The influence of social support on posttraumatic stress symptoms among children and adolescents: a scoping review and meta-analysis

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ABSTRACT

Background: Several risk and protective factors play a role in the development of posttraumatic stress symptoms (PTSS) in children and youth. The evidence for social support (SS) as a protective factor is rising; however, a review of the evidence is lacking.

Objective: This scoping review and meta-analysis aims to map out and synthesize the present research on the influence of social support on PTSS in children and adolescents.

Method: The literature searched through PubMed, MEDLINE, Embase, PsycINFO, and CINAHL identified 3629 abstracts. Ninety articles published from 1999 to 2020 were selected, including a total of 77,439 participants.

Results: Most papers focused on social and emotional support from family members (36/88) and peers (26/88); other types of support (e.g., informational support and support from professionals) were not widely reported. The cross-sectional studies illustrated an overall significant but weak, negative correlation between global social support and PTSS. A similar weak negative association was found between family support and PTSS. The association between peer support and PTSS was not significant. For longitudinal studies, 4 of 5 indicated that SS was a significant negative predictor of PTSS.

Conclusions: There was conceptual, methodological, and statistical heterogeneity of the identified studies. This review suggests a weak negative relationship between global SS and PTSS in children and adolescents. Higher global SS was related to less PTSS. The evidence regarding family support revealed a more stable negative relationship with PTSS than that for peer support. Investigating social support without specifying the form of support confounds the effect. Studies on informational, teacher, or professional support seem to be lacking. More studies are needed on the longitudinal effects of SS on PTSS.

La influencia del apoyo social en los síntomas de estrés postraumático en niños y adolescentes: revisión de alcance y metanálisis

Antecedentes: Varios factores de riesgo y de protección influyen en el desarrollo de síntomas de estrés postraumático (SEPT) en niños y jóvenes. La evidencia del apoyo social (AS) como factor protector está aumentando; sin embargo, falta una revisión de la evidencia.

Objetivo: Esta revisión de alcance y metanálisis tiene como objetivo(mapear y sintetizar la investigación actual sobre la influencia del apoyo social en el SEPT en niños y adolescentes.

Método: La bibliografía buscada a través de PubMed, MEDLINE, Embase, PsycINFO y CINAHL identificó 3629 resúmenes. Fueron seleccionados Noventa artículos publicados entre 1999 y 2020, incluyendo un total de 77,439 participantes.

Resultados: La mayoría de los artículos se centraron en el apoyo social y emocional de los miembros de la familia (36/88) y compañeros (26/88); otros tipos de apoyo (por ejemplo, apoyo informativo y apoyo de profesionales) no se informaron ampliamente. Los estudios transversales ilustraron una correlación negativa global significativa, pero débil, entre el apoyo social global y SEPT (coeficiente de correlación agrupado $r = -0.09$, $p < .01$). Una débil asociación negativa similar se encontró entre el apoyo familiar y los SEPT (agrupado $r = -.12$, $p < .005$). La asociación entre el apoyo de los compañeros y los SEPT no fue significativa, $r = -.08$, $p = .143$. Para estudios longitudinales, 4 de 5 indicaron que AS era un predictor negativo significativo de SEPT (rango de tamaño de efecto beta $= (-.32, -.21)$).

Conclusions: Hubo heterogeneidad conceptual, metodológica y estadística de los estudios identificados. Esta revisión sugiere una débil relación negativa entre AS global y SEPT en niños y adolescentes. Un AS global más alto se relacionó con menos SEPT. La evidencia con respecto al apoyo familiar reveló una relación negativa más estable con SEPT que la del apoyo de pares. Investigar el apoyo social sin especificar la forma de apoyo confunde el efecto. Estudios de apoyo informativo, docente o profesional parecen faltar. Se necesitan más estudios sobre los efectos longitudinales de AS en SEPT.

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HIGHLIGHTS
• This study aims to review current knowledge on the influence of SS on children and adolescents with traumatic experiences and/or posttraumatic stress symptoms (PTSS).
• A systematic search strategy identified 3629 abstracts, among which 90 quantitative articles were selected.
• Our review found that there was a weak negative relationship between global SS and PTSS in children and adolescents that family support showed a more robust protective effect than peer support.
1. Background

Childhood exposure to traumatic life events has been an important public health and social problem reported by the World Health Organization (Gilbert et al., 2009). Approximately 15% to 43% of children and adolescents worldwide experience at least one traumatic event in their childhood or adolescence (Hamblen & Barnett, 2014). The early exposure can cause significant immediate and long-term consequences on children’s physical and mental health (Briere, Kaltman, & Green, 2008; Dyregrov & Yule, 2006; Nemeroff, 2004). Traumatic experiences in childhood and adolescence are furthermore associated with a higher likelihood of mental health disorders in adults such as psychosis, schizophrenia, personality disorders, and posttraumatic stress disorder (PTSD) (Li et al., 2014; Read, Van Os, Morrison, & Ross, 2005). The prevalence of PTSD in children and adolescents is 7–8% (Lewis et al., 2019). For children and adolescents with trauma exposure, the estimated rate of PTSD is as high as 15.9% (Alsic et al., 2014).

There are several risk or protective factors that influence the development as well as the course of PTSD in children and adolescents. Lewis et al. reviewed the literature and surveyed a population-representative birth-cohort of 2232 children born in England and Wales in 1994–95 (Lewis et al., 2019). The risk profile they developed for PTSD included: (1) child characteristics such as female sex, (2) part of a minority ethnicity, (3) lower Child IQ, (4) internalizing symptoms of the child, (5) externalizing symptoms of the child, (6) psychotic symptoms of the child, (7) victimization of the child, and (8) accident involving the child. The family characteristics included: (1) socioeconomic disadvantage, (2) less than two biological parents at home, and (3) family history of mental illness.

Many observational studies on PTSS found that social support (SS) also has the potential to buffer the impacts of psychological trauma (Evans, Steel, & DiLillo, 2013; Glass, Perrin, Campbell, & Soeken, 2007; Hébert et al., 2014). A meta-analysis, a decade ago, examining risk factors for PTSS in children and adolescents (Trickey, Siddaway, Meiser-Stedman, Serpell, & Field, 2012) identified lower social support as a risk factor for PTSS in the aftermath of traumatic exposure for youth, reporting a medium to large effect size. However, findings are inconsistent with some studies showing no effect of social support on PTSS (Affrunti, Suárez, & Simpson, 2018; Bal, Crombez, Van Oost, & Debourdeaudhuij, 2003; Deane et al., 2018). Additionally, previous studies employed SS as an umbrella term. Social support is such a broad concept that the particular function of different types of support may have been neglected. For example, Chu and colleagues found in their meta-analysis that supports from teachers and school personnel were stronger correlates with well-being than family and peer support (Sen, Saucier, & Hafner, 2010). Individual sources (e.g., family, friends, colleagues, professionals, etc.) and the category of social support (i.e., emotional, instrumental, and informational support) may have different effects on PTSS (Berthold, 2000; Pina et al., 2008). Emotional support is about listening when one is sharing one’s feelings (Hill, 2016; Li et al., 2014). Informational support is provided when others share facts or knowledge helping to tackle the recipient’s challenges. Instrumental support is helping others by providing financial resources, political assistance, and physical resources (Heaney & Israel, 2008; Hill, 2016; Li et al., 2014).

The heterogeneity of findings and poor specification in the definition of social support suggest that a more thorough investigation is needed to construct a comprehensive model of social support on PTSS. This scoping review and meta-analysis was designed to investigate the levels of social support for children and adolescents with PTSS or trauma exposure and their association with the severity of PTSS. The scoping review framework was used because the body of literature on the association between social support and PTSS among children and adolescents was not clear. A scoping review would help to identify
relevant evidence and clarify the social support concept in the field. A meta-analysis was also conducted for the research questions that yielded sufficient and relatively comparable statistics.

We aimed to extend the existing knowledge for different subtypes of social support and its specific influence on the prevention or moderation of PTSS in children and adolescents. We aimed to map the present evidence of the research on social support in children and adolescents with trauma exposure. The specific questions were:

1. What is known from the existing literature about the role of social support in the development of PTSS in children or adolescents?
2. Is social support a protective factor in the development and course of PTSS?
3. Which sources and types of social support show associations in mitigating PTSS?
4. Do studies from different subpopulations show similar effects of SS on PTSS?

2. Methods

2.1. Identifying relevant studies

We used the widely used framework of Arksey and O’Malley (2005) to conduct the review study. The search strategy was developed in consultation with a librarian. The librarian was instrumental in generating, modifying, and applying search terms to optimize study identification in the relevant bibliographic databases. Several rounds of preliminary search were conducted by the librarian as well as the research team to identify and refine key search terms. Search terms and subject headings were generated and combined during the search process, based on three key concepts: posttraumatic stress disorder, social support, and population (i.e. adolescents/children).

Specific terms searched in each database are available in the Additional File 1 (online supplementary data). The databases utilized were PubMed, MEDLINE, Embase, PsycInfo, and CINAHL. In November 2019, we searched for peer-reviewed papers published in English in the last two decades (1999–2019). In the initial identification stage, 3054 abstracts were included after removing duplicates. Automatic alerts of new articles derived from the established searching terms were sent to, screened by, and added by the first author (TX) for each of the databases between December 2019 and May 2020.

