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Peer Interventions to Promote Health: Conceptual Considerations

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Abstract

Peers have intervened to promote health since ancient times, yet few attempts have been made to describe theoretically their role and their interventions. After a brief overview of the history and variety of peer-based health interventions, a 4-part definition of peer interveners is presented here with a consideration of the dimensions of their involvement in health promotion. Then, a 2-step process is proposed as a means of conceptualizing peer interventions to promote health. Step 1 involves establishing a theoretical framework for the intervention's main focus (i.e., education, social support, social norms, self-efficacy, and patient advocacy), and Step 2 involves identifying a theory that justifies the use of peers and might explain their impact. As examples, the following might be referred to: theoretical perspectives from the mutual support group and self-help literature, social cognitive and social learning theories, the social support literature, social comparison theory, social network approaches, and empowerment models.

Keywords

peer-based health interventions; patient advocacy; self-efficacy; social support; popular-opinion-leader (POL) interventions; dynamic social impact theory (DSIT); social cognitive theory (SCT)

Lay people have provided support, treatment, and preventive health services within their own communities throughout human history. Even as contemporary systems of health care delivery have grown more organizationally and technologically complex, nonprofessional community members remain an important complement to, or substitution for, professional health care providers (Goldstrom et al., 2006; Macvean, White, & Sanson-Fisher, 2008; Swider, 2002).

Currently, peer interventions are used in diverse settings throughout the world and across different age groups to target a broad range of physical health outcomes (i.e., smoking cessation [Campbell et al., 2008], weight loss [Stock et al., 2007], and asthma management [Fisher, Strunk, Sussman, Sykes, & Walker, 2004]) as well as to support chronic mental and

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physical disease management and rehabilitation, especially in cardiovascular disease (Carroll, Rankin, & Cooper, 2007), breast cancer (Helgeson, Cohen, Schulz, & Yasko, 2001), diabetes (Baksi et al., 2008), HIV or AIDS (Simoni et al., 2009), and serious mental illness and addiction (Fors & Jarvis, 1995; Lawn et al., 2007). In testament to their widespread appeal and assumed effectiveness, several policy statements support the use of nonprofessional providers (herein referred to as *peers*) in diverse health care settings (Health Resources and Services Administration, 2005; Newell, 1975; Trotter, Bowen, & Potter, 1995; U.S. Department of Health and Human Services, 1994).

Contemporary peer health interventions derive from three traditions of community-based lay support for health and well-being (Porter & Porter, 1989; Ro, Treadwell, & Northridge, 2003). The first tradition predates biomedicine and includes lay healing and care based on practical as well as spiritual understandings of health and illness. Subordinated by modern biomedicine, this tradition has endured in areas where medical professionals are scarce or in response to perceived health needs that professionals do not adequately address (Lay, 2000; Newell, 1975). Especially since the mid-20th century, modern health care systems have adopted aspects of this lay caregiver tradition to extend into traditionally underserved parts of developed countries and to build national health care programs in developing countries (Berman, Gwatkin, & Burger, 1987; Djukanovic & Mach, 1975). The provision of social support to enhance health outcomes is a common peer role that falls within the lay caregiver tradition (Hoey, Ieropoli, White, & Jefford, 2008). The second tradition, peer education, is a longstanding practice that has been adopted in contemporary settings. Students teaching students have been part of Western pedagogy at least since the classical era in Greece (Wagner, 1982), and the value of cohort members as role models is well recognized. Extending beyond didactic functions, peers who engage targeted populations in participatory learning processes can foster their empowerment. This is part of the rationale for incorporating peer education into reform efforts such as the U.S. “War on Poverty” (Wagner, 1982). Finally, the tradition of mutual aid for recovery from alcoholism and other addictions has influenced contemporary peer roles (Rehm & Room, 1992). In the 20th century, mutual aid grew from individual assistance to advocacy for system changes, and expanded into HIV care and prevention, mental health care, and breast cancer treatment (Davidson, Chinman, Sells, & Rowe, 2006; Solomon, 2004). Consumer-patient advocacy has broadened the contemporary platform for peer contributions to health care provision to efforts to combat stigma, discrimination, and health disparities (Mead & Bower, 2002).

