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Past horrors, present struggles: The role of stigma in the association between war experiences and psychosocial adjustment among former child soldiers in Sierra Leone⋆

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Abstract

Upon returning to their communities, children formerly associated with armed forces and armed groups–commonly referred to as child soldiers–often confront significant community stigma. Much research on the reintegration and rehabilitation of child soldiers has focused on exposure to past war-related violence and mental health outcomes, yet no empirical work has yet examined the role that post-conflict stigma plays in shaping long-term psychosocial adjustment. Two waves of data are used in this paper from the first prospective study of male and female former child soldiers in Sierra Leone. We examined the role of stigma (manifest in discrimination as well as lower levels of community and family acceptance) in the relationship between war-related experiences and psychosocial adjustment (depression, anxiety, hostility and adaptive behaviors). Former child soldiers differ from one another with regard to their post-war experiences, and these differences profoundly shape their psychosocial adjustment over time. Consistent with social stress theory, we observed that post-conflict factors such as stigma can play an important role in shaping psychosocial adjustment in former child soldiers. We found that discrimination was inversely associated with family and community acceptance. Additionally, higher levels of family acceptance were associated with decreased hostility, while improvements in community acceptance were associated with adaptive attitudes and behaviors. We found that post-conflict experiences of discrimination largely explained the relationship between past involvement in wounding/killing others and subsequent increases in hostility. Stigma similarly mediated the

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relationship between surviving rape and depression. However, surviving rape continued to demonstrate independent effects on increases in anxiety, hostility and adaptive/prosocial behaviors after adjusting for other variables. These findings point to the complexity of psychosocial adjustment and community reintegration in these youth and have a number of programmatic and policy implications.

Keywords

War; Mental health; Children; Adolescents; Child soldiers; Trauma; Stigma; Sierra Leone

Introduction

Of the many horrors of war, the phenomenon of children associated with armed forces and armed groups is of increasing international concern (CSUCS, 2008; UNICEF, 2007). At present, it is estimated that as many as 300,000 children under the age of 18 currently serve in government forces or armed rebel or militia groups around the world (CSUCS, 2008). A number of recent studies have documented high rates of mental health problems among children formerly associated with armed forces and armed groups (CAAFAG), commonly referred to as "child soldiers" (we will use the term "child soldiers" throughout this paper for ease of readability with the caveat that it implies the broader view encompassed by the acronym CAAFAG). Upon returning to their communities, former child soldiers may face significant stigma due to community perceptions that these youth are immoral or dangerous. Stigma for a variety of reasons, from HIV to mental illness, has been robustly linked to poor health outcomes (Collins et al., 2008; Rao, Kekwaletswe, Hosek, Martinez, & Rodriguez, 2007; Williams et al., 2008). Although much attention has been paid to the negative impact of the violence that child soldiers endure, little is known about how stigma associated with such experiences may influence the psychosocial adjustment and social reintegration of former child soldiers in the post-conflict environment.

A number of studies in recent years have documented increased risk of mental health problems, including symptoms of post-traumatic stress disorder (PTSD), other anxiety disorders, and depression, among former child soldiers. For instance, Kohrt et al. (2008) found that 55.3% of Nepalese former child soldiers met standard diagnostic criteria for PTSD, 53.2% met criteria for depression and 46.1% for anxiety disorder. In northern Uganda, a study by Derluyn, Broekaert, Schuyten, and De Temmerman (2004) evaluated 71 former child soldiers, and found extremely high rates (97%) of posttraumatic stress reactions. This study, although critiqued for its recruitment methods (McKay & Wessells, 2004) speaks to the scale of distress in this sample. Bayer, Klasen, and Adam (2007) studied 169 former child soldiers in rehabilitation centers in Uganda and the Democratic Republic of the Congo (DRC) and documented that over a third of their sample (34.9%) met clinical symptom thresholds for PTSD.

Several studies illustrate risk for poor mental health outcomes among former child soldiers, however the substantial variability in these outcomes across different settings suggests that long-term psychosocial adjustment is influenced not only by past war experiences, but also by post-conflict factors, which may vary widely. For example, in Nepal, Kohrt et al. (2008) observed that poor mental health outcomes persisted in former child soldiers compared to matched controls even upon adjusting for exposure to violence. They speculated that other processes such as experiences of discrimination and stigma might likely account for these differences.

The process by which stigma and discrimination directed at former child soldiers may occur appears to vary greatly by context. In Sierra Leone, a survey of ex-combatants (which included adults and former child soldiers) conducted by Humphreys and Weinstein (2004, 2007) found that higher rates of exposure to violence were associated with lower levels of community acceptance. The degree of acceptance encountered in families may also vary from that of the broader community. In northern Uganda for instance, Annan et al. (2006) observed very high rates of family acceptance, with only 1% of returnees reporting that their families were unwelcoming or unhappy about their return. However, the researchers also noted that community acceptance was not as widespread, with nearly 25% reporting the presence of initial community stigma (usually expressed in the form of insults) upon return home. Blattman and Annan (2007) also noted that stigma tended to decrease over time with 94% of participants stating that they felt "very" or "somewhat" accepted by the community at the time of interview. These studies suggest a more nuanced relationship between past experiences of violence, community stigma and family support in contributing to the mental health of former child soldiers.

In Sierra Leone, the long term psychosocial adjustment and social reintegration of former child soldiers is of particular concern. Civil war ravaged the West African nation from 1991 – 2002. Children of all ages were involved in the national army, civilian defense forces (CDF) and, most notoriously, in the Revolutionary United Front (RUF). The RUF rebel group was responsible for brutal atrocities including terrorism directed at civilian populations, a campaign of amputations to suppress resistance and the large scale abduction of children (CSUCS, 2008). In the Sierra Leone conflict, official estimates indicate that some 5000, 10,000 children were involved in the different warring factions (CSUCS, 2008), though other sources report estimates as high at 48,000 (McKay & Mazurana, 2004). The RUF, in particular, was known for forcing children to commit atrocities, including murder, against neighbors and loved ones in order to indoctrinate new recruits and sever community ties. During their years with the rebels, many of those children were also raped repeatedly and forced to take drugs to reduce inhibitions against committing violent acts (McKay & Mazurana, 2004).

