# Promoting Mental Health and Psychosocial Well-Being in Children Affected by Political Violence: Part II—Expanding the Evidence Base

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## Limitations in Current Knowledge

In our opinion, current research and knowledge regarding ecological resilience is hampered by four main interrelated limitations.

First, knowledge regarding ecological resilience is dominantly cross-sectional in nature. Notable exceptions include work in the Middle East (Punamaki, Qouta & El Sarraj, 2001), work

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in progress in Northern Ireland (Cummings, Goeke-Morey, Schermerhorn, Merrilees & Cairns, 2009), and in Sierra Leone (see below). Without longitudinal data, conclusions regarding causality (e.g., it may be possible that creativity does not protect against mental health problems, but mental health problems affect creativity) cannot be drawn, and it remains possible that other variables are responsible for observed resilience.

Second, very few studies address processes involving transaction, i.e., resilience processes in which variables at different social-ecological level interact over time. For instance, it is possible that consistent and supportive parenting leads to better coping skills in children, which in turn strengthens positive parenting in a reenforcing cycle. Such hypotheses require sophisticated multilevel longitudinal designs, which are hard to implement in politically unstable resource-poor settings. However, naturalistic designs may also shed light on these hypotheses as discussed by Sameroff and Mackenzie (2003).

Third, most political violence takes place in low-income countries in settings with varying sociocultural settings (Ungar, 2008). Concepts and measurements from high-income countries may not be appropriate in these settings because of differences in conceptualizations of distress and optimal child development, help-seeking strategies, and what type of support is available and needed among others. Mixed methods research that employs participatory qualitative techniques to elicit contextually sensitive indicators of well-being is crucial in this regard.

Fourth, we believe that research on ecological resilience with children affected by political violence can be strengthened by stronger development of theory. A sign of poor theoretical development concerns the popular citation of Bronfenbrenner's, 1979 work without acknowledgement of his later bioecological work, in which he more strongly focused on the importance of development as situated in the person and advocated a person-process-context-time (i.e., chronosystem) model (Bronfenbrenner, 2005). Here, Bronfenbrenner's writing foreshadowed current interests and advances in developmental research that have illuminated how environmental and biological processes interact, for instance, by showing how brain architecture is shaped by adversity in early childhood (Shonkoff, 2010; Shonkoff & Phillips, 2000). Similarly, while the international resilience literature is moving beyond a "wish-list" approach to examine processes—including biological processes (Masten, 2007)—most research with children in this field still concerns testing associations of family-level and individual-level variables with good developmental outcomes. As stated in the previous chapter, very little data exists on meso-system interactions. We feel that two research approaches may be promising to strengthen theory in this regard. First, hypothesis generating $n=1$ research may help to uncover resilience processes in action. Second, following Bronfenbrenner's mentors' advice "if you want to understand something, try to change it" (Bronfenbrenner, 1979, p. 37), randomized controlled trials that take into account moderators and mediators of intervention may be helpful to provide insight into how resilience processes take place.

Below, we describe four research projects aimed at overcoming some of these limitations. First, we describe a longitudinal study with former child soldiers in Sierra Leone, aimed at examining risk and protective factors in this population over time. Second, we summarize a participatory approach to the development of a measure of positive psychosocial well-being, which was subsequently used to assess environmental influences on well-being of former child

soldiers in Nepal. Third, we present a study consisting of a series of 11 single-case studies that was aimed at theory formation regarding treatment processes of individual psychological treatment with children affected by political violence in Burundi. Finally, we review the results of a cluster randomized trial of a school-based intervention with violence-affected children in Indonesia that included study of moderators and mediators of intervention benefits.

## A Longitudinal Study of War-Affected Youth in Sierra Leone

In 2002, collaboration between the Harvard School of Public Health and the International Rescue Committee (IRC) led to the launch of a longitudinal study of war-affected youth in Sierra Leone. The study was designed to examine risk and protective processes in psychosocial adjustment and social reintegration. It was informed by an ecological approach to child health and well-being which examines the interaction of influences at the individual, familial, peer, community, and cultural/collective level (Betancourt & Khan, 2008; Bronfenbrenner, 1979). The study was also shaped by contemporary theory and research related to resilience in the mental health and development of children and families in adversity.