2.2. Study selection

Cochrane Covidence was used to systematically screen studies (Veritas Health Innovation Australia). Inclusion criteria were articles: (1) published from 1999 to 2020, (2) written in English, (3) including participants between 6 and 18 years old (i.e. participants’ average age ranges from 6 to 18), (4) reporting quantitative results of PTSS and level of social support. Quantitative results of PTSS include: (1) clinical assessment of posttraumatic stress symptoms performed by clinicians/health professionals or researchers, and/or (2) posttraumatic stress symptoms measured by self-reported PTSS instruments. In the case where a study includes both adolescents as well as adults, we included it if the average age of the study sample was equal to or below 18. A publication was excluded if: (1) it was not a full report on a research study (i.e. an editorial, a letter, a conference abstract), (2) it was a review paper, (3) it was a study protocol, (4) an organic disease (e.g. cancer or HIV) was identified by the authors as the primary health condition of the population in the study; (5) the average age of participants was over 18 years, and/or (6) the outcome was not reported (i.e. no outcome of social support and/or PTSS). For the exclusion criteria (4), trauma history of physical injury, medical treatment or hospital admission was not classified as an organic disease being the primary health outcome and, therefore would not be the reason for being excluded. Studies that did not meet all of the inclusion criteria or met any of the exclusion criteria were excluded from data extraction.

The selection of studies involved two consecutive steps: abstract screening and full-text screening. One hundred and sixty-eight publications met our criteria and subsequently entered full-text screening. First, two independent reviewers (TX and AM) screened titles and abstracts and determined eligibility based on the inclusion and exclusion criteria. Eligible articles then entered the pool for the next step where full texts were reviewed and the decision of acceptance and rejection for data charting was made by the two independent reviewers. The final decision was made after a discussion between the reviewers. For both steps, whenever disagreement arose, a third party was consulted (PM). Finally, 85 articles were included during this stage. 33 articles were excluded with specific reasons shown in See Figure 1 for a description of the selection process (Moher, Liberati, Tetzlaff, Altman, & Group, 2009). The follow-up from database alerts identified 575 new articles; five of those were included in the review.

2.3. Charting data and summarizing results

A coding manual, available in the Additional File 2 (online supplementary data), was developed to extract data from the study under the guideline of the PRISMA framework for scoping reviews (Tricco et al., 2018). The PRISMA checklist was used to summarize each report section, see the Additional File 4(online supplementary data). We also followed the Population, Intervention, Comparison, Outcome (PICO) strategy for reporting systematic reviews. Data related to research questions and useful for information interpretation was extracted and recorded in a code form, consisting of publication information (e.g. title, year of publication, country), methodological features (e.g. sample size, study design,
design of comparison, age, and gender of participants), measurement of social support (e.g. type of support, questionnaire being used, time of measurement, administration, scoring information), measurement of PTSS (e.g. questionnaire, administration, time of measurement, and traumatic events reported in the population), and major outcome (e.g. level of support, the association between SS and PTSS, and effect size). For all the reviewed studies, a higher score for a measure indicates a higher level of the factor being measured; for example, a negative effect size between social support and PTSS means higher social support was correlated to lower levels of PTSS. Data related to our primary and secondary questions is included in Tables 1–3.

We summarized outcomes in terms of the type of support, type of association, and outcome (i.e. significant or not significant) by study designs (i.e. a cross-sectional study, a longitudinal study, and an interventional study). Different terms that were used to describe social support, such as tangible support (e.g. study ID 52, 64), received support (e.g. study ID 67, 72, 77), perceived support (e.g. study ID 2, 12, 15), social interaction (e.g. study ID 64), availability of support (e.g. study ID 3, 5), satisfaction with social support (e.g. study ID 4, 16, 59) were summarized with the term ‘global social support’ or ‘global support’ in this study.

A meta-analysis could only be performed for the questions that yielded relatively comparable studies
Table 1. Characteristics of studies.

| Publication year, N = 91 | N \(_{\text{studies}}\) | % | N \(_{\text{participants}}\) |
|--------------------------|-----------------|---|-----------------|
| 1999–2005                | 9               | 9.9% | 2584            |
| 2006–2010                 | 19              | 20.9% | 8990            |
| 2011–2015                 | 31              | 34.1% | 34,648          |
| 2016–2020                 | 32              | 35.2% | 31,217          |
| Region of study, N = 90  |                 |     |                 |
| North America             | 34              | 37.8% | 20,787          |
| Asia                     | 35              | 38.9% | 44,322          |
| Europe                   | 15              | 16.7% | 10,117          |
| Africa                   | 3               | 3.3%  | 1008            |
| Others                   | 3               | 3.3%  | 1108            |
| Sample size, N = 90      |                 |     |                 |
| <100                     | 12              | 13.3% | 914             |
| 100–1000                 | 61              | 67.8% | 25,043          |
| >1000                    | 17              | 18.9% | 51,482          |
| Study design, N = 91     |                 |     |                 |
| Cross-sectional          | 70              | 76.9% | 68,855          |
| Cohort/longitudinal      | 21              | 23.1% | 8584            |
| Mean Age, years, N = 84  |                 |     |                 |
| [6, 12]                  | 18              | 21.4% | 4201            |
| [12–18])\(^{1,2}\)       | 66              | 78.6% | 61,479          |
| Gender (Female), %       |                 |     |                 |
|                         | -               | - | -               |
| Traumatic events, N = 91 |                 |     |                 |
| Natural disaster         | 40              | 44.0% | 39,205          |
| Violence, abuse and maltreatment | 19 | 20.9% | 6834          |
| Multiple                 | 17              | 18.7% | 23,638          |
| War and political conflicts | 11           | 12.1% | 3824            |
| Other                    | 4               | 4.4%  | 3938            |
| Source of support, N = 88 |                 |     |                 |
| Multiple                 | 50              | 56.8% | 44,317          |
| Family                   | 36              | 40.9% | 25,626          |
| Peer                     | 26              | 29.5% | 2935            |
| Professional             | 10              | 11.4% | 4547            |
| Other                    | 11              | 12.5% | 7567            |
| Support Relevance, N = 91 |                 |     |                 |
| Social support related to traumatic events | 4 | 4.4%  | 3597            |
| Global social support    | 87              | 95.6% | 73,842          |

\(^{1}\)Refers to percentage of studies in the classified group. 
\(^{2}\)The parenthesis ‘)’ is a non-inclusive mark and the square brackets '[' and ']’ are inclusive marks. This means the studies that reported a mean age of 12.00 were classified in the group [12, 18], not the group [6, 12].

(e.g. the same type of coefficient reported as effect size, similar study design, comparable type of social support). Accordingly, meta-analyses were conducted for: (1) correlation between global support and PTSS in cross-sectional studies; (2) correlation between family support and PTSS in cross-sectional studies; (3) correlation between peer support and PTSS in cross-sectional studies; (4) correlation between global support and PTSS in the adolescent group (i.e. participants on average aged 12–18); (5) correlation between global support and PTSS in participants with trauma exposure ‘natural disaster’; (6) correlation between global support and PTSS in participants with trauma exposure ‘violence, abuse, and maltreatment’. We did not conduct a statistical synthesis of effect sizes for the remaining questions due to the heterogeneity of studies and the scarcity of studies in the subgroups. Studies that did not report their sample sizes did not enter the meta-analyses. For the studies that sampled multiple groups or assessed multiple aspects on the analysed question, separate effect sizes with their corresponding sample sizes were analysed. An example would be study ID 54 which assessed and reported support from mothers as well as fathers. The two effect sizes were both included in the analysis of the family support related question.

Correlation coefficients and 95% confidence intervals (CI) were calculated for the data extracted from each study for the research question. The pooled effect size, \( r \), was used as the summary statistic. We used a random-effect model to calculate the pooled effect sizes, Laird \( Q \) statistic and \( I^2 \) statistic (Takkouche, Cadarso-Suárez, & Spiegelman, 1999) to test and report homogeneity and significance. The meta-analysis was conducted through the ‘metafor’ (Viechtbauer & Cheung, 2010) and ‘robmeta’ package (Fisher, Tipton, Zhipeng, & Fisher, 2017) for \( R \).

Critical appraisal of the studies was conducted using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies and JBI Critical Appraisal Checklist for Cohort Studies (Moola et al., 2019). Only relevant items of the checklists were reported in the current paper. All the assessment questions used in the current review are available in Additional File 5 (online supplementary data). The assessment tool for cross-sectional studies asks for criteria clarity, description for the study setting, reliability of the measure for social support, the measure of confounding factors, reliability of the measure for PTSS, and appropriateness of the data analysis method. The appraisal tool for longitudinal studies focused on the reliability of the measure for social support, identification of confounding factors, strategies to address confounding factors, reliability of the measure for PTSS, the sufficiency of follow-up time, clarity of sample loss in the follow-up assessment, strategies to address sample loss in the follow-up assessment, appropriateness of the data analysis method. The assessment of study quality was pilot tested by two independent reviewers (TX and AM) for 25 studies. The results from the reviewers were compared and any conflict was calculated and discussed thoroughly. During this initial pilot, 10 out of 209 (4.78%) records received different scores from the two reviewers. Then a second subset of 25 studies was reviewed by the two reviewers to promote consistent and reliable evaluation.

