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Parenting in Times of War: A Meta-Analysis and Qualitative Synthesis of War Exposure, Parenting, and Child Adjustment

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Abstract
This mixed methods systematic review and meta-analysis sheds more light on the role parenting practices play in children's adjustment after war exposure. Specifically, we quantitatively examined whether parenting behavior explained some of the well-known associations between war exposure and children's adjustment. In addition, we meta-synthesized qualitative evidence answering when and why parenting practices might change for war-affected families. We searched nine electronic databases and contacted experts in the field for relevant studies published until March 2018, identifying 4,147 unique publications that were further screened by title and abstract, resulting in 158 publications being fully screened. By running a meta-analytic structural equation model with 38 quantitative studies (N=54,372, M_age=12.00, SD_age=3.54), we found that more war-exposed parents showed less warmth and more harshness toward their children, which partly mediated the association between war exposure and child adjustment, that is, post-traumatic stress symptoms, depression and anxiety, social problems, externalizing behavior, and lower positive outcomes (e.g., quality of life). War exposure was not associated with parents' exercise of behavioral control. By meta-synthesizing 10 qualitative studies (N=1,042; age range=0–18), we found that the nature of war-related trauma affected parenting differently. That is, parents showed harshness, hostility, inconsistency, and less warmth in highly dangerous settings and more warmth and overprotection when only living under threat. We conclude that it is both how much and what families have seen that shapes parenting in times of war.

Keywords
war exposure, trauma, parenting, mental health, child development

“Some things, once seen, can never be unseen.”
Anthony Lake (2016)
Executive Director, United Nations Children’s Fund

War exposes children to extreme dangers and traumatic experiences that put them at risk for maladjustment. Children in war-affected areas often have to live under siege; get separated from family members, schools, and friends; and can witness torture and abuse of close family members (Geltman et al., 2005; United Nations Children’s Fund [UNICEF], 2016; van Os, Kalverboer, Zijlstra, Post, & Knorth, 2016). While the effects of war exposure on children’s adjustment have been studied exhaustively (e.g., Slone & Mann, 2016; van Os et al., 2016), most research leaves questions about mechanisms through which war impacts children’s adjustment unanswered. One such mechanism is through parenting practices (Barber, 1999; Conway, McDonough, MacKenzie, Follett, & Sameroff, 2013; Slone & Mann, 2016). Research on how war exposure affects children’s (mal)adjustment through changes in parenting increases our understanding of the developmental pathways of children in extreme or prolonged contexts of risk and can inform clinicians and intervention workers working with war-exposed families. The present study meta-analyzes whether changes in parenting indeed partly explain the impact of war exposure on children’s adjustment and synthesizes qualitative research to better understand how war exposure could change parenting practices.

All acts of war, political violence, or armed conflict are referred to as “war” in this article, and when parents and children have lived in war zones together, we call this “co-exposure.” War affects many civilians, exposing many parents and children to war-related atrocities (UNICEF, 2016). War-exposed children, on average, show elevated rates of anxiety disorders, post-traumatic stress disorder (PTSD), depression, and externalizing problems (Allwood, Bell-Dolan, & Husain, 2002; Montgomery & Foldspang, 2005). War exposure can

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influence child adjustment directly, by exposing children to extreme adversities. In addition, war exposure might influence child adjustment indirectly, through parenting practices, which are behaviors parents engage in to influence and support the emotional, social, and cognitive development of their children (Baumrind, 1996).

In the context of war, families can be impacted by experiencing war trauma and by having to live the daily struggle of living in the aftermath of war-related experiences (Miller & Rasmussen, 2010). Such adversity could change parenting practices, by impacting parental stress and mental health. Parents with mental health problems may become irritable, viewing normal parenting demands as highly stressful and taxing. Specifically, when parents need to constantly focus on keeping themselves and their children safe, they may have less time and mental space to attend to their children’s emotional needs, which could lead to children’s maladjustment (Samuelson, Wilson, Padrón, Lee, & Gavron, 2016; Smith, 2004).

**Parenting in Times of War**

War increases parental stress (Conway et al., 2013). This stress might further compromise parents’ ability to attend to their children’s emotional needs. Specifically, living in dangerous surroundings can make parents overly concerned for the safety of their children. In an attempt to protect their children, parents can become overprotective and excessively restrictive of their children’s behaviors (Sriskandarajah, Neuner, & Catani, 2015). While overprotection can be seen as adaptive in the given context, the core essence of restricting children’s behavior such that it stands in the way of their age-appropriate development seems harmful across cultures (Barber, Stolz, Olsen, Collins, & Burchinal, 2005). In addition, war destruction often demands that families abandon their homes to move in with other family members or in shelter homes. Displacement can affect parents, by changing family structures and roles played within (Farhood, 1999). Displacement is also accompanied by reduced access to financial resources, placing immense pressure on parents who are responsible for providing for their families (Farhood et al., 1993). Such financial burdens, induced by war exposure, can negatively impact parents’ emotional states, leading to more conflicts, increased hostility, and reduced warmth in parent–child interactions (Conger, Ge, Elder, Lorenz, & Simons, 1994; Conger et al., 2002).