At the war's end, short-term disarmament, demobilization, and reintegration (DDR) programs worked to prepare former child soldiers to return to their homes through services offered at interim care centers (ICCs) such as reunification with their remaining family members and communities. During the DDR process, many young people were given the explicit message that their involvement in the atrocities of the war was "not their fault." Similar messages were an important part of the community sensitization campaigns carried out in the communities where these young people were returned (Betancourt, Borisova, et al., 2008; Betancourt & Khan, 2008; Stovel, 2008). Despite these external messages, however, the day-to-day interactions of these youth with others in their community reminded them that all was not forgotten. The initial response to their return was often one of fear and distrust (Betancourt, Simmons, et al., 2008). Females were frequently seen as sexually promiscuous or defiled, while many youth–male and female alike–were treated with apprehension (Burman & McKay, 2007; Denov, 2007).

Of the many aspects of the DDR process, reintegration and rehabilitation remain the longest and most complex. Successful reintegration and rehabilitation depends on a number of factors, including family and community acceptance (Annan, Blattman, Carlson, & Mazurana, 2007; Betancourt et al., in press; Betancourt, Simmons, et al., 2008; Boothby, Crawford, & Halperin, 2006), access to educational and training opportunities to help war-affected youth achieve self-sufficiency and maintain productive roles in the community (Betancourt, Borisova, et al., 2008; Wessells, 2009) as well as the behavior of the youth themselves. Thus, to understand the full impact of war experiences on former child soldiers

it is important to explore the role of post-conflict factors which are gaining attention in research on war-affected youth (Annan et al., 2007; Ellis, MacDonald, Lincoln, & Cabral, 2008; Lykes, 1994; Miller, Fernando, & Berger, 2008).

Dominant theories of stigma and discrimination are useful for understanding the situation of former child soldiers in the post-conflict environment. Research on stigma and prejudice grew from the early work of leading sociologists (Goffman, 1963) and social psychologists (Allport, 1954). With time, theory and research on stigma and its health consequences cited the need to move from a focus on individual characteristics to understanding stigma in its social context (Crocker, 1999; Yang et al., 2007). Stigma exists when an individual is labeled, negatively stereotyped, categorized as separate, and experiences discrimination by someone who is in a position of relative power (Link & Phelan, 2001, 2006). Former child soldiers returning to their communities often experience stigma, though in differing degrees (Annan et al., 2007; Betancourt, Simmons, et al., 2008; Boothby, 2006; Williamson, 2006). In addition to poor mental health outcomes (Dovidio et al., 2008; Link et al., 2008; Mak, Poon, Pun, & Cheung, 2007; Meyer, Schwartz, & Frost, 2008; Williams et al., 2008; Yang & Kleinman, 2008), stigma may also contribute to fewer positive opportunities 8) and less access to protective resources such as community and family support (Link & Phelan, 2001, 2006).

Social stress theory (Aneshensel, 1992) posits that stress and resources act as mediators in the relationship between social structure and poor health outcomes. Two hypotheses are suggested by this model. First, that social structure patterns both stress and resources. Second, that stress due to one's status has a causal relationship to mental health outcomes, while resources (internal and external) serve to buffer this risk (Aneshensel & Phelan, 1999). Social stress theory can be adapted to illuminate the processes characterizing the relationship between war experiences, social stigma and psychosocial adjustment in former child soldiers. First, adding to the model of social stress (see Fig. 1), it is important to note that for many former child soldiers, traumatic war experiences may create internal guilt, anxiety and even traumatic stress reactions. Upon return to their communities, child soldiers then experience lowered social status as a result of the prejudices and fear from community members. This stigma in turn may lead to greater experiences of stress (in the form of discrimination) and reduced access to protective resources, which may combine with internal distress to influence poor mental health outcomes.

Building on social stress theory, Link and Phelan (2006) have proposed that stigma leads to experiencing 'less of the good things and more of the bad' in relation to health and adjustment (Link & Phelan, 2006). In this manner, not only does stigma increase stress, it may also impede a person's access to coping resources (Aneshensel, 1992). Both of these models draw attention to the importance of understanding the consequences of social responses to the stigmatized individual and point to the possibility that psychosocial adjustment in former child soldiers must consider the post-conflict environment and not solely past war-related experiences. Indeed, stigma may be an important aspect of understanding how past war experiences continue to exert influence on the psychosocial adjustment of former child soldiers long after the end of war.

There is a strong body of literature linking discrimination with poor psychosocial outcomes in young people (Fisher, Wallace, & Fenton, 2000; Klonoff, Landrine, & Ullman, 1999; Rumbaut, 1994), yet discrimination directed at former child soldiers has received very little attention. In their study, Annan et al. (2007) noted that the minority of child ex-combatants who had experienced poor community acceptance upon returning home were three times more likely to exhibit negative social behaviors and had higher levels of emotional distress.

Such findings point to the need to examine the role of discrimination in the longer term psychosocial adjustment of these youth.

In terms of protective factors, community and family support can be important resources contributing to healthier long term outcomes in former child soldiers (Corbin, 2008). Betancourt et al. (in press) observed that although family support and improved community support were not able to completely mitigate the deleterious effects of wounding/killing and rape on psychosocial adjustment, they did reduce the risk of negative psychosocial outcomes such as hostility. Stigma may serve to impede or erode such protective processes, placing youth at further risk for psychosocial maladjustment.