3. Results

3.1. Demographics and study characteristics

A total of 90 papers (91 studies with 77,439 participants) published in the last two decades (1999–2020) met the inclusion criteria. Studies that did not report relevant information on a specific research question were not summarized in the corresponding section or tables. The characteristics of the studies are presented in Table 1. The majority of studies (63/91, 69.23%) were published in the last decade (2011–2020); they had larger sample sizes than studies from the previous decade. The average sample size was 1118 and 976 for the years 2011 to 2015 and 2016 to 2020. Most of the studies were large with 61
Table 2. Summary of cross-sectional studies.

| Study ID & Reference | Sample size | Type of social support | Measure of PTSD | Level of social support | PTSD score, M (range of possible score) | Type of traumatic event | Major results |
|---------------------|-------------|------------------------|----------------|------------------------|--------------------------------------|-------------------------|-------------|
| 1. Affrunti et al., (2018) | 96 | Support from parents and friends | CBCL – PTSD subscale | Peer support 58.59 (23–72); Parent Support 54.63 (28–73) | 65.33 (50–89) | Community violence | Correlation friend support –0.08; parent support 0.04; prediction friend support beta = −0.12; parent support beta = 0.06; moderation primary exposure x friend support beta = −0.37, primary exposure x parent support beta = 0.04, secondary exposure x parent support beta = 0.01, secondary exposure X parent support beta = −0.02 |
| 2. Aydin et al. (2016) | 182 | Perceived support from families, friends, and teachers | CPTSD-RI | NR | NR | Sexual abuse | Correlation Overall support r = −0.27***; Family support r = −0.27***; Peer support r = −0.11; Teacher support r = −0.21***; odds ratio family support 0.93; peer support 1.02, teacher support 1.00 |
| 3. Bal et al. (2009) | 100 | Received social support after a traumatic experience | TSCC | Family 11.7 (6–36); friends (6–36) | 9.4 (0–30) | Sexual abuse | Correlation r = −0.1 |
| 4. Bal et al. (2003) | 820 | Received support from family and friends; satisfaction of support | TSCC; CAPS-C | Peer support 3.12 (0–4); Family support 3.07 (0–4) | 19.08 (0–80) | Sexual abuse | Correlation Peer support r = −0.30***; family support r = −0.10***; Prediction Peer support beta = −0.29***; family support beta <0.1; Moderation peer support X exposure beta = 0.04, family support X exposure beta <0.1 |
| 5. Banks & Weems (2014)-Study 1 | 1098 | Family support and peer support | Modified PTSD-R | Peer support 3.12 (0–4); Family support 3.07 (0–4) | 19.08 (0–80) | Sexual abuse | Correlation Peer support r = −0.30***; family support r = −0.10***; Prediction Peer support beta = −0.29***; family support beta <0.1; Moderation peer support X exposure beta = 0.04, family support X exposure beta <0.1 |
| 6. Beerli et al. (2012) | 511 | Global social support | PTSD Symptom Checklist for DSM-III-R | NR | Trauma exposed group 22.86 (0–44); (46.3%)**; comparison group 16.64 (0–44); (18.5%)** | Hurricane | Prediction beta = −0.120 |
| 7. Bernard-Bonnin et al. (2008) | 134 | Sibling support, peer support and family support | CRIES | NR | Experiment group 22.86 (0–44); (46.3%)**; comparison group 16.64 (0–44); (18.5%)** | Child sexual abuse | Prediction beta = −0.16* |
| 8. Bokszczanin (2008) | 533 | Parental Support | Revised Mississippi PTSD Scale | NR | NR | Hurricane | Correlation r = −0.28***; prediction beta = −0.11***; moderation (trauma exposure X parental support-> PTSD) beta = −0.03 |
| 9. Bountress et al. (2017)** | 332 | Emotional support from family and children | NSA | 1.13 (0–2) | NR | Tornado | Correlation r = −0.118* |
| 10. Bruwer et al. (2008) | 502 | Perceived social support from family, friends, and significant other | Child PTSD Checklist | 62.94 (12–84) | 20.17 (0–84) | 0.044 | Multiple | Correlation overall r = −0.044; family support r = −0.104***; friend support r = 0.019; significant other’s support r = −0.032 |
| 11. Cohen et al. (2016)** | 352 | Support from mothers, fathers, siblings, close friends, and peers; emotional support, instrumental support and fun | NSA | NR | NR | Tornado | Correlation r = −0.31** |
| 12. Danielson et al. (2017) | NR | Support from mothers, fathers, siblings, close friends, and peers; emotional support, instrumental support and fun | NSA | 7.09 (1.67–10) | (6.30%)** | Child sexual abuse | Correlation r = −0.19***; prediction area under ROC curve 0.70** Cohen’s d = 0.74 |

(Continued)
| Study ID & Reference | Sample size | Type of social support | Measure of PTSD | Level of social support | PTSD score, M (range of possible score) OR (rate of PTSD diagnosis/%) | Type of traumatic event | Major results |
|---------------------|-------------|------------------------|----------------|-------------------------|------------------------------------------------------------------|--------------------------|--------------|
| 15 (Deane et al., 2018)* | 254 | Perceived family support | TSQ | NR | NR | Community violence | Correlation r = 0.2 |
| 16 (Derivio et al., 2014) | 917 | Satisfaction of social support | IES-R | Overall 22.43 | 16.89 (0–38)\(^5\) | Natural disaster | Correlation r = 0.284** |
| 17 (Derivio et al., 2014) | 540 | Social support from home, school, and from religious and other social organizations | PCL-C; IES-R | 22.71 (0–36) | 45.04%\(^1\) | Tornado | Correlation r = 0.153** |
| 18 (Derivio et al., 2014) | 1988 | Support from their parents and/or peers | HTQ | NR | NR | Multiple | Prediction predictor no family support B = 0.14**, predictor no peer support B = 0.01 |
| 19 (Du et al., 2018) | 4118 | Support from family, friends, and significant others | PCL-C | NR | (1.9% & 2.7% in 2 areas)\(^2\) | Tornado | Prediction Generally affected area B = −0.062***, severely affected area B = −0.027*** |
| 20 (Ellis et al., 2009) | 97 | Support from family, a special person, and friends | ASC-kids | 70.8 (12–84) | 11.16 (0–57)\(^3\) | Tornado | Correlation r = −0.11 |
| 21 (Fang Schiff and Benbenisty, 2016) | 4733 | Support from teachers and other adults at school | IES | NR | NR | Community violence | Correlation r = −0.053** |
| 22 (Gearing et al., 2015) | 86 | Caregiver support and peer support; perceived availability of functional support | UCLA PTSD-RI for DSM-IV | Caregiver support 0.5 (0–1); Peer relationship 0.67 (0–1) | 21 (0–88)\(^2\) (24%)\(^2\) | Natural disaster | Prediction logistic regression High caregiver support beta = −1.1, close peer relationship beta = −2.61** |
| 25 (Springer et al., 2007) | 106 | Family support | CPSS | 11.09 (4–16) | 38.76 (0–68)\(^3\) | Earthquake | Prediction B = −0.06, beta = −0.07 |
| 27 (Hébert et al., 2014) | 694 | Support from mother, father, siblings, peers, and extra-familial adult | Abbreviated UCLA PTSD-R | Maternal support 8.76 (0–12); Parental support 6.83 (0–12); Sibling support 1.85 (0–3); friend support 2.68 (0–3); Other adult support 1.71 (0–3) | NR | Multiple | Prediction Peer support B = −0.33*, maternal support B = −0.12**, paternal support B = −0.02, support from other adult B = 0.01, sibling support B = 0.05 |
| 30 (Jia et al., 2015) | 631 | Emotional support, instrumental support, companionship, intimacy and enhancement of worth | CPSS | 49.87 (0–80) | 15.84 (0–51)\(^3\) | Earthquake | Correlation r = −0.14*, prediction B = −0.16*** |
| 31 (Jieling & Xindun, 2017) | 618 | Emotional support, instrumental support, companionship, enhancement of worth and intimacy | CPSS | 47.18 (0–80) | 12.41 (0–51)\(^3\) | Multiple | NR |
| 32 (Jones 2007) | 71 | Cultural support: formal kinship, informal kinship, and spirituality | A/A CTS | NR | 73.41 (41–164)\(^5\) | Multiple | Correlation formal kinship = −11, informal kinship = 0.7; prediction formal kinship support on PTSD beta = −1.61*, Community violence* formal kinship support to predict PTSD beta = 2.45* |
| 33 (Kasel Dahan & Elias, 2008) | 311 | Family support | PTSD-R | NR | NR | Multiple | Correlation r = 0.098 |
| 34 (Kheirallah et al., 2020) | 418 | Support from family, friends, and significant others | PCL-C | 34.8 (12–84) | 42 | Earthquake | NR |
| 35 (Klasen et al., 2013) | 330 | Global social support | MINI-KD | 2.48 (0–4) | 8.89 (0–15)\(^1\)(0.9%)\(^1\) | Home fire | Prediction beta = 0.02 |