Related to increased parenting stress, war exposure may lead to parental mental health problems such as PTSD and depression (Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997). These problems are known to impact parenting practices. Specifically, parents might find it difficult to regulate their own emotional states, which can reduce their ability to regulate their children’s emotional states, resulting in less sensitivity, structure, and increased hostility (Kistin et al., 2014; Ruscio, Weathers, King, & King, 2002; van Ee, Lieber, & Mooren, 2012). For example, traumatized parents who are overly occupied with their trauma could be emotionally unavailable for their children, resulting in a reduced ability to provide parental warmth and support (Smith, 2004). Furthermore, parents who continuously live with the fear that their children might be exposed to trauma can become overprotective and excessively restrictive of their children’s behaviors.

War exposure may also reduce parental self-efficacy beliefs, which are parents’ self-held expectations of their abilities to parent successfully (Jones & Prinz, 2005). Parents are expected to provide safety for their children, yet in war settings their ability to provide such protection might be compromised. Children are likely to get exposed to traumatic experiences, which might lead parents to question their ability to successfully provide safety for their children (Mooren, 2011), negatively impacting their feelings of parental self-efficacy. This can translate into increased use of parental harshness, in an attempt to regain control over children (Mash, Johnston, & Kovitz, 1983). However, empirical evidence suggests that heightened exposure is not necessarily associated with lower parental self-efficacy (Pagorek-Eshel & Dekel, 2015), highlighting the need to better understand the specific role of parental self-efficacy among war-affected families.

While war exposure has many potential negative effects on adults and children, it might also uncover elements of strength and resilience in families. For example, families that lost loved ones due to war tend to feel a greater sense of compassion and connection to people around them (Taku, Cann, Calhoun, & Tedeschi, 2008), which might translate into increased warmth and affection toward one’s own children. In addition, war exposure can lead parents to change their self-perceptions. While they appreciate their vulnerabilities and view the world as unpredictable, they may also come to appreciate their strengths more, having survived such a major challenge (Taku et al., 2008). Such increased perceptions of resilience might translate into increased parental self-efficacy beliefs, which is evident among parents who rely less on maladaptive parenting practices (Mash et al., 1983). This suggests that at least some families may be able to cope adequately with the stress and challenges of war exposure and that some parents may even change for the better, with increased positive parenting as a consequence. Thus, while there is evidence to suggest that war exposure might contribute to adverse parenting practices, there is also evidence to question whether this is indeed the general pattern for all war-exposed families.

**Parenting and Child Adjustment**

Parenting practices, such as parental warmth, sensitivity, and adequate behavioral control, can be protective factors for children in war situations (Masten et al., 1999). If parents remain available for their children even in war conditions, this can reduce the adverse impact of trauma exposure on their children (Bek-Pedersen & Montgomery, 2006). Warmth and involvement, for example, are associated with lower levels of children’s depression and anxiety, fewer externalizing problems, and better positive outcomes in terms of self-esteem and school achievement (Juang & Silbereisen, 1999).
In contrast, parenting practices such as harshness, hostility, or overprotection can be harmful for children’s adjustment (Barber, Olsen, & Shagle, 1994; Conger et al., 1994). For example, when parents are harsh and hostile, children might experience a deterioration in the parent–child relationship quality and learn hostility as modeled by their parents. In war-exposed families specifically, such behavior might exacerbate a child’s trauma-related symptoms, through reducing a child’s perceived safety in the family situation and through reducing a child’s access to social support networks, which are important for healing following traumatic exposure (Jia, Ying, Zhou, Wu, & Lin, 2015). In addition, when parents are overprotective and excessively restrictive of their children’s behaviors, their autonomy and sense of safety in the world are reduced, possibly elevating the risk for anxiety disorders (Chorpita & Barlow, 1998). While such parenting practices can lead to a myriad of child outcomes for most children, their impact might be even more profound in war-affected families possibly by exacerbating the direct effect of war on children’s adjustment.

Reviews on war-exposed families have focused either on war veterans or on the intergenerational transmission of trauma but have not addressed the unique situation where parents and children are co-exposed to war. Recent work which has focused on co-exposed families either addressed single attacks or focused exclusively on young children (Rousseau, Jamil, Bhuì, & Boudjarane, 2015; Slone & Mann, 2016). In addition, until now no systematic meta-analysis has examined how war exposure impacts children’s adjustment through parenting practices. To overcome these limitations, we specifically focus on co-exposed parents and children in war-exposed families.

The Present Study

By using a meta-analytic structural equation model (MASEM), we examined the mediation of war exposure effects on children’s adjustment through parenting practices. In doing so, we examined children in early, middle, late childhood, and adolescence. In addition to meta-analyzing quantitative research, we synthesized the findings of qualitative research on war-exposed families, as a crucial endeavor in increasing our insight into the processes through which war exposure impacts parenting and children’s adjustment. While war exposure disrupts multiple contexts within which parents and children live, it is of vital importance to study a specific part of a greater model, namely, to understand how different dimensions of child (mal)adjustment develop through which parenting practices in times of war.

Our quantitative strand therefore tested a mediation model, where we hypothesized that parenting practices would partially mediate the association between war exposure and child (mal)adjustment. We assumed that war exposure would be negatively associated with parenting practices tapping into warmth, sensitivity, and limit setting and positively associated with parenting practices tapping into harshness and hostility. However, we did not limit ourselves to predefined parenting practices, attempting to include as many parenting practices as possible. We also assumed that parenting behaviors would be associated with child adjustment, with more warmth predicting positive adjustment (e.g., less anxiety) and more harshness and hostility predicting negative adjustment (e.g., more anxiety). We did not have hypotheses about the strengths of the associations.