Descriptive and some experimental evidence is accumulating to support the feasibility and effectiveness of peer health care interventions in diverse fields (Goldstrom et al., 2006; Health Resources and Services Administration, 2005; Rhodes, Foley, Zometa, & Bloom, 2007; Swider, 2002). The evidence is difficult to interpret because of the heterogeneity of peer definitions, roles, and strategies for integration with other health care providers and because of differences in targeted outcomes and evaluation designs. Perhaps more importantly, contemporary peer interventions derive from diverse conceptual and theoretical foundations that both guide and limit peer work. Several prior reviews explored the underpinnings of specific types of peer interventions (Davidson et al., 2006; Dennis, 2003; Israel & McLeroy, 1985; Turner & Shepherd, 1999); however, there is currently no conceptual analysis that encompasses the spectrum of peer activities and roles in health care today.

This article aims to provide such a conceptual analysis, both in terms of defining peers and the scope of their work and the theoretical basis for incorporating them into health-related interventions. A deeper understanding of the theoretical foundations of peer work will inform the training and selection of peers, the implementation of peer-led interventions, and the design of research evaluating them. Note that the topics of peer intervention

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implementation and efficacy, both in the area of HIV, will be considered in two separate papers (Franks, Simoni, Lehavot, & Yard, 2011; Simoni, Nelson, Franks, Yard, and Lehavot, in press).

Defining Peers and the Scope of Their Activities

The growing range of titles for peers reflects their interdisciplinary appeal and varied functions (Ro et al., 2003). Our review of the literature identified dozens of terms for peers working in health care: those referencing the descriptor *peer* (combined with advisor, counselor, educator, facilitator, health advocate, helper, intervener, navigator, outreach staff worker); *lay* (combined with advisor, counselor, educator, health advisor, health worker); *community* or *health* (combined with advisor, educator, representative, worker); *volunteer* (combined with peer educator, health worker); as well as other titles, including outreach worker, patient advocate, buddy, health advocate, *promotor/a de salud*, and *accompagnateur*.

While each title is explicitly or implicitly linked to a specific definition of peer work, a lack of definitional clarity characterizes the field of peer interventions. Most reports on peers do not define terms or link interventions to specific peer responsibilities, although there are some exceptions. For example, Tindall (1995) broadly defined *peer helping* as "a variety of interpersonal helping behaviors assumed by nonprofessionals who undertake a helping role with others" (p. 7). Shiner (1999) wrote that *peer education* can best be viewed as

> an umbrella term used to describe a range of interventions where the educators and the educated are seen to share something that creates an affinity between them (such as a characteristic like age or an experience like working as a prostitute) (p. 557).

Several studies highlighted peers' function providing social, emotional, and instrumental support for health-related behavior change. These studies tend to emphasize either shared identities of peers and target populations or peers' mobilization of community support networks in the service of health care initiatives (Dennis, 2003; Eng, Parker, & Harlan, 1997). Baiss (1989) described *peer counseling* as a "system to help people further discover and make use of their own natural helping abilities" (p. 128).

Settings and Modalities of Peer Work

Peer workers operate within a range of settings and modalities (Turner & Shepherd, 1999). Work can be done on-site within medical and other service settings, at an individual's home, or at any other convenient location, such as educational arenas (schools, colleges); community centers and venues (playgrounds, barber shops); and through informal networks. Peers have been particularly valued when operating in settings that traditional health care workers find difficult to access or navigate, such as prisons, bath houses, crack houses, and among highly marginalized groups, including the homeless and active substance users.

In the area of cancer, five modalities of peer support have been identified: one-on-one face-to-face, one-on-one telephone, group face-to-face, group telephone, and group Internet (Hoey et al., 2008). Across disease groups, peers most often work in person or over the telephone (as with hotlines), but with information technology advancing they increasingly interact with target populations via e-mail, listservs, chat rooms, and websites. Larger activities aimed at the community have involved theater presentations or other performances, health fairs, and exhibitions. Research into the effectiveness of different modalities of peer support has produced contradictory results, although, as Hoey et al. (2008) pointed out, conclusions to date must be considered tentative because of the divergence in outcomes of interest, study design, and methodological rigor.

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Peer Activities

Most published work on peers does not adequately specify what they do or how their work makes use of the characteristics that distinguish them as peers. Greater specificity would facilitate our understanding of how peers operate and what contributes to their efficacy. It may also aid in interpreting the available research literature and explaining why some peer interventions work and others do not. For example, peers might be crucial in activities such as outreach but less effective than professionals when it comes to leading a support group.