(Continued)
| Study ID & Reference | Sample size | Type of social support | Measure of PTSD | Level of social support | PTSD score, M (range of possible score)\(^a\) OR (rate of PTSD diagnosis/%)\(^b\) | Type of traumatic event | Major results\(^c\) |
|---------------------|-------------|------------------------|-----------------|-------------------------|-----------------------------------------------------------------------------|------------------------|------------------------|
| 36 (Klingman 2001)  | 604         | Global social support  | PTSD-Related Symptoms | NR                     | (6.30%)\(^d\)                                                                 | Sexual abuse           | Prediction Support on somatic symptom beta = 0.14*** crisis beta = 0.12** autonomic beta = 0.13** vulnerability beta = 0.11** Prediction beta = −0.26** |
| 38 (L. a Greca et al. 2013) | 116         | Support from parents, friends, teachers, and classmates | Revised PTSD-RI | 3.33 (1–4)              | 23.88                                                                        | Cyclical political instability and violence | Sexual abuse Multiple |
| 39 (L. a Greca et al. 2013) | 116         | Support from parents, friends, teachers, and classmates | Revised PTSD-RI | 3.33 (1–4)              | 23.88                                                                        | Cyclical political instability and violence | Sexual abuse Multiple |
| 43 (Leshem & Guterman 2016) | 3324        | Global social support | CRIES | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 44 (Ma et al. 2011)  | 3208        | Objective social support | CRIES | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 45 (Ma et al. 2011)  | 3208        | Objective support, subjective support and support use; social support from parents, teachers, relatives and friends | CRIES | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 47 (McCarthy & Thompson 2010) | 350         | Perceived support from parents, siblings, friends, and members of a faith group | TSCC | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 50 (Moore & Varela 2010) | 156         | Perceived support from parents, teachers, classmates, and close friends | PTSD-RI | 3.33 (1–4)              | 23.88                                                                        | Multiple |
| 51 (Morley & Kohrt 2013) | 142         | Support from family, friends, teachers, political organizations, neighbours, or NGOs | CPSS-1 | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 52 (Muller et al., 2000) | 65          | Current received social support | CCDS | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 53 (Murussi Ganser & Goldbeck 2017) | 200         | Social support from family, friends, and significant others | UCLA PTSD-R | 69.61(12–84) | 26.12 (O–88)\(^5\) | Sexual abuse | Multiple |
| 54 (Ozer & Weinstein 2004) | 349         | Perceived emotional support from mother, father, sibling, friend, and teachers | TSCC | NR | (6.30%)\(^d\) | Sexual abuse | Multiple |
| 55 (Papadatou et al. 2012) | 1468        | Perceived support from parents, siblings, teachers, close friends, peers/classmates, and church in the last 6 months | CRIES-13 | 10.77 (O–18) | 15.55 (O–65)\(^5\) | Sexual abuse | Multiple |

(Continued)
| Study ID & Reference | Sample size | Type of social support | Measure of PTSD | Level of social support | PTSD score, M (range of possible score) OR (rate of PTSD diagnosis/%) | Type of traumatic event | Major results
|---------------------|-------------|------------------------|----------------|------------------------|---------------------------------------------------------------|------------------------|------------------|
| 56 (Paul et al. 2015) | 2000        | (a) emotional social support (b) instrumental social support and (c) recreational social support from mothers, fathers, siblings, close friends, and peers | NSA            | NR                     | 2.47                                                          | War                    | Correlation r = −0.3**; prediction B = −0.55** beta = −0.27; moderation (trauma exposure X support) B = −0.03* beta = 0.01 |
| 57 (Paxton et al. 2004) | 77          | Support from family, peers, and other adults | Checklist of Post-Traumatic Stress Symptoms | 47.05 (0–90) | 58.12 (28–112)\(^5\) | Hurricane | Correlation r = 0.24; prediction B = 0.11 beta = 0.18; moderation (social support X violence exposure) B < 0.005, beta =0.06 |
| 58 (Pina et al., 2008) | 46          | Familial support, extrafamilial support and professional Support | Child PTSD checklist | NR                     | 19.78 (0–84)\(^3\) | Hurricane | Correlation familial −0.41*, extrafamilial r = −0.09, professional r = 0.14; Prediction familial support beta = −0.16, extrafamilial support beta = −0.98**, professional beta = 1.63** |
| 59 (Pinto et al. 2017) | 183         | Satisfaction and activities of social support | CPSS-V          | 41.66 (0–60) | 20.45 (0–51)\(^5\) | Hurricane | Correlation r = −0.37***; prediction B = −0.88, beta = −0.4*** |
| 60 (Ponnanperuma & Nicolson 2016) | 755        | Family members, friends, and a significant other | PTSD-RI          | 48.3 (12–84) | 15.9 (0–88)\(^5\) | Hurricane | Correlation r = −0.23; prediction B = −0.01, beta = −0.05 |
| 61 (Ponnanperuma & Nicolson 2018) | 753        | Perceived support from family members, friends, and a significant other | PTSD-RI          | 40.69 (8–56) | 17.13 (0–80)\(^5\) | Hurricane | Correlation r = −0.22; prediction beta = −0.09*, moderation (social support X trauma) B = 0.01, beta = 0.03 |
| 62 (Qin et al. 2016) | 1573        | Objective support, perceived support, and utilization of support | PTSD-SS          | NR                     | NR                     | Earthquake | Correlation r = −0.13* |
| 63 (Reyes 2008) | 61          | Perceived parent support | TSCC            | 5.15 (1–4) | 11.53 (5–162)\(^2\) | Community Violence | Correlation r = −0.23; prediction B = −0.01, beta = −0.05 |
| 64 (Roaș et al. 2017) | 7875       | Emotional support, tangible support, affectionate support, and social interaction | WHO-CIDI         | PTSD group mother support 1.84(1–4); father support 2.34(1–4); family support 2.34(1–4); friend support 1.92(1–4) | (3.40%)\(^D\) | Earthquake | PTSD & No PTSD group different levels of Social support from Mother, father, family and friend ***, Cohen's \(d = 0.32\) |
| 66 (Rubens et al. 2013) | 905        | Support from friends | DISC-IV          | NR                     | (1.10%)\(^D\) | Flood | Prediction friend support beta = −0.16 Moderation (Hurricane exposure X friend support) beta = −0.02 |
| 67 (Saeed Hassan & Husain 2011) | 193        | Received support after the disaster from mother, father, siblings, friends, neighbours, and other inhabitants | PCL-S            | NR                     | (1.0%)\(^D\) | History of physical, sexual, or emotional abuse | Correlation r = −0.15 beta = −0.17**; interaction exposure support B = .15 beta = .04 |
| 69 (Schiff Pat-Horenczyk & Peled 2010) | 570        | Perceived support from family, friends, and significant others | UCLA PTSD RI-Adolescent Version | 5.53 (1–7) | 5.06 (Low exposure group 4.6%)\(^D\) | Multiple | Predict B = −1.15 beta = −0.17**; interaction exposure *support B = .15 beta = .04 |
| 70 (Scrimin Moscardino & Natour 2014) | 167        | Perceived support from family, friends, and significant others | UCLA PTSD RI for DSM-IV | 3.0 (0–4) | 18.67 (0–81)\(^5\) | Exposure to violence | Correlation r = −0.07 prediction B = −2.15* |
| 73 (Steijnen et al. 2016) | 111        | perceived social support from family, friends, and significant others | CRIES-13         | NR                     | NR                     | Hurricane | Correlation r = −0.03 |

(Continued)
| Study ID & Reference | Sample size | Type of social support | Measure of PTSD | Level of social support | PTSD score, M (range of possible score) OR (rate of PTSD diagnosis/%) | Type of traumatic event | Major results |
|---------------------|-------------|------------------------|----------------|------------------------|---------------------------------------------------------------------|--------------------------|---------------|
| 74 (Suomalainen et al. 2011) | 757 | Perceived social support from family and friend | IES | NR | NR | Multiple | NR |
| 75 (Thabet et al. 2009) | 412 | Parent support | SCID | 46.9 (0–100) | (30.80%) | Exposure to | Correlation: Parenting support & PTSD: r = –0.34***; prediction: Parenting support on PTSD; Beta = –0.33*** |
| 76 (Tian et al. 2014) | 4604 | Support from family members, friends, and others received crisis support | CRIES-13; TSRC | crisis support 29.91 (7–49); current support 29.41 (7–49) | TSRC 5.59 (0–39); CRIES 11.7 (0–65) | Community Violence | Correlation: r = 0.22, prediction: NS |
| 77 (Tiersens et al. 2012) | 3007 | Emotive support, instrumental support, companionship, affective evaluation, and intimacy | PCL-5 | NR | 13.87 (0–60) | Multiple | Correlation: r = 0.09; prediction: r < 0.169; B = 0.026 |
| 78 (Wang Wu & Tian 2018) | 706 | Emotional support, instrumental support, companionship, affective evaluation, and intimacy | CPSS | NR | NR | Tornado | Correlation: r = 0.22, prediction: NS |
| 79 (Yuan et al. 2016) | 247 | Crisis support; perceived social support after trauma | HTQ Part IV | crisis support 33.16 (7–49); current support 33.61 (7–49) | 51.62 (30–120) | Community Violence | Correlation: r = 0.22, prediction: NS |
| 80 (Zerach & Elkil 2020) | 390 | Crisis support; perceived social support after trauma | PCL-C-Chinese Version | NR | 33.64 (17–85) | Hurricane | Psychological consultation: Beta = 0.049; Material support: Beta = 0.053 |
| 81 (Zhang et al. 2011) | 1976 | Material and psychological support | PCL-5 | 47.88 (0–80) | 17.3 (0–60) | Multiple | Correlation: r = 0.22, prediction: NS |
| 82 (Zhen et al. 2016) | 951 | Emotive support, instrumental support, companionship, affective evaluation, and intimacy | CPSS | 2.4 (0–4) | 0.76 (0–3) | Tsunami | Correlation: r = 0.22, prediction: NS |
| 83 (Zhou Wu & Zhen 2017) | 315 | Emotional support, instrumental support, companionship, affective evaluation, and intimacy | PCL-5 | 49.38 (0–80) | 14.96 (0–60) | Tsunami | Correlation: r = 0.22, prediction: NS |
| 84 (Zhou Wu & Zhen 2018) | 397 | Emotional support, instrumental support, companionship, affective evaluation, and intimacy | PCL-5 | 49.38 (0–80) | 14.96 (0–60) | Tsunami | Correlation: r = 0.22, prediction: NS |
| 85 (Khurshid Irshad & Gul 2020) | 561 | Perceived social support from family, friends, or significant others | The Children’s Revised Impact of Event Scale-13 | NR | NR | Flood | Predicition: Overall support B = .11***; Family support B = .003; Peer support B = .14***; Other support B = .08 |
| 86 (Lee et al. 2004) | 261 | Information, emotional, and material support from parents, peers, and teachers | PTSD Reaction Index | NR | NR | Typhoon | Correlation: r = 0.18***; Prediction: B = 0.13* |
| 87 (Wang et al., 2020) | 597 | Emotional support, instrumental support, companionship, affective evaluation, and intimacy | PTSD Checklist for the DSM-5 | Intrusion: 2.53; Avoidance: 0.79; Negative alterations in cognition and mood: 4.26; Alterations in arousal and reactivity: 4.82 | Earthquake | Correlation: Intrusion: B = 0.04; Avoidance: B = 0.01; Other alterations in cognition and mood: B = 0.08; Alterations in arousal and reactivity: B = 0.03 |
| 88 (Weiler & Taussig 2019) | 156 | Support from peers, caregivers, and mentors | Trauma Symptom Checklist for Children | Intrusion: 2.53; Avoidance: 0.79; Negative alterations in cognition and mood: 4.26; Alterations in arousal and reactivity: 4.82 | Earthquake | Correlation: Intrusion: B = 0.04; Avoidance: B = 0.01; Other alterations in cognition and mood: B = 0.08; Alterations in arousal and reactivity: B = 0.03 |

