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Community Health Workers in Brazil's Unified Health System: A framework of their praxis and contributions to patient health behaviors

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ABSTRACT

Community Health Workers (CHWs) play a pivotal role in primary care, serving as liaisons between community members and medical providers. However, the growing reliance of health care systems worldwide on CHWs has outpaced research explaining their praxis – how they combine indigenous and technical knowledge, overcome challenges and impact patient outcomes. This paper thus articulates the *CHW Praxis and Patient Health Behavior Framework*. Such a framework is needed to advance research on CHW impact on patient outcomes and to advance CHW training. The project that originated this framework followed Community-Based Participatory Research principles. A team of U.S.-Brazil research partners, including CHWs, worked together from conceptualization of the study to dissemination of its findings. The framework is built on an integrated conceptual foundation including learning/teaching and individual behavior theories. The empirical base of the framework comprises in-depth interviews with 30 CHWs in Brazil's Unified Health System, Mesquita, Rio de Janeiro. Data collection for the project which originated this report occurred in 2008–10. Semi-structured questions examined how CHWs used their knowledge/skills; addressed personal and environmental challenges; and how they promoted patient health behaviors. This study advances an explanation of how CHWs use self-identified strategies – i.e., empathic communication and perseverance – to help patients engage in health behaviors. Grounded in our proposed framework, survey measures can be developed and used in predictive models testing the effects of CHW praxis on health behaviors. Training for CHWs can explicitly integrate indigenous and technical knowledge in order for CHWs to overcome contextual challenges and enhance service delivery.

Introduction

Community Health Workers (CHWs) are key liaisons between professional care providers – physicians, nurses, social workers, etc. – and patients in primary health care settings worldwide (Abbatt, 2005; Brownstein, Hirsch, Rosenthal, & Rush, 2011; Lewin et al., 2005). The global number of CHWs has grown in the past decade and their pivotal role in primary care has been widely acknowledged (Pan American Health Organization, 2007; World Health Organization, 2011). CHWs are recruited chiefly for their indigenous knowledge about their communities' geographies, cultural norms, and health resources and needs (Gilkey, Garcia, & Rush, 2011; Standing & Chowdhury, 2008) The majority of CHWs are low-income women trained in health promotion and disease prevention (Haines et al., 2007; Nascimento & Correa, 2008). The combination of indigenous and technical skills places CHWs in the strategic position of "experience-based experts" whose strategies for health promotion reflect their social positions (e.g., their gender, race and economic status) (Collins & Evans, 2002; Popay & Williams, 1996).

CHW praxis – how CHWs combine indigenous and technical knowledge, overcome personal and environmental challenges and impact patient outcomes – represents a serious gap in the literature (Spencer, Gunter, & Palmisano, 2010; Swider, 2002). Though CHW effectiveness is abundantly known, a theoretically- and empirically-based framework to describe and explain CHW praxis is not yet available. Therefore, an explanatory framework of CHW praxis is both a theoretical and empirical matter addressed by this paper. Such a framework is needed to advance research on CHWs' impact on patient behavioral changes and to optimize CHW training (Gilkey et al., 2011; Spencer et al., 2010; Swider, 2002).

Community Health Worker praxis and effectiveness

CHWs derive their effectiveness from an ability to impart health information to patients using interpersonal strategies known to

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promote patient health. For example, communication between health providers and patients is improved by demonstrated concern, respect and empathy (Travaline, Ruchinskas, & D'Alonzo Jr., 2005). Jargon-free communication promotes patients' understanding of health information given by health professionals (United States Department of Health and Human Services, 2005). Empathy enhances patients' adherence to behavioral and medical treatments (Dziopa & Ahern, 2009; Howgego, Yellowlees, Owen, Meldrum, & Dark, 2003). Though praised for these valuable interpersonal skills, CHWs are also perceived by patients as less credible than professional providers because they lack formal education and access to medical resources, e.g., medications needed by their patients. However, perseverance in helping patients has shown to improve patients' attitudes toward providers (Alcock et al., 2009; Franco, Bennett, & Kanfer, 2002).

Two comprehensive reviews (Lewin et al., 2005; Swider, 2002) show that by using interpersonal strategies to communicate health-related information, CHWs can help patients prevent diseases, manage chronic illnesses, access health care and adhere to health promotion and disease prevention behaviors (i.e., "health behaviors"). For example, CHWs help parents adhere to their children's immunization schedules (Macinko, de Fátima Marinho de Souza, Guanais, & da Silva Simoes, 2007), patients adhere to hypertension treatments (McCormick et al., 1989; Perino, 1992), HIV prevention (Centers for Disease Control and Prevention, 1998, pp. 1–43), and to practices designed to prevent infectious diseases (Clarke, Dick, Zwarenstein, Lombard, & Diwan, 2005). Though informative, these studies have used different measures of CHW effectiveness. Lacking a theoretical framework upon which hypotheses could be based, previous studies are un-replicable across different contexts. Having a strong CHW praxis framework will be thus beneficial in measuring CHW effectiveness in future research.