Our qualitative strand was more exploratory and focused on which parenting practices, feelings, and cognitions were evident in war-affected families and how and why war-related experiences changed them.

Combining quantitative and qualitative methods is the recommended approach to provide a deeper understanding of complex processes (Hannes, 2011; Schulze, 2003) such as parenting experiences and child adjustment in times of war. Specifically, while quantitative studies allow us to identify which parenting practices mediate the relation between war exposure and child adjustment, qualitative studies allow us to understand how such mechanisms work exactly. Similarly, while quantitative studies allow us to quantify trends and associations, qualitative studies can best capture why such trends and associations are evident and what differences exist between families.

General Methods

This review has been registered in PROSPERO, an online register for systematic reviews under registration number CRD42017059640. Registration allows for transparency in research through publicly stating the aims and methodology of the research.

Literature Search

Following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) criteria (http://www.prisma-statement.org), quantitative and qualitative studies, published until March 2018, were jointly identified by systematic searches in nine electronic databases: PsycINFO, MEDLINE, Web of Science, Scopus, Sociological Abstracts, Anthropology Plus, PILOTS, CINAHL, and Cochrane Library. We used the following search terms in various combinations: war, terrorism, political revolution or unrest, genocide, refugees, asylum seekers, parenting, and childrearing. Studies were also identified through citation tracking using reference lists from identified studies. Finally, experts in the field were e-mailed, inquiring about published or unpublished literature that was not identified using the first two search strategies.

Selection of Studies

Our search process yielded a total of 47 publications (38 quantitative, 10 qualitative, with 1 study coded as both; Figure 1). The searches of the electronic databases and other search techniques provided a total of 6,076 citations, of which 4,147 unique publications were identified and screened by title and abstract. Of these, 158 publications were examined in more detail. Three team members independently screened each of the abstracts and excluded studies not adhering to our inclusion criteria (86.5%...
agreement). Disagreements were solved by discussion. Studies were included if they (1) studied parents and children co-exposed to war, (2) focused on children up to 18 years, and (3) assessed parenting practices. Studies were excluded if (1) war exposure was confounded with other types of non-war-related trauma (e.g., childhood trauma); (2) violence was short term, such as one-time terrorist attacks and school shootings because these might impact parents and children differently from prolonged exposure to war; and (3) children suffered from medical conditions (e.g., pediatric cancer) that could influence child outcome measures. Baseline data from intervention studies were included, provided that these met our inclusion criteria.

Methods: Quantitative Strand

Data Extraction

Effect sizes. Effect sizes were (1) correlations between families’ level of war exposure and each of the different parenting constructs, (2) correlations between parenting constructs and child adjustment, and (3) correlations between war exposure and child adjustment. In addition, we extracted correlations between different parenting constructs, as well as between different child adjustment measures, to acquire a full correlation matrix. For studies that reported multiple correlations, for example, separately for boys and girls, we computed the mean correlation. If βs were reported, we converted these to correlations based on the formula $r = \beta + .05\lambda$, where $\lambda$ is 1 if $\beta$ is nonnegative and 0 if $\beta$ is negative (Peterson & Brown, 2005). Most studies (82%) included only cross-sectional correlations. If, however, both cross-sectional and longitudinal correlations were reported, longitudinal correlations were prioritized. If not all correlations were reported, authors were e-mailed a request for the full correlation matrix. The following section describes how we defined the different variables that fed the correlation matrix in our study.
Study Variables

War exposure. War exposure was defined in the included studies as war-related atrocities, political violence, sectarian violence, and armed conflict. Studies reported either on the level of occurrence (e.g., frequency counts of war-related incidents) or on the severity (e.g., frequency counts multiplied by a severity scale) of exposure. While there was considerable heterogeneity in measures used to assess war exposure, there was much overlap in the type of war-related traumatic experiences: living under siege, witnessing shelling or gunfire, being directly victimized by militia, being forcefully displaced, knowing of someone who got killed, or being exposed only through media while living in a war zone. We were not able to categorize the nature of traumatic exposure (e.g., living in displacement vs. losing a family member) because of the variation in measures used and because reported correlations were typically based on an aggregated assessment of war exposure. When measures for parents and children’s exposure were reported separately, we prioritized parents’ exposure levels because of its association with parenting practices (Cohen, Hien, & Batchelder, 2008).

Parenting practices. We defined parenting practices as behaviors parents engage in to influence and support the emotional, social, and cognitive development of their children (cf. Baumrind, 1996). All studies used questionnaires to assess parenting practices as perceived either by parents themselves or by children (e.g., Parent Behavior Inventory, Family Assessment Device, Parental Acceptance-Rejection Questionnaire, Family Environment Scale). Dimensions for which data were available from multiple studies were (1) Warmth, which included reports on the parent–child relationship that reflect emotional bonding (e.g., parental support, availability, reciprocity); (2) Behavioral control, which included reports on parents’ close monitoring of children’s activities and whereabouts and having clear consequences which reflect consistent awareness and involvement in a child’s life (e.g., monitoring children’s activities, reverse coding of permissive parenting practices); and (3) Harshness, which included reports on overly restrictive, punitive, and controlling parenting practices which reflect a controlling hierarchical parent–child relationship (e.g., hostility, verbal and/or physical aggression). Although there were cultural differences that pertained to how different parental behaviors were measured (e.g., harshness included being burned in a Sri Lankan study, being beaten in a Palestinian study, and hostility and intrusiveness in a Croatian study), most parenting behaviors could be classified into constructs of parental warmth, behavioral control, and harshness.