(Continued)
Table 2. (Continued).

| Study ID & Reference | Sample size | Type of social support | Measure of PTSD | Level of social support | PTSD score, M (range of possible score) b OR (rate of PTSD diagnosis%) c | Type of traumatic event | Major results c |
|---------------------|-------------|------------------------|-----------------|-------------------------|-----------------------------------------------------------------|------------------------|----------------|
| 91 (Zhai et al. 2015) | 5765        | Family support         | Chinese version of the Essen Trauma Inventory for Kids and Juveniles (ETI-KJ) (Tagay et al., 2007) | NR                      | (1.65%)d                                                            | Multiple               | Correlation = −.256**, Prediction t = −4.169*** |

A/A CTS = Angie/Andy Cartoon Trauma Scales; ASC-kids = Acute Stress Checklist for Children; CAPS-C = Clinician-Administered PTSD Scale for Children and Adolescents; CASSS = Child and Adolescent Social Support Scale; CBCL = The Child Behavior Checklist – PTSD subscale; CCDS = Checklist of Children’s Distress Symptoms: Self Report Version; CPSS = Child PTSD Symptom Scale; CPTS-RI = Child Post-Traumatic Stress Reaction Index; CRIES = Children’s Revised Impact of Event Scale; HTQ = Harvard Trauma Questionnaire; K-SADS-PL = Affective Disorders and Schizophrenia for School-Age Children; MINI-KID = Mini International Neuropsychiatric Interview – adolescent version; NSA = PTSD module from the National Survey of Adolescents; PCL-S = PTSD Checklist for DSM-5; PCL-C = PTSD Checklist-Civilian Version; PCL-S = PTSD Checklist Specific; PTSD-RI = Posttraumatic Stress Reaction Index for Children; PTSD-SS = PTSD Self-Rating Scale; RPI = Reintegration Process Instrument; SCID = Structured Clinical Interview for DSM-IV Disorders; TSQ = Trauma Symptom Questionnaire; TSCC = The Trauma Symptom Checklist for Children; UCLA PTSD-RI = University of California at Los Angeles PTSD Reaction Index; WHO-CIDI = World Health Organization Composite International Diagnostic Interview.

aStudies 11 13 15 61 62 are cross-sectional for the variables of interest (SS & PTSD).

bM: support from multiple sources; F: support from Family (i.e. parents, kinship, and siblings); PE: support from peers (i.e. friends, other children/adolescents, and classmates); PR: support from professionals (i.e. service professionals, teachers); O: support from others; NR: Not Reported.

cMajor results include effect sizes from correlational analysis, moderation/mediation analysis, and regression analysis that examine the association between SS and PTSD symptom score; * indicates p < .05; ** indicates p < .01.

Asterisks represent the significance of the outcome; *represents p < 0.05; **represents p < 0.01; ***represents p < 0.001; ****represents p < 0.00001; if the study report the effect was significant but no p value, * was used to identify this significant effect.
| Study ID & Reference | Sample size | Measure of PTSD | Type of social support | Time of measuring SS | Level of PTSD | Time of measuring PTSD | Level of SS | Traumatic events | Major results |
|---------------------|-------------|-----------------|------------------------|----------------------|--------------|------------------------|-------------|-----------------|---------------|
| 5. Bal et al. (2005) | 100         | TSCC            | Received social support after a traumatic experience | T1, T2 (6 months after T1) | NR           | T1, T2                 | T1 3.483 (7–49); T2 3.505 (7–49) | Sexual abuse | Correlation $r = −0.35^*$; prediction beta = −0.31**, beta = −0.26** |
| 7. Banks & Weems (2014)- Study 2 | 192         | Modified PTSD-RI | Family support and peer support | T1 (24 months after Hurricane) | T1 24.15 (0–80); T2 23.09 (0–80)$^a$ | T1; T2 = approximately 30 months after Katrina | Peer support 2.97 (0–4); Family support 3.32 (0–4) | Hurricane | Correlation peer support & PTSD(T1) $r = −0.35^*$, family support & PTSD(T1) $r = −0.33$, peer support & PTSD(T2) $r = −0.31^*$, family support & PTSD(T2) $r = 0.01$; prediction peer social support on PTSD(T2) beta = −0.12, family support on PTSD (T2) beta = −0.02 |
| 23 (Geng et al. 2018) | 1573        | PTSD-SS         | Objective support, subjective support, and utilization of social support | T1 (6 months after earthquake); T2 (18 months after earthquake) | T1 38.9 (24–120)$^b$; T2 34.4 (24–120)$^b$ | T1; T2 | NR | Earthquake | NR |
| 24 (Greenberg & Keane 2001) | 56         | PTSD-RI         | Family support | NR                       | NR | 5 months and 9 months after fire | NR | Home fire | Prediction family support beta = −0.32* |
| 26 (Hall et al. 2014) | 176         | CPSS            | Material, emotional, Guidance, and play support | T1 (baseline);T2 (6 weeks follow up);T3 (4 months follow up) | T1 16.30 (0–51)$^b$; T2 13.82 (0–51)$^b$; T3 10.67 (0–51)$^b$ | T1; T2; T3 | T1 12.63 (0–20); T2 13.83 (0–20); T3 13.64 (0–20) | Cyclical political instability and violence | NR |
| 28 (Hitchcock et al. 2015) | 97          | CAPS; CPSS      | Parental perceptions of social support; children's perception of support from family, a special person and friends | T1 (1 month after trauma); T2 (6 month after trauma) | Child Posttraumatic Stress 11.16 (0–51)$^b$; CAPS follow-up 13.22 | CAPS at T2, CPSS at T1 | NR | Multiple | NR |
| 29 (Jensen et al. 2019) | 118         | CPSS            | Functional social support | T1 (6 months after arrival); T2 (2 years after arrival); T3 (5 years after arrival) | NR | T3 | T3 28.58 (7–35) | Unaccompanied minor refugees in Norway | Prediction coefficient = −0.25 |
| 37 (Kuterovac-Jagodic 2003) | 252         | QPTSR-C         | Instrumental support, emotional support, support for self-esteem | T1 | T1 36.12 (20–60)$^b$; T2 32.10 (20–60)$^b$ | T1; T2 (30 months after T1) | 57.04 (20–80) | War | Prediction beta = −0.21* |

(Continued)
| Study ID & Reference | Sample size | Measure of PTSD | Measure of PTSD | Type of social support | Level of PTSD | Time of measuring PTSD | Level of SS | Traumatic events | Major results |
|----------------------|-------------|-----------------|-----------------|------------------------|---------------|-----------------------|------------|-----------------|---------------|
| 39 (La Greca Lai Llabre et al. 2013) | 568 | PTSD-RI | | Social support from parents, classmates, teachers, and close friends | NR | T1; T2; T3 | NR | Hurricane | NR |
| 40 (La Greca Silverman et al. 2010) | 384 | PTSD-RI | | Family and peer/ friend support | T1 19.81; T2 17.71 | T1; T2 | T1 3.2 (1–4); T2 3.24 (1–4) | Hurricane | Prediction SS(T2) on PTSD (T2) coefficient = −0.22 |
| 41 (Lai et al. 2015) | 353 | The UCLA PTSD RI- Revision 1 | | Support from parents, teachers, and peers | T1 17.62 (0–72) | T1; T2 | (14–17 months post disaster) | NR | Hurricane | NR |
| 42 (Lai et al. 2018) | 426 | UCLA-PTSD RI-Revision 1 | | Support from parents, teachers, friends, and classmates | T1 1.08 (0–4); T2 0.86 (0–4); T3 0.75 (0–4); T4 0.63 (0–4) | T1; T2; T3; T4 | Parent support 3.34–3.52 (1–4); teacher support 3.18–3.3 (1–4); peer support 3.12–3.38 (1–4) | Hurricane | Correlation teacher support r = −0.08–−0.23; peer support r = −0.14–0.39 |
| 46 (Martin et al., 2016) | 239 | CPSS | | Friendship social support (positive and negative aspects of close relationships) | 5.55 | 10 days after flood | NR | Flood | Correlation friend support 0.11; prediction friend support B = 0.02, beta = 0.03 |
| 48 (Meiser-Stedman et al. 2014) | 90 | ADIS; CRIES | | Global social support | T1 0.019 | T1; T2 | (6 months after trauma) | Multiple | Correlation r = 0.30** |

