# War experiences, daily stressors and mental health five years on: elaborations and future directions

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*In this paper, the authors elaborate on a model proposed in 2010 that identifies major sources of stress affecting mental health among war affected populations. That model emphasised the importance of what was termed 'daily stressors', as well as direct exposure to war related violence as predictors of mental health status The authors first summarise the original model and discuss the widespread response to the 2010 paper among researchers and practitioners working in conflict and post conflict settings. Then, the authors expand on the model, suggesting that, like the trauma focused model it was meant to improve upon, the proposed 2010 model still presents an overly static view of the experience of living through organised violence. A transactional version of the model is now proposed, which the authors believe more closely approximates the lived experience of war and the multiple sources of stress it entails. Implications of this transactional model, and possible directions for future research and practice, are suggested.*

**Keywords:** daily stressors, mental health, trauma, war

## Introduction

The authors are pleased to be a part of an evolving conversation about how best to understand and address the impact of organised violence on mental health. In 2010, we sought to bridge the somewhat contentious divide between advocates of *trauma focused* versus *psychosocial* approaches in addressing the mental health effects of armed conflict (Miller & Rasmussen, 2010a). We began with a critique of the literature, which posited a predominantly trauma focused model of mental health, in which posttraumatic stress disorder (PTSD) was the primary mental health concern stemming from exposure to organised violence.

Although research findings did (and continue to) suggest a positive association between degree of exposure to war events and the severity of PTSD symptoms, we argued that the utility of the *'direct exposure'* model was limited by its reliance on (equally weighted), war related, traumatic events as the sole predictor of mental health status. We suggested that the direct exposure model operationalised the experience of war as a discrete set of traumatic events, without any consideration of the stressful social and material contexts in which they occur. Missing from the direct exposure model were *'daily stressors'*; the stressful social and material conditions of everyday life that are common within settings of organised violence. Daily stressors are typically caused or worsened by armed conflict, although they certainly may exist independently as well. Examples found within these settings include: a lack of access to basic necessities such as food, water and medicine; unsafe and overcrowded shelters in refugee camps or other settings of displacement; social isolation resulting from the destruction of traditional support networks; family violence (which may spike during times of armed conflict, Catani, Schauer, & Neuner, 2008; Clark et al., 2010); a lack of income generation opportunities resulting in worsened poverty and the shame and frustration of being unable to provide for one's family; and the social marginalisation of specific war

affected groups, including: orphans, sexual assault survivors, former child soldiers and people with war related disabilities (Boothby, Strang, & Wessells, 2006; Betancourt, 2008; Wessells & Monteiro, 2004). The chronically elevated stress arising from these ongoing conditions shapes the context in which specific experiences of war related violence occur.

As noted in the original article, the idea that chronic or repeated stressors of non traumatic intensity might have profound impact over time draws upon several traditions in mental health scholarship. For almost half a century, the literature on stress and coping has included findings that daily stresses often have a cumulatively greater impact on wellbeing than major life events (Delongis et al., 1982; Holmes & Rahe, 1967; Jandorf et al., 1986; Kanner et al., 1981; Rafnsson, Jonsson, & Windle, 2006). Also relevant are theories of stress that emphasise interactions between environmental and individual determinants (*Hobfoll's Conservation of Resources* being perhaps the best modern example; Hobfoll, 1989; 2001) and even anthropological perspectives on suffering (e.g., Kleinman and Das' work on '*social suffering*'; Kleinman, Das, & Lock, 1997). In addition to these theoretical roots, the interaction of daily stressors and trauma is also reflected in empirical research with war affected populations, which concludes that there is much more to the wellbeing of war affected individuals than direct exposure to traumatic events. To provide an exhaustive review of the relevant literature is well beyond the scope of this paper; suffice it to say that research by Joop (de Jong, 2002; de Jong et al., 2001), Derrick Silove and Zachary Steel (e.g., Silove et al., 1997; Steel et al., 1999), as well as others (e.g., Bhui et al., 2003) were critical antecedents highlighting non traumatic antecedents of what, otherwise, had been categorised as posttraumatic stress. That their ideas provided some empirical basis for summary recommendations for disaster mental health (e.g., Hobfoll et al., 2007; Mollica et al., 2004) is testimony to their importance in the field.