Child adjustment. We defined child adjustment as moods, behaviors, and positive outcomes demonstrated by the child. Studies used either parent report or self-reported questionnaires or diagnostic interviews to assess child adjustment (e.g., Children Revised Impact of Events Scale, Development and Wellbeing Assessment, Brief Symptoms Inventory, Strengths and Difficulties Questionnaire [SDQ], Child Behavior Checklist, Rosenberg Scale Self Esteem). We used data from subscales designed to measure specific aspects of child adjustment wherever possible (e.g., SDQ—conduct problems subscale to represent externalizing behavior). Dimensions for which data were available from multiple studies were (1) post-traumatic stress (PTS) symptoms (e.g., trauma-related symptoms such as reexperiencing, hyperarousal, withdrawal, avoidance, nightmares, and sleep problems), (2) depression and anxiety (e.g., depressive symptoms, psychological distress, emotional problems, sadness, irritable mood, anxiety, and fearfulness), (3) externalizing behavior (e.g., aggression, hostility, psychotism, disruptiveness, conduct problems, and hyperactivity), (4) social problems (e.g., peer problems), and (5) positive outcomes (e.g., self-esteem, academic achievement, prosocial behavior, civic engagement, quality of life, and seeking parent for comfort and support).

Risk of bias. We dichotomously evaluated the risk of bias for each study on seven criteria: (1) avoiding selection bias by using adequate recruitment methods; (2) comparability of different groups, for example, socioeconomic background of different subgroups; (3) clarity of outcome measures; (4) homogeneity of outcome measures across groups; (5) use of validated instruments; (6) statistical adjustment for key confounding factors (e.g., when participants were exposed to non-war-related trauma such as a tsunami in addition to war; Higgins et al., 2011). For longitudinal studies, we also assessed (7) whether retention rates were good (>60%). Each study was given a score out of 6 (or 7). Scores 1 and 2 were marked as low quality, 3 and 4 as medium quality, and 5–7 were ranked as of high quality. Two team members independently assessed the quality of 25% of the studies with an interrater agreement of 85.7%.

Data analysis strategy. To investigate which parenting practices mediated the relation between war exposure and child adjustment, we used an MASEM in R (R Core Team, 2018), using the metaSEM package (Cheung, 2015). MASEM is a relatively new statistical technique that allows the testing of mediational effects—even though mediation was not tested in all of the primary studies—through combining data from multiple individual studies (Jak, 2015). In this case, original studies mainly tested direct bivariate relations between war exposure and parenting practices or bivariate relations between parenting practices and different child outcomes. MASEM analysis consists of two stages. In the first stage, individual correlations of the primary studies are combined into one pooled correlations matrix. In the second stage, the hypothesized model is fitted to the pooled correlation matrix. We tested a mediation model where we hypothesized that parenting practices would partially mediate the association between war exposure and child adjustment.

MASEM provides estimates of model fit as well as regression coefficients with confidence intervals. We ran a two-stage structural equation model utilizing an omitted correlations approach (Cheung & Chan, 2005; Jak & Cheung, 2017). The relatively small number of studies did not allow us to apply random effects modeling. We therefore pooled the correlation coefficients using a fixed-effects model; hence, the current
results cannot be generalized to studies outside those included in our meta-analysis (Hedges & Vevea, 1998). Specifically, in Stage 1, we pooled the correlation coefficients using structural equation modeling. In Stage 2, we fitted the structural equation models representing partial mediation by parenting practices to the pooled correlation matrix using weighted least squares estimation. Doing this, we gave more weight in Stage 2 to correlations that were based on more studies in Stage 1. Model fit is considered adequate if the root mean square error of approximation (RMSEA) is < .05 (Hu & Bentler, 1999).

### Results and Discussion: Quantitative Strand

**Characteristics of Included Studies**

Our final sample included 38 studies with data on 54,372 participants (see Table 1 and Supplementary Materials Table S1).

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**Table 1. Summary of Included Studies.**

<table>
<thead>
<tr>
<th>Lead Author (year)</th>
<th>N</th>
<th>Parents’ Ethnicity</th>
<th>Children’s Age Range</th>
<th>Study Type</th>
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<td>Israeli and Palestinian</td>
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<td>L</td>
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<tr>
<td>Ajdukovic (1993)</td>
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<td>Croat</td>
<td>Minors</td>
<td>L and T</td>
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<td>T</td>
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<td>Kosovar</td>
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<td>Middle Eastern</td>
<td>16–18</td>
<td>L</td>
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<td>Ugandan</td>
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<td>Arab refugees in Lebanon</td>
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</tbody>
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Note. Order of publications as in the Reference List of Included Studies - Supplementary Materials. * a = first cited publication by the same author in the same year; b = second cited publication by the same author in the same year; T = quantitative study; L = qualitative study; p = parents; c = children.
Eleven studies (29%) covered displaced families, and more than half (60%) were on families from Palestine and Israel. Most studies focused either on adolescent children or on children in different developmental stages: 34% of the studies focused exclusively on children who were, on average, younger than 12. Only seven studies presented longitudinal data, ranging in follow-up measurements from 18 months to 10 years. When studies used parent reports, it was most often the mothers (69%) who participated.