To build on this prior research, the present study examines the role of stigma as a potential mediating (i.e., explanatory) factor in the relationship between exposure to war-related events and psychosocial outcomes. The present study draws on prospective data to examine the contributions of potentially stigmatizing war exposures (i.e. surviving rape and participating in wounding/killing) and more recent post-conflict experiences (i.e. perceived discrimination, access to education, and acceptance in the family and community) to psychosocial adjustment. The study set out to examine the following hypotheses: first, that perceived discrimination (as our indicator of stigma) would be associated with poorer access to protective resources such as family and community acceptance and school access. And second, that the relationship between potentially stigmatizing past war-related experiences (being raped and wounding/killing others) and poor psychosocial adjustment would be in part attributable to (i.e. mediated by) higher levels of perceived discrimination.

Methods

Participants and procedures

This investigation was conducted in collaboration with the International Rescue Committee (IRC). Data collection began in 2002 with a baseline assessment (Time 1 or T1) of 260 former child soldiers who had been affiliated with the Revolutionary United Front (RUF) in Sierra Leone. The initial sample for the study was obtained using a two-stage method of selection. First, IRC registries were pooled to create a master list of all youth who had been processed through their Interim Care Center (ICC) in Kono which served five districts of Sierra Leone during the most active period of demobilization from June 2001 to February 2002 ($n = 309$). Second, the lists were narrowed down to youth between the ages of 10 and 18 for whom active contact information was available, who were then approached and invited to participate in the study ($n = 260$) at baseline. There were no refusals to participate at baseline; participation was not linked to receiving services.

At follow-up in 2004 (Time 2, T2), 60% of the original sample was re-interviewed ($n = 156$). Midway through T2 data collection, the death of the IRC's country director and subsequent suspension of program activities halted completion of the follow-up survey. As a result, 31% of the original sample could not be attempted for follow-up. Of those T1 participants attempted for interviews at T2, 1% of caregivers declined consent for their child to participate, 1% of participants had died and 7% of the initial sample had relocated to a distance that prevented follow-up. Upon data cleaning, 4 additional participants were excluded from analysis due to inconclusive evidence that the same young person was interviewed at both waves of data collection. These exclusions resulted in a final analytical sample of $N = 152$.

Data for all participants at T1 and T2 were collected through face-to-face interviews by a team of trained Sierra Leonean research assistants, monitored by the study PI and IRC staff at the country level. Because of the low literacy rate in the study population, all survey

protocols were administered verbally and were constructed for brevity and easy comprehension. The parent/guardian informed consent and youth informed assent process were conducted separately. The T1 assessments were approved by the IRC country program and headquarters staff; the T2 survey received Institutional Review Board (IRB) approval from the Boston University School of Medicine/Boston Medical Center. Permission to conduct interviews in each district was given by local paramount chiefs. At baseline and follow-up, IRC social workers traveled with the research team to respond to cases requiring special attention due to serious emotional or physical health needs.

In nonwestern contexts such as Sierra Leone, the assessment of mental health and related constructs in culturally meaningful and valid ways remains a persistent challenge (Achenbach & Rescorla, 2006; Canino & Alegria, 2008). Many of our measurement scales were developed in close consultation with local staff as well as focus group discussions among youth similar to the study population to determine the face validity and cultural relevance of survey items. All measures were then forward-and back-translated to ensure accuracy. Similar combined methods for cross-cultural instrument development have been used in several recent studies of psychosocial adjustment of former child soldiers (Bayer et al., 2007; Kohrt et al., 2008).

Measures

War experiences—To assess individual exposures to potentially stigmatizing war events, we used items from the *Child War Trauma Questionnaire* (CWTQ) (Macksoud & Aber, 1996), initially developed for use with war-affected youth in Lebanon. The adapted instrument contained 42 items regarding the child's experience of war-related events and was administered during the second wave of data collection. War experiences were coded for occurrence versus no occurrence, as some traumas were experienced so commonly that participants had a difficult time accurately recalling or assessing frequency.

Two war experiences were examined in data analysis in light of theory and research on severe war exposures characterizing former child soldiers: 1) experiencing rape; and 2) perpetration of wounding/killing. Recent literature on child soldiers in West Africa has documented the deleterious effects of rape in girls and boys (Johnson et al., 2008). In addition, the reality of being involved in the perpetration of violence, particularly the wounding or killing of others, is an experience that is of particular concern in the mental health of individuals forced to engage in such acts as children (Goodwin-Gill & Cohn, 1994; Grossman, 1996). These two war-related experiences are of particular interest given their potential link to stigma. The survey instrument also included a self-reported age of abduction, as well as duration of time with the fighting forces, which were analyzed separately.

Retention in school—A dichotomous variable indicative of sustained access to education was created by comparing youth who reported being in school at both T1 and T2 to youth who were not in school at one or both waves of data collection.

Family acceptance—Measures of family and community acceptance were drawn from our previous qualitative work and consultations with local staff in 2002. The family acceptance measure, only administered at T2, consisted of six items assessing the way former child soldiers perceived acceptance, understanding, and respect from their family members. Items were scored on a Likert scale with response options of "not true," "sometimes true" or "very true." Questions on this scale included "since the war you feel you are welcome in the family with whom you live" and "you have the same opportunities and responsibilities as other children in the family/household." This measure exhibited

strong internal reliability (Cronbach's a =.93) and was treated as a continuous measure in analyses.

Community acceptance—The community acceptance measure consisted of six items assessing the way participants perceived general manifestations of acceptance from others in the community. The measure included items such as "since the war, people in this community have been good to you" and 'since the war, you feel you have been welcomed back into the community where you live." As opposed to the daily discrimination scale discussed below, these items were not phrased to specifically refer to the experience of being a child soldier. Items were scored on a Likert scale with response options of "not true" to "sometimes true" or "very true." This measure was administered at both waves of data collection and exhibited strong internal reliability (Cronbach's a =.90 at T1 and Cronbach's a =.89 at T2). For each child, we computed a subscale score for community acceptance at T1 and T2. We also computed a "change in community acceptance" by subtracting the T1 score from the score at T2. An increase in the community acceptance score between baseline and follow-up would thus indicate a positive change in community acceptance. Because change in community acceptance differed for those starting at higher or lower levels at baseline, all analyses were adjusted for T1 community acceptance. Baseline scores and scores for change in community acceptance were treated as continuous measures in analyses.

