Agency and life satisfaction in Bedouin children exposed to conditions of chronic stress and military violence: A two-wave longitudinal study in Palestine

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Abstract
Bedouin children in Palestine are at risk of developing trauma-related pathologies as a result of chronic exposure to severe political and military violence. Little is known about their coping abilities and survival skills. The aim of our study was to longitudinally test the contribution of agency to predicting life satisfaction and the power of life satisfaction to mitigate traumatic stress in a group of Bedouin children exposed to prolonged military violence in West Bank, occupied Palestinian territories. We expected that children who maintained good levels of satisfaction over the time would be less at risk of developing stress- and trauma-related syndromes and that agency would act as a predeterminant of mitigated traumatic reactions. A quantitative cross-lagged path model (CLPM) research design was implemented. One hundred forty-three Palestinian children were administered with Children’s Hope Scale, Multidimensional Student Life Satisfaction Scale, Children’s Impact of Event Scale, and a built ad hoc traumatic checklist. The results provided support for all the study hypotheses, suggesting that in general Bedouin children draw on a considerable range of resources in adjusting to their chronically traumatic life context. Implications for clinical work and future research are discussed.

Keywords
Children agency, trauma, military violence, life satisfaction, longitudinal study

Introduction
Bedouin children in both Israel and Palestine are at risk of developing trauma-related pathologies as a result of chronic exposure to severe political and military violence (Massad, Khammash, &
Shute, 2017; Muhammad, Mansbach-Kleinfeld, & Khatib, 2017). Indeed, as an unrecognized seminomadic population, Bedouins are constantly under threat of deportation, demolition of their homes and schools, and other systematic forms of state and colonial settler violence (Braun-Lewensohn, Sagy, & Al Said, 2014). Consequently, researchers have observed poor mental health and marked psychological and emotional distress in Bedouin children and families (Al-Said, Braun-Lewensohn, & Sagy, 2018).

This said, much remains to be learnt about psychological well-being and life satisfaction in child victims of war or about the coping abilities and survival skills that they can potentially display in severely compromised living environments (Linton, Kennedy, Shapiro, & Griffin, 2018; Rabaia, de Jong, Abdullah, Giacaman, & van de Ven, 2018). Although the scientific literature extensively describes the child victims of conflict and violence as highly vulnerable, a growing corpus of studies points up sources of resilience that can be available to these children (Barber, 2013; Halevi, Djalovski, Vengrober, & Feldman, 2016; Veronese & Castiglioni, 2015). Personal well-being and life satisfaction play a key role in protecting children from posttraumatic reactions and psychological sequelae when they are exposed to ongoing traumatic situations (Diab, Guillaume, & Punamäki, 2018; Veronese & Pepe, 2017). For example, Veronese, Pepe, Jaradah, Murannak, and Hamdouna (2017) found that—following a period of war—children in Palestine continued to display positive psychological functioning and that this outcome was related to their levels of subjective well-being and life satisfaction. In another study, despite extremely disrupted living conditions, Palestinian children manifested positive affect, good self-esteem, and satisfaction with their peers, family, school, and living environment, as well as low levels of trauma (Veronese, Castiglioni, Barola, & Said, 2012). Similarly, children living in refugee camps were found to be more optimistic and satisfied with their lives than children living in rural and urban areas (Veronese, Castiglioni, Tombolani, & Said, 2012). Other authors have reported that support from family, warm social relationships, and mastery over an adverse life context via the maintenance of everyday routines mitigated distress in child victims of political conflict (Pat-Horenczyk, Schiff, & Doppelt, 2006; Thabet, Ibraheem, Shivram, Winter, & Vostanis, 2009). In general, children display considerable ability to mobilize positive resources that help them to adjust to adverse conditions and maintain good functioning in the aftermath of devastating conflicts (Aitcheson, Abu-Bader, Howell, Khalil, & Elbedour, 2017; Veronese & Barola, 2018).

Nonetheless, little research to date has focused on explaining this unforeseen capability to recover from trauma and adjust. How exactly do children manage to conserve and even enhance their well-being and life satisfaction?

The concept of human agency offers a possible framework for understanding how children might activate healthy coping and survival strategies (Bandura, 2018). This construct was developed by Albert Bandura (1991, p. 161), who defined human agency as “the transformational and generative operations by which cognitive models are translated into proficient action . . . as well as the changes that occur in multilevel regulation of skills as they are perfected.” Self-efficacy is a proximal determinant of human motivation, triggering both emotions and actions (Bandura, 1989). Motivational, cognitive, and affective personal processes interact with social and environmental determinants to shape human agency (Bandura, 2018).