Risk of Bias

Nineteen percent of the studies were considered of high quality, 78% of medium quality, and 3% of low quality (Supplementary Materials Table S1). Lower quality or medium-quality studies were constrained mostly by authors using self-developed instruments and using these directly without prior validation (50%) and by the use of sampling techniques that potentially increased bias, including nonrandom or nonsystematic selection of samples (e.g., students from a particular school or parents from a single camping site (29%). This could be explained by the logistical difficulties associated with researching war-affected families and children which can sometimes limit methodological rigor. In addition, studies that assessed multiple war- and nonwar-related traumas (10%) often combined these traumas in their measure of trauma exposure rather than reporting the correlations for different types of trauma exposure separately.

MASEM Results

Stage 1: Pooled correlation matrix. The pooled correlation matrix (Supplementary Materials Table S2) showed acceptable model fit according to the RMSEA, \( \chi^2(263) = 4,962.19, p < .001 \), RSMEA = 0.018 [0.018–0.019]. The correlation coefficients demonstrated that war exposure was related to less parental warmth \((r = -.02, p = .007)\), more parental harshness \((r = .12, p = .008)\), and less behavioral control \((r = -.01, p = .009)\). Parenting practices were also significantly associated with child adjustment in the expected direction, in that less parental warmth, more harshness, and less behavioral control were all associated with more child adjustment problems and less positive outcomes. Finally, war exposure was directly associated with child adjustment in the expected direction—more war exposure was associated with more child adjustment problems and fewer positive outcomes.

Stage 2: Mediation model. The MASEM analysis showed that war exposure had direct and indirect associations with children’s adjustment (Figure 2). That is, in addition to the direct associations between war exposure and children’s adjustment, there were indirect associations that could partly be explained by parents showing less warmth \((\beta = -.02, p = .003)\) and more harshness \((\beta = .12, p < .001)\) toward their children. Indeed, more war exposure was associated with lower levels of warmth and more use of harshness, which in turn were associated with more PTS symptoms (warmth: \(\beta = -.06, p < .001\); harshness: \(\beta = .11, p < .001\)), more depression and anxiety (warmth: \(\beta = -.13, p < .001\); harshness: \(\beta = .25, p < .001\)), higher levels of social problems (warmth: \(\beta = -.16, p < .001\); harshness: \(\beta = .09, p < .001\)), more externalizing behavior (warmth: \(\beta = -.09, p < .001\); harshness: \(\beta = .20, p < .001\)), and less positive outcomes (warmth: \(\beta = .22, p < .001\); harshness: \(\beta = -.17, p < .001\)) such as academic achievement, self-esteem, civic involvement, and quality of life. In contrast, more war exposure was not associated with parents’ use of behavioral control \((\beta = -.01, p = .125)\), although behavioral control was negatively associated with children’s maladjustment. Total effect sizes were relatively small ranging between \(\beta = -.09\) for positive outcomes and \(\beta = .19\) for PTS symptoms (Supplementary Materials Table S3), which confirms that parenting practices only partially mediate the link between war exposure and child adjustment.

Sensitivity analysis. To make sure that the results are not biased by low-quality studies or by study design (i.e., cross-sectional vs. longitudinal), we ran two sensitivity analyses. First, we compared MASEM results for only medium- and high-quality studies to MASEM with all studies included. The results for the two different MASEM analyses were the same. Thus, study quality was unrelated to the strength of the associations between war exposure, parenting, and child adjustment. Second, we compared MASEM results for only cross-sectional studies to MASEM with both cross-sectional and longitudinal studies included. In MASEM with cross-sectional studies only, the association between war exposure and behavioral control was significant \((\beta = -.04, p < .001)\), unlike the results for MASEM with both cross-sectional and longitudinal studies included. In other words, war exposure seems to be associated with less behavioral control by parents, but this association dissipates over time.

Methods: Qualitative Strand

Data Extraction

Qualitative data from 10 studies were entered into MAXQDA 11 release 11.0.11 (VERBI Software, 2014) for analysis. Specifically, we extracted all data related to parenting practices. We also coded whether the parent or the child reported on parenting practices and child outcomes.

Risk of Bias

We dichotomously evaluated the risk of bias for each study on seven criteria covering the broader dimensions of credibility, transferability, dependability, and confirmability (Hannes, 2011). Specifically, we assessed studies on whether (1) sampling was rigorous to reduce selection bias, for example, participants from multiple locations versus a single refugee center; (2) interviewers were not varied for different subsamples; (3) participants were interviewed more than once; (4) subsamples (e.g., participants in refugee camps vs. foster settings) were
comparable; (5) a clear data analysis strategy; (6) findings were
grounded in the data; and the (7) depth and breadth of the
findings. Scores 1 and 2 reflected low quality, 3 and 4 reflected
medium quality, and 5–7 reflected high quality. To cover the
literature as comprehensively as possible, studies were not
excluded based on quality assessment (Jensen & Allen,
1996). Two team members independently assessed the quality
of 50% of the studies with an interrater agreement of 85.7%.