Psychosocial adjustment—To assess psychosocial adjustment, we used a measure developed by researchers at the Oxford Refugee Studies Program for use among former child soldiers in Sierra Leone and northern Uganda (MacMullin & Loughry, 2004). The measure comprises three subscales for mental health problems (anxiety, depression, hostility) and two subscales of adaptive attitudes and behaviors (confidence and prosocial attitudes). Given the high correlation among items in the confidence and prosocial attitudes scales, as well as the theoretical overlap of the items on these scales, they were combined to form an "adaptive attitudes and behaviors subscale". Each of the four domains (depression, anxiety, hostility and prosocial/adaptive behaviors and attitudes) is represented by a set of questions that inquire about indicators particular to that domain (e.g., "Do you cry easily?" [depression]; "Do you get into fights?" [hostility]; "Do you share with others?" and "Do you feel you can do things as well as other kids your age?" [adaptive attitudes and behaviors]). For each question responses were scored on a 1–4 scale, ranging from "never = 1," "rarely = 2," "sometimes = 3" to "always = 4."

We used a 46-itemversion of this instrument (Betancourt et al., in press) which had good internal consistency across all subscales at both waves of data collection. At follow-up, the Cronbach's a was .70 for the depression subscale (8 items), .67 for the anxiety subscale (8 items), .88 for the hostility subscale (12 items), and .85 for the adaptive attitudes and behaviors subscale (18 items). For each child we computed a continuous subscale score (e.g., anxiety, depression, hostility, adaptive attitudes and behaviors) at T1 and T2.

Perceived discrimination—We examined perceived discrimination as a manifestation of stigma using an adaptation of the Everyday Discrimination Scale (Williams, Yan Yu, & Anderson, 1997). The measure contained 9 items which indicate community reactions (e.g., "How often do people act as if they are afraid of you?"), differential treatment (e.g., "How often are you are treated in a way that is not as good as other people?"); and threats or abuse (e.g. "How often do people threaten you?"). For each question responses were scored on a 0–2 scale, ranging from "never = 0," "sometimes = 1" to "always = 2." For each item endorsed as "sometimes" or "always," interviewers were trained to probe as to the reason for the discrimination. Eight potential reasons for perceived discrimination were given (status as a child soldier, religion, gender, age, disability, poverty, level of education and tribe) as well

as an open-ended option for other reasons. If a participant endorsed having experienced discrimination and then stated that this discrimination was due to being a former child soldier, this response was included in a total score of discrimination due to being a child soldier. This measure was administered at T2 only and was treated as a continuous score in analyses.

Participant demographics—A demographic inventory collected information on gender, age and family socioeconomic status. A measure of socioeconomic status was created to indicate an individual's access to food, housing, and clothing relative to others in the community. The measure consisted of four items (treated as continuous in analyses) which displayed good internal consistency (Cronbach's α =.78).

Statistical analyses

In order to investigate the hypothesized mechanisms underlying the associations between war-related events and psychosocial adjustment, we conducted a series of mediation analyses based on the framework articulated by Baron and Kenny (1986) and expanded on by the MacArthur group (Kraemer, Kiernan, Essex, & Kupfer, 2008). The hypothesized mediators were perceived discrimination, family acceptance, community acceptance, and school access. Analyses first entailed fitting a series of multiple linear regression models to determine the effects of war exposures on the hypothesized mediators. Next, regression models were fit to identify predictors of T2 psychosocial outcomes after adjusting for T1 scores as well as age, gender and SES. For each of the four psychosocial outcomes (depression, anxiety, hostility, and adaptive attitudes/behaviors), three main-effects regression models were fit, allowing for the assessment of the impact of introducing successive sets of covariates. The first model included demographic factors (age, gender, SES) along with war-related experiences predicting T2 psychosocial adjustment scores (adjusted for baseline). In the second model, we examined how relationships between these past war-related events and psychosocial outcomes were affected by the addition of perceived discrimination. Attenuation of the main effects for wounding/killing or surviving rape upon including perceived discrimination in these regression models was taken as an indication of mediation (Kraemer et al., 2008). The final model added family acceptance, baseline and change in community acceptance and retention in school, to test for any additional mediation due to protective resources. Given our small sample size, we considered p values of <05 as statistically significant and those of <10 as marginally significant. At each step we compared parameter estimates (unstandardized) and model fits and calculated the difference in R^2.

The analytic sample for this study was comprised of the 152 individuals who participated in both the baseline (T1) and follow-up (T2) interviews. To address the problem of item-level missing data in this sample, we used multiple imputation to generate 50 complete datasets (Rubin, 1987). All analyses were conducted using these multiply-imputed datasets, and the results were combined across imputations. This approach reduces bias to the extent that values on the observed variables are informative about values on items that are missing, increases precision relative to a complete case analysis with a smaller sample size, and accounts for the sampling variability across imputations (Rubin, 1987). Imputed datasets were generated using the method of chained equations as implemented in *IVEware* (Raghunathan, Lepkowski, Van Hoewyk, & Solenberger, 2001) and the results of analyses conducted across imputations were combined using the MIANALYZE procedure in SAS version 9.1 (SAS Institute Inc, 2004).

Results

Participants lost to follow-up did not differ significantly from ongoing participants in terms of age ($p = .79$), gender ($p = .87$) or literacy levels ($p = .25$) at baseline. Higher percentages of completers versus non-completers (72% vs. 53%) attended school at baseline ($p = .004$). Participants lost to follow-up reported similar levels of community acceptance at T1 ($p = .91$). Ongoing participants did not differ from those lost to follow-up on depression ($p = .25$), anxiety ($p = .24$), hostility ($p = .16$), or adaptive behaviors/attitudes ($p = .34$) as assessed at baseline. No significant differences were found between non-completers and ongoing participants in terms of age of abduction ($p = .25$) or length of time with the fighting forces ($p = .51$).