Agency has been identified as playing a key role in protecting children from violent contexts. For example, Alexander, Callaghan, Sixsmith, and Fellin (2015) found that children deployed their corporeal and spatial agency and relational competence to protect themselves from perpetrators when exposed to domestic violence. More generally, children who experience domestic violence typically take some form of action to protect themselves from perpetrators (Överlien, 2017). In a different context, Veronese and colleagues identified multiple sources of agency in Palestinian children living in refugee camps who were exposed to war and military violence. Specifically, personal growth, political well-being, play, spirituality, education, sense of belonging, social relations, and spatial
agency all motivated the children to resist the brutally oppressive power controlling their lives and those of their families (Veronese, Cavazzoni, & Antenucci, 2018). Thus, children’s functioning, coping abilities, and agency enable them to mobilize survival skills and strategies for personal well-being, protecting them from psychological burden in the face of continuous trauma and risky living conditions (Marshall, 2014; Veronese, et al., 2017). Furthermore, the environment children live in also plays a crucial role in shaping their resilience and resistance to ongoing violence. They often use domestic, school, and public spaces to express the particular capabilities that make them resilient and adaptable to the unpredictable and uncertain events marking their lives (Betancourt & Khan, 2008).

The study

Background

Following the 1995 Oslo II Accord, the West Bank was divided into areas A and B, officially controlled by the Palestinian Authority, and Area C, where Israel has full control over security and civil affairs (B’Tselem, 2018). The Jordan Valley and the northern Dead Sea constitute almost 30% of the West Bank and 90% percent of this region has been designated as Area C. Here, Israel impedes the development of adequate housing, infrastructure, and livelihoods for the Palestinian communities, preventing them from entering or using about 85% of the area (Office for the Coordination of the Humanitarian Affairs [OCHA]). Most of Area C is off-limits to Palestinians, being classified as settlement areas, firing zones or natural reserves. According to B’Tselem reports, the Israeli civil administration demolished at least 698 Palestinian residential units in the Jordan Valley between January 2007 to September 2017: 2948 Palestinians (including 1334 minors) have lost their homes (283 of them—and 386 minors—at least twice). Most of the Palestinians living in these areas are not connected to water and electricity networks, and construction is heavily restricted. Moreover, nearly a third of the residential areas in Area C lack primary schools, forcing the children to travel long distances, and exposing them to harassment by Israeli settlers and requiring them to pass military checkpoints (United Nations Office for the Coordination of Humanitarian Affairs, 2017).

Aims and scope

Given this background, the aim of our study was to longitudinally test both the contribution of agency to predicting life satisfaction and the power of life satisfaction to act as a buffer against traumatic stress. More specifically, we hypothesized that the more children were agentic over time in terms of activating domains of life satisfaction (school, living environment, family, peers, and personal satisfaction), the more they would be satisfied with their lives (H1). Conversely, we expected that children with fewer agentic resources would less satisfied with their lives. Second, we predicted that children who maintained good levels of satisfaction over the time would be less at risk of developing stress- and trauma-related syndromes (H2). Finally, we expected that agency would act as a predeterminant of mitigated traumatic reactions (H3); in other words, that the more children were agentic, the less they would display signs of trauma.

Method

Participants

We conducted our cross-lagged longitudinal study with 143 Palestinian children attending either primary (26.5%) or lower secondary school (73.5%). Data were gathered in several Bedouin
village communities in Area C; around 58% of participants were from the Jordan Valley in the West Bank (29.3% from Deouq Al-Fauqa, 7.7% from Fasayel, and 21% from Badou Ka’abneh). The remaining 42% of participants were from Bedouin communities located northeast of Jerusalem (Area E1, Al Khan Al-Ahmar). At Time 1, the children’s ages ranged from 9 to 16 years ($M = 12.02; SD = 2.05$); 65 (45.5%) were males and 78 (54.5%) were females. The criteria for inclusion in the study were (1) having been directly exposed to or having witnessed one or more episodes of violence over the 2 months prior to the study, (2) never having been diagnosed with any form of physical or psychological impairment, (3) living in Areas C (West Bank), and (4) belonging to the 9–16 years age group.

