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Social resources, health promotion behavior, and quality of life in adults living with HIV

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ABSTRACT

Purpose: To describe the associations among three social resource variables (social belonging, social support networks, and social capital) and two health promotion behaviors, HIV medication adherence and physical activity, and quality of life among persons living with HIV (PLHIV).
Method: We conducted a cross-sectional analysis in 102 adult PLHIV. Social resource variables and quality of life were assessed using validated and widely-used instruments. Physical activity was assessed using a daily physical activity diary and medication adherence was abstracted from the participant's medical record. Spearman correlations and descriptive statistics were used to analyze associations among variables.
Results: Fifty-four participants (54%) were male and most were African American (84%), single (69%), and living in poverty (82%). Participants had been living with HIV for an average of 13.6 years (+/− 7) and most were living with at least one non-AIDS comorbidity (80%). Social belonging was significantly associated with HIV medication adherence ($\rho = 0.25$, $p = 0.02$), overall functioning ($\rho = 0.48$, $p < 0.01$) and life satisfaction quality of life ($\rho = 0.50$, $p < 0.01$). Social capital was also associated with HIV medication adherence ($\rho = 0.17$, $p = 0.10$) and life satisfaction quality of life ($\rho = 0.29$, $p < 0.01$).
Conclusions: We found that there are distinctions among various, widely-used social resource constructs. By describing these unique associations and distinctions, our study helps identify which social resources should be targeted in the development of interventions to improve health promotion and the quality of life of members of this marginalized population.

1. Background

Recent biomedical and political advances in the treatment of HIV have contributed to the realistic possibility for an end to the HIV epidemic (UNAIDS, 2014). Continued progress toward achieving an end to the epidemic will require concerted efforts and resource expenditures to address persistent health inequities that exist globally. HIV is a highly stigmatized disease that often affects marginalized peoples who historically have had limited access to social resources. Racial and ethnic minorities and gay and bisexual men are disproportionally affected by the HIV epidemic in the United States (Ayala, Bingham, Kim, Wheeler, & Millett, 2012; Millett et al., 2012; Oster et al., 2011). The increased HIV burden among these groups necessitates a better understanding of what social resources are available to them and what effects these resources have on health outcomes. Efforts to address the challenges of persons living with HIV who are disenfranchised or marginalized require innovative approaches that integrate their daily context-specific challenges (2014). Understanding the relationships between social resources and health promoting or risk behaviors, and how key demographic variables influence social resources may help us develop targeted interventions with marginalized groups. Among all people, including people living with HIV, the achievement of optimal health requires individual and collective resources. Individual and collective resources have been studied over the past several decades through studies of social resources (Cohen, Gottlieb, & Underwood, 2000; Foa & Foa, 1980; Kawachi & Berkman, 2001), social belonging/friendship (Hawthorne, 2006; Holt-Lunstad, Smith, & Layton, 2010), social capital (Murayama, Fujiwara, & Kawachi, 2012), and social networks (Berkman, 1977; Berkman & Kawachi, 2000). The purpose of this study was to describe associations between social belonging/friendship, social networks, social capital, and the health promotion behaviors and quality of life of persons living with HIV.

Social resources are defined as any concrete or symbolic item that can be used as an object of exchange among people (Foa & Foa, 1980). They are constructs that have consistently been observed to improve and maintain health. Examples of social resources include both tangible items such as money, information, goods and services, and less tangible concepts such as love/affection and status within society. Over the last few decades, social resources have been documented to have direct and indirect benefits for members of society that possess them (Umberson & Montez, 2010). Individuals and groups with adequate

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social resources tend to be healthier and are more able to manage health threats in their communities. When social resources are present, they mediate the deleterious effect of stress on health as well as directly affect physical and psychological health (Cohen et al., 2000; Kawachi & Berkman, 2001). Foa and Foa classified social resources into six categories: love/affection, status, information, services, goods, and money. This categorization remains a useful framework for analysis despite being debated, elaborated on, and synthesized by other scholars (Törnblom & Kazemi, 2012). In this analysis, we use Foa and Foa's Social Resource Theory to help describe the distinct contributions of social belonging, social networks, and social capital on select health promotion behaviors (HIV medication adherence and physical activity) and quality of life of persons living with HIV.

Social belonging (friendship) or inclusion is a universal and basic human need for being accepted as a member of a group (Baumeister & Leary, 1995). Elements of social belonging include companionship, affiliation, and connectedness (Lee & Robbins, 1995). Associations between social belonging and increased heath promoting behaviors have been documented, but remain an emerging area of health research (Kaczynski & Glover, 2012). Social belonging encompasses all six of Foa and Foa's (1980) social resource categories with an emphasis on love/affection and status. The relationship between social belonging and other social resources, and their combined impact on the health promotion behaviors and quality of life of persons living with HIV, has yet to be explored. However, understanding this relationship may provide critical information on the nature of social resources in this population, leading to improved health promoting interventions.