The average age at T2 in this sample of former child soldiers was 17.4 years, with 11% female and 89% male participants (Table 1). The sample was almost equally split in terms of religious background (52% Christian and 47% Muslim). At T1, 51% of the sample reported poor literacy skills (reading and writing), with similar percentages of both girls and boys reporting poor literacy (47% of girls and 51% of boys); 72% of the youth were attending school at baseline and 63% were in school at both T1 and T2. At T1, the majority (83%) of youth reported staying with an immediate family member while 17% reported staying with an extended family member or other caretaker; 84% of the female and 55% of the male caretakers were illiterate and reported no educational background.

War experiences

Almost all of the former child soldiers in the sample reported becoming involved with the rebels by force. The average age at abduction in this sample of former child soldiers was 10.50 (SD = 2.95) years. There was no significant difference between males and females in terms of age of abduction. Average length of time with the fighting forces was 4.68 (SD = 0.73) years. Looking at potentially stigmatizing war-related events, 44% of females and 7% of males in the sample reported being a victim of rape. Wounding/killing others was endorsed by both males and females in the sample, with 31% of females and 35% of males reported having killed or injured either a stranger or loved one.

Sources of discrimination

Table 2 summarizes instances of perceived discrimination reported by our sample. Overall, 71% of youth reported exposure to some form of discrimination for any reason (gender, disability, being a former child soldier, etc.). The mean perceived discrimination score for the 9 item scale was 2.45 (SD = 3.58), with a range of 0–18. The most commonly cited reasons for perceived discrimination were: being a former child soldier, gender, and one's family having more or less money than other families (see Table 2). Of those who reported some form of stigma, 73% reported at least one incidence of stigma due to being a former child soldier. Twenty-nine percent of this sample of former child soldiers reported no stigma at all.

Consistent with Link & Phelan's discussion of stigma as associated with fewer protective resources (2006), we observed an inverse correlation between perceived discrimination due to being a child soldier, family acceptance and change in community acceptance. Perceived discrimination was not significantly correlated with T1 community acceptance but was significantly inversely associated with T2 community acceptance ($r = -0.36$, $p < 0.001$), indicating that these constructs were associated but not entirely overlapping. Perceived discrimination was correlated with T2 levels of depression, anxiety and hostility but had no relationship with adaptive behaviors/attitudes.

While we were unable to examine changes in levels of perceived discrimination over time, as this measure was only given at T2, we were able to assess changes in levels of community acceptance from T1 to T2. The mean level of community acceptance at T1 was 10.18 (SD = 3.10), while at T2 this was 10.28 (SD = 2.47) with a range of 0 to 12. While community acceptance was slightly higher at T2, this change was not statistically significant ($p = 0.76$).

To understand the potential mediating role of perceived discrimination in the relationship between war exposures and psychosocial adjustment, we fitted a series of regression models predicting perceived discrimination due to being a child soldier (not shown). We observed that female gender was a marginally significant predictor of perceived discrimination due to being a child soldier, adjusting for age and SES ($b = 1.84$, $p = .052$). Looking at war-related events, both wounding/killing ($b = 2.20$, $p < .001$) and surviving a rape ($b = 2.02$, $p = .03$) were significantly associated with perceived discrimination upon adjusting for age and SES (analyses not shown). Community acceptance at baseline ($b = 0.39$, $p = 0.004$) and change in community acceptance ($b = -43$ $p = .001$) were inversely and significantly associated with perceived discrimination in adjusted models.

Table 3 presents a series of regression models for each psychosocial outcome at T2 adjusting for T1 scores and covariates. Looking first at the model for depression, perpetration of wounding/killing is marginally significant as a predictor of increased depression at T2 ($b = 1.18$, $p = .07$), however, this effect is attenuated upon adding perceived discrimination to the model ($b = 0.29$, $p = .63$). Being raped significantly predicts an increase in depression over time ($b = 2.58$, $p = .01$) in models controlling for demographic covariates and other war-related experiences. However, once perceived discrimination is included in the model, the strength of the relationship between being raped and depression is reduced nearly by half, and is marginally significant ($b = 1.65$, $p = .08$). Adjusting for all other factors, perceived discrimination remains a significant predictor of increases in depression over time ($b = .36$, $p < 0.001$). Upon adding protective factors to the model for depression (Model 3), only family acceptance shows an inverse and marginally significant relationship to depression symptoms ($b = -1.48$, $p = .06$).

In the model for anxiety, wounding/killing is not a significant predictor of anxiety at T2 upon adjusting for other factors. Surviving rape is significantly associated with higher levels of anxiety ($b = 5.35$, $p < 0.001$). When perceived discrimination is included in the model, the effect of being raped is somewhat attenuated yet remains statistically significant ($b = 4.46$, $p < .001$) and stigma is indicated as a significant and independent predictor of increased anxiety with time ($b = .44$, $p < .001$). None of the protective factors examined were associated with changes in anxiety in the adjusted models, but along with younger age of abduction and female gender, surviving rape and experiencing stigma remain significant predictors of higher levels of anxiety at T2.

The model predicting levels of hostility shows similar, but more robust patterns of risk and protection. Perpetration of wounding/killing is a significant predictor of increases in hostility over time ($b = 2.39$, $p = .02$) in models controlling for demographic covariates and other war-related experiences. However, once perceived discrimination is included in the model, the strength of the relationship between wounding/killing and hostility is reduced by almost half and is no longer significant ($b = 1.26$, $p = .20$). Post conflict stigma remains a significant predictor of increases in hostility adjusting for all other factors ($b = .51$, $p < .001$). After adjusting for stigma and all other variables, being raped continues to exert a significant main effect on increases in hostility ($b = 7.14$, $p < .001$) between T1 and T2. Upon adding protective factors (Model 3), family acceptance demonstrates a significant inverse relationship with hostility upon adjusting for all other variables ($b = -2.62$, $p = .04$).