Empirically, the addition of daily stressors as predictors of mental health status in war affected populations greatly increases the explanatory power of the direct exposure model. It also reduces the strength of the association between direct war exposure and all categories of psychological distress, including PTSD. In statistical terms, this suggests that daily stressors partly or wholly mediate (account for) the relationship of war exposure to mental health (partial versus full mediation varies by study and by specific mental health outcomes). Clinically, this suggests that trauma focused research and practice with war affected populations *overestimates* the clinical significance of exposure to discrete war events. This is because the trauma focused approach fails to consider the constellation of ongoing environmental stressors that greatly influence the impact of armed conflict on mental health. In other words, much of the distress observed among war affected populations may, in fact, not be due to exposure to political violence *per se*, but to its ongoing impact on multiple domains of people's lives. Consider the example of family violence, which, like armed conflict, is positively related to levels of PTSD symptoms, and which appears to spike in settings of political violence (Catani, Schauer, & Neuner, 2008; Clark et al., 2010; Fernando, Miller, & Berger, 2010). It is quite possible that over attention to events commonly assessed on war exposure checklists may misattribute trauma stemming from spouse or child abuse to the violence of war. Ongoing violence in the home requires different sorts of interventions than ameliorating post trauma reactions resulting from prior war exposure. Family violence may also influence reactions to specific war experiences, by diminishing people's capacity to cope with war related traumatic stress.

We proposed that a comprehensive model, which includes both direct war exposure

*and* daily stressors, would have important implications for the allocation of scarce resources and the design of interventions aimed at improving mental health in conflict and post conflict settings. Because daily stressors represent ongoing sources of stress and are strongly related to mental health outcomes, they represent important and timely targets for intervention. We cannot alter histories of war exposure, but we *can* have a direct impact on the stressful material and social conditions of everyday life. This could be achieved, for example, through programmes that reduce family violence, provide opportunities for income generation, create safer public spaces and more adequate housing in refugee camps, foster the development of supportive social networks and reintegrate specific sub-populations marginalised because of their particular war experiences.

Our emphasis on the importance of psychosocial interventions aimed at ameliorating daily stressors does not negate the importance of trauma focused programmes for war affected populations. This is an important point that is, at times, lost among advocates of psychosocial programming. Although there is no way to undo the violence that people have been exposed to, we may be able to ameliorate its enduring psychological effects through specific trauma focused interventions. Our point is that prioritising the treatment of war related PTSD may be inappropriate, and that programmes to ameliorate war trauma are best conceived of as just one element of a multi-level or ecological approach to addressing mental health needs in conflict affected settings.

## Reactions to the 2010 paper

We were surprised by the extent of the response to our 2010 paper. We heard from numerous colleagues that the paper expressed long held concerns they had had about: (1) the lack of explanatory power of the trauma focused or '*direct exposure*' model and its overly narrow focus on treating war related PTSD; (2) the unrecognised and powerful influence of daily stressors on the mental health of war affected populations; and (3) the need for multi-level or ecological interventions that address daily stressors, as well as enduring posttraumatic stress reactions. In essence, presenting a model that included daily stressors expanded the discussion of what researchers and practitioners should consider as significant and targetable sources of stress in war affected populations. We reiterate that we were hardly the first nor only researchers to consider the importance of environmental stressors affecting civilians in conflict zones. Rather, the novelty of our paper lay in its articulation within a conceptual and empirically grounded model, of an integrated approach to understanding the influence of war exposure, as well as daily stressors on mental health.

A few researchers have provided important replications of the research we cited in supporting our model. Jordans et al. (2012) tested the model among large samples of Iraqi refugees in Jordan and Bhutanese refugees in Nepal, and found full mediation of war exposure by daily stressors on mental health in the Jordan sample, and partial mediation in the Nepal sample. Among Nepalese populations exposed to years of civil war, Kohrt and colleagues found that socio-economic factors and non conflict stressful life events had large effects on risk for depression, beyond conflict exposure (Kohrt et al., 2012). This led the authors to conclude, '*conflict exposure should be considered in the context of other types of psychiatric risk factors*'. Trani and Bakhshi's (2013) research found that mental health in Afghanistan was linked to increased social exclusion present before war, driving home the importance of examining the maintenance and exacerbation of pre war stressors in conceptualising daily stressors.