**Research design and procedures**

To examine the longitudinal chain of relationships between children’s agency, life satisfaction, and trauma symptoms, we chose a quantitative cross-lagged path model (CLPM) research design (for details, see Kearney, 2017). A CLPM research design is typically adopted in the social sciences to assess longitudinal mutual relations among target variables by estimating directional influences over time. CLPM models are crucial to the study of children’s lifespan development because they allow researchers to control for covariates, other potentially confounding variables, and stability effects (in relation to previous scores on the outcome) (Adachi & Willoughby, 2015). They are termed “crossed” models because they estimate the path from one variable to another and vice versa, and “lagged” because they do this across different time points. To be tested, they require a set of quantitative measures to be gathered in relation to the same participants in at least two waves. Therefore, to implement this design, we administered quantitative self-report measures to our participants, in the context of structured face-to-face interviews, in both January 2018 (Time 1) and June 2018/September 2018 (Time 2). The interviews were conducted with the children in their classrooms, during regular school hours. Written informed consent was obtained from all the children’s parents or caregivers. All children agreed to be part of the research. Local social workers received ad hoc training in how to conduct structured face-to-face interviews with children and gather data based on indirect psychological measures. The participating children and their families had been appropriately briefed about the research aims and informed that they were free to withdraw from the study at any time. During administration of the measures, the children were provided with all necessary clarification concerning the meaning of the interview questions. To protect participants’ confidentiality, after the administration stage, the data were anonymized by randomly assigning the children’s names to numerical codes.

The research was approved by the Ethics Board of the University of Milano-Bicocca (Protocol Number 368) and fulfilled the ethical guidelines of the American Psychological Association (2010), particularly Sections 1 (Ethical Issues), 4 (Privacy and Confidentiality), and 9 (Assessment). Measurement took place at two time points: (1) In early 2018, when 150 selected participants completed the study measures; (2) 6 months later, when the same subjects were asked to again complete the same measures. Given that 143 children agreed to participate in both waves, the attrition rate for the study was 4.7%.

**Measures (Time 1)**

*Children’s Hope Scale* (CHS; Snyder et al., 1996): The Children’s Hope Scale is a measure of children’s agentic competences operationalized as two different components of children’s thinking, concerning agency and pathways, respectively (Snyder et al., 1996). It is a six-item self-report measure with three items assessing agentic thoughts (i.e. children’s self-perceived capacity to begin and continue moving toward their goals) and three items evaluating their thinking about
pathways (i.e. children’s confidence that they can generate routes toward achieving their goals). Items are rated on a 5-point Likert-type scale: 0 = none of the time, 1 = a little of the time, 2 = some of the time, 3 = most of the time, and 4 = always, with possible scores for scales ranging from 0 to 12. High scores for the scales indicated high levels of agency in children. In the present study, the scale was taken to offer two distinct (but correlated) measures of agentic thinking. Raykov’s Composite Reliability (ω) values for the subscales were .74 (agency) and .72 (pathway).

**Multidimensional Student Life Satisfaction Scale (MSLSS; Veronese & Pepe, 2018a):** originally developed by Huebner (1994), the Multidimensional Student Life Satisfaction Scale is a quantitative measure assessing children’s satisfaction with four specific domains (school, family, friends, and environment) as well as their overall life satisfaction. In the present study, the Arabic version of the MSLSS was administered. The MSLSS is composed of 14 items, which respondents are required to rate on a 4-point Likert-type scale (never = 1; sometimes = 2; often = 3; and almost always = 4) with possible score ranging from 14 to 56. High score on the MSLSS indicated a higher degree of life satisfaction. In the present study, the scale was used as a cumulative measure of overall life satisfaction (i.e. only participants’ global scores were included in the research design and data analysis). Raykov’s Composite Reliability (ω) value for the global measure was .77.

**Children’s Impact of Event Scale (CRIES-13; Veronese & Pepe, 2013):** the Impact of Event Scale (IES) was originally developed by Horowitz, Wilner, and Alvarez (1979) to measure traumatic psychological responses in people who have experienced or witnessed traumatic events. The version of the questionnaire adopted for the present study was an adapted version that has been specifically developed for Arabic-speaking cultures. The CRIES-13 is composed of 13 items to be rated on a 4-point Likert-type scale (not at all, rarely, sometimes, often; scores 0, 1, 3, and 5), with no reversed items. The measurement model comprises three domains: avoidance (i.e. avoidance of trauma-related stimuli such as trauma-related thoughts and feelings or external reminders of the trauma, 4 items), intrusion (i.e. unwanted upsetting memories, nightmares, flashbacks, emotional distress, 4 items) and hyper-arousal (i.e. high sense of alert as a result of thinking about trauma even though real danger may not be present, 5 items). In this study, the scale was used as a cumulative measure of overall traumatic response (i.e. only participants’ global scores were included in the research design and data analysis) with possible score ranging from 0 to 65. High scores on the IES-13 indicated high level of trauma symptoms. Raykov’s Composite Reliability (ω) value for the measure was .84.

Finally, to record the traumatic events children were exposed to, and in the absence of a standardized trauma checklist, each respondent was asked to write or to draw something that had particularly frightened him or her during the previous 2 months. To avoid subjective interpretation by the interviewers, the children were asked to comment on and explain their own drawings. The written materials were translated into English by a bilingual assistant researcher and content analysis was applied to the texts.