Survey interviews were conducted at three time points, in 2002, 2004, and 2008. The core sample comprised children who had been involved with the Revolutionary United Front (RUF) who were referred to the IRC's Disarmament, Demobilization, and Reintegration (DDR) program in Sierra Leone's Kono District (a sample of $N=260$ drawn from a master list of 309 youth that were served by the IRC's Interim Care Center (ICC) during the most active period of demobilization, June 2001 to February 2002). The study design also included a comparison group of community children ($N=137$) identified by random door-to-door sampling and, in 2004, an additional cohort of former child soldiers ($N=138$) who were not served by ICCs.

All participants were interviewed by trained Sierra Leonean research assistants, in Krio, the

most dominant local language. The surveys contained a mix of standard measures and locally derived measures, developed in close consultation with local staff and community members. Main measures of interest included standard information about age and length of involvement with armed groups, war-related violence exposures, and a scale of psychosocial adjustment developed and validated for use among former child soldiers in Sierra Leone by researchers at the Oxford Refugee Studies Program (MacMullin & Loughry, 2004), which contained subscales for anxiety, depression, hostility, confidence, and prosocial behaviors. Taking more of an ecological perspective, the survey instruments also included questions about family configuration and relationships upon return, community acceptance, social support, access to educational and skills-training opportunities, and family socioeconomic status. The 2004 and 2008 follow-up surveys repeated these baseline measures and added other items to examine community collective efficacy (nonformal social control and social cohesion), stigma/discrimination, high-risk behavior, civic participation, and post-conflict hardships.

This research has led to several publications about how war-related and post-conflict experiences affect the long-term mental health and psychosocial adjustment of former child soldiers (Betancourt, Agnew-Blais, Gilman, Williams & Ellis, 2010; Betancourt et al., 2008, 2010; Betancourt, Brennan, Rubin-Smith, Fitzmaurice & Gilman, 2010; Betancourt & Ettien, 2010; Betancourt, Zaeh, Ettien & Khan, 2012. The research indicates that the long-term mental health of former child soldiers is affected both by war experiences and by post-conflict factors. For instance, lower levels of prosocial behavior (such as helpfulness towards others) were associated with having killed or injured others during wartime, and with the presence of social stigma towards that child, after the war (Betancourt, Agnew-Blais, et al., 2010). Young people who reported having been raped exhibited heightened anxiety and hostility after the war (Betancourt, Borisova et al., 2010). Worsening anxiety and depression over time were also closely related both to younger age of being involved in fighting

forces and to social and economic hardships in the post-conflict environment (Betancourt, Brennan, et al., 2010). We also looked at the role of stigma (including discrimination and lower levels of community and family acceptance) as a potential mediator between war-related experiences and problems with post-conflict psychosocial adjustment and adaptive behaviors. We found that societal stigma due to being a child soldier also explained a significant proportion of the variance in levels of hostility that the cohort of youth reported over time (Betancourt, Agnew-Blais, et al., 2010); greater stigma was also associated with less prosocial behavior.

Poor outcomes were partly mitigated by some post-conflict factors, including social support, being in school, and increases in community acceptance over time. Higher levels of family acceptance were associated with lower hostility. Improvement in community acceptance was associated with positive adaptive attitudes and behaviors (Betancourt, Brennan, et al., 2010). Overall, community acceptance—both initially and over time—had a beneficial effect on all outcomes studied (Betancourt, Brennan, et al., 2010). Qualitative data from a series of in-depth key informant interviews indicated that even young people who experienced extreme trauma could reintegrate well if they had strong family and community support (Betancourt & Ettien, in press). We also found that youth who lacked strong, effective support were on a much riskier path characterized by social isolation and high-risk behavior such as substance abuse and, in some cases, engaging in high-risk or abusive relationships in order to secure basic needs (Betancourt & Ettien).

The findings of this first longitudinal study of male and female former child soldiers indicate that psychosocial adjustment and community reintegration of war-affected youth are complex processes involving a range of factors across time and ecological levels. However, post-conflict factors that play a role in determining long-term outcomes are of particular interest to researchers, practitioners, and policy-makers, since many post-conflict factors can be modified while war experiences cannot.