One influential approach to categorizing the scope of peer work focused on the relative integration of peers into health care organizations. Eng et al. (1997) conceptualized a continuum of peer roles ranging from natural helpers with minimal engagement in a health care system to paraprofessionals within health care settings. At one extreme of the continuum, natural helpers conduct autonomous activities that complement or support health care, while at the other extreme paraprofessionals are fully integrated into a service provision organization. Selectivity of peers, training requirements, and compensation levels increase along the continuum from natural helper to paraprofessional. The selection of appropriate peer roles on the continuum depends on the goals and objectives of a given health care program, the needs of its target population, and the program's capacity to integrate peer workers. Another possible approach to conceptualizing the place of peers within health care organizations is to categorize where their intervention occurs throughout the disease course (i.e., prevention, prediagnosis asymptomatic, prediagnosis symptomatic, diagnosis, early treatment, inpatient care, posthospitalization follow-up, ongoing maintenance, and in remission). These perspectives highlight the flexibility of peers and are important for clarifying their organizational role, especially in relationship to their professional colleagues. However, they do not offer much guidance about the optimal utilization of peer skills and services in health care. Researchers need to be thoughtful and have a rationale in considering how and when to implement peers, given these many options.

Proposed Definition of "Peer"

Standard terminology and a clear, comprehensive definition would focus the field, promoting a deeper theoretical understanding of peer health interventions and offering practical guidance about how to select, train, and implement them. With this intent, we propose the general term "peer," although the term "peer intervener" may be used to distinguish our meaning from the colloquial "peer," meaning one that is of equal standing with another. We rejected "peer worker" so as not to exclude volunteer or uncompensated peers. We propose four essential elements that define *peer:*

- Peers share with the target group key personal characteristics, circumstances, or experiences (i.e., "peerness"). One's identity can derive from a variety of sources, including belonging to a group category (e.g., based on gender, race /ethnicity, sexual orientation); occupying a role (e.g., being a new mother); or having a specific experience (e.g., a history of abuse; Shiner, 1999). The identity or identities common to a target group that would define a peer depend on the group. The "master" categories of gender and race are often important but are seldom necessary or sufficient. Younger age might be key to achieving peerness among youth, while the experience of having used illicit drugs is likely optimal for working successfully with addicts. Matching the marginalized or stigmatized status of a target group (i.e., impoverished, sexual minority) is often an important aspect of peerness.

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- The benefits of peers' interventions derive largely from their status as peers. Peers engage in a wide range of health promotion and disease prevention activities, many of which are similar to the services a professional or nonpeer would typically provide. However, peers are valued and thought to be effective in this work at least partly because of their status as peers and not solely based on the services they provide.
- Peers lack professional training or status in the scope of their work. Peers generally are trained to deliver specific interventions, but their preparation is more limited than the formal educational programs leading to academic degrees or recognized professional status. Individuals who gain professional stature and then work in their own communities might be considered "peer professionals" because the scope of their work is generally defined by their professional training. Of course, their effectiveness and perceived value may accrue from their status both as a professional and a peer.
- Peers function intentionally according to standard protocols, rather than operating solely as part of a naturally occurring social network. Health-promoting social interactions in naturally occurring social networks of family members, friends, coworkers, and social and religious community members are not considered peer work by this definition. Peers are generally selected or volunteer specifically for the role. They receive some preparation according to guidelines or manualized protocols for their work, which may be loosely structured or highly specified, and then intentionally set out to interact with individuals they may or may not encounter in their everyday life. The helping relationships they develop differ from those in naturally occurring networks, most notably in their reach, scope, and the lack of anticipated reciprocity.

This proposed definition is useful in distinguishing peer intervention from other work. Paraprofessional helping—characterized by workers who are trained but not professionally qualified—would be considered peer work only if the paraprofessionals were peers. What Medvene (1992) referred to as hybrid self-help groups—mutual support groups facilitated by nonpeer professionals—would not be considered a peer intervention according to the proposed definition. On the other hand, mutual support, mutual aid, self-help, 12-step, or peer support groups that are nonprofessionally peer-led buddy programs and other interventions providing one-on-one peer support if they are conducted by peers would be considered peer interventions. The popular-opinion-leader (POL) interventions (Kelly, 2004) also would be considered peer interventions because, although POLs generally work in settings within their naturally occurring social networks, they follow standardized protocols and their credibility and authority presumably stem from their peer status.