(Continued)
| Study ID & Reference | Sample size | Measure of PTSD | Type of social support | Time of measuring SS | Level of PTSD | Time of measuring PTSD | Level of SS | Traumatic events | Major results |
|---------------------|-------------|-----------------|------------------------|---------------------|--------------|------------------------|-------------|-----------------|--------------|
| 65 (Rosario Salzinger, Feldman & Ng-Mak 2008) | 667 | DICA-R | Social support from guardians and peers | 3 annually (T1; T2; T3) | T2 13.88 (0–72); T3 11.28 (0–72) | T2; T3 | Guardian support 4.11–4.34 (1–5); peer support 3.98–4.08 (1–5) | Community Violence | Correlation Support (T1) & PTSD (T2) guardian support r = −0.11*, peer support r = −0.04; support (T2) & PTSD (T2) guardian support r = −0.24**, peer support r = −0.16**; SS(T1) & PTSD (T3) guardian support r = −0.08; peer support r = −0.01; support (T2) & PTSD (T3) guardian support r = −0.12*; peer support r = −0.04; support (T2) & PTSD (T3) guardian support r = −0.15**; peer support r = −0.10*; Prediction PTSD (T2) & Social support (T1) guardian support for boys beta = −0.04, girls beta = −0.00; peer support for boys beta = 0.02, girls beta = −0.01; PTSD (T2) & Social support (T1) guardian support for boys beta = −0.12, girls beta = −0.12, peer support for boys beta = −0.23**, girls beta = −0.13; PTSD (T3) & Social support (T1) guardian support boys beta = 0.07, girls beta = −0.09, peer support boys beta = −0.03, girls beta = 0.04 |
| 68 (Salloum & Overstre 2012)* | 72 | UCLA-PTSD RI | Perceived social support from family, friends and significant others | T1 (3 years post hurricane, pre-treatment); T2 (post-treatment); T3 (3 months f/u); T4 (12 months f/u) | Experiment Group T1 46.82 (0–88); T2 31.18 (0–88); T3 29.88 (0–88); T4 24.74 (0–88); Control Group T1 42.90 (0–88); T2 27.57 (0–88); T3 26.30 (0–88); T4 25.53 (0–88) | T1; T2; T3; T4 | Experiment Group T1 48.03 (12–60), T2 47.68 (12–60), T3 50.76 (12–60), T4 49.41 (12–60); Control Group T1 45.53 (12–60), T2 48.23 (12–60), T3 48.40 (12–60), T4 49.57 (12–60) | Multiple | NR |
| 71 (Shechtman & Mor 2010)* | 164 | CPTS-RI | Perceived support from family, friends, and significant others | T1 (pre-treatment); T2 (post-treatment) | Experimental group T1 1.86 (0–4); T2 1.40 (0–4); Control group T1 2.03 (0–4); T2 1.81 (0–4) | T1; T2 | Experimental group T1 5.27 (1–7); T2 5.63 (1–7); Control group T1 5.37 (1–7); T2 5.65 (1–7) | War | NR |
| 72 (Sheerin et al. 2019) | 707 | NSA | Received emotional support and recreational support from family, friends, and other peers | T1 (baseline) | Baseline 3.69 (16.6%); T2 (4 months f/u); T3 (12 months f/u) | T1; T2 | Emotional support 6.9 (0–10); Recreational support 8.1 (2–10) | Tornado | Correlation recreational support r = −0.29**, emotional support r = −0.16**; Prediction recreational support B = −50**, emotional support B = −12 |

(Continued)
| Study ID & Reference | Sample size | Measure of PTSD | Type of social support | Time of measuring SS | Level of PTSD | Time of measuring PTSD | Level of SS | Traumatic events | Major results |
|---------------------|-------------|----------------|------------------------|----------------------|--------------|------------------------|-------------|----------------|--------------|
| 78 (Tol et al. 2010)* | 403         | CPSS           | Material, emotional, guidance, and play social support | T1 (pre-treatment), T2 (1 week post-treatment); T3 (6 months post-treatment) | 21.7 (0–51)** | T1; T2; T3             | T1 Peers social support 0.57 (0–5); Emotional social support 3.96 (0–5); Play social support 3.78 (0–5) Mean change in peer social support 0.06; emotional social support –0.11; play social support 0.17 (significant change**) | 1.79 (0–5) | Political violence | **Mediation peer support on treatment coefficient = .016**, play support on treatment coefficient = .022** |
| 80 (Wu et al. 2009)  | 705         | UCLA PTSD-RI for DSM-IV | Supportive relationship and detrimental relationships from teachers, family and peers | NR | NR | NR | 47.59 (18–72) | Earthquake | NR |

ADIS = PTSD Schedule of the Anxiety Disorders Interview Schedule; CAPS-C = Clinician-Administered PTSD Scale for Children and Adolescents; CPSS = Child PTSD Symptom Scale; CPTS-RI = Child Post-Traumatic Stress Reaction Index; CRIES = Children’s Revised Impact of Event Scale; DICA-R = Diagnostic Interview for Children and Adolescents-Revised; NR = Not reported; NSA = PTSD module from the National Survey of Adolescents; PTSD-R = Posttraumatic Stress Reaction Index for Children; PTSD-SS = PTSD Self-Rating Scale; QPTSR-C = Questionnaire for Examination of Posttraumatic Stress Reactions in Children; TSC = The Trauma Symptom Checklist for Children; TSQ = Trauma Symptom Questionnaire; UCLA PTSD-RI = University of California at Los Angeles PTSD Reaction Index.

(a) Study ID 68, 71, and 78 originally used interventional design (i.e. quasi-experiment design or RCT); these studies are categorized in cohort group, as SS was not within major purpose of the intervention.
(b) M: support from multiple sources; F: support from family (i.e. parents, kinship, and siblings); PE: support from peers (i.e. friends, other children/adolescents, and classmates); PR: support from professionals (i.e. service professionals, teachers); O: support from others; NR: Not Reported.
(c) See Additional File 3 (online supplementary data) for reference list.

*The asterisk represents the significance of the outcome; * represents $p < 0.05$; ** represents $p < 0.01$; *** represents $p < 0.001$; **** represents $p < 0.0001$; if the study report the effect was significant but no $p$ value, * was used to identify this significant effect.
studies (67.03%) having 100 to 1000 respondents (M = 411), and 17 studies examining more than 1000 children or adolescents. Over a third of the studies were conducted in North America (n = 34/90, 37.78%) and Asia (35/90, 38.89%). Most studies (70/91, 76.92%) were cross-sectional and 21 studies (23.08%) employed longitudinal designs. The majority (66/84, 78.57%) of the studies targeted adolescents (around or over 12 years of age) rather than children. In regards to the specific trauma exposure in the populations, 81.32% (74/91) of the investigations were focused on a single traumatic exposure of the population, comprising natural disasters (40/91, 43.96%), childhood abuse, violence, or maltreatment (19/91, 20.88%); 11/91 (12.09%) examined trauma from war or political conflicts. Seventeen studies (17/91, 18.68%) reported multiple traumatic exposures in their samples. Over half (50/88, 56.82%) studied social support from multiple sources (e.g. peers, family members, professionals, and materials). The second most common source being explored was family support (36/88, 40.91%); peer support was examined in 29.55% (26/88) of the studies. Most studies (87/91, 95.60%) investigated global social support; a few (4/91, 4.40%) studies assessed social support in response to the children and/or adolescents’ traumatic exposure.

### 3.2. Overview of the cross-sectional studies

#### 3.2.1. Critical appraisal of the cross-sectional studies

Good overall quality was observed in studies using a cross-sectional design, M = 4.57 (SD = 0.92, range = 2–6), as assessed by 6 items in the JBI cross-sectional appraisal checklist (i.e. Q1, Q2, Q3, Q5, Q7, and Q8; scale range = 0–6) (Takkouche et al., 1999). As presented in Figure 2(a), there was an overall detailed description of study settings (67/72, 93.06%), reliable measurement (62/72 for condition measure and 67/72 for outcome measure), and appropriate data analysis strategies (57/72, 79.17%) employed. Inclusion and exclusion criteria for the studies were not clarified thoroughly in 54 of the 72 cross-sectional studies.

#### 3.2.2. Characteristics of the cross-sectional studies

Characteristics of all cross-sectional studies are presented in Table 2. Children’s perceived social support from

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**Table 2:**

| Characteristics | Number of Studies |
|-----------------|-------------------|
| Overall quality | M = 4.57 (SD = 0.92, range = 2–6) |
| Inclusion criteria | 54/72 |
| Exclusion criteria | 54/72 |
| Study setting | 67/72, 93.06% |
| Reliable measurement | 62/72 |
| Appropriate data analysis strategies | 57/72, 79.17% |

**Figure 2:** Critical appraisal results for studies. (a) Critical appraisal for cross-sectional studies. (b) Critical appraisal for longitudinal studies. (a) Depicts critical appraisal results for cross-sectional studies; (b) Describes critical appraisal results for longitudinal studies. Numbers and percentages in each bar refer to the number and percentage of studies that met the quality assessment criteria as described in the left vertical axis.
multiple sources (i.e. family, peers, professionals, and others) was examined most frequently (51.43%, n = 36 of 70); among the 30 studies that examined the specific source of support, family (i.e. parents, kinship, and siblings) support was measured by most studies (37.14%, 26 out of 70). Support from teachers was examined and reported by five studies. The most widely-used instruments, including full scales and subscales to measure levels of social support, were the Multidimensional Scale of Perceived Social Support Scale (MSPSS) (18.57%, 13/70) and The Perceived Social Support Scale (PSSS) (10%, 7/70) (Procidano & Heller, 1983; Zimet, Dahlem, Zimet, & Farley, 1988).

