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Understanding resilience in armed conflict: Social resources and mental health of children in Burundi

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ABSTRACT

Little is known about the role of cognitive social capital among war-affected youth in low- and middle-income countries. We examined the longitudinal association between cognitive social capital and mental health (depression and posttraumatic stress disorder (PTSD) symptoms), functioning, and received social support of children in Burundi. Data were obtained from face-to-face interviews with 176 children over three measurement occasions over the span of 4-months. Cognitive social capital measured the degree to which children believed their community was trustworthy and cohesive. Mental health measures included the Depression Self-Rating Scale (DSRS) (Birleson, 1981), the Child Posttraumatic Symptom Scale (Foa et al., 2001), and a locally constructed scale of functional impairment. Children reported received social support by listing whether they received different types of social support from self-selected key individuals. Cross-lagged path analytic modeling evaluated relationships between cognitive social capital, symptoms and received support separately over baseline (T1), 6-week follow-up (T2), and 4-month follow-up (T3). Each concept was treated and analyzed as a continuous score using manifest indicators. Significant associations between study variables were unidirectional. Cognitive social capital was associated with decreased depression between T1 and T2 ($B = -.22$, $p < .001$) and T2 and T3 ($\beta = -.25$, $p < .001$), and with functional impairment between T1 and T2 ($\beta = -.15$, $p = .005$) and T2 and T3 ($\beta = -.14$, $p = .005$); no association was found for PTSD symptoms at either time point. Cognitive social capital was associated with increased social support between T1 and T2 ($\beta = .16$, $p = .002$) and T2 and T3 ($\beta = .16$, $p = .002$). In this longitudinal study, cognitive social capital was related to a declining trajectory of children's mental health problems and increases in social support. Interventions that improve community relations in war-affected communities may alter the trajectories of resource loss and gain with conflict-affected children.

Exposure to war and armed conflict is associated with adverse mental health outcomes in children and adolescents (Barenbaum et al., 2004; Betancourt and Khan, 2008). Although challenging to quantify these problems, a recent systematic review of 17 studies including 7920 children found the pooled prevalence of post-traumatic stress disorder (PTSD) was 47%, depression 43%, and anxiety disorders 27%, demonstrating a high burden of these disorders (Attanayake et al., 2009). Mental disorders are associated with negative outcomes during childhood and adolescence. For example, depression in childhood can affect social functioning, academic achievement, and raise the risk for substance abuse and suicidal ideation (Birmaher et al., 1996; Fergusson et al., 2005). In post-conflict settings, a number of factors protect children from pernicious mental health effects of adversity and promote their well-being. A recent systematic review identified protective and promotive effects that exist at multiple levels of children's social

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ecology (i.e., at individual, family, peer/school, and community levels) (Tol et al., 2013). Although some qualitative studies (Betancourt et al., 2011) document the importance of social and community relations in post conflict settings, the concept of social capital has received little empirical attention.

Within low- and middle-income countries, social resources buffer the effects of exposure to potentially traumatic life events (PTEs) and aid in community healing (Betancourt et al., 2013; Gorst-Unsworth and Goldenberg, 1998; Hobfoll et al., 2011; Panter-Brick et al., 2011; Veling et al., 2013). Social capital is a useful concept that encapsulates social resources available to a person through their social environment (Bourdieu, 1986; Inaba, 2013). It is often measured as an individual (Lin, 2001) or aggregate community resource (Kawachi et al., 2013) and delineated into cognitive and structural domains (De Silva et al., 2005). Structural social capital focuses on social networks and civic or community group membership and participation while cognitive social capital is concerned with perceptions of trust and reciprocity within communities.

Cognitive social capital, the focus of the current investigation, is associated with better mental health outcomes. In a systematic review, of research mostly conducted in high resource settings, greater cognitive social capital was protective against common mental disorders (De Silva et al., 2005) and children's mental health. Greater social capital is also associated with an increased sense of safety (Dallago et al., 2009) and lower risk for a variety of public health problems in children including smoking, and obesity. Although cognitive social capital is associated with fewer mental health problems in adult populations living in low-income countries (De Silva et al., 2006b), the association between social capital and children's mental health within similar contexts has not been investigated. We would expect that cognitive social capital would exert a positive influence on mental health of children in these contexts, similar to what was found in higher resource communities (De Silva et al., 2005).