Theorizing Peer-Related Health Interventions: A Two-Step Process

The literature on peer-related health interventions is largely atheoretical. Indeed, little research on peer interventions to promote health even mentions theory, let alone offers a cogent conceptualization of how peer-focused interventions impact health outcomes. Solomon (1994) wrote that theories about self-help groups have been inferred rather than empirically tested. Turner and Shepherd (1999) concurred and, based on the dearth of empirical work, characterized peer education as "a method in search of a theory rather than the application of a theory to practice" (p. 235). Some work has been done, notably by Dennis (2003), who undertook to explicate the conceptual bases of peer health interventions providing social support, but a more encompassing approach is needed.

We propose a two-step process to conceptualize peer interventions to promote health outcomes. In Step 1, the researcher identifies a sound theoretical basis for how to promote a

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specified health behavior or outcome in a target population. In Step 2, the researcher justifies the inclusion of peers to accomplish the outcomes also based on some valid theory. The theoretical approach selected in Step 1 will affect the appropriate theory for Step 2. Indeed, the first theory may stipulate mechanisms of effect that do not lend themselves to peer intervention, in which case peers would not be recommended. The second step in our proposed two-step process is important because it can help explain *why* peers are expected to be helpful and what aspect of peers is most important to ensuring successful outcomes. In the literature, these two steps are often confounded or the justification for peers as interveners is not based on any theory but instead couched in terms of loosely formulated rationales. Common rationales include that peers are less expensive and more readily available than professionals and thus peer intervention may be more sustainable, or that working as a peer can be an enriching opportunity for the peers themselves, leading to personal growth and employment opportunities. Although clearly important for sustainability and community enrichment, these rationales do not explain why peers might be more successful than nonpeers at achieving desired outcomes.

Although researchers often omit the first step of articulating the processes hypothesized to underlie behavior change in their peer interventions, they mostly focus on one of five areas: education, social support, social norms, self-efficacy, and patient advocacy. This is meant to be a representative but not exhaustive list. We next apply our two-step process to each, considering theories that underlie the approach (Step 1) as well as theoretical justifications for incorporating peers (Step 2).

Education-Based Peer Interventions

Most peer-based interventions involve some form of didactic provision of health information. Influential health behavior theories argue that education is an effective catalyst for change when it responds to the values and priorities of its target population (Becker, 1974; Fisher, Fisher, & Harman, 2003). Peers may be particularly well suited to deliver tailored health information and thus facilitate the translation of knowledge into changes in motivation or beliefs. Indeed, if research can show that peers improve behavioral outcomes without affecting belief or motivational mediators, the science of behavior change itself would be positioned to benefit from exploration of the mechanisms of peer influence.

There are several theoretical perspectives supporting the choice of peers as the providers of health education interventions. For example, dynamic social impact theory (DSIT) postulates that communication can more effectively increase an individual's likelihood of changing behavior if the communicator is similar and credible; the communication is socially, physically, or temporally immediate; and there are multiple persuasive change agents communicating about a new practice (Nowak, Szamrej, & Latané, 1990). Dickson-Gomez, Weeks, Martinez, and Convey (2006) demonstrated that DSIT could help to explain the ability of peer health advocates to conduct HIV prevention outreach among high-risk drug users. They found that all three components of DSIT were related to successful outreach, although different components were more influential for different peers.

Social comparison theories (Festinger, 1954) suggest another use for the information that one individual derives from another and explain that similar others are most informative. According to theory, people use information gleaned from interactions with others for at least three main purposes. First, for self-evaluation, they use it to gauge the correctness of their opinions and their capabilities for action (Festinger, 1954) as well as to interpret their emotional states (Schachter & Singer, 1962). A second function of information from others is self-enhancement or self-protection: people compare themselves with others who are worse off (downward comparisons) to increase their own self-esteem (Wills, 1981). Finally, for self-improvement purposes (Wood, 1989), people may prefer to compare themselves

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with others doing better (upward comparisons) to inspire hope or learn information that will assist them.