Although a thorough review of the literature on daily stressors is beyond the scope of this

paper, a brief review of abstracts of manuscripts citing our 2010 model tells us something about how daily stressors are commonly operationalised. Daily stressors used to predict mental health have included: socio-economic hardship in Timor-Leste (Brooks et al., 2011); migration related stress, temporary residence visa in countries of asylum, and not feeling accepted among former Yugoslavs in Germany (Bogic et al., 2012); low socio-economic position among Palestinians refugees (Daoud et al., 2012); lack of resources and economic loss, as well as a lack of social support among Israelis exposed to daily mortar fire (Gelkopf et al., 2012); current perceived needs among Iraqi refugees in Jordan and Bhutanese refugees in Nepal (Jordans et al, 2012); food insecurity (Cole & Tembo, 2011); and loss of caregivers, family abuse and neglect and stigma among former child soldiers in Sierra Leone (Betancourt et al., 2013). Even this brief, non scientific review evinces broad diversity. Daily stressors seem to include a lack of material goods, liminal legal status, non war related violence, and what is perhaps best described as '*social suffering*' (Tawil, 2013). What seems to hold this group of events and conditions together is their description as sources of ongoing stress that affect mental health, but do not entail direct exposure to potentially traumatic war events.

There have been some concerns raised about the paper as well. For example, Neuner (2010) wrote a rejoinder, also published in *Social Science and Medicine*, in which he questioned the causal direction of the relationship between daily stressors and mental health. More specifically, Neuner suggested that poor mental health, and specifically PTSD, may actually cause or exacerbate daily stressors, and that we had misinterpreted the direction of causation in our review of the literature. He reiterated the priority of trauma focused treatments, including his own group's narrative exposure therapy arguing that healing war trauma will allow people to engage more effectively with their environment and thereby reduce or eliminate much of their daily stress. He also took issue with our proposal for a sequenced approach to intervention. We had suggested that psychosocial programmes first target daily stressors to improve mental health and enhance coping resources, subsequently, for individuals whose symptoms of trauma persist despite improvements in their material and social ecology (i.e., a reduction in daily stress), trauma focused treatments might then be offered.

In our response to Neuner's critique of this sequenced approach (Miller & Rasmussen, 2010b), we agreed that it might be fruitful to offer psychosocial and trauma focused interventions concurrently, with one caveat: we do not, at present, know how to distinguish reliably between individuals whose trauma symptoms are transient reactions to highly stressful conditions, and those who genuinely require specialised treatment. We also agreed with Neuner that war trauma could indeed impair people's capacity to cope effectively with stressful environmental circumstances. This finding was nicely documented by Hinton et al. (2011), who found that '*worry attacks*' concerning current stressors associated with acculturative stress and financial difficulty that resulted in panic attacks were highly associated with PTSD symptoms among Cambodian refugees, long after their exposure to Khmer Rouge atrocities. However, we also reiterated our view that daily stressors such as poverty, social marginalisation, family violence, unsafe and overcrowded shelters and isolation resulting from the destruction of social networks have all been well established as causally related to various negative mental health outcomes. War damages or destroys the social and material ecology of everyday life, which in turn generates a host of enduring stressful conditions. On this point, the data are clear.

We believe the unexpectedly strong response to our paper reflects a growing desire for

more nuanced models to guide research and practice in the field – models that more accurately reflect the lived reality of armed conflict as it is experienced by civilians on the ground. In that spirit, and with the benefit of additional reflection, research and practice, we critique our original model. In keeping with the spirit of this extra issue on future directions, our aim is to raise questions and suggest areas for future exploration, rather than to offer definitive conclusions.

## Elaborations and future directions

### Distinguishing between moderate and potentially traumatic daily stressors

As we noted in 2010, the term '*daily stressors*' seems to us both useful and problematic. It is useful in that it captures essential variance missing in the direct exposure model, and suggests a meaningful framework for comprehensive interventions that target ongoing sources of stress and distress. However, it is also problematic in that it is overly broad, including stressors ranging from significant, but not traumatic (such as overcrowded housing, inadequate nutrition, worsened poverty and social isolation) to acts of extreme violence with great potential to cause enduring trauma (such as child physical and sexual abuse and intimate partner abuse). The distinction between these two levels of environmental stressors is not merely semantic. As noted earlier, in both our research and clinical experience and in a growing number of studies by colleagues, we have seen that family violence contributes as strongly to levels of PTSD as any form of actual war exposure (Al-Krenawi, Lev-Wiesel & Sehwail 2007; Catani et al., 2008; Miller, Kulkarni, & Kushner, 2006).