3.2.3. Association between social support and PTSS in cross-sectional studies

Among cross-sectional findings, 42/70 studies reported correlational coefficients between SS and PTSS, without our classification of the type of social support. There were varied outcomes across different types or sources of the social support, which implies that a single summary of the direction and magnitude of this association may be oversimplified. 57.14% (24/42) found significant correlational effects (effect size range $r = [-.37, .28]$); the remaining 18/42 (42.86%) did not find significant effects. Fourteen out of twenty-four significant findings (58.33%) reported significantly negative correlation coefficients (i.e. more support was correlated with less symptomatology); the remaining 10 reported significantly positive correlation coefficients.

Thirty-three studies examined the association between overall SS and PTSS, with 18 correlation coefficients being statistically significant (effect size range $r = [-.37, .28]$); 14 studies found a significantly negative correlation between the two variables. The pooled coefficient $r$ for correlation between global social support and PTSS in correlational studies was $-0.09$, 95% CI $[-0.15, -0.03]$, $p < .01$, with a statistically significant heterogeneity, $Q (29) = 639.7, I^2 = 96.0\%$, $p < .001$.

There were 10 studies on the specific association between family support and PTSD; 7 revealed significant coefficients (effect size range $r = [-.41, -.10]$). All of them reported negative correlation coefficients meaning that higher perceived family support was associated with lower PTSS. The pooled correlation coefficient $r$ was $-0.12$, 95% CI $[-0.20, -0.04]$, $p < .005$, with a statistically significant heterogeneity, $Q(13) = 70.11, I^2 = 83.1\%$, $p < .0001$.

Seven studies examined the specific association between perceived support from peers and PTSS with three significant correlational coefficients and effect sizes ranging from $-0.3$ to $0.14$. Two of the significant effect sizes were negative. The pooled correlation coefficient was $-0.08$, 95% CI $[-0.19, -0.07]$, $p = .143$, with a statistically significant heterogeneity, $Q(7) = 80.50, I^2 = 86.3\%$, $p < .0001$. Five studies examined the association between support from teachers and PTSS. Only 3 of the studies reported the correlational coefficients, ranging from $0.00$ to $-0.21$. The pooled correlational coefficients were not calculated due to insufficient evidence.

Three studies (i.e. study ID 3, 77, 82) examined social support directly related to trauma exposure. All three studies used the Crisis Support Scale (CSS; Elklit, Schmidt Pedersen, & Jind, 2001). They all found a weak negative association between crisis support and participants' posttraumatic stress symptoms, with correlations ranging from $-0.1$ to $-0.15$. One study (i.e. study ID 83) reported the effects of specific types of social support on PTSS; it found significantly positive association between psychological consultation support and PTSS ($\beta = 0.049, p < .01$) and significantly negative association between material support ($\beta = -0.053, p < .01$).

A further inspection of how levels of social support affected the presence or absence of PTSD diagnosis did not yield clear results. This is because: (1) there were only a few studies reporting the information (i.e. study ID 22, 45, 64, and 76), and (2) the reported forms of effect sizes were not consistent. For example, the study ID 45 and 76 recorded PTSD among their defined high social support groups, they found the odds ratios were 0.89 and 0.977, respectively. The Cohen’s d (i.e. the difference between social support levels in the PTSD group and no PTSD group) from the study ID 64 was 0.32.

3.3. Overview of longitudinal studies

3.3.1. Critical appraisal of longitudinal studies

As shown in Figure 2(b), a moderate level of quality was found in the longitudinal studies, $M = 5.90$ ($SD = 0.97$, range $= 4–7$), as assessed by 8 items in the appraisal checklist (i.e. Q3, Q4, Q5, Q7, Q8, Q9, Q10, and Q11; range $= 0–8$), as shown in Figure 2(b). The 21 studies showed good quality in the measurement of social support (i.e. Q3; 21/21), PTSS (i.e. Q7; 21/21), confounding factors (21/21), and the setting of follow-up time intervals (18/21). Few studies stated follow-up loss (8/21) and strategies to address the loss during the follow-up time (0/21).

3.3.2. Characteristics of longitudinal studies

The characteristics of longitudinal studies are presented in Table 3. After the screening process, 21 longitudinal studies met the inclusion criteria. Of the 19 reported times of measurement for social support, 13 (68.42%) measured more than once, typically with a time interval between six weeks and one year. For the studies measuring a specific source of support, emotional support from family (7/21, 33.33%) was more frequently measured than the other sources of support (i.e. from peers or professionals). Another trend that repeats findings in cross-sectional studies is that of the 13 studies that reported the average and the range of social support levels, 92.31% (12/13) found that the children/adolescents
perceived moderately high levels of support. For the studies showing scores on perceived social support over time (Study ID 5, 26, 40, 42, 65, 68, 71, 78), a relatively stable tendency was found.

Nineteen studies (15/21, 71.43%) measured PTSS more than once, typically with the same time intervals as those for social support. Five out of 21 studies were conducted among hurricane survivors. Participants showed an overall decrease in PTSS over time, as suggested by six observational longitudinal studies (study ID 7, 23, 26, 37, 42, and 65).

In total, three studies delivered a psychological intervention for PTSS (study ID 68, 71, and 78), two of which (study ID 68 and 71) compared perceived support among experimental groups and control groups, with both experiencing increasing support over time. These two studies reported both the pre-treatment and post-treatment outcomes of PTSS and compared the changes among the treatment group and the control group. Both groups showed less severe symptoms after treatment.

### 3.3.3. Associations between social support and PTSS in longitudinal studies

Inspection of the longitudinal studies indicates that the correlation between overall SS and PTSS was only reported by two studies, both with significant findings (effect size range $r = [-.35, .30]$). Five studies used a regression model between overall SS and PTSS; all reported a negative coefficient (i.e., higher SS predicted less severe symptoms). Four out of five studies indicated that SS was a significant negative predictor of PTSS (effect size range $\beta = [-.32, -.21]$). A notable finding from the interventional studies is that the participants’ perceived level of social support showed an increasing trend over time regardless of the treatment condition (experimental group versus control group).

One study (i.e. study ID 5) assessed social support in response to traumatic events using the Crisis Support Scale (CSS; Elklit et al., 2001). It found a significantly moderate negative correlation ($r = -.35$, $p < .01$) between crisis support and the development of PTSS among the participants. The prediction model revealed that trauma-related support was a negative predictor of PTSS ($\beta = -.31$, $p < .01$). Moreover, one study (i.e. study ID 72) showed the outcome of the specific type of support and its effect on PTSS. It revealed that both recreational support (i.e. the support that children/adolescents received from others when they wanted to have fun) and emotional support showed a significantly negative association with PTSS, $r = -.29$ and $-.16$, respectively. Concerning presence of PTSD, only one longitudinal study (i.e. study ID 13) noted the effect of levels of social support on dichotomous PTSD outcomes. It revealed that high levels of social support significantly increased the likelihood of developing PTSD, $odds\ ratio = 1.3$.

### 3.3.4. Association between social support and PTSS by study characteristics

The association between social support and PTSS was further examined with participant age group and type of trauma exposure in mind. This was conducted to examine the effect of development timing and trauma on the relationship between PTSS and social support. For the age group 6 to 12 years, the association between social support and PTSS was not consistent, and the evidence was not sufficient to conclude. Two articles investigating the association between global support and PTSS were available ($r = .098$ and .18, respectively). For peer support, the correlation to PTSS was between $-.35$ and .11 (3 negative and 1 positive coefficients). Family support included 3 positive and 3 negative coefficients, $effect\ size\ range\ r = [-.41, .07]$.

For the adolescent group more studies were available ($n = 66$). The range of the correlation effect sizes between PTSS and global social support were $r = [-.35, .28]$; the pooled correlation effect size $r$ was $-.10$, 95% CI $= [-.16, -.03]$, $p < .01$, with a statistically significant heterogeneity, $Q(28) = 555.61$, $I^2 = 95.5\%$, $p < .0001$. Six articles on peer support illustrated 3 positive and 3 negative coefficients with PTSS ($range\ of\ the\ effect\ size\ r = [-.30, .14]$). For family support, the negative correlation with PTSS was more evident, as indicated by 7 articles with 6 negative correlation coefficients and 1 positive coefficient, $range\ of\ the\ effect\ size\ r = [-.34, .04]$.

Classified by participants’ type of trauma exposure, 5 subgroups were formed: (1) natural disaster, (2) violence, abuse, and/or maltreatment, (3) multiple traumas, (4) war and political conflicts, and (5) other trauma. The association between global social support and PTSS in the natural disaster group had 13 negative and 5 positive coefficients, $range\ of\ the\ effect\ size\ r = [-.31, .28]$; the pooled correlation effect size $r$ was $-.08$, 95% CI $= [-.17, .01]$, $p = .07$, with a statistically significant heterogeneity, $Q(16) = 462.32$, $I^2 = 96.6\%$, $p < .0001$. The correlation of PTSS with family support and peer support illustrated a similarly negative direction (family support $effect\ size\ range\ r = [-.41, .01]$, 3 negative and 1 positive coefficients; peer support, $effect\ size\ range\ r = [-.39,.11]$, 3 negative and 1 positive coefficients).