## Child-Led Indicators in Nepal: A Participatory Approach with Former Child Soldiers

Based on a participatory approach, former child soldiers in Nepal developed a measure of positive psychosocial well-being (Karki, Kohrt & Jordans, 2009). The process comprised working with small groups of 8–10 former child soldiers in which the children engaged in an extended participatory activity. Over a 3-day period, a group of children would complete seven activities: First they described feelings in the heart-mind, which is the organ of emotion and memory in Nepali ethnopsychology (Kohrt & Harper, 2008; Kohrt & Hruschka, 2010). Second, they ranked feelings according to those most impairing in their lives and selected the most impairing feelings as the focus for subsequent steps. Third, they highlighted the causes of these target feelings and the effect these feelings have on their lives and the lives of others. Fourth, they identified the ideal psychosocial well-being for children their age (i.e., resiliency-promoting factors). Fifth, they mapped resources in their communities that could be mobilized to help solve psychosocial problems and promote psychosocial well-being. Sixth, they selected interventions and activities needed to achieve ideal well-being and promote resilience. In the final step, they selected child-led indicators for children to evaluate interventions, for example, monitoring school attendance and grades, doing focus groups, having street discussions, and conducting radio call-in shows to discuss changes in the community.

The nine items on the child-led indicator scale developed by the children included (1) being hopeful about the future, (2) desire to help others, (3) feeling safe, (4) confidence in speaking with others, (5) treating everyone equally and not engaging in caste or ethnic discrimination, (6) concentration on studies, (7) feeling free of unnecessary fear, and (8) desire to improve one's country. This measure encompassed well-being across ecological levels: individual intrapsychic objectives were to control one's fear and improve concentration, goals for interpersonal behavior included confidence in speaking with others and

helping others, and broad social ideals included not engaging in caste discrimination and desire to improve the nation. The measure was inversely correlated with depression ($r = -0.36$, $p < 0.001$) and PTSD ($r = -0.18$, $p < 0.05$). The measure positively correlated with reintegration support from the family and community after returning from the armed group ($r = 0.46$, $p < 0.001$).

We assessed the contribution of different ecological levels to the resilience and psychosocial well-being measure using hierarchical regression models (see Table 3.1 below). Individual-level variables contributed 27% of the total variance. Micro-system family-level variables contributed 12% of the total variance. Finally, exo-system community-level variables contributed 13% of the total variance. This demonstrates the importance of considering social-ecological levels in addition to individual characteristics when identifying risk and protective factors for childhood resilience. Of note, the type of community (exo-system) contributed significantly to psychosocial well-being among former child soldiers. Children returning to communities with high levels of female literacy had greater well-being, whereas children returning to communities dominated by upper caste elites had poorer well-being. These factors, in turn, are influenced by macro-system level factors such as cultural beliefs and policies related to gender and caste equality.

This Nepal example has important intervention implications, specifically around the area of *policy* at the macro-system level. Policy advances to promote greater inclusion of children in the educational system would engender resilience, as educational level was one of the strongest predictors of psychosocial well-being. Moreover, policies are needed to assure greater representation of girls in the educational system because female literacy strongly predicts positive psychosocial well-being. Through his research and advocacy, Bronfenbrenner was instrumental in establishing the *Head Start* program in the United States as an approach to reduce socioeconomic barriers to education, which often occurred along racial and ethnic lines. Similar policies and programs are needed to foster resilience among not only girls but among entire communities in Nepal.

**Table 3.1** Multivariate regression models by ecological level for locally developed measure of child soldiers in Nepal (*n* = 142)

| | Positive psychosocial well-being | | |
|---|---|---|---|
| | $\beta$ (95% CI) | *p*-value | Variance ($R^2$) |
| *Child variables* (individual ontogenetic) | | | 0.27 |
| Age | 0.14 (−0.13–0.39) | 0.31 | |
| Female | −0.21 (−1.19–0.79) | 0.68 | |
| Education (none = ref.) | | | |
|   Primary | 1.76 (−0.67–4.20) | 0.002 | |
|   Lower secondary | 2.88 (0.39–5.36) | | |
|   Secondary + | 2.99 (1.06–4.92) | | |
| Married | −0.27 (−1.62–1.08) | 0.69 | |
| Recruitment (>14 years) | −0.95 (−1.81–0.08) | 0.03 | |
| Time as soldier (>1 year) | −0.81 (−1.72–0.09) | 0.08 | |
| Time since returned (>1 year) | −0.15 (−1.05–0.74) | 0.74 | |
| Beating | −0.02 (−1.02–0.98) | 0.96 | |
| Bombing | −0.95 (−1.70–0.21) | 0.01 | |
| Abduction | 0.76 (−0.33–1.86) | 0.17 | |
| Torture | −0.64 (−1.63–0.34) | 0.20 | |
| Still associated | 1.51 (0.20–2.81) | 0.02 | |
| *Family variables* (micro-system) | | | 0.12 |
| Joint family | −0.33 (−1.08–0.42) | 0.39 | |
| Family size (#members) | −0.28 (−0.47–0.10) | 0.002 | |
| Hindu religion | −0.34 (−1.54–0.87) | 0.58 | |
| Caste (high caste = ref.) | | | |
|   Dalit | −0.21 (−0.82–0.41) | 0.77 | |
|   Janajati | −0.19 (−093–0.54) | | |
| Wealth | 0.06 (−0.32–0.43) | 0.77 | |
| Wealth worse after conflict | −0.05 (−0.99–0.90) | 0.99 | |
| Female decision maker | −0.21 (−1.03–0.62) | 0.62 | |
| Family member killed | −1.72 (−2.77–0.67) | 0.001 | |
| Physical abuse | −2.13 (−3.18–1.08) | <0.001 | |
| *Community variables* (exo-system) | | | 0.13 |
| Conflict mortality (>200) | 0.42 (−0.39–1.23) | 0.31 | |
| Female literacy (>45%) | 1.95 (1.22–2.68) | <0.001 | |
| High caste proportion (>40%) | −2.06 (−3.01–1.10) | <0.001 | |
| Total variance | | | 0.51 |