**Measures (Time 2)**

Six months after Time 1, the participants in the study again completed the MSLSS, CRIES-13, and CHS. The administration procedure was the same for this second wave as for the first. Raykov’s Composite Reliability coefficients (ω) were: MSLSS (ω = .79), CRIES-13 (ω = .88), CHS-agency (ω = .84), and CHS-pathway (ω = .79).

**Data analysis strategy and modeling**

CLPM were assessed by analyzing the regression and auto-regression coefficients they yielded. The regression coefficients were estimated via structural equation modeling (see Bollen, 1989; Kline, 2016) including the breakdown of total effects into direct and indirect effects. The Maximum
Likelihood method (Gath & Hayes, 2006) was adopted to determine the parameters for the structural Equation Modeling (SEM) analysis. The practical and statistical significance of the models were evaluated by means of the following goodness-of-fit indices: \( \chi^2 \) (a not statistically significant chi-square value indicated good fit; Hooper, Coughlan, & Mullen, 2008), Normed \( \chi^2 \) (NC <5; Bentler, 1990), root mean square error of approximation (RMSEA <0.05; Hu & Bentler, 1999); standardized root mean square residual (SRMR < 0.05; Marsh & Hau, 2014); normed fit index (NFI >0.95; Morin, Marsh, & Nagengast, 2013); Tucker–Lewis Index (TLI >0.95; Morin et al., 2013); and comparative fit index (CFI >0.95; Morin et al., 2013). In addition to RMSEA, the pclose test (i.e. the measure is one-sided test of the null hypothesis that the RMSEA equals 0.05, the index should not be statistically significant; Kenny, Kaniskan, & McCoach, 2015) was provided. All measures were preliminarily checked by computing Mahalanobis’ distance \( (p < .001) \) in order to identify and skip multivariate outliers. No multivariate values were omitted from the analysis. The data were also assessed to establish whether the scores were normally distributed. None of the variables under study displayed kurtosis or skewness values exceeding the recommended limits \([-2,+2]\) (George & Malloy, 2010). All models were tested using Amos software (Arbuckle, 2003).

With the aim of estimating the causal relationships between children’s agency, life satisfaction, and symptoms of trauma at two measurement points, a hierarchical testing procedure was used (Meinshausen, 2008). We began by analyzing the simplest model and then proceeded to the more complex models which examine the changes in goodness of fit values (e.g. nonnormed fit index (NNFI), CFI, RMSEA) at each step in the hierarchy. First, the baseline model (Model A) at Time 1 was evaluated. In light of the current literature (Veronese, Pepe, Almurnak, Jaradah, & Hamdouna, 2018; Veronese et al., 2017), children’s agency was included in the model as an exogenous variable with direct effects on both life satisfaction and symptoms of trauma as measured at Time 1. Next, a “stability model” (Model B) including direct effects between measures at Time 1 and Time 2 was estimated. Model B was crucial to assuming that longitudinal regression paths accounted for mechanisms resembling causality in the observed data (Pearl, Glymour, & Jewell, 2016). In CLMPs, constructs are controlled for by the inclusion of autoregressive pathways. Consequently, an additional model (Model C) was tested by including cross-lagged coefficients. Model C included direct effects from life satisfaction at Time 1 to trauma symptoms at Time 2, as well as, trauma symptoms at Time 1 to life satisfaction at Time 2. In addition, we estimated the direct paths from life satisfaction and trauma at Time 1 to life satisfaction and trauma at Time 2, respectively (see the conceptual model in Figure 1). According to Adachi and Willoughby (2015), the magnitude of longitudinal effects should be evaluated by “putting them in perspective” (p. 126), meaning that stability effects should be taken into account when using bivariate correlations to assess predictive effects. In keeping with the current literature (e.g. MacKinnon, Lockwood, & Williams, 2004), we estimated confidence limits using both Monte Carlo simulation and bootstrapping methods with a set of random samples \((k=500)\). We calculated given indirect effects for each of the k samples and the mean value for the selected pool of samples. Indirect effects were computed by using product method (see MacKinnon et al., 2004). To this end, statistically significant \( \beta \) values of at least .05 was taken to indicate a small effect size (Ferguson, 2009).