For participants who were exposed to violence, abuse, and/or maltreatment, the direction of the correlation between global support and PTSS was less consistent ($range\ of\ the\ effect\ size\ r = [-.35,.24]$), 4 negative and 2 positive effect sizes; the pooled correlation effect size $r$ was $-.12$, 95% CI $= [-.28, -.05]$, $p = .15$, with a statistically significant heterogeneity, $Q(5) = 27.25$, $I^2 = 84.1\%$, $p < .0001$. The trend of a negative association with PTSS was found in peer support ($range\ of\ the\ effect\ size\ r = [-.24,.14]$) 7 negative, 2 positive) and family support ($range\ of\ the\ effect\ size\ r = [-.27,.18]$, 11 negative 2 positive). For children and adolescents who experienced multiple traumatic events, more negative than positive correlations were found between global social support
and PTSS (negative: $n = 6$; positive: $n = 2$; range of the effect size $r = [-.37, .30]$). The associations between other types of social support and PTSS and the associations assessed in other trauma-exposed groups were not synthesized as no sufficient evidence could be identified.

4. Discussion

4.1. Overview

This review mapped out the evidence of the last two decades on what role social support plays in the development of PTSS among children and adolescents. To our knowledge, this is the first work that systematically reviewed the specific effect of both global and different sources of SS among children and adolescents with PTSS. The previous review from Trickey et al. (2012) focused on all risk factors and only identified 3 studies on social support. We were able to include a large number of studies ($n = 90$) with a large number of research participants ($N = 77, 439$) in this review. The majority of the studies showed an overall good quality, especially in the assessment of SS and PTSS.

4.2. Discussion of findings

The first major finding was that the examination of global/general social support revealed a significantly negative, but weak, association with PTSS. This means that higher levels of global social support were linked to lower levels of posttraumatic stress symptoms. This finding replicated outcomes of previous systematic reviews from other populations (i.e. adults; DiGangi et al., 2013), earthquake survivors (Alipour & Ahmad, 2020), cancer patients (Shand, Cowlishaw, Brooker, Burney, & Ricciardelli, 2015), and longitudinal studies (Wang, Chung, Wang, Yu, & Kenardy, 2021). Furthermore, this review found that the source of SS can be a determinant of the direction and magnitude of the effect of SS on PTSS. Most studies of familial support showed it has a protective effect, while studies of peer support revealed ambivalent results. This is in line with the previous review on the relationship between SS and general well-being among these age groups (Sen et al., 2010). Sen et al. (2010) found that, in contrast with peer support, familial support manifested a stronger association with well-being. The importance of family support and environment in one’s early development has also been suggested by many other studies (Ozer, 2005; Rhee, Belyea, & Brash, 2010). Research that compared support from family and peers further revealed the unique role of family to provide social resources (Barrera & Li, 1996).

Longitudinal research about the course of PTSS over time shows decreasing symptoms, which might reflect the fact that this review included samples with moderate to high levels of SS and that some studies even revealed a slight increase in the level of SS. A bidirectional mechanism might explain these changes. We found that in longitudinal studies, higher levels of perceived SS negatively predict PTSS (Andrews, Brewin, & Rose, 2003; Vranceanu, Hobfoll, & Johnson, 2007). This suggests that there was a positive impact of supportive social networks and relationships on the course of PTSS later on. On the other hand, the onset of mental health disorders like PTSS may interfere with one’s social life, including disruption of interpersonal relationships (Laffay, Cavella, Drescher, & Rosen, 2008). Therefore, the amelioration of such symptoms may also manifest in the improvement of their social interaction (Schnurr & Lunney, 2016). The finding of a protective role of SS in the longitudinal studies suggests that SS may need a period of time to exert its impact on the remission of PTSS. A cross-sectional design might mask the protective role of SS as both SS and PTSS were assessed at the same time period (Ellis, Nixon, & Williamson, 2009). Due to the limited amount of longitudinal evidence, more longitudinal observations are required to replicate these findings.

To determine the relationship between social support and PTSS, it is essential to specify the concept of social support. Otherwise, the effect might be shaded; for example, in all cross-sectional studies, 58% of the significant findings indicate negative correlations and the remaining found positive correlations between social support and PTSS. A possible explanation of the existence of the positive correlations might imply an interactive relationship. Children and adolescents might seek more social support when experiencing more severe symptoms. A recent study by Seto, Rodrigues, Ham, Kirsh, and Hilton (2020) also discovered that PTSS can be a positive predictor of seeking social support.

There was obvious heterogeneity of the literature regarding the association between social support and PTSS among participants under 18 years old. Firstly, the broad notion of social support added conceptual heterogeneity (Fiore, Coppel, Becker, & Cox, 1986). Except for the source and type of support discussed in the current review, the umbrella term ‘social support’ was used to describe factors such as satisfaction of received support (Derivios, Cénat, & Mérissier, 2014), perceived strength of support (Deane et al., 2018), availability of support (Bal et al., 2003), negative social interaction (Martin, Felton, & Cole, 2016), crisis support (Bai, De Bourdeaudhuij, Crombez, & Van Oost, 2005), and tangible support (Muller, Goebel-Fabbri, Diamond, & Dinklage, 2000) as presented in the reviewed papers. The second aspect is the methodological heterogeneity – various associations were reported between social support and PTSS. Except for correlational relationships, most of the reviewed articles also examined the effect of social support as a predictor, a moderator or a mediator for PTSS. The complication of the designs and the confounding factors increased the difficulty of knowledge synthesis, especially for quantitative outcomes.
A third domain of the heterogeneity was presented in the meta-analysis of the effect size outcome. This statistical heterogeneity illustrated that study results varied not only for different forms of social support but also within the same type of support (e.g. family support or peer support) and that due to the heterogeneity, the dataset was not ideal for meta-analysis.

4.3. Implications
The conceptual, methodological, and statistical heterogeneity of the studies has several implications. First, this review highlights the importance of clarifying the type of social support during the conceptualization of a research question in this domain. Second, the classification of study designs, methods, and form of reported coefficients are needed to clarify ambiguity in the field.

A practical implication regarding the protective role of family support is to consider long-term policies that strengthen social resources for parents and enable parents’ competence in supporting their offspring. However, current evidence is limited that social support interventions reduce PTSD symptoms following trauma. Longitudinal designs should be implemented when exploring the effects of SS as cross-sectional designs are insufficient to observe causal relationships between SS and PTSD. Experimental studies, e.g. randomized controlled trials, could elucidate strong causal relationships between some forms of social support and PTSD. While encouraging parents to withhold support for their children in the face of trauma would be unethical, interventions to bolster naturally occurring social support are possible.

4.4. Knowledge gaps, limitations, and future directions
This review identified knowledge gaps that future research could illuminate. So far, existing evidence was more focused on emotional support from family and friends, while other types of support (e.g. instrumental and informational support) were rarely discussed. Future studies are warranted to expand the scope of the support, particularly concerning other forms of support. There was a paucity of knowledge on several specific topics, including (1) the influence of social support on the likelihood and development of clinical posttraumatic stress disorder; (2) discrepancy of the effect of trauma-related support (i.e. crisis support) from that of global social support; (3) how other trauma survivors, rather than individuals who experienced natural disasters, violence, abuse, or maltreatment, reacted to different magnitudes of social support (e.g. whether the effect is different from that of natural disaster survivors). This review did not aim to discuss how social support affects individuals’ organic diseases and their subsequent PTSD, which is also a valuable question to answer. Currently, most studies rely only on the self-reported level of SS; future studies could include more objective measures of social support and also ask parents and teachers about the availability of social support networks and resources. The assessment of social support should specify what type of support they exactly shed light on; using social support to describe a specific form (e.g. emotional support) is not recommended according to this scoping review. Finally, due to the limited literature on each type of social support, we also allowed studies that included participants below or above our age range as long as the average age of the participants was met. This could have led to a bias in the data analysis.

Implications from this study should be applied with the consideration of some limitations: more observational than interventional studies were identified in this paper. In the reviewed observational studies, there were more cross-sectional studies (n = 70) than longitudinal studies (n = 21), which hindered the examination of the causal relationship between social support and PTSD. Current studies sampled substantially more adolescents than children below 12 years old and thus results could not be specified for age groups. Questions like how or whether the age group determines the relationship between SS and PTSD remain unanswered. The primary criterion for the assessment of PTSD (i.e. trauma history as the first criterion for clinical diagnosis and assessment of PTSD) among the samples in the reviewed articles was documented and should also be an inclusion criterion for future systematic reviews in PTSD. Moreover, low to modest severity of PTSD was found in our samples; the associations discussed in this study should also be further investigated in more severely burdened samples (e.g. clinical samples with PTSD). Clinical samples would also help to clarify the effect of SS on the remission of chronic PTSD (Bal et al., 2005). Finally, most of the reviewed studies investigated positive aspects of social support, such as satisfaction of received support, perceived strength of support; negative forms of social support (e.g. social constraints, negative appraisals, negative social interaction) were not discussed due to lacking studies identified in the review. Evidence from adults revealed the effect of negative support on developing PTSD (Belsher, Ruzek, Bongar, & Cordova, 2012; Holeva, Tarrier, & Wells, 2001). Whether this effect holds true among children and adolescents is not yet determined (Mueller et al., 2000; Ponnampерuma & Nicolson, 2016). Future studies should expand the current scope of definition for ‘social support’ and synthesize knowledge on negative support and its effect on post-trauma pathology.

5. Conclusion
The conceptual, methodological, and statistical heterogeneity of the studies was evident. Investigation of social support as an umbrella term might obfuscate true
relationships. The current evidence focused on global support and emotional support from family and peers. Other types of support (e.g. information and resources) and support from other sources (e.g. teachers, professionals) have not been studied widely. The synthesis of the current evidence suggests a weak negative relationship between global SS and PTSS in children and adolescents. Family support played a more stable protective role in the development of one’s PTSS than peer support. The long-term effects of SS suggest that future research should focus more on longitudinal, including interventional, designs.

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