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In search of links between social capital, mental health and sociotherapy: A longitudinal study in Rwanda

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ABSTRACT

To date, reviews show inconclusive results on the association between social capital and mental health. Evidence that social capital can intentionally be promoted is also scarce. Promotion of social capital may impact post-conflict recovery through both increased social cohesion and better mental health. However, studies on community interventions and social capital have mostly relied on cross-sectional study designs. We present a longitudinal study in Rwanda on the effect on social capital and mental health of sociotherapy, a community-based psychosocial group intervention consisting of fifteen weekly group sessions. We hypothesized that the intervention would impact social capital and, as a result of that, mental health.

We used a quasi-experimental study design with measurement points pre- and post-intervention and at eight months follow-up (2007–2008). Considering sex and living situation, we selected 100 adults for our experimental group. We formed a control group of 100 respondents with similar symptom score distribution, age, and sex from a random community sample in the same region. Mental health was assessed by use of the Self Reporting Questionnaire, and social capital through a locally adapted version of the short Adapted Social Capital Assessment Tool. It measures three elements of social capital: cognitive social capital, support, and civic participation. Latent growth models were used to examine whether effects of sociotherapy on mental health and social capital were related.

Civic participation increased with 7% in the intervention group versus 2% in controls; mental health improved with 10% versus 5% (both: $p < 0.001$). Linear changes over time were not significantly correlated. Support and cognitive social capital did not show consistent changes.

These findings hint at the possibility to foster social capital and simultaneously impact mental health. Further identification of pathways of influence may contribute to the designing of psychosocial interventions that effectively promote recovery in war-affected populations.

Trial registration: Nederlands Trial Register 1120.

1. Introduction

Traumatized survivors of war or political violence often have complex mental health problems, with anxiety, depressive and cognitive disturbances (De Jong et al., 2003; Rodin and van Ommeren, 2009). Most patients also suffer from feelings like shame, guilt, distrust and alienation. Such feelings complicate social functioning and interpersonal contacts in communities where social structures and cohesion have already been damaged by human violence (Ager, 2002; Hobfoll et al., 2007). Psychological and behavioral problems hamper daily functioning and the engagement in relations. Learning how to cope with such difficulties may not only counter individual suffering, it may also help to prevent additional damage in social relations caused by ongoing behavioral disturbances, and to rebuild meaningful social structures in which people can re-find and practice (self)respect. Social capital is potentially a key resource supporting post-conflict recovery. Promotion of social capital may impact post-conflict recovery both through increased social cohesion and through better mental health (Scholte and Ager, 2014). This study explores the possible effects of an intervention called sociotherapy on social capital and

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mental health in post-genocide Rwanda. We hypothesized that this intervention would impact social capital and, as a result of that, mental health.

1.1. Social capital

Social capital is a concept based on the idea that social networks provide a basis for social cohesion and cooperation. It has been characterized as 'the glue that holds societies together' (McKenzie et al., 2002). Social capital's most commonly adopted definition in health sciences recognizes five characteristics: community networks, civic engagement, civic identity (belonging, solidarity, equality), reciprocity and norms of cooperation, and trust in the community (Putnam, 1993). Within the literature, studies distinguish between individual and collective conceptualizations of social capital (Kawachi and Subramanian, 2006), but the definition as a community asset is currently "privileged" over individual definitions.

Social capital has been divided into two components, 'structural social capital' and 'cognitive social capital'. Structural social capital refers to the existence of relationships, networks, and associations that link members together. Cognitive social capital is the 'driving force'; it includes values, norms, civic responsibility, expected reciprocity, charity, altruism, and trust. Structural and cognitive social capital, respectively, can be characterized as what people 'do' and what people 'feel' in terms of social relations (Harpham et al., 2002).

1.2. Promotion of social capital

Until recently, the few existing studies on community interventions aiming to improve social capital, tended to rely on cross-sectional study designs. This implies that their ability to draw causal inferences has been limited (Macinko and Starfield, 2001; De Silva et al., 2005a). Only very few longitudinal studies evidence that social capital can be fostered by interventions. Coletta and Cullen (2000) discussed changes in social capital resulting from violent conflict in their study of four conflict-affected countries (Cambodia, Rwanda, Guatemala, and Somalia); they provide clear examples of how governments and international actors promote decentralization, civic participation, social inclusion, empowerment, and the strengthening of grassroots movements. A study by Michael et al. (2008) showed social support and self-rated health improved, while depressive symptoms decreased, after a community-based participatory research intervention, which employed Community Health Workers who used popular education to identify and address health disparities in Latino and African American communities in a metropolitan area in the United States.