*Note*: Generalized estimating equations used to control for village clusters

Policy changes are also needed to reduce child abuse, which is a major risk factor for poor outcomes. Nepal lacks any comprehensive legal policy or enforcement mechanism to protect children from abuse (Baker & Hinton, 2001; His Majesty's Government, 1992). Lastly, policies are needed to eliminate caste- and ethnic-based discrimination related to high caste hegemony. Policies in this area have been very slow to develop in Nepal and have consistently lacked repercussions for caste- and ethnic-based crimes and discrimination (Kohrt, 2009). To date, much of the international work with children and conflict has involved specific targeted individual-, family-, and often school-based programming. This research in Nepal suggests that policy change is crucial as well. Future interventions should find avenues to promote local advocacy mechanisms to change national policies that enhance ecological resilience for children.

## Theory Formation of a Psychosocial Intervention in Burundi

A recent systematic literature review of mental health and psychosocial intervention for children affected by political violence presents a wide range of treatment modalities, with 18% focusing on universal interventions (Jordans, Tol, Komproe & de Jong, 2009). Moreover, while treatment evaluation studies are still scarce, evidence for efficacy of treatment is emerging. Yet, to date there are no studies that assess treatment processes for child-focused interventions in areas of political violence. A better understanding of how treatments work, and specifically how they impact children's resilience, is much needed to direct treatment refinement, setting the stage for future efficacy studies and scaling-up of the intervention. This calls for research that is geared towards theory formation.

The use of empirically grounded single-case studies can play an important, practice-relevant role in this regard (Lundervold & Belwood, 2000). Single-case ($n=1$) studies focus on the temporal unfolding of variables within subjects (monitoring of client progress), thereby evaluating the effect of the intervention on an individual level allowing for evaluation of processes of change (whether, how, and for whom treatment works). We conducted 11 $n=1$ studies of children between 11 and 14 years of age (9 females, 2 males) that were referred to counselor presenting with moderate to severe psychosocial distress (Jordans et al., 2012). Children and the counselor were followed weekly before, during, and after treatment (4, 8, and 4 measurements, respectively), to assess outcome indicators (i.e., depression, anxiety, posttraumatic stress symptoms, function impairment, and sense of hope) and treatment process variable (i.e., treatment perceptions, session content, utilized intervention strategies) during the counseling period. Analyses included visual inspection of change trajectories, testing the stability of trends of successive measurements, content analyses of treatment process data, and finally categorizing and associating treatment outcome trajectories with treatment process data.
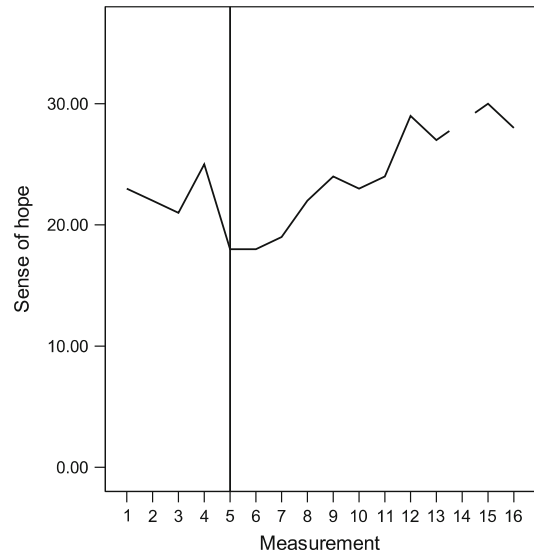


**Fig. 3.1** Change in sense of hope. Note: The graph presents the change in hope of one client over time. Intervention started at measurement 5. The gap in the line diagram represents a missed interview due to the client's illness

The results present a wealth of information on the working elements of a paraprofessional psychosocial intervention in Burundi. When specifically looking at the interplay between counseling and resilience, there appear to be two trends: first, counseling having the intended effect of increasing children's sense of empowerment and hope and, second, the role of counseling in mobilizing existing resources within the child's context. Both trends are concurrent with reduction of symptoms in the studied cases. To illustrate this interplay, we present two examples.