**Covariates**

The effects of age and gender were controlled for in all the models, with direct paths to all the target variables under study. The inclusion of the children’s demographic characteristics as covariates was based on evidence from the literature as well as for the attempt to compensate for source of confounding relations (Pepe & Addimando, 2014; Pepe, Addimando, Dagdouke, Yagi, & Veronese, 2018). In fact, life satisfaction and trauma symptoms have frequently been described as associated
Results

Categorization of the children’s self-reported traumatic experiences showed that approximately half of the interviewees had been exposed to more than one event related to political violence. About one-third (32.5%) described traumatic experiences involving military violence (such as demolition of homes, incursions by the Israeli army, exposure to military drones, sound-bombs, tear gas, and shootings); 17.4% self-reported episodes connected with the Israeli occupation (e.g. being threatened by settlers or the Israeli police). In addition, a considerable percentage of children (32%) reported that they were afraid of wild animals (such as snakes, dogs, scorpions, or hyenas) or frightened because of the unsafe environment in their village (5.2%). A further 5% of the children had experienced episodes involving community and/or family violence (such as sexual harassment, threat, or physical violence). Finally, 4.1% reported having nightmares and experiencing fear due to having viewed horror movies.

Before going on to report the results of the structural equation modeling, we provide a summary of the descriptive statistics for all measures in Table 1 and of the zero order correlations in Table 2.

The zero order correlations indicated that there was a statistically significant, positive association between children’s agentic competencies and their life satisfaction scores as measured at Time
In contrast, a linear association was not found between children’s agentic competencies and their trauma symptoms at Time 1 and Time 2. With regard to the correlations linking the two waves, life satisfaction at Time 1 was associated with life satisfaction at Time 2. A similar result was found in relation to the effects of trauma, with trauma symptoms as measured at Time 1 related to the level of trauma symptoms at Time 2. Finally, children’s demographic characteristics were associated with all variables of interest, with the younger children generally obtaining higher scores on the study measures. Similarly, boys generally obtained lower scores in all domains.

The next step was to estimate the prospective relationship between children’s agentic competencies, life satisfaction, and symptoms of trauma. We tested the full model (Model A), then the model including the stability coefficients between measures at Time 1 and Time 2 (Model B), and finally the cross-lagged model (Model C). The null model fitted the data ($\chi^2(1) = 1.07, p = \text{n.s.}; \text{NC} = 1.07, \text{RMSEA} = .022, \text{pclose} = .382, \text{NFI} = .981, \text{NNFI} = .985, \text{CFI} = .998$), and supported the idea that the relationships among the variables under study were both conceptually and statistically robust. As illustrated in Figure 2, agentic competency scores wielded a medium-sized total positive standardized effect on life satisfaction ($\beta = .25, p = .004; 95\% \text{ CI [0.149, 0.449]}$) and a small direct standardized effects on trauma symptoms ($\beta = .08, p = .023; 95\% \text{ CI [0.139, 0.450]}$). The indirect effect of agentic competency on trauma was $-.04 (p = .044; 95\% \text{ CI [–0.119, –0.101]})$. In addition, life satisfaction wielded a small statistically significant effect on trauma ($\beta = –.17; p = .037; 95\% \text{ CI [–0.484, –0.191]}$). In keeping with the results of the correlational analysis, age was inversely

Table 1. Main descriptive statistics for life satisfaction, trauma symptoms, and children’s agency at Time 1 and Time 2 ($N = 143$).

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Time 1</th>
<th>Time 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Boys (45.5%)</td>
<td>47.57</td>
<td>6.44</td>
</tr>
<tr>
<td>Girls (54.5%)</td>
<td>50.94</td>
<td>5.03</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSLSS</th>
<th>CRIES</th>
<th>CHS–Agency</th>
<th>CHS–Pathway</th>
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<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
<td>MSLSS</td>
<td>CRIES</td>
<td>CHS–Agency</td>
<td>CHS–Pathway</td>
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<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
</tbody>
</table>

Table 2. Zero order correlations between the variables in the model ($N = 143$).

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CHS–Path Time 1</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. CHS–Agency Time 1</td>
<td>.679***</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. MSLSS Total score Time 1</td>
<td>.267***</td>
<td>.333***</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. IES–Total score Time 1</td>
<td>.095</td>
<td>.104</td>
<td>-.02</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. MSLSS–Total score Time 2</td>
<td>.197**</td>
<td>.219**</td>
<td>.354***</td>
<td>.110</td>
<td>–</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. IES–Total score Time 2</td>
<td>-.041</td>
<td>.032</td>
<td>.010</td>
<td>.236**</td>
<td>.011</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.201*</td>
<td>.142</td>
<td>.283***</td>
<td>.152</td>
<td>.256**</td>
<td>.237**</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>-.179*</td>
<td>-.186*</td>
<td>-.259**</td>
<td>-.242**</td>
<td>-.081*</td>
<td>-.187*</td>
<td>-.081</td>
</tr>
</tbody>
</table>

CHS: Children’s Hope Scale; MSLSS: Multidimensional Student Life Satisfaction Scale; IES: Impact of Event Scale.