Individuals interacting with peers could engage in all three comparison processes to the betterment of their health. Moreover, when peers are selected to enhance these functions, they may be maximally effective. For example, when peers have overcome disadvantaged circumstances, recovered from drug dependence, or coped successfully with an HIV diagnosis, they may be best positioned to serve in upward comparisons as models that will inspire others as well as provide important health information.

Note there are situations when peers might not be the best conduits of health information. Complex or highly technical information might best be conveyed by experts, whose authority could bolster the credibility of their message. Also, although similarity is generally important, internalized oppression may lead targeted individuals to reject similarly situated peers as less valuable than professionals.

Peer Interventions Based on Social Support

Many peer interventions are based on the assumption that the provision of social support will promote health outcomes. Social support has been broadly defined as “resources and interactions provided by others that may be useful for helping a person to cope with a problem” (Wills & Fegan, 2001, p. 209) and encompasses *emotional* support (concern, acceptance, understanding, encouragement, and reassurance); *instrumental* assistance or aid (the provision of material goods such as money and services such as transportation or child care); and *informational* support (knowledge, advice, guidance, and feedback; Solomon, 1994). The functions of social support that promote health have not been adequately examined empirically (Uchino, 2004), but from a stress and coping perspective, social support can be seen as providing the resources needed to engage in adaptive coping and problem solving (Lazarus & Folkman, 1984). The literature on social support provides additional frameworks for understanding how it might influence health outcomes. Specifically, Wills and Fegan (2001) summarized the potential direct, moderating (buffering), and mediating effects of social support on health outcomes. They propose two physiological mechanisms. The first is the calming effect of the presence of others, which leads to relaxed states and positive affect. Indeed, fMRI research has suggested that even the physical presence of a loved one can attenuate the perception of threat: Coan, Schaefer, and Davidson (2006) found that activation of neurological systems of threat responding were attenuated among those who were holding someone’s hand, and were negatively correlated with the quality of the relationship with that individual. The second physiological pathway involves a mediating effect: Social support is seen as enhancing the immune system by reducing levels of anxiety and depression in times of stress. Five behavioral mechanisms can explain social support’s impact on health outcomes: altered threat appraisal, lower physiological reactivity, less harmful behavior, more preventive behavior, and better coping with stressors.

Multiple theoretical frameworks might be used to support peers as the most effective providers of social support. In addition to the DSIT and the social comparison theories described previously, the mutual support group and self-help literature typically explains peers’ potential efficacy based on their similarity to the target population. Peers who resemble targeted individuals in terms of their experience, status, or social role—all the aspects that define peerness – are thought to be capable of providing support in ways that nonpeer professionals cannot. This perspective represents the core belief that “people who have a shared experience of a common problem have unique resources to offer one another” (Medvene, 1992, p. 52). Borkman (1976) emphasized that the “experiential knowledge” that peers use in their provision of social support is more valuable than knowledge gained

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indirectly, tends to be unique and pragmatic, and is specific to circumstances. Otherwise, little research has examined precisely what qualities of perceived or actual similarity might be most important. “Experiential” (Atkinson & Schein, 1986) and “attitudinal” (Giddan, 1988) similarity might operate by enhancing peer attractiveness and acceptability to clients, which would likely facilitate the provision of social support. Furthermore, similarity is considered an important characteristic of effective peers because peers who are embedded in established social networks of the target group may be better able to reach hidden and “hard-to-reach” populations (Broadhead & Heckathorn, 1994). In one example of a peer intervention based on the benefits of providing social support, Simoni et al. (2009) demonstrated that, among HIV-positive individuals receiving various types of social support from peers, the extent of their support was positively related to their adherence to their HIV medication regimens.

Note that the social support literature predominantly draws from research on naturally occurring support networks. The type of social support that peer interveners provide can differ from this “embedded” support in significant ways—with both advantages and disadvantages. Typically, peer workers are selected for their social skills, trained to enhance their effectiveness, and purposefully matched to support receivers. With these advantages, they may be more effective at giving the kind of support needed and do not require that support to be reciprocated (which can be burdensome to stressed individuals). However, peers workers are likely to be less available, less knowledgeable about past experiences that are likely to inform the target individual’s learning of new behaviors, in contact only for the duration of an intervention, and more recently and less firmly embedded in the target individual’s social networks than indigenous supports, all of which may diminish their impact.