Data Analysis Strategy
We used a grounded theory approach because our aim was to
work toward generating theory rather than testing theory (Gla-
scher & Strauss, 1967). We did not specify concepts in advance.
Instead, we assigned open codes to study findings (e.g., paren-
tal warmth, permissiveness), in order to explore the various
parenting constructs discussed in the studies. Second, we con-
ected key concepts to each other using axial coding (Green &
Thorogood, 2004). This process involved constant comparison
within and between incidents in the data and took place over
tree phases: (1) we coded different incidents in the data into as
many categories as possible; (2) we compared incidents in the
data with different categories, thus defined properties of cate-
gories; and finally (3) we carried out a process of reduction of
terminology, aiming at reaching a parsimonious formulation
that is applicable to a wide range of situations (Glaser &

Results and Discussion: Qualitative Strand
Characteristics of Studies
We included 10 studies with data on 1,042 participants (see
Supplementary Materials Table S4). Families could be categor-
ized into having experienced four different types of war-related
traumas, namely, living under threat (i.e., living under the pos-
sibility of an attack, $k = 1$), living in extreme danger (i.e.,
displacement, absence of police authority, or under the threat
of abduction, $k = 7$), bereaved (i.e., having lost a family mem-
ber due to the war, $k = 1$), or raped ($k = 1$). Families came from
different countries, although most families (42%) came from
Afghanistan. Studies investigated different aspects of family
functioning following war-related trauma exposure, and three
studies briefly addressed the impact on children as well. Most

![Figure 2. Mediation analysis. This figure presents individual pathways from war exposure to different parenting practices and from the different parenting practices to different child adjustment outcomes. Total indirect effects are presented in Supplementary Materials Table S3. For visual clarity, dotted lines are for direct effects from war exposure to child adjustment. Correlations between outcome variables are estimated but not depicted in the diagram.](image-url)
studies relied on mothers as informants; two studies relied exclusively on children as informants (Bek-Pedersen & Montgomery, 2006; Elamouri et al., 2018).

**Risk of Bias**

Thirty percent of the studies were considered of high quality, 60% of medium quality, and 10% of low quality (Supplementary Materials Table S4). Low- or medium-quality studies were mainly constrained by nonrandom or nonsystematic sampling techniques and interviewers being different for different populations in the same study. The logistical difficulties associated with researching war-affected families and children can sometimes limit methodological rigor. In general, studies were of average quality. High-quality studies (Bek-Pedersen & Montgomery, 2006; El-Khani, Ulph, Peters, & Calam, 2016; Sim, Fazel, Bowes, & Gardner, 2018) recruited participants from different backgrounds and/or locations, used a rigorous interviewing technique, and conducted more than a single interview or focus group with participants. In addition, Bek-Pedersen and Montgomery (2006) was the only study to report on the need to reach data saturation—the situation when researchers start hearing repeated stories—which indicates having a sufficient number of participants in a qualitative study. One study (Almqvist & Broberg, 2003) was rated of low quality because it did not include a clear description of their recruitment methods or data analysis strategy. This means that the findings on mothers who were raped have to be interpreted with caution.

**Qualitative Meta-Synthesis**

All studies, except Abbott (2009), reported on parents’ cognitions. In general, most war-affected families felt a reduction in their feelings of parental self-efficacy beliefs. Parents felt unable to influence their surroundings “We are living each second unaware of what’s coming next” (El-Khani et al., 2016, p. 104) and unable to provide for their children like they once did. Families became primarily concerned with keeping their children alive, safe, and with providing for their basic needs. In contrast to the consistent findings of the effects of war exposure on self-efficacy beliefs, the effects of war exposure on parenting practices seemed to depend on the specific nature of the exposure.

Frist, living in displacement or in highly dangerous settings (e.g., war-affected regions characterized by reduced safety and an absence of police authority) affected families very differently from “merely” living under threat. In displacement or highly dangerous settings, families had reduced access to financial means, feared that their children might be abducted or used drugs. Parents also had to work for long hours. Those conditions increased families’ stress levels, made them less capable of offering warmth and support, and more likely to engage in harsh and inconsistent discipline. As one child reports: “It is very dangerous to play on roofs with kites because, if you fall down and injure yourself, your father will shout at you saying, ‘Now where am I supposed to get the money for treating you from?’” (De Berry et al., 2003, p. 27). In addition, families’ ability to adequately exercise behavior control was diminished. These parenting behaviors had an adverse impact on children, who felt unsupported and misunderstood and engaged with delinquent peers or used drugs, when available. In contrast, living under threat—as opposed to daily attacks—meant that parents constantly lived with the ambiguity of when a strike might happen, which could risk their lives or those of loved ones. As one mother reports on living in constant fear: “what will happen to my children [if I’m killed]?” Another reports on the importance of regaining normalcy in life: “As part of my responsibility as a parent, I feel the need to emphasize having fun in life” (Dekel, 2004, p. 33). While stressful, living under threat seemed to not completely deplete families of their mental or material resources, who more often showed increased parental warmth and overprotection.