*p < .05, **p < .01, ***p < .001.
associated with participants’ scores on the study measures. All in all, Model A portrayed agentic competency as a factor promoting life satisfaction and protecting children from trauma symptoms. Similarly, levels of life satisfaction appeared to protect children from the consequences of traumatic experience (see Figure 2).

Next, evaluation of goodness of fit indexes revealed that the stability model (a model with estimated direct paths linking scores at Time 1 with scores on the same variables only at Time 2) did not meet the criteria for the acceptance: ($\chi^2(7)=18.17$, $p=.011$; NC=2.59, RMSEA=.106, pclose=.057, NFI=.825, NNFI=.596, CFI=.865). The misfit of Model B with the empirical data suggested that using exclusively longitudinal effects in the model yielded a poor representation of the covariances among scores at Time 1 and Time 2. This suggested the hypothesis that cross-lagged paths between life satisfaction and trauma at Time 1 and Time 2 might produce a better fit of the theoretical model with the empirical data. To further investigate the stability of scores across time, a 2 (time) × 2 (gender) mixed analysis of variance (ANOVA) analysis was conducted for each of the measures. With regard to life satisfaction scores, the model ($F=4.35$, $p=.039$, $\eta^2=.030$) suggested that scores at T2 were significantly lower (49.4 vs 48.15) than at T1 regardless the gender of children. With regards to trauma, the scores (31.5 vs 30.20) were substantially stable ($F=2.16$, $p=.149$, $\eta^2=.015$) with a not statistically significant effect of gender. Finally, agency_cumulate scores did not reported statistically significant ($F=1.88$, $p=.172$, $\eta^2=.013$) differences between T1 and T2 (24.33 vs 23.49).

Hence, we next tested the cross-lagged model (Model C), which included the stability coefficients between life satisfaction at Time 1 and Time 2 and trauma symptoms at Time 1 and Time 2, as well as the cross-lagged paths ($R^2$ values were summarized in Table 3). Model C displayed an
excellent fit with the observed data: ($\chi^2(17)=1.18, p=\text{n.s.}; \text{NC}=1.18, \text{RMSEA}=.021, \text{pclose}=.746, \text{NFI}=.990, \text{NNFI}=.982, \text{CFI}=.992$). With regard to children’s agentic competencies, statistically significant total standardized effects were found between agency and both life satisfaction ($\beta=.25, p=.010; 95\% \text{ CI} [0.161, 0.476]$) and trauma symptoms ($\beta=−.13, p=.044; 95\% \text{ CI} [−0.317, 0.203]$) at Time 1. Similarly, agentic competencies were also found to be more related to life satisfaction ($\beta=.14, p=.047; 95\% \text{ CI} [0.025, 0.338]$) and less to trauma symptoms ($\beta=−.10, p=.145; 95\% \text{ CI} [−0.543, 0.036]$) at Time 2. In other words, including the cross-lagged paths increased the fit of the model significantly. In fact, in addition to the path values estimated in the null model, Model C suggested that life satisfaction and symptoms of trauma were longitudinally interrelated. On one hand, the results confirmed the stability of the scores across time; in fact, both direct effects (i.e. from life satisfaction at Time 1 to life satisfaction at Time 2 ($\beta=.29, p=.011; 95\% \text{ CI} [0.163, 0.502]$), and from trauma at Time 1 and trauma at Time 2 ($\beta=.18, p=.042; 95\% \text{ CI} [0.029, 0.329]$) were moderate, positive, and statistically significant. On the other hand, life satisfaction at Time 1 was not statistically related to trauma at Time 2 (total effect $\beta=−.09, p=.323; 95\% \text{ CI} [−0.365, −0.085]$) and trauma at Time 1 was not statistically related to life satisfaction at Time 2 (total effect $\beta=−.07, p=.255; 95\% \text{ CI} [−0.026, 0.166]$). In other words, the more the subjects displayed agentic competences, the more positively they rated their lives in the domains of family, school, environment, and friends; the less trauma they reported at Time 1, the more life satisfaction they reported 6 months later. On the contrary, the relationship between trauma at T1 and life satisfaction at T2 was not statistically significant. From this point of view, it was important to underline that the effects of agentic competencies on trauma was small and mainly indirect at T1 (via life satisfaction, $\beta=−.04, p=.049; 95\% \text{ CI} [−0.169, −0.010]$) and not statistically significant at T2. The standardized indirect effects of the demographic variables are summarized in Table 4.