The majority of studies examining social capital and mental health have relied on cross-sectional designs. These studies are helpful in identifying correlates that, if modified, may increase mental health. However, such studies are limited with regard to concluding the directionality of relationships and only tell one side of the story; reciprocal relationships may be occurring. In addition to the evidence that suggests cognitive social capital is associated with better mental health (De Silva et al., 2005), relationships between mental health and protective factors can exhibit reverse causation. Evidence from the adult trauma literature suggests that declines in the availability of social resources are related to psychological distress following a variety of potentially traumatic events (Bonanno et al., 2010; Hall et al., 2014b; Heath et al., 2012; Kaniasty and Norris, 2008). To our knowledge, no longitudinal study has investigated whether social capital is a resource for children affected by war and ongoing violence and political instability. The present study utilizes a three-wave crossed-lagged panel design to evaluate the nature and direction of effects between cognitive social capital, mental health and received social support.

We modeled reverse causality in the current study for several theoretical reasons. According to the social causation/social drift framework (Kaniasty and Norris, 2008), social causation predicts that losses to social resources are associated with increased mental health problems. Social drift suggests that mental health problems can lead to decreased social resources. This model is supported and extended by Hobfoll's conservation of resources theory that posits loss to valued resources following exposure to traumatic events leads to mental health problems; loss spirals may occur when mental health problems in turn lead to further losses (Hobfoll, 1989). We also sought to evaluate the presence of gain spirals, that is, whether the presence of one form of interpersonal resources could subsequently lead to gains in another. Cognitive social capital may increase the likelihood that children received social support as they may be more likely to seek this support if they believe in the trustworthiness of those in their environment. Conversely, receiving greater social support could in turn bolster the belief of community trust.

Given that cognitive social capital exists as an individual's perception, it is plausible that depressive symptoms could negatively influence the perception of the trustworthiness of others (Gotlib and Joormann, 2010) and PTSD symptoms could undermine feelings of safety, trust and confidence in ones community (Ehlers and Clark, 2000), and contribute to avoidance of social contact, leading to reductions in cognitive social capital. Contrariwise, greater cognitive social capital could influence mental health outcomes by attenuating the cognitions regarding perceived isolation (Hawkley and Cacioppo, 2010), danger and fear (Ehlers and Clark, 2000), and negative biases (Alloy et al., 2006) known to exacerbate mental health problems.

Poor mood, irritability (King et al., 2006) and lack of interest in socialization could lead to alienation or rejection. General impairment in functioning could lead to dependency and help seeking and if this is met with rejection or miscarried support, cognitive social capital may also be affected. With regard to received social support, it is plausible that increased support could lead to more positive view of the community, thereby increasing cognitive social capital.

We hypothesize that greater cognitive social capital is associated with decreases in mental health symptoms and functional impairment over time. Beyond reductions in symptoms and impairment, we hypothesize that greater cognitive social capital will confer other salutary benefits. Beliefs in the trustworthiness and cohesiveness in one's community may lead to a desire or openness to receive social support; therefore, greater cognitive social capital is expected to relate to greater received social support. Based on our theoretical arguments above, we also hypothesize that reciprocal effects would occur such that mental health symptom severity would lead to losses in cognitive social capital and that higher reported received social support would relate to greater cognitive social capital.

1. Method

1.1. Participants

Burundi experienced cyclical political instability and violence between Hutu and Tutsi ethnic groups since 1962. The eastern African country has a population of 8.5 million and ranks as the third poorest country in the world with regard to health, education and income (United Nations, 2011). Widespread exposure to violence, displacement of 1.2 million people and the death of 300,000 people occurred during the civil war that started in 1993. The data obtained for the current study are from the waitlist control participants ($N = 176$) of a cluster randomized trial aimed at evaluating the effectiveness of a school-based mental health intervention in Burundi (Tol et al., 2014).

Data collection occurred between 2006 and 2007 in 7 randomly selected public schools within the northwestern province of Cibitoke. Although peace agreements were signed in 2003, and armed violence significantly reduced, this province continued to experience threat of violence from rebel groups that remained active in the area during the time of study. A qualitative study showed that the armed conflict and poverty were perceived to be associated with an interrelated set of children's problems, including war-related problems at the individual, family (large-scale loss of