## Case Vignette 1

A 13-year-old girl, who witnessed the killing of her father, reports a combination of fear, nightmares, and sleep problems. From the start of the counseling process the client expresses a sense of relief and reassurance in being able to express her feelings, especially as she feels ashamed of her thoughts and problems. The emerging trust in the counselor and consequently feeling at ease allows for verbalization of painful memories. The client reports a sense of encouragement and hope for the future as a result of this process (Fig. 3.1).
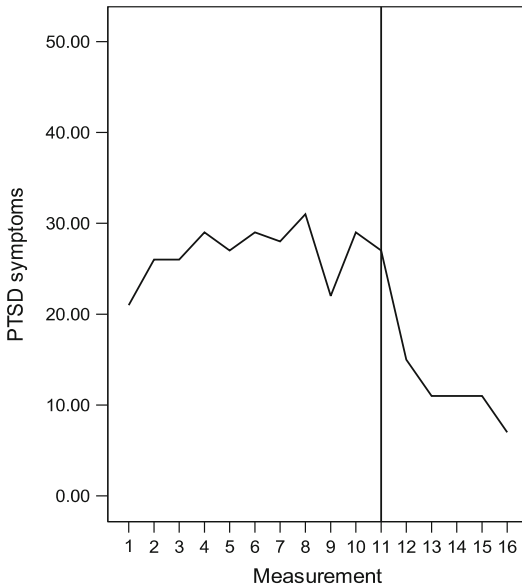
**Fig. 3.2** Change in PTSD symptoms. Note: The graph presents the change in PTSD of one client over time. Intervention started at measurement 5

Analyses demonstrate that client change is associated with the quality of the therapeutic alliance in this case.

## Case Vignette 2

An 11-year-old girl demonstrated signs of selective mutism, aggressivity, and high levels of PTSD symptoms. After 6 sessions characterized by reluctance and silence, the parents are included in the process. The parents refer to their child's problem as "wind fear." It appears that since a 2003 armed attack of the rebels during a heavy storm, winds serve as a traumatic trigger for the child. Subsequently, the counselor works with the parents on their awareness of the child's problems (i.e., posttraumatic triggers) and strengthening their parental roles of guidance and support to deal with the child's difficulties. Analyses clearly show a milestone change in PTSD symptoms soon after the involvement of parents at session 7 (measurement 11) (Fig. 3.2). A similar trend is found in other cases as well.

The above cases are provided as examples to illustrate the use of $n = 1$ studies in exploring

treatment processes of counseling that may contribute to increased resilience of children and their context. It points towards the role of treatment, and in particular a therapeutic relationship, in reaffirming a sense of hope and empowerment (enabling or reinforcing clients to help themselves). At the same time it demonstrates the importance of existing resources and support outside the client-counselor context that have a powerful influence on the healing process of children, most notably the involvement of parents in the treatment process. This confirms the findings of the protective role of parenting practices, as summarized in the previous chapter. While the above-mentioned results present initial hypotheses, further research should look into the specific practice elements that contribute to increased resilience.

## Moderators and Mediators in a Cluster Randomized Trial in Indonesia

In a study focused specifically on testing an ecological resilience theoretical framework, we examined moderators and mediators of a classroom-based psychosocial intervention in conflict-affected areas of Indonesia (Tol, Komproe et al., 2010). Given the experimental nature of a randomized controlled trial and assessment at multiple time points (pre-intervention, post-intervention, and follow-up at 6 months), this design allowed for testing whether an increase in ecological resilience through intervention was associated with a decrease in symptomatology. In short, we randomized schools to either a treatment or waitlist condition and subsequently screened for exposure to political violence events, PTSD symptoms, and anxiety in the province of Central Sulawesi on the island of Sulawesi, Indonesia. This area has suffered communal violence played out along religious lines since 1998 (Tol et al., 2008). Our choice, adaptation, and development of instruments to assess psychosocial well-being (including psychological symptoms, function impairment, and resilience variables) were based on previous qualitative research which involved focus group discussions and key informant interviews (e.g., massage healers) concerning local perspectives