**Discussion**

In our study, we set out to assess the longitudinal role of agentic capabilities in a group of Bedouin children exposed to ongoing political and military violence in promoting life satisfaction (H1), which in turn can moderate traumatic reactions (H2) (Veronese, Pepe, Cavazzoni, Obaid, & Perez, 2019). We further tested whether agency directly contributed to mitigating symptoms of trauma (H3). The results provided support for all three hypotheses, suggesting that in general Bedouin children draw on a considerable range of resources in adjusting to their chronically traumatic life context (Diab, Peltonen, Qouta, Palosaari, & Punamäki, 2015; Massad et al., 2009; Qouta, Palosaari, Diab, & Punamaki, 2012). Our prediction that age and gender would also yield effects and should therefore be included in the conceptual model was confirmed by the outcomes (Veronese et al., 2017; Veronese et al., 2019). Indeed, younger children and girls appear better equipped to

<table>
<thead>
<tr>
<th>Latent variables</th>
<th>$R^2$</th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
<td>.09</td>
<td>.09</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Life satisfaction T1</td>
<td>.18</td>
<td>.18</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>Trauma T1</td>
<td>.10</td>
<td>.10</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>Life satisfaction T2</td>
<td>–</td>
<td>.14</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Trauma T2</td>
<td>–</td>
<td>.07</td>
<td>.13</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Summary of $R^2$ values for all models.
### Table 4. Summary of standardized indirect effects (Model C).

<table>
<thead>
<tr>
<th>From –&gt;To</th>
<th>Gender</th>
<th>Age</th>
<th>CHS total Time 1</th>
<th>MSLSS total Time 1</th>
<th>IES total Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHS total Time 1</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>MSLSS total Time 1</td>
<td>0.043 [0.035, 1.14]</td>
<td>–0.046 [–0.293, –0.023]</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>IES total Time 1</td>
<td>–0.030 [–1.51, –0.361]</td>
<td>0.024 [–0.088, 0.330]</td>
<td>–0.042 [–0.159, 0.003]</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>MSLSS total Time 2</td>
<td>0.109 [0.544, 2.45]</td>
<td>–0.112 [–0.595, –0.131]</td>
<td>0.077 [0.031, 0.193]</td>
<td>–0.016 [–0.045, 0.081]</td>
<td>–</td>
</tr>
<tr>
<td>IES total Time 2</td>
<td>–0.022 [–1.73, –0.85]</td>
<td>0.009 [–0.341, –0.273]</td>
<td>–0.014 [–0.153, 0.082]</td>
<td>–0.050 [–0.175, 0.015]</td>
<td>0.007 [–0.024, 0.011]</td>
</tr>
</tbody>
</table>

CHS: Children’s Hope Scale; MSLSS: Multidimensional Student Life Satisfaction Scale; IES: Impact of Event Scale. 95% Confidence intervals were reported in square brackets.
mobilize agentic resources and thus to enhance their life satisfaction, while older boys reported fewer sources of agency and life satisfaction, as well as greater symptoms of trauma (Veronese & Pepe, 2013; Veronese et al., 2017). These effects might be explained as context-related factors, given that boys in Palestinian and Bedouin culture are more exposed to risk because they are more highly motivated than girls to engage with out-of-home social environments that are characterized by severe political and military violence (Al-Krenawi & Slonim-Nevo, 2002; Khamis, 2015). Participating in demonstrations or being part of a civil resistance movement against occupation, may on the one hand be viewed as a route toward competence and salvation but on the other hand can increase the subject’s risk of being traumatized. As a result, agentic strategies can turn into risk behaviors undermining the quality of life of youth and adolescents with severe exposure to military retaliation and persecution (Fassin, 2008; Punamäki, Palosaari, Diab, Peltonen, & Qouta, 2015). On the contrary, girls and younger children may be more inclined to engage in emotion-informed agentic strategies in intimate and more protected domestic living environments and consequently, less exposed to traumatic events (Frydenberg, 2018; Punamäki et al., 2015).

With regard to the function of agency in triggering life satisfaction, we found a direct effect between the predictor, agency, and the outcome variable, life satisfaction. This direct effect seems to confirm the role of agency in activating and mobilizing life satisfaction in contexts of ongoing trauma (Cook et al., 2017). Thus, the children were shown to actively contribute to their own life satisfaction. Children’s everyday actions are directed at enhancing their sense of self-competence and efficacy in multiple life domains, thereby, potentially increasing their satisfaction with themselves, their friends, families, living environment, and school (Savahls et al., 2015; Veronese, & Pepe, 2017). Life satisfaction plays a role in protecting children from trauma, while agency contributes both to activating life satisfaction and mitigating traumatic stress. Accordingly, agency showed to be an activator of life satisfaction in the short term, becoming a buffer against trauma over a longer period. Furthermore, the children’s levels of life satisfaction dropped slightly over the time period of the study, most probably reflecting the adverse life conditions they continued to face as the victims of chronic political and military violence. Simultaneously, they appeared to compensate for disruption to their life satisfaction by deploying agentic resources and strategies to protect themselves from traumatic reactions and psychological breakdown (Denov & Akesson, 2016; Veronese et al., 2018).

