 2008; Stark and Ager, 2011; Watts and Zimmerman, 2002). This somewhat simple, if surprising, finding has played an important role in helping to shift GBV policy and programming efforts for women in emergency contexts. While previous advocacy, funding and programming efforts focused on protecting women from gender-based violence from "strangers" (e.g. military personnel) and in public spaces (e.g. collecting firewood), it is now more widely understood that women suffer the majority of violent events at the hands of intimate partners in their own homes.

Developing a robust body of research pertaining to violence against children in humanitarian contexts could similarly provide critical insights, including who is most at risk and why, how rates of particular forms of violence may vary, and how various forms of violence are impacted by armed conflict and other elements of humanitarian emergencies. For example, one study found that, even during periods of active armed conflict, a greater number of traumatic events associated with everyday violence were reported as compared to those directly associated with war (Panter-Brick et al., 2011). A deeper understanding of such findings, including examining comparable issues in other emergency contexts, may help inform and prioritize interventions. If, like women, children in emergency settings are at the greatest risk of experiencing violence in their homes, then research, programming and policy need to be aligned to respond to this reality. If boys are, as the studies in this review suggest, at greater risk of physical violence and girls are at greater risk for sexual violence, targeted interventions may be needed to supplement other sex-neutral anti-violence initiatives.

4.3. How can we do better?

While acknowledging the importance of building a more robust evidence base, this is not to suggest that measuring violence against children is an easy task. Although a full discussion of the ethics of measuring violence against children in emergencies is outside the scope of this review, it is important to acknowledge the inherent risks and dilemmas involved in such measurement. Violence studies hold the potential to exacerbate mental health concerns for survivors who are interviewed directly, and to place children at risk of exposure to further violence. Ensuring confidentiality as well as the availability of proper referral services is also challenging in emergency settings. While many of the ethical risks have been identified (Child Protection Monitoring and Evaluation Reference Group, 2012), the field has yet to develop a set of child-focused guidelines for humanitarian settings akin to WHO's 'Ethical and safety recommendations for researching, documenting and monitoring sexual violence in emergencies' (World Health Organization [WHO], 2007). Such a resource could be an important complement to a more standardized approach to measurement of violence against children in emergencies.

Other measurement decisions are equally complex and require

further evaluation. The choice of informants provides one example. Asking young people about their own experiences of violence (as was done in 18 of 22 studies in this review) raises significant ethical questions, and is not recommended with particularly young children. The alternative of asking caregivers to report on their children's experience with violence, however, carries with it the probability of non-disclosure in the event that caregivers themselves are the perpetrators. Reporting may also be inhibited due to social desirability bias, in which caregivers may feel ashamed to admit that their children are experiencing violence from another person while under their care.

An alternative to both of these approaches is seen in the "Neighborhood Method" (Potts et al., 2011; Stark et al., 2013), which asks respondents about violence in their household as well as those of their neighbors. Findings from these studies suggest that higher rates of violence are captured when respondents report on their neighbors' households than when the focus is on respondents' own households (Stark, 2010). While methodological limitations of this approach have yet to be fully understood and the ethics have been questioned by some, further investigation of network sampling approaches may help overcome social desirability bias and nondisclosure to detect rates of violence against young children more accurately (Silva and Price, 2011).

4.4. Limitations of the present study

Potential limitations of this study include the fact that studies used different definitions of violence and approaches to measurement, making precise comparisons difficult. Included studies also demonstrated varying degrees of quality, further limiting comparability of the data. The observational nature of the majority of these studies bring the potential for both recall and social desirability bias. Child respondents may have underreported violence due to fear or potential psychological distress that can accompany disclosure. Respondents may have chosen not to disclose incidents of violence in settings where topics such as sexual violence are considered taboo, and caregivers may not disclose perpetration of violence against children for whose care they are responsible. Recall bias is also closely connected to the malleability of trauma memory (Panter-Brick et al., 2015), which is unaccounted for in a majority of the studies included here. As this review does not include a meta-analysis of rates of violence, the magnitude of potential bias cannot be further quantified.

5. Conclusion

Findings from our review reveal a weak evidence base by which to determine the scale, nature and impact of violence against children in emergency settings. Without reliable data, humanitarian actors are limited in their ability to design effective prevention and response initiatives to address the forms of violence experienced by children, and to ensure that sufficient resources for needed programming are put in place. Humanitarian efforts around the world are to be lauded, but if they apply a tourniquet to the wrong injury, they are destined to be ineffective.

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