on how political violence compromises psychosocial well-being and which initiatives were undertaken to address this impact (Tol, Reis, Susanty & de Jong, 2010). Screening in 14 schools resulted in the inclusion of 182 and 221 children and their parents in the treatment condition and waitlist condition, respectively. Treatment consisted of 15 structured sessions of combined cognitive behavioral and creative-expressive techniques, including drama, drawing, structured play, dance, and music activities. These activities focused both on decreasing symptomatology (e.g., through creation of a trauma narrative by the use of drawing) and strengthening children's resources (e.g., through cooperative play activities, discussion of coping strategies). Previous analyses based on mixed methods regression analyses showed that the girls in the intervention condition improved more with regard to PTSD symptoms and function impairment. For both girls and boys in the intervention condition, hope remained stable, whereas it decreased in the waitlist condition (Tol et al., 2008). Here, we were interested in explaining these changes in PTSD symptoms and function impairment by examining moderators and mediators. Mediators are variables that identify why and how treatments have effects, whereas moderators are variables that identify on whom and under what circumstances treatments have different effects (Kraemer, Wilson, Fairburn & Agras, 2002). For instance, a change in negative cognitions about the self may be a mediator of the relation between participating in cognitive behavioral therapy and decreased depressive symptomatology. Such a change in depressive symptomatology may be moderated by social support, in that participants with better social support show stronger treatment benefits.

In accordance with an ecological resilience framework, we hypothesized that increased hope, better coping (i.e., the use of more positive coping strategies and less negative coping strategies), and social support (specifically emotional and play-based social support, and social support provided by peers) would mediate the relation between treatment participation and decreases in PTSD symptoms and function impairment.

In addition, we anticipated that individual (gender, age, exposure to violence, displacement) and contextual variables (family connectedness, household size, social support by people outside the households) would moderate the relationship between treatment participation and reduced PTSD symptoms and function impairment. We employed a parallel process latent growth curve modeling approach to test these hypotheses.

First, we examined whether treatment was associated with better outcomes on the resilience variables (i.e., hope, coping, social support), a precondition for their function as mediators. We found that participating in treatment was indeed associated with better outcomes on hope, positive coping, and peer- and play-based social support; treatment was not associated with decreased negative coping or increased emotional social support. However, the improved resilience variables generally did not serve as mediators of changes in PTSD symptoms and function impairment. In contrast, we found that play-based social support functioned as a mediator in the opposite direction, in that larger increases in play-based social support were associated with smaller decreases in PTSD symptoms.

With regard to moderators, we found that gender (girls), household size (smaller household size), and reporting more social support from adults outside the household were associated with larger treatment benefits. We interpreted this finding in terms of vulnerability, i.e., those children with less social support before the intervention were able to benefit more from the social support it offered in order to decrease their psychological distress (Tol, Komproe et al., 2010).

In conclusion, this rigorous evaluation provides only limited support for the proposed ecological resilience theoretical framework. It will remain important, despite broad consensus on the importance of contextual resources for populations exposed to violence, to systematically check our theoretical assumptions in order to provide the best possible services. Together with other authors (Kazdin, 2007; Kazdin & Nock, 2003; Kraemer et al., 2002), we feel that randomized controlled trials are a promising method to do this, given their experimental design. However, randomized trials would then have to be designed

to take into account mediators and moderators of treatment, which is currently rarely done in either high- or low-income settings.

## Concluding Remark

The above examples are meant as illustrations of possible ways in which some of the current shortcoming in our knowledge on ecological resilience may be addressed. Obviously, other research efforts have been published which could have served a similar function, and the above examples have their own limitations. For instance, they do not address recent advances in knowledge regarding biological processes and markers of resilience, despite the potential of this emerging body of knowledge to inform prevention practices (Feder, Nestler & Charney, 2009; Haglund, Nestadt, Cooper, Southwick & Charney, 2007). Nonetheless, we believe that advances in longitudinal and multilevel statistics provide an opportunity to start unraveling the complex transactional patterns between person and context that are at the heart of understanding the mental health and psychosocial well-being of children living in areas of political violence. Combined with continued attention to strengthening theory, a participatory approach, and sensitivity to sociocultural context, we feel such advances put researchers in a position to move beyond establishing that exposure to political violence is associated with psychological symptoms, thereby providing crucial knowledge to inform prevention and treatment practices.

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