The diversity of stressors within the broad category of daily stressors is perhaps best first divided into potentially traumatic events (or PTEs) and other stressors. There are good reasons to believe that stressors that are severe and have a rapid onset (i.e., are potentially traumatic) share mechanisms of impact that chronic, but less acute, stressors do not. This is not to say that either type of stressor ultimately has more potential to adversely impact than the other. The negative effects of chronic stress on body and mind have been well documented (Christopher, 2004; Gunner & Quevedo, 2007; Sapolsky, 2004). Lower intensity forms of daily stressors trigger a chronic activation of the sympathetic nervous system, leading the stress response system to remain '*online*' continuously. PTEs likewise, have deleterious effects related to chronic activation of the stress response system. However, their high intensity, the realistic perception of imminent and recurrent threat, and the lack of any perceived escape or stress altering mechanism suggest a markedly greater capacity to erode mental health and psychosocial functioning more quickly, leading to more immediate disability. As a potential direction for future research, then, we propose looking at the distinct contribution of, and interaction among, (1) lower intensity daily stressors, (2) potentially traumatic daily stressors, and (3) direct exposure to war related violence and loss, as these affect mental health and psychosocial wellbeing. It may, alternatively, be conceptually cleaner to group together all PTEs, whether directly war related or not, and explore their impact on mental health within the context of other sources of ongoing daily stress. In any case, clinically the concept of potentially traumatic daily stressors serves as a useful reminder to practitioners that, even in settings of armed conflict, symptoms of trauma may be related to forms of traumatic stress other than direct war exposure.

### The nature of stress in settings of armed conflict: a transactional model

Future directions in modelling the sources of distress in war affected communities should not be limited to the somewhat theoretical

divisions between types of PTEs. We suggest that for civilians living through organised violence, the experience is one of chronically elevated stress, punctuated by intermittent PTEs. This description implies a considerably more transactional view than that of the conventional war exposure model. As suggested, that model operationalises the stress of war simply as exposure to a discrete set of potentially traumatic events, without reference to the ongoing stressful context in which they occur. In fact, neither the direct exposure model, nor the more complex model we proposed in 2010 takes into account the impact of each PTE on the degree of perceived vulnerability and heightened stress related to the prospect of subsequent PTEs. Both models are essentially static, decontextualised views. They make for clean and simple assessments, but they create maps that are, at best, very rough approximations of the actual territory.

As discussed in the 2010 paper and summarised above, a major set of contributing factors to the stressful context in which PTEs occur is the constellation of daily stressors that define the social and material conditions of daily life in conflict and post conflict settings. Here, we propose a second factor contributing to elevated levels of daily stress, the dynamic and inter-related nature of war related PTEs. In many situations of armed conflict, incidents of extreme violence are typically both intermittent and uncontrollable. This can lead to a prolonged state of vulnerability and chronically heightened levels of stress stemming from fear of the next act of violence (see Batniji et al., 2009, for an excellent discussion of this phenomenon among Palestinians). As the late Salvadoran psychologist, Ignacio Martín Baró, observed based on his experience of state terror and civil war in El Salvador, acts of terrifying violence need not occur frequently to generate widespread and enduring fear (Martín Baró, 1994). From a behavioural perspective, noxious events that are both unpredictable and uncontrollable generally exert the most negative effects on physical and mental health. In the language of behaviourist learning theory, the variable ratio schedule of the occurrence of war related and other PTEs during wartime reinforces anxiety and other forms of distress. In other words, it may not be the single instance of a particular PTE that is so toxic, rather, it might be the perpetual threat and intermittent recurrence that so imperil mental health in settings of ongoing violence and forced displacement. Consider the experience of women sexually assaulted by armed combatants during times of organised violence: not only must they cope with the devastating effects of a single experience of rape, they must also contend with the vulnerability and realistic fear of repeated sexual assault by other combatants, and potentially, rejection and stigmatisation by family and community members.