Brune and Bossert (2009) performed a longitudinal study in Nicaragua, showing that systematic interventions promoting management and leadership development were effective in improving some aspects of social capital, in particular the cognitive attitudes of trust in the communities. Interventions were also linked to higher levels of civic participation in governance processes. As in other empirical studies, they also found that higher levels of social capital were significantly associated with some positive health behaviors.

Pronyk et al. (2008) conducted an intervention in rural South-Africa that combined group-based microfinance with participatory gender and HIV training in an attempt to catalyze changes in solidarity, reciprocity and social group membership as a means to reduce women's vulnerability to intimate partner violence and HIV. After two years, adjusted effect estimates indicated higher levels of structural and cognitive social capital in the intervention group than the comparison group, although confidence intervals were wide.

1.3. Social capital and mental health

Social capital may play a role in the incidence and prevalence of mental illness (McKenzie et al., 2002). The assumed relevance of social capital for mental health has been underscored by national and international policies to develop social capital in disaster- or war-affected communities (Hobfoll et al., 2007; Norris et al., 2008). Over the last decade literature on the salutary association between social capital and mental health is growing (Kawachi and Berkman, 2001; Almedom, 2005; De Silva et al., 2005a; De Silva et al., 2007; Engström et al., 2008; Berry and Welsh, 2010; Hamano et al., 2010; Suzuki et al., 2010; Wind et al., 2011). However, systematic reviews of quantitative studies examining the association between social capital and mental illness have shown inconclusive results (De Silva et al., 2005a,b; Islam et al., 2006). Especially studies that conceptualized social capital as a community asset (as opposed to an individual asset) found ambiguous associations with individual mental health outcomes (De Silva et al., 2005a,b; Hamano et al., 2010; Eriksson, 2011). At the individual level, several studies have observed positive associations with better mental health (Veenstra, 2000, 2002; De Silva et al., 2005a,b; Whitley and McKenzie, 2005; Almedom, 2005; Irwin et al., 2008; Patel, 2010).

A study in Rwandan children and families affected by HIV/AIDS showed that communities which 'gather people together to discuss problems', 'offer advice' and 'understand and help solve problems' add to individual coping and strong parent–child relationships in protecting against mental health problems and promoting resilience (Betancourt et al., 2011). A recent study among war-affected youth in Sierra Leone revealed the role of the post-conflict social context in shaping mental health in former child soldiers. Findings underscored the importance of the social environment and the need to develop post-conflict interventions that address community-level processes in addition to the needs of families and individuals (Betancourt et al., 2014).

Various scholars (Wang et al., 2009; Nakhaie and Arnold, 2010; Wind and Komproe, 2012) assert that the time has come to shed more light on possible associations between social capital and mental health, and which specific starting points are most important for interventions.

1.4. The present study

The study presented here was performed within the framework of a psychosocial community intervention (community based sociotherapy) aimed to enhance social bonding (Richters et al., 2005). Sociotherapy has been shown to establish a significant improvement in mental health in Byumba, Rwanda (Scholte et al., 2011a).

Byumba province is located in the north of Rwanda, bordering Uganda. The invasion by the Rwanda Patriotic Front (RPF) from Uganda into Rwanda on 1st October 1990 started a civil war in the north of the country. Predominantly of Tutsi origin, many of the members of the RPF were second generation refugees who had fled to Uganda and settled there from 1959 onwards, escaping ethnic purges in Rwanda. The RPF went into Rwanda as an army of liberation but was perceived by the majority of the population (mostly of Hutu origin) as an army of occupation. Low intensity fighting was interrupted by several massacres, including one in Byumba. During the 1994 genocide, social capital atrophied as the country, communities and families fell prey to hatred and violence (Coletta and Cullen, 2000). The war (1990–1994) and genocide (1994) related problems affected men and women of all ages. The