Social support network is a multidimensional construct that emphasizes the structure and function of a person's social relationships (Smith & Christakis, 2008). The members of social support networks can help to convey a strong sense social belonging, or the lack thereof. Social support networks can be shaped by individual factors (e.g. personality, norms), interpersonal (e.g. family, neighbors, organizational membership) and sociostructural conditions (e.g. local geography, civil stability, macroeconomic conditions) (Berkman, 1977; 1984; Berkman & Kawachi, 2000). Social support networks are prerequisites for the development of social capital (Cattell, 2001) and are recognized as essential for good health by the World Health Organization (Marmot, Allen, Bell, Bloomer, & Goldblatt, 2012). The effects of social support networks have figured prominently in health research, practice, and policy. Extensive research has demonstrated that social support networks decrease illness and mortality across populations (Holt-Lunstad et al., 2010). However, the mechanisms by which social support networks lead to improved health outcomes are elusive (Kawachi & Berkman, 2001) and expanding the distinctions between social support networks, social belonging (friendship) and social capital may lead to a better understanding of these mechanisms.

Social capital is the "aggregate of potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu, 1985; Portes, 1998). While debated (Lochner, Kawachi, & Kennedy, 1999; Pitkin Derose & Varda, 2009), it can be useful to think of individual social capital comprising reciprocity, trust, participation, norms, social networks, value of life (Szreter & Woolcock, 2004). Many of the definitions of social resources are similar to those of capital – an ability to exchange object entities, capabilities for other objects, entities of value (Törnblom & Kazemi, 2012) – helping to make social capital a popular area of study in health research. However, conceptualization and operationalization of social capital vary tremendously across studies rendering aggregation of findings difficult (Pitkin Derose & Varda, 2009). In general, social capital is thought to be associated with positive health behaviors and outcomes, although rigorous prospective trials are lacking. Similar to social belonging, social capital encompasses all of Foa and Foa's (1980) social resource categories, however social capital can more easily illuminate the concrete and particular categories including services, goods, and money.

Given the overlap and inter-relatedness of these constructs, scholars have called for conceptual clarity among social resources constructs (Berkman & Kawachi, 2000; Portes, 1998; Smith & Christakis, 2008). For example, Locher et al. (2005) examined the relationship between social isolation, social support, social capital and nutritional risk among 1000 older adults and found that indicators of social isolation were associated with greater nutritional risk. However, they did not examine associations between social resource variables and did not use psychometrically sound scales to measure these variables, leaving many gaps in the literature (Locher et al., 2005). To our knowledge our study is the first to examine the relationships between social belonging/friendship, social support networks, social capital, health promoting behavior, and quality of life among people living with HIV.

2. Objectives

We hypothesized that the nature of various constructs that contribute to conceptualizations of social resources, particularly those most commonly used in the health literature, is different and each construct adds distinct information about the impact of social resources on the health of people living with HIV. In this paper, our objectives were to examine the associations among three variables, social belonging/friendship, social support networks, and social capital. Guided by previous research (Kawachi & Berkman, 2001), we further examined the role of the demographic characteristics gender, age (stage of life) and economic position on these social resources. Finally, we described the associations between these social resource variables and two important health behaviors, HIV medication adherence and weekly physical activity, and quality of life among persons living with HIV.

3. Methods

This analysis was conducted as part of a larger study examining the relationships between age, gender and self-management behavior in adults living with HIV. A fuller description of the inclusion criteria and data collection methods for this analysis is included in prior publications (Webel et al., 2015; Webel et al., 2014).

3.1. Sample and recruitment

We examined the relationships between social belonging/friendship, social support networks, social capital, health promoting behavior, and quality of life among people living with HIV using a convenience cohort. Adults living with HIV were recruited from HIV clinics, HIV service organizations, and a northeast Ohio HIV research registry and organized into four groups that most approximated equal sized strata and equivalent age cut points (27 males <51 years, 27 males ≥51 years, 23 females <51 years and 25 females ≥51 years) to ensure representation of both males and females, and older and younger participants. Individuals with a documented HIV diagnosis (provided by the primary HIV clinic) who were 18 years of age or older and on antiretroviral therapy (ART) were recruited from November 2011 to June 2012 ($N = 102$).

The study was approved by the institutional review board of University Hospitals, Case Medical Center (Cleveland, OH). Written informed consent was obtained from eligible adults living with HIV before completing study related activities. Participants completed the demographic survey, which was collected via computer-assisted delivery, to enhance self-report accuracy. Participants were compensated for their time with a $50 cash gift card.

3.2. Measures

Demographic characteristics were obtained by self-report and clinical data were abstracted from participant's medical records. Clinical data included HIV disease variables (current HIV viral load, CD4 + T cell count, current medications, 3-day self-reported HIV medication