Adaptive behaviors and attitudes

Female gender was negatively associated ($b = -7.55$, $p < .001$), while higher SES was positively associated ($b = .79$, $p = .002$), with adaptive behaviors and attitudes. Perceived discrimination was not significantly associated with adaptive attitudes and behaviors. Interestingly, a relationship was observed between rape and adaptive attitudes and behaviors whereby rape survivors demonstrate increases in adaptive attitudes/behaviors over time. This relationship persists upon adjusting for all other factors ($b = 6.92$, $p < .001$). Additionally, after controlling for all other factors, both baseline community acceptance ($b = 1.24$, $p = <.001$) and increases in community acceptance ($b = 0.93$, $p = .001$) were significantly associated with higher levels of adaptive attitudes and behaviors over time.

Discussion

Consistent with social stress theory, we observed that post-conflict factors, such as stigma, were associated with subsequent psychosocial adjustment. As suggested by the social stress model, stigma manifest via perceived discrimination had significant relationships with increases in depression, anxiety and hostility over time, independent of the war experiences examined. Of the protective factors examined, higher baseline community acceptance and increases in community acceptance were associated with higher levels of adaptive attitudes and behaviors over time. Increases in family acceptance were also inversely associated with hostility at follow up.

Our findings speak to the importance of viewing the psychosocial adjustment of former child soldiers as a dynamic and complex process which involves the interaction of both risk and protective factors in the pre-, peri- and post-conflict environment (Betancourt, Borisova, et al., 2008; Wessells, 2006). Prior research on child soldiers has indicated that exposure to war trauma is associated with poor mental health outcomes (Bayer et al., 2007; Kohrt et al., 2008). Building on this research, we found that the relationship between wounding/killing others and increases in hostility over time may be mediated by stigma. We also found that the relationship between being raped and depression may be largely explained by stigma, whereas experiencing rape appears to exert independent effects on anxiety, hostility and prosocial behavior over time. Consistent with social stress theory, these results suggest that post-conflict stigma may perpetuate some of the effects of past war experiences in the psychosocial adjustment of former child soldiers.

Our failure to find strong mediation between the effects of surviving rape on anxiety and hostility could be explained by limited measurement. Our measure of perceived discrimination mainly captured variables related to fear and differential treatment and threats, but not the specific manifestations of stigma often facing female former child soldiers who were commonly viewed as sexually immoral or defiled (Betancourt, Simmons, et al., 2008; Denov, 2007). In future research, to better understand the relationship between stigma, gender and sexual violence, it would be important to have measures of stigma and perceived discrimination specific to the experiences of female former child soldiers and others who survived sexual abuse.

It is also noteworthy that stigma most attenuated the association between injuring/killing others and hostility as well as surviving rape and depression while being raped continued to exert independent effects on increases in anxiety and hostility. Another possibility for these findings may be that while the social stress model accounts for external processes (social and community factors), for some young people, internal processes are additionally important in understanding adjustment. A young person may simultaneously face difficulties related to their own internal memory of what they experienced, while struggling with an external environment in which they experience community stigma (Yang et al., 2007).

Survivors of rape may further suffer from the dissonance of knowing they were victims, while perhaps also being treated by community members as perpetrators. In this manner, external community factors, including stigma, may serve to exacerbate internal distress (Layne, Warren, Watson, & Shalev, 2007, chap. 24).

It must be noted that although we did ask about perceived discrimination due to one's gender, it was endorsed by far fewer participants than discrimination due to having been a child soldier. The data presented here indicate that despite sensitization programs, 71% percent of former child soldiers in the sample reported at least some form of stigma and of those who reported some form of stigma, 73% reported at least one incident of stigma due to being a former child soldier. Our qualitative data on the post-conflict readjustment of former child soldiers has indicated that upon return from their time with the rebels, it was common for members of the community, and even their own family members, to respond with fear and mistrust (Betancourt, Simmons, et al., 2008). We note that being called names/talked about, being provoked and being feared by others were all common manifestations as demonstrated by the high endorsement of related items on the Daily Discrimination Scale. Evidence of these forms of stigma was also well documented in our qualitative data collected in 2004 and as recently as 2008 which attests to the potent role that stigma played in the lives of those returning home:

> When you are now alone people start calling you a rebel or collaborator. And nobody wants to associate with a rebel or collaborator, so they can't help you even if you are in need. Because of this we had no friends. The stigma was very high in our communities. (Female former child solider, Makeni)

> Initially when I arrived, people feared me. Some said I was a killer. There were times when I wanted to touch and play with other kids, their parents will shout at me. I felt bad during those early days. (Male former child soldier, Kono)

> When you eventually approach someone for help, they call you a rebel and don't help. But in actual fact you didn't choose to become a rebel. You were forced to go and live with them and now everybody blames you. (Female former child solider, Makeni)

Others described how, in some cases, the effects of stigma persisted even to the present day:

> …for every little mistake one makes, some people will have to attribute it to [being a] former RUF. (Male former child soldier, Kono)

> …Even up to now I am feeling the effect. I do not have any man because as soon as some body shows interest in me people tell the person that I am a witch and a bad one at that. I have a child and the father has abandoned me because of this same problem. (Female former child solider, Makeni)

> At first when you join other people you will be embarrassed or ashamed because the moment they see you they start pointing fingers at you, calling you names and talk[ing] about you as if you went with the rebels willingly– but now that has changed we are all considered the same. However they make comments if you quarrel with them they will say you still have the rebel blood in you that means you are still acting like a rebel. (Female former RUF, Kono)

The present study builds on our qualitative data (Betancourt, Simmons, et al., 2008) by showing empirical evidence that stigma in the form of perceived discrimination plays an important role in the post-conflict psychosocial adjustment of former child soldiers.

Of the protective factors examined, we found that family acceptance was inversely and significantly associated with hostility and moderately associated with depression upon

adjusting for war experiences and perceived discrimination. Improved community acceptance was also associated with higher levels of adaptive/prosocial attitudes and behaviors at follow up. However, family and community acceptance alone were not found to entirely mitigate the relationship between war-related events, stigma and psychosocial adjustment. Nonetheless, the effects of these protective resources are promising and deserve further attention in future studies.