Community Health Worker praxis and training

The literature suggests that CHWs are encouraged to teach medical staff about community members' realities while, in turn, learning technical information from these professionals. However, a review of 109 articles shows that CHWs and medical providers are seldom trained together and thus are denied opportunities to acquire knowledge and skills from diverse sources and perspectives (Bhui, Warfa, Edonya, McKenzie, & Bhugra, 2007). Most training for health care providers includes participant observation and analysis of case reports. Role play exercises have been used in acute care settings (Hadwiger, 1999). Moreover, provider training is often disease- and intervention-focused; it frames social conditions as pathological, stigmatizes disadvantaged populations and discourages interdisciplinary exchanges (Leipzig et al., 2002; Mayfield-Johnson, 2011; Simoni, Franks, Lehavot, & Yard, 2011; Spencer et al., 2010).

CHWs, hired mainly for their indigenous knowledge, are trained by medical staff to use technical skills to administer prescribed medications, conduct blood pressure screenings, help patients acquire and prepare foods, etc. CHWs' trainers are themselves encouraged to use strategies CHWs commonly use to optimize patient outcomes, such as empathic communication and perseverance (Farmer & Gastineau, 2002; Lewin et al., 2005; Mahler, 1978; Pérez & Martinez, 2008; Satterfield, Burd, Valdez, & Hosey, 2002; Swider, 2002). CHWs and medical staff thus have distinct but complementary knowledge and skill sets, suggesting that training health providers in both indigenous and technical knowledge may optimize patient outcomes. Such training would emphasize a team-based approach to health care delivery (Hamilton et al., 2008; World Health Organization, 2011). Regrettably, diverse care providers seldom train jointly or mutually train one another.

CHW Praxis and Patient Health Behavior Framework

The absence of a theoretically- and empirically-based framework connecting CHW praxis to patient outcomes has challenged both the advancement of CHW training and of research showing CHW effectiveness (Gilkey et al., 2011; Spencer et al., 2010; Swider, 2002). Without a unifying framework of CHW praxis, research measuring CHW effectives and describing CHW roles and responsibilities has been unsystematic across countries and social contexts. CHW training also has not followed any systematic trend that could be replicated and evaluated across different contexts. This paper helps fill this gap by introducing the *CHW Praxis and Patient Health Behavior Framework*. In order to develop such a framework, we used an integrated theoretical foundation including teaching/learning (Freire, 2000, 2005) and individual behavior (Ajzen, 1991; Bandura, 1977, 1989) theories. We used in-depth interview data from 30 CHWs in Brazil's Unified Health System as the empirical basis for the framework. The framework reflects CHWs' efforts to help oppressed, low-income individuals develop positive health behaviors. This focus on CHW data is novel, as previous research has privileged the voices of researchers and policy makers in matters concerning CHW praxis and training. The focus on Brazil's health system has implications for CHW praxis and training globally.

CHWs in Brazil's Unified Health System

CHWs (Agentes Comunitários da Saúde) are an integral part of Brazil's Unified Health System (Sistema Único de Saúde – SUS), meant to provide free primary care to all citizens. According to Brazil's Ministry of Health (Ministério da Saúde, 2011a, 2011b), the SUS seeks to achieve this goal through its Family Health Program (Programa de Saúde da Família – PSF), a nationwide strategy implemented in 1994, funded by federal, state and local governments. By 2009, PSF was one of the largest community-based primary health strategies in the world, caring for 61% of Brazil's population, approximately 115 million people. The PSF comprises community-based clinics whose transdisciplinary teams comprise at least one physician, one nurse and up to 15 or more CHWs. The size and concentration of PSF clinics reflect the needs and size of local populations. The PSF serves the poorest populations in Brazil and employs some 234,767 CHWs. Each CHW is assigned up to 150 families or 750 individuals. The key criteria used to select CHWs are: residence in the community; understanding of local geography and culture; and endorsement by residents. CHWs receive training in basic health concepts, healthy lifestyles, sanitary living conditions and public health strategies (Nascimento & Correa, 2008; Nunes, Trad, Almeida, Homem, & Melo, 2002; Silva & Dalmaso, 2002).

CHW praxis framework's conceptual foundation

Research on CHWs' impact on patient health behaviors has not been grounded in a unifying theoretical framework showing how CHWs' indigenous and technical skills relate to patient health behaviors. This conceptual issue can be best addressed by an integrated conceptual foundation, including learning/teaching and individual behavior theories, as follows.

Freire's philosophy of learning and teaching emphasizes the value of indigenous knowledge combined with technical information in transforming the lives of low-income and illiterate individuals, including positive changes in health behaviors (Freire, 2000, 2005). Though these concepts are reflected in the work of experiential learning theorists (Borzak, 1981; Houle, 1981; Itin,