This transactional perspective has implications for the measurement of war experiences. Most war events checklists ask people to indicate whether or not they have experienced particular events or conditions at some point in their lives. This approach fails to capture the recurring and unpredictable nature of such events, and thus their impact on levels of ongoing fear and vulnerability. There are several problematic assumptions made when asking people to indicate whether or not they have experienced war events and then simply summing the positive endorsements to yield a total '*war exposure*' score. Masten (2012) has noted in her review of child development in settings of war and disaster that a transactional perspective calls into question the simple linear relationship between direct war exposure and mental health posited by the direct exposure model. Modelling a transactional perspective on war exposure implies asking about the number of times someone has been exposed to them, the schedule of their occurrence, and their immediate consequences – including the daily stressors that arise because of them. In other words, items

on war exposure checklists should not be treated as discrete events that have or have not been experienced without regard for their number, recurrent nature, or for the daily stressors they produce or intensify. We feel that only then will researchers and clinicians alike be able to successfully account for the fear generated by the realistic threat of their recurrence.

None of these points suggests that studies done to date, using conventional war exposure checklists, lack basic validity. There has been enough consistency across studies that we can conclude with some confidence that: (1) war is bad for people's mental health, and more war is worse; (2) this is true regardless of the mental health outcomes used, from PTSD, depression, and anxiety, to various culturally specific indicators and idioms of distress; and (3) the toxic effects of organised violence are the result of both direct exposure to the violence itself and to the deleterious impact of such violence on the social and material ecologies of people's lives. What we are suggesting is that conventional approaches to assessing war exposure grossly oversimplify, and even distort, the actual experience of traumatic stress within war affected communities. We propose that future research explore a variety of ways to more closely capture the actual complexity of war exposure.

A transactional approach to measurement might emphasise the type, number and frequency of occurrence of war related PTEs, the nature and intensity of daily stressors over a history of war events and then examine how patterns relate to mental health. This might entail assigning different weights to particular PTEs, and examining their impact in the context of chronically elevated stress stemming from daily stressors. This sort of measurement approach would represent a significant departure from the current practice of simply summing the types of PTEs and stressful conditions that individuals have experienced.

From an applied perspective, the transactional model we are proposing underscores the importance not only of targeting daily stressors and addressing enduring symptoms of trauma, but also of recognising and addressing the chronic fear and vulnerability generated by specific instances of war related violence. This may take multiple forms. On a preventive level, advocacy with warring parties and international bodies for the protection of civilians and protection of human rights, the use of new media to widely publicise human rights violations and better safeguards in refugee settlements, may lead to a reduction in civilian harm and a corresponding drop in stress levels (see Giacaman et al., 2011 for a discussion of advocacy in the occupied West Bank and Gaza). We note with curiosity a split among mental health colleagues in certain conflict affected regions (Latin America, apartheid-era South Africa, Palestine), who have long argued for political advocacy to achieve structural changes linked to better mental health, and colleagues elsewhere who have adopted a more clinical, politically neutral tone in their writing. Although an in-depth discussion is beyond the scope of this paper, we suggest that a more central role for advocacy is essential to achieve lasting improvements in mental health and psychosocial wellbeing. On a more clinical community level, culturally appropriate stress management techniques and activities to lower sympathetic arousal can be taught or developed (e.g., meditation, community narrative theatre, child friendly play spaces), existing social support networks can be strengthened, and community efforts to reduce the social isolation and stigmatisation of survivors of certain types of violence (e.g., sexual assault) can be created. We recognise the enormous difficulty in helping people feel less stressed while living in situations of ongoing vulnerability, yet short of stopping the violence, which is precisely the task with which interventionists are frequently confronted.

## Conclusions

Great strides have been made during the past 25 years in our understanding of the complex pathways by which armed conflict endangers the mental health of civilians caught in, or intentionally targeted by, the fighting. Our aim in this paper, consistent with our aim in the 2010 paper elaborated here, is to contribute a more nuanced transactional view of the complex relationship between organised violence and mental health. To some extent, an overly simplistic framework for viewing this relationship has limited the field. The relevance of research for practitioners and policy makers will be significantly enhanced as its methods and models more closely approximate the transactional nature of daily stressors and potentially traumatic experiences and their impact on mental health and psychosocial wellbeing.

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