Study limitations must be noted. Because all variables within this study were provided via youth self-report, they are subject to response bias. Stigmatizing war experiences such as rape, as well as wounding and killing others, may be underreported in our sample. Because our sample was drawn from an ICC roster and ICCs were known to serve many more males than females, the females in our sample are likely less representative of most female former child soldiers. In addition, we cannot rule out the possibility that maladjusted individuals may tend to report higher levels of perceived discrimination as well as low community and family support. Research in the discrimination and health literature generally finds that when associations between discrimination and health are adjusted for factors such as self-esteem, social desirability bias, hostility and neuroticism, the associations remain significant (Williams & Mohammed, 2009); however, these variables were not assessed in the present study. In addition, a young person's psychosocial adjustment may influence the degree to which they are stigmatized; for instance, a former child soldier who displays hostility may be more likely to be negatively stereotyped and discriminated against compared to a former child soldier who does not display hostility. It is important to note that perceived discrimination may differ from actual discrimination, as may community acceptance. In future research it would be valuable to have independent community level assessments of these constructs reported by third parties, such as caregivers or peers.

Despite these limitations, our findings have a number of programmatic and policy implications and point to the importance of understanding the community stigma former child soldiers face. In Sierra Leone thoughtful attention was given to promoting acceptance of former child soldiers immediately following the war (Williamson, 2006). Although community sensitization campaigns were launched to assist the initial phases of reintegration in Sierra Leone, they were short-lived (Dougherty, 2004). The nation-wide sensitization efforts coordinated by the Government of Sierra Leone, the UN Mission in Sierra Leone (UNAMSIL) and multiple NGOs were particularly strong before the creation of the Sierra Leone Truth & Reconciliation Commission (TRC), which was meant to coordinate mass campaigns. However, a staffing crisis and 2002 budget cut necessitated scale-backs in these programs. In Sierra Leone and in other such war-affected settings, planning for such reintegration programs and the associated sensitization campaigns should consider ways to sustain initial investments in healthy community relations such as "booster" sensitization campaigns and community-based advocacy and problem solving for areas of persistent problems.

An additional step in addressing stigma involves recognizing that the stigma facing girls and boys may differ. For instance, our qualitative data indicates that both boys and girls appear to be seen as potentially dangerous or labile, at least at first. However, for girls, the provoking and stigma also includes the label of being defiled or sexually "loose" (Betancourt, Simmons, et al., 2008). The consequences of such stigma seems to generate a compounded risk for girls and present obstacles to marriage and other markers of community acceptance (Burman & McKay, 2007). Gender-sensitive community sensitization campaigns and support programs to assist young women to navigate the particular manifestations of stigma that they face may be of additional benefit in such instances.

Of additional importance in future research is the development of intervention studies to examine the effectiveness of community interventions to counteract stigma as well as individual and family-level interventions to enhance coping strategies and positive interpersonal relationships between former child soldiers and others in their lives. Such approaches might also activate and maintain local protective processes in the family and community thus augmenting initial sensitization efforts. With such efforts, the important investments made in returning these young people to their families and communities have the potential to be fully actualized.
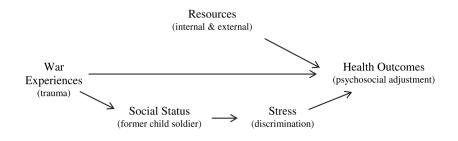
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Fig. 1.
Adapting social stress theory to the situation of former child soldiers.

Table 1

Socio-demographic Characteristics of the Sample (*N* = 152).

Characteristic	M/N (SD/%)
Age at T2 Interview, yrs	17.39 (2.36)
Gender	
Male	136 (89%)
Religion T1	
Christian	76 (52%)
Muslim	70 (47%)
Literacy T1	
Poor	73 (51%)
Functional	56 (39%)
Moderate	13 (9%)
In school T1	105 (72%)
In school at T1 and T2	95 (63%)
Age of abduction, yrs	10.50 (2.95)
Length of time with armed forces, yrs	4.68 (0.73)
Relative SES, T2 (Range = 4–16)	9.39 (2.28)
Perceived Discrimination score, T2 (Range = 0–18)	2.45 (3.58)

Table 2

Reasons for Discrimination.

How often	Total	Child soldier	Gender	Money	Age	Disability	Other
Reason, *N* (%)							
1. …are you treated with less respect than other people?	68 (44.7)	40 (58.8)	6 (8.8)	9 (13.2)	5 (7.4)	1 (1.5)	7 (10.3)
2. …are you treated in a way that is not as good as other people?	60 (39.5)	33 (55.0)	9 (15.0)	9 (15.0)	3 (5.0)	2 (3.3)	4 (6.7)
3. …do you receive bad looks when you go to the market or other places where they sell?	37 (24.3)	18 (48.6)	0 (0.0)	14 (37.8)	1 (2.7)	0 (0.0)	4 (10.8)
4. …do people act as if you don't have good sense?	58 (38.2)	26 (44.8)	7 (12.0)	3 (5.2)	9 (15.5)	3 (5.2)	9 (15.5)
5. …do people act afraid of you?	44 (28.2)	35 (79.5)	1 (2.3)	4 (9.1)	2 (4.5)	1 (2.3)	1 (2.3)
6. …do people act as if you are dishonest?	36 (23.7)	18 (50.0)	4 (11.1)	3 (8.3)	0 (0.0)	10 (27.8)	1 (2.8)
7. …do people pretend to be better than you?	62 (40.1)	22 (35.5)	1 (1.6)	31 (50.0)	1 (1.6)	1 (1.6)	6 (9.7)
8. …do people say things that you do not like?	77 (50.7)	51 (66.2)	4 (5.2)	9 (11.7)	4 (4.8)	2 (2.6)	7 (9.1)
9. …do people threaten you?	44 (28.9)	36 (81.8)	2 (4.5)	2 (4.5)	1 (2.3)	1 (2.3)	2 (4.5)

Table 3

Multiple regression analyses for psychosocial outcomes.