Second, experiencing rape and bereavement in the context of war exposure affected families very differently. While they were studied in a single study each, it seemed that those experiences have opposing effects on parenting practices. Raped mothers suffered a harmed self-image and were reminded of their trauma through their children’s symptomatic behavior, they avoided engaging with their children and became overly withdrawn and insensitive. As the study reports, “Kastriot’s mother felt her life was worthless. She did not know why she was still alive. Perhaps for the sake of the children, but she honestly did not think that she was of any use to them either” (Almqvist & Broberg, 2003, p. 372). Bereaved parents, in contrast, felt very close to and had a great sense of empathy toward their surviving children. They therefore spent more time together, tolerated children’s misbehaviors, and became more lenient. As one father mentions, “I don’t beat them anymore; I can’t make any of them feel sad” (Abbott, 2009, p. 122).

While findings on the effects of displacement on increased harshness and reduced behavioral control were repeated across multiple studies, findings on parental warmth were less saturated. In addition, current evidence from rape, bereavement, and living under threat, while interesting, warrants additional scientific investigation due to the dearth of primary studies—based on a single study each.

**General Discussion**

We examined whether war exposure impacted child adjustment partly through parenting practices. Our quantitative findings showed that war exposure compromised children’s adjustment partly through reduced parental warmth and increased parental harshness but not parents’ behavioral control. Our qualitative findings nuanced this model. That is, the impact of war exposure on parenting depended on the type of traumatic exposure. Specifically, living under threat seemed to make parents warmer and at the same time overprotective of their children. In displacement or highly dangerous settings, most parents became less capable of adequately exercising behavioral control, more harsh, less warm, and more inconsistent. Thus, while the general pattern suggests more adverse parenting given more
war exposure, there seemed to be exceptions to that trend, based on the nature of traumatic exposure.

Our quantitative findings expand previous findings (e.g., Schwerdtfeger, Larzelere, Werner, Peters, & Oliver 2013; Slone & Mann, 2016) by highlighting the role of particular parenting practices in the relation between war exposure and multiple aspects of child (mal)adjustment. While our study did not assess changes in parenting, our findings were in line with those from a previous unique study examining parenting before and after war exposure, which reported that reduced parental warmth predicted increased child PTS symptoms (Conway et al., 2013). We moved away from only focusing on parents’ and/or children’s PTS symptoms to uncovering parenting practices of war-exposed parents, which were associated with multiple aspects of child (mal)adjustment. We also expanded previous findings through quantifying the strengths of the associations.

The association between war exposure and parental warmth is rather small and negative ($r = -0.02$). While it seems from our quantitative strand that more war exposure is associated with less depictions of parental warmth, our qualitative strand suggests that this overall negative association might be driven by the over representation of adolescent children in our study. In other words, the qualitative literature shows that passive depictions of parental warmth (e.g., hugging children to sleep) can be evident, yet parents show less active depictions of parental warmth (e.g., taking the time to listen to a child’s stories). Parental warmth has been assessed by more passive behaviors among young children than among adolescents (e.g., Barber, 1999; Halevi et al., 2017). Since most studies included adolescent children, the results might have been steered in line with active depictions of parental warmth, something war-affected parents seemed to provide less of.

Although parental warmth and harshness partly mediated the relation between war exposure and child adjustment, behavioral control did not. Our sensitivity analysis highlighted that the lack of association is driven by the longitudinal studies, such that over time, parents’ ability to exercise behavioral control seemed unrelated to war exposure. Apparently, behavioral control was not as robustly associated with war exposure as were parental warmth and harshness. Our qualitative findings suggested that there might be opposing effects of war exposure on behavioral control for families who lived under threat versus families who were in extreme danger. These opposing effects might have canceled each other out in the quantitative model. Furthermore, it seemed that the longer families stayed in war conditions or displacement, the more they tried to normalize their lives. This might explain why there was no association between war exposure and behavioral control over time.

We found little evidence for the possibility that parents show mainly resilience and strength following war exposure, at least in terms of their parenting practices. Specifically, resilience and strength in this context would mean that parents showed as much positive, or at least not more negative, parenting practices. While bereaved parents increased their levels of warmth post-trauma, this was not the general pattern for war-affected families. Children who were more exposed to war seemed to live with parents who were less warm and more harsh, making the overall picture one of risk and potential harmful development for children.

One key finding was that it is not only how much but also what families have experienced that played a vital role in shaping parenting. This supports the findings from previous research that it is indeed the nature of such exposure that is most salient for children’s adjustment (Betancourt, McBain, Newnham, & Brennan, 2013; Lambert, Holzer, & Hasbun, 2014; Schwerdtfeger & Goff, 2007). Thus, while the most commonly studied form of war exposure—living under gun shelling—suggests a dose–response ratio (e.g., Slone & Mann, 2016), certain types of war exposure seem to act as outliers to this trend, such as the case with bereaved families and increased parental warmth.

Importantly, some constructs uncovered by the qualitative literature were hardly addressed by the quantitative literature. Reduced parental self-efficacy, for example, received much attention in the qualitative literature but were hardly investigated by quantitative studies. In addition, specific parenting constructs such as withdrawn, neglectful, and inconsistent parenting were not examined by the quantitative literature. Finally, it is important to highlight the vast cultural heterogeneity of the families included in the original sampled studies. While the underlying constructs of parental warmth, behavioral control, and harshness seem to hold universal value (Barber et al., 2005), the specific manifestations of those constructs are often culturally specific.