Peer Interventions Targeting Social Norms

Many peer-based health interventions aim to change social norms, or at least perceptions of them, assuming that social norms and values interact to generate normative behavioral standards that may influence the adoption and maintenance of health behaviors (O’Hara, Messick, Fichtner, & Parris, 1996; Walter & Vaughan, 1993).They are often grounded in theories such as the theory of reasoned action (TRA; Ajzen & Fishbein, 1980), which posits that one of the stronger influences on behavior change is an individual’s perception of social norms or beliefs about what people who are important to the individual do or think about a particular behavior.

The involvement of peers in norms-based health interventions is supported by social network theories. One such theory, the diffusion of innovations theory (Granovetter, 1973; Rogers, 1995), considers how innovative practices (e.g., cleaning syringes among drug users) are adopted or rejected. It postulates that the adoption of novel practices is enhanced when they are congruent with existing practices, advocated by trustworthy “change agents,” and already accepted by key opinion leaders. In this way, peer modeling can establish standards for acceptable behavior, actually altering norms and not merely perceptions of them (Kandel, 1986). Kelly (2004) has used a POL intervention conceptually anchored in diffusion of innovations theory with some success to increase condom use among gay men.

Broadhead et al. (2002), working with substance users, used social network theory to explain their hypothesis that targeting group norms and members’ willingness to enforce them (a form of peer pressure) is the most effective way to change behavior (Broadhead & Heckathorn, 1994; Frank, 1988). Grounded in the concept of “group-mediated social control” (Heckathorn, 1990), Broadhead used trained peers to create a functionally equivalent social support system (i.e., alternate form of social support) capable of strengthening commitment to health care and enhancing medication adherence. Peers were

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seen as particularly well suited for exerting influence to the extent that their rationale for change is culturally relevant and a peer-driven intervention can harness cultural and social capital.

Peer Interventions to Promote Self-Efficacy

Another popular approach in peer-based interventions is to target individuals' self-efficacy, or their judgment of their ability to execute desired health behaviors. Self-efficacy is thought to mediate behavior change, and much empirical evidence suggests that self-efficacy impacts nearly every aspect of people's lives (e.g., DiClemente, Faithhurst, & Piotrowski, 1995; Stajkovic & Luthans, 1998). The rationale for this approach is rooted in social cognitive theory (SCT; Bandura, 1986), which is a comprehensive theory of learning that also describes how self-efficacy can be enhanced. Specifically, SCT proposes that self-efficacy develops through mastery experiences, vicarious or observational learning, and social persuasion, each of which is amenable to peer approaches. Peers can provide realistic opportunities for individuals to practice skills and thus gain mastery. Peers can model health behaviors, with peers who are similar to observers having the greatest influence because their performance can be interpreted as diagnostic of observers' own capability (Bandura, 1988). Finally, effective persuaders cultivate people's beliefs in their capabilities by providing support and encouragement, something in which peers can be particularly adept. A recent qualitative study (Mancini, 2007) found that peer support helped participants raise their self-efficacy beliefs via social persuasion (that provided hope and the expectation of success) and through vicarious learning (via exposure to others with similar experiences who succeeded), thereby impacting their recovery from serious psychiatric illness.

Advocacy-Based Peer Interventions

Peer interventions focused on advocacy argue that individual behavior change or health outcomes can only be achieved in the context of changes in larger social power structures. They target socially marginalized, stigmatized, and oppressed populations, for whom personal and political empowerment is seen as crucial to eradicating health disparities or focus on under-recognized diseases, seeking to gain access to care and funding for research and services. In such interventions, peers aspire to engage targeted populations in participatory learning processes, to empower them and enable them to promote their collective interests beyond a specific behavioral change.

These peer interventions are useful to consider because, unlike most others, they operate from a conceptual base that extends beyond individual-level frameworks. Specifically, from the perspective of empowerment theories (Sherman, 1998), powerlessness at the individual level can be seen as a personal expectation that one's actions will be ineffective in influencing the outcome of life events (Kieffer, 1984). This may be influenced by economic inequities and oppressive control imposed by others. Personal empowerment is the experience of gaining increasing control and influence in daily life and community participation (Kieffer, 1984). In contrast to more individually focused SCT, empowerment is seen as having a strong social dimension, in which individual knowledge, values, and power accrue in concurrence with group empowerment (Aujoulat, d'Hoore, & Deccache, 2007). McWilliam et al. (1997) view empowerment as the result of both personal and interactive processes, in which the emergence of "power" is facilitated by caring relationships, and not merely given by someone nor created within someone. From this perspective, the main features of an empowering relationship have been found to be continuity, patient centeredness, mutual acknowledgement, and relatedness (Paterson, 2001).