	Depression[a]			Anxiety			Hostility			Adaptive/prosocial behaviors & attitudes		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
R^2	0.20	0.33	0.38	0.26	0.36	0.37	0.30	0.39	0.41	0.18	0.18	0.31
ΔR^2		0.13	0.05		0.10	0.01		0.09	0.02		0.00	0.13
Baseline score	0.11 (−0.04, 0.25)	0.06 (−0.07, 0.19)	0.06 (−0.07, 0.19)	0.11 * (0.00, 0.21)	0.08w (−0.01, 0.18)	0.09w (−0.01, 0.19)	0.12 (−0.03, 0.28)	0.07 (−0.08, 0.22)	0.07 (−0.08, 0.22)	0.10 * (0.00, 0.20)	0.11 * (0.01, 0.21)	0.01 (−0.11, 0.12)
Age	0.49 * (0.06, 0.91)	0.40 * (0.01, 0.79)	0.28 (−0.10, 0.67)	0.57 * (0.13, 1.00)	0.46 * (0.05, 0.87)	0.43w (−0.01, 0.87)	0.37 (−0.25, 0.98)	0.24 (−0.34, 0.82)	0.02 (−0.59, 0.63)	−0.36 (−1.13, 0.41)	−0.34 (−1.11, 0.44)	0.17 (−0.62, 0.96)
Female	−0.19 (−2.24, 1.87)	−0.49 (−2.38, 1.40)	−0.74 (−2.58, 1.11)	−1.82 (−4.09, 0.45)	−2.23 * (−4.36, −0.10)	−2.29 * (−4.44, −0.15)	0.61 (−2.52, 3.74)	0.09 (−2.86, 3.05)	−0.18 (−3.12, 2.76)	−7.55 ** (−11.5, −3.61)	−7.43 *** (−11.4, −3.47)	−6.92 ** (−10.6, −3.22)
SES	−0.14 (−0.39, 0.12)	−0.06 (−0.30, 0.18)	0.03 (−0.21, 0.27)	−0.15 (−0.44, 0.15)	−0.07 (−0.35, 0.20)	−0.10 (−0.39, 0.18)	−0.09 (−0.49, 0.32)	0.01 (−0.37, 0.39)	0.07 (−0.32, 0.47)	0.79 * (0.28, 1.30)	0.77 * (0.26, 1.28)	0.45w (−0.05, 0.95)
Age at abduction, yrs.	−0.43 * (−0.77, −0.10)	−0.32 * (−0.63, −0.02)	−0.28w (−0.59, 0.02)	−0.50 * (−0.86, −0.15)	−0.38 * (−0.72, −0.05)	−0.37 * (−0.72, −0.01)	−0.45w (−0.95, 0.05)	−0.31 (−0.79, 0.17)	−0.15 (−0.65, 0.35)	0.12 (−0.52, 0.76)	0.10 (−0.55, 0.74)	−0.18 (−0.81, 0.46)
Yrs. with fighting forces	−0.07 (−0.41, 0.27)	0.02 (−0.29, 0.33)	−0.04 (−0.36, 0.28)	−0.25 (−0.62, 0.13)	−0.15 (−0.50, 0.20)	−0.15 (−0.53, 0.23)	−0.34 (−0.85, 0.17)	−0.23 (−0.72, 0.26)	−0.12 (−0.64, 0.41)	0.43 (−0.27, 1.12)	0.41 (−0.29, 1.10)	0.34 (−0.33, 1.02)
Killing	1.18w (−0.07, 2.43)	0.29 (−0.90, 1.49)	0.41 (−0.76, 1.58)	0.95 (−0.46, 2.37)	0.03 (−1.34, 1.40)	0.09 (−1.30, 1.48)	2.39 * (0.43, 4.34)	1.26 (−0.65, 3.16)	1.28 (−0.63, 3.19)	−1.31 (−3.79, 1.17)	−1.09 (−3.67, 1.49)	−1.09 (−3.50, 1.31)
Victim of rape	2.58 * (0.59, 4.57)	1.65w (−0.21, 3.51)	1.60w (−0.27, 3.46)	5.35 *** (3.11, 7.59)	4.46 *** (2.33, 6.58)	4.26 ** (2.06, 6.46)	8.23 *** (5.15, 11.30)	7.06 *** (4.11, 10.00)	7.14 ** (4.13, 10.15)	6.91 ** (3.00, 10.83)	7.16 ** (3.16, 11.16)	6.49 ** (2.68, 10.31)
Post-conflict discrimination		0.44 *** (0.27, 0.60)	0.36 *** (0.19, 0.53)		0.44 *** (0.26, 0.63)	0.46 *** (0.26, 0.65)		0.58 *** (0.32, 0.84)	0.51 ** (0.23, 0.78)		−0.11 (−0.46, 0.23)	0.19 (−0.16, 0.53)
Change in community acceptance			−0.11 (−0.39, 0.16)			0.22 (−0.10, 0.53)			−0.05 (−0.49, 0.39)			0.93 * (0.37, 1.49)
Baseline community acceptance			−0.24 (−0.52, 0.05)			0.18 (−0.15, 0.51)			0.07 (−0.39, 0.53)			1.24 *** (0.62, 1.85)
Family acceptance			−1.48w (−3.04, 0.09)			−1.23 (−3.01, 0.54)			−2.62 * (−5.06, −0.17)			1.45 (−1.64, 4.54)
School retention			−0.30 (−1.40, 0.80)			0.25 (−1.07, 1.58)			0.17 (−1.65, 1.98)			2.22w (−0.11, 4.55)

Note: N = 152.

*** $p < 0.001$;

** $p < 0.01$;

* $p < 0.05$;

$^\sim$ $p < 0.10$.

R^2 Percentage of outcome variance explained by each regression model.

ΔR^2 Difference in percentage of outcome variance explained between regression models.

[a] For each predictor we report parameter estimate, associated p-value and 95% confidence intervals.