Our study has several limitations. First and foremost, most quantitative studies were cross-sectional. This had several consequences; first, we could not assess changes in parenting practices following war exposure. Specifically, the absence of time precedence in cross-sectional studies means we can only assume, and not test, that war causally shaped parenting practices. Hence, our mediation model is based on the plausibility of the assumption and not on research design (Kline, 2015). Second, we were not able to exclude the possibility that the relation between war exposure and parenting practices is partly explained by third variables. People from lower socioeconomic status might be more likely to live in war zones and rely on less optimal parenting practices than parents from higher socioeconomic status (Hoff, Laursen, & Tardif, 2002). Thus, the pattern might be attributed to, or at least confounded by, the socioeconomic background of the families more so than war exposure itself. Third, based on our current analyses, we are unable to disentangle the bi-directionality of parenting practices and child adjustment. Specifically in this case, when children are affected by war and display symptomatic behavior (e.g., reenacting play), this might remind the parent of the traumatic event which can activate the parent’s symptomatology and change parenting behavior (Pynoos, Steinberg, & Piacentini, 1999; Schwerdtfeger, Larzelere, Werner, Peters, & Oliver, 2013; van Ee et al., 2012). In other words, in addition to being personally traumatized, a parent might experience a secondary effect to war exposure, by living with a child who had also been
exposed to trauma (Scheeringa & Zeanah, 2001). In addition to the limitations due to the cross-sectional nature of most studies, it is important to note that war exposure was sometimes assessed using crude measures with considerable heterogeneity in war-related experiences which might have influenced the accuracy of our estimates. Finally, our findings on behavioral control were based on a limited number of studies \((k = 12)\), and our findings on raped, bereaved, and families living under threat were based on a single study each, meaning that conclusions pertaining to these factors are to be interpreted with caution.

That said, several study strengths may increase confidence in our findings. First, our use of a meta-analytic mediation model allowed us to test whether parenting practices partially mediated the effect of war exposure on children’s adjustment in a culturally and ethnically diverse sample. This is especially beneficial since primary mediation studies are scarce. Second, our mixed methods approach allowed us to integrate findings from qualitative studies to our quantitative findings. Doing so, we were able to explain why parenting might change following war exposure, something not addressed in any of the quantitative studies. Third, our sensitivity analysis gave us greater confidence that our results were not steered by the lower quality studies.

Future research on parenting in co-exposed families should more carefully assess the diverse types of war exposure experiences families go through and separately test their associations with parenting practices. Most assessment tools capture diverse forms of war exposure (e.g., violence, death of family members, or living under tough conditions); however, analyses hardly disentangle the unique associations between specific war exposure experiences and parenting practices. Studies mainly construct a sum score for war exposure experiences, at the expense of the nature of the exposure itself, losing valuable insights that could be gained from the unique effects of different traumatic experiences (Barber, 2013).

In addition, there is a scarcity of rigorous longitudinal research on how war exposure is associated with parenting practices over time and how parenting practices in turn are associated with children’s adjustment. That is, do some aspects of parenting show some “sleeper effects”? In other words, while the initial response to war exposure seems to be reduced warmth, reduced behavioral control, and increased harshness, how would such patterns play out over time? In addition, these longitudinal studies can shed more light on bi-directionality of parent–child interactions. That is, do parenting practices indeed influence child adjustment or is it the case that child behavior shapes parenting practices?

Finally, future research should aim to address the mechanisms through which war exposure affects parenting practices. Previous research on co-exposed families mainly assumes that parents exposed to traumatic experiences might be incapable of offering their children with the much needed support (Lambert et al., 2014), yet it does not provide us with explanations as to why such changes might be witnessed. For example, our qualitative findings highlight the salience of reduced parental self-efficacy, as a possible mechanism of change, which is hardly addressed in quantitative research. Threats placed on civilian areas and lack of predictability of when a strike will happen, and loss of control, can reduce parental self-efficacy (Seligman & Estes, 1968; Williams, 2010). Reduced parental self-efficacy might lead to elevated levels of harshness (Deković et al., 2010; Mash et al., 1983); something we demonstrated is harmful for children.

Our findings could inform intervention work with war-affected families by suggesting that parenting practices play an important role in children’s adjustment after war exposure. However, longitudinal research is necessary to test the conclusions laid out in the present study to provide a strong foundation for intervention work (Cummings, Goeke-Morey, Merrilees, Taylor, & Shirlow, 2014). Still, intervention workers might be able to ameliorate some of the effects of war on children’s adjustment by targeting parenting practices that seem most affected by war exposure. In other words, parenting interventions that are focused on increasing parental warmth, availability and support, and reducing harshness and hostility might be particularly useful for war-affected families. Perhaps in this way, war-exposed children can be given a future, different from a past, which they might never unsee.

**Implications for Policy**
- There are vast numbers of children exposed to war, who are adversely affected. If we aim at promoting healthy development for war-affected children, focusing on supporting parents’ parenting practices is an important target.

**Implications for Practice**
- Supporting parents to maintain warm interactions with their children despite war atrocities, and limit harshness as much as possible, might support healthy child adjustment.

**Implications for Research**
- Identify the unique effects of different war-exposure experiences on parenting practices and child adjustment.
- Address the impact of war exposure on more varied parenting practices (e.g., withdrawn parenting) and parental cognitions (e.g., parental self-efficacy) and whether those practices and cognitions explain the impact of war on child adjustment.
- Assess the long-term impact of war exposure on parenting practices and child adjustment, as well as disentangle the bidirectionality of how parents and children shape each other’s behavior.

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