Based on empowerment theory's focus on societal-level factors and connections with others, peers are optimally suited to empower others. Support from similarly situated others may

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foster self-development, decision-making skills, and a sense of community. In addition, the minimized power differential that presumably exists between a peer provider and client reduces the likelihood that services offered will serve as a further means of social control. The leveling of power differentials that can occur in peer interventions may keep recipients engaged in the intervention, particularly recipients from marginalized groups who may be reluctant to seek help because of prior experiences (and expectations of future experiences) of discrimination.

A supportive peer relationship also can allow for the development of a more critical understanding of how personal experience is connected to social and political struggles and, in this way, may proactively enhance social justice (Kieffer, 1984). As an example of an empowerment perspective, Pablo Freire's (1973) educational model of listening, dialog, and action has been used for peer-based behavioral health education (e.g., McQuiston & Uribe, 2001; Williams et al., 2006).

Application

One example from the HIV prevention field provides an illustration of how the two-step conceptualization process may be helpful in developing new peer-based interventions. An increasing amount of empirical data suggests that widespread adoption of male circumcision in Africa could reduce HIV incidence among circumcised men by as much as 60% (Auvert et al., 2005; see also Centers for Disease Control and Prevention, 2008). The theoretical basis for this effect (Step 1) is biological: Laboratory research has found that the inner mucosa of the foreskin is more susceptible to HIV infection than external tissue (Patterson et al., 2002). What is the conceptual basis for a peer component to promote male circumcision then (Step 2)? Would not medical experts best convey the technical aspects of the surgery and the research supporting widespread circumcision? Although the benefits of the procedure are amply demonstrated, convincing adult men to get circumcised may be difficult and this is where peers may prove useful. As role models, men who have been circumcised and remain HIV-negative could promote the procedure (this mechanism would be supported by social learning theories and DSIT). In addition, peers may be needed to support men after healing to ensure that there is no behavioral disinhibition (leading to increased risky behaviors that would counteract any positive effect of the circumcision); their work to transform norms around sexual concurrency would be supported according to diffusion of innovations theory. Other theories would justify different approaches.

Conclusions

Throughout history and today peers are used to promote health, although researchers and public health officials have yet to adequately conceptualize their peer-based interventions. In this article, we propose four essential elements that define a peer and discuss the various roles that peers assume. To contribute to further theoretical work in this area, we also propose a two-step process to conceptualize how proposed interventions produce desired health outcomes (Step 1) and how a peer component would enhance the effects (Step 2). Multiple existing theoretical frameworks were considered, including literature on mutual support groups and self-help, social cognitive and social learning theories, social support, social comparison theory, social network approaches, and empowerment models. Several theories (DSIT, social comparison theories, SCT) confirm the widely assumed importance of shared experience between peers and target populations and indicate how that experience may be mobilized to promote health-related behavior change. Other areas remain underdeveloped in the theoretical literature, for instance, how introduced peer support functions to support health-related outcomes. Finally, as our example of male circumcision revealed, there are no clear "best practices" approaches to choosing a theory. Theory selection depends upon the outcomes, proposed mechanisms, and target population. Clearly,

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there is need for further development of theoretical understanding of how peer interventions function.

Still other questions with theoretical dimensions may be best addressed empirically. What aspects of peers are most important? Which activities and modalities make best use of peers' unique contributions to health care services? The theoretical exploration of peer interventions proposed here should inform the design and implementation of research into these and other aspects of peer services.

In closing, we encourage researchers and public health workers to think carefully and conceptually when designing and evaluating peer interventions. We recommend that work in this area employ a consistent peer definition and follow the two-step process, which requires a rationale for implementing peers within a specific health intervention. This will ensure that future work builds upon the current empirical and theoretical knowledge base and will make a substantial contribution to the literature. Peers are increasingly recognized as potentially powerful agents in promoting health and well-being. Future research and implementation work in this area, if carefully conducted, can contribute to their success.

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