In sum, our findings showed that although Bedouin children are at risk of undermined ability to cope with trauma, due to worsening adverse life conditions, they nonetheless conserve good psychological functioning by maintaining their levels of life satisfaction. Although the children in our sample displayed significantly higher levels of trauma symptoms 6 months after first measurement, they seemed to protect their psychological well-being by drawing on sources of agency to maintain their levels of life satisfaction which, together with their sense of agency itself, helped them to mitigate their traumatic distress to some degree (Veronese et al., 2019).

**Conclusion**

Our findings suggest that children are competent agents who are capable of self-regulating and adjusting to traumatic experiences even in contexts characterized by chronic extreme violence (Barber, 2001; 2013; Gilligan, 2009; Rabaia et al., 2014; Veronese, Castiglioni, Tombolani, & Said, 2012). Such a perspective on children’s competence challenges the widely accepted definition of children as vulnerable and more at risk than adults when exposed to conflict and military violence (Slone & Mann, 2016; Thabet & Vostanis, 2000).
We conclude by trying to coherently relate the two opposing arguments within our theoretical framework. We have drawn on agency here to explain how children might implement skills for survival and resistance, rather than succumb to risks and sources of vulnerability when they are the victims of political and military violence. The more children perceive themselves as agentic social actors in activating domains of life satisfaction, the more effectively they will be able to deploy their natural survival skills and resilience when exposed to extreme live events (Boyden, 2003; Gilligan, 2009; Marshall, 2014).

Consequently, clinical and psychosocial practice needs to take into account children’s own perspective on their suffering and how they might overcome it, thus embracing a child-centered approach to psychological care (Lake & Jamieson, 2016; Lawrence, Kaplan, & Collard, 2019). The more children have the opportunity to actively participate in their recovery process, the more their agentic capability can contribute to boosting their resilience and survival skills (Veronese & Barola, 2018; Veronese et al., 2017).

Finally, some remarks about the specific life contexts of the young participants in our research are in order. The Bedouin population both in Israel and in West Bank are continuously subjected to severe human rights violations that undermine their quality of life and psychological well-being (Margalit, 2017). To protect children and promote their own natural resources, psychosocial approaches designed to foster children’s life satisfaction and agency should promote and safeguard human rights, by supporting political actions aimed at improving the quality of life and civil rights of oppressed populations and advocating for justice and protection against systematic violence and structural racism. In sum, we are skeptical about the efficacy and ethical status of interventions that do not seek change in sociopolitical and structurally violent conditions that continuously cause suffering to child victims. We believe that the failure to look for change will further undermine children’s agentic development, frustrating their aspiration to live happy and secure lives (Giacaman, 2017; Rabaia et al., 2014).

**Limitations**

Our work should be viewed as a pilot study with a number of weaknesses that we attempted, with partial success, to address. First, to the best of our knowledge, the current literature offers no instruments that fully conceptualize and measure agency. The instrument by Snyder et al. (1996) used in this study was developed as a generic measure of hope and therefore was not sufficient to capture the finer nuances of agency. Nonetheless, the subscales of agency and future pathways may be viewed as a first attempt to operationalize the broader construct. In the future, mixed-method research designs are recommended to explore context-specific domains and dimensions of agency in greater depth and inform the development of quantitative instruments for operationalizing and measuring agency more reliably and exhaustively (Veronese et al., 2017; Veronese et al., 2018).

Next, as is the case in research on children and trauma generally, self-report measures are inherently less accurate than clinical interviews when it comes to assessing traumatic distress (Boals & Hathaway, 2010) and, consequently, should be supplemented in the future by qualitative data on the consequences of living in an at-risk environment. To offset this potential source of bias, we included a direct qualitative instrument (the children were asked to write about or draw something that had particularly frightened them over the previous 2 months) to evaluate the traumatic events the children had been exposed to. Also, the use of different quantitative measures within the same research design can give rise to common method variance (CMV; that is to say, relationships among variables that are attributable to the measurement method rather than to the constructs themselves, Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Furthermore, the longitudinal design used in this study involved collecting data at two time points only; further studies with measurement at multiple time points are recommended.
points across different developmental stages should be conducted to advance our understanding of the relationships among the study constructs along the developmental trajectory. Finally, the sample was composed of Bedouin children living in specific environmental conditions, which limits the generalizability of our findings to other at-risk populations and cultural milieus.

Declaration of conflicting interests
The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding
The author(s) received no financial support for the research, authorship, and/or publication of this article.

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