In the past, nurses and other healthcare professionals have thought of health promotion as a simple function of knowledge acquisition and not something that leads to health behavior change (Ryan, 2009). Preparing individuals and groups to consider health promotion, disease prevention, or the experience of self-managing chronic illness is often challenging, but it is critically important at a time when chronic diseases are prevalent. Marginalized groups are particularly at risk and often see health providers only during episodes of acute healthcare crises. Frequently these episodic encounters are viewed by the clients as negative experiences that focus on personal deficits rather than on behavioral interventions. Nurses working with members of vulnerable populations often find it difficult to help individuals and groups make behavioral changes that address both health and quality of life (Flaskerund, Lesser, Dixon, Anderson, Conder, Kim, Konikak-Griffin, Strehlow, Tullmann, & Verzemnieks, 2002). This article uses the definition of vulnerable populations from the Agency for Health Care Research and Quality (1998): “those who are made vulnerable by their financial circumstances or place of residence, health, age, personal characteristics,
functional or developmental status, ability to communicate effectively, and presence of chronic illness or disability.” The purpose of this article is to describe how three programs incorporated evidence regarding behavioral change in health promotion and management of chronic illness to develop behavioral health promotion competencies in a variety of vulnerable population groups whose vulnerability included a combination of characteristics noted in the AHRQ definition.

Background

In recent years, healthcare professionals have become increasingly aware of the burden of chronic illnesses on American life and longevity. More than 1.7 million Americans die of a chronic disease each year, which accounts for about 70% of all deaths (U.S. Department of Health and Human Services, 2003; Centers for Disease Control and Prevention, 2010). The U.S. spends more on healthcare than any other country in the world (on average $7,421 per person in 2007), and the majority is spent on managing chronic illness (Fox, 2009). Chronic diseases such as diabetes, heart disease, stroke, and obesity are related to lifestyle choices. The evidence supporting health promotion activities to combat these diseases is well known, but gaps exist in the application of behavioral change principles with vulnerable population groups. These groups may be marginalized because of race, ethnicity, disability, or socioeconomic status and offered few choices regarding personal health and lifestyle behaviors. Vulnerable population groups are in need of health messages directed toward understanding how to apply health promotion behaviors to their lifestyles in socially and culturally appropriate ways. Such groups often have limited access to focused health information or informed supporters to aid them in sustaining health behaviors (Wilcox, 2007).

Nurses and other healthcare professionals often view health deficits as largely related to knowledge deficits and therefore focus on instructing clients in what they “should” do to be healthy (Pharez, Walls, Roussel, & Broome, 2008). Educational interventions may address the need for healthcare providers to feel knowledgeable, but education alone offers little guidance in actual strategies to increase readiness to improve lifestyle choices. Public health campaigns deliver multi-media messages that encourage healthy living but offer few action-oriented steps to achieve success (Robert Wood Johnson Foundation, 2008). The fact remains that in 2005 the number of Americans with three or more chronic illnesses rose to 13%, which coincides with an increase in obesity and sedentary lifestyles (Dunham, 2009). Obesity alone is thought to be responsible for several serious chronic health conditions, all of which can be delayed or prevented if lifestyle changes are made (Anderson, Martinson, Crain, Pronk, Whitebird, Fine, & O’Connor, 2005; Emery, Szczypka, Powell, & Chaloupka, 2007; Robert Wood Johnson Foundation, 2008; Robert Wood Johnson Foundation, 2009).

The 2007-2008 prevalence of obesity rate in the U.S. was reported at 32.2% among adult men and 35.5% among adult women (Flegal, Carroll, & Ogden, 2010). The negative impact of obesity is reinforced by lack of behavioral change in modifiable lifestyle factors. The Centers for Disease Control and Prevention (2009) report the irony that many Americans feel vulnerable about events that are out of their control, such as terrorism, while ignoring the risks of largely preventable life-threatening diseases. The report notes that “as a nation the emphasis has been on expensive cures for disease rather than cost-effective prevention” (Centers for Disease Control and Prevention, 2009). The risk factors related to vulnerable populations, including access issues, presence of chronic illness, and cultural practices and beliefs, may provide additional barriers that affect wellness and lifestyle behaviors (Silow-Carroll, Alteras, & Stepnick, 2006).

Vital to the effective practice of health promotion is demonstration of behavioral change
strategies to help clients perceive the need for lifestyle changes, as well as assessment of readiness for change. When healthcare professionals provide client-focused services in partnership with population groups, many opportunities are created to increase self- and community awareness of the health needs and behaviors of defined groups (Barkoozis & Engelmann, 2004; Scott, 2005; Seifer, 1998; Sternas, O’Hare, Lehman, & Milligan, 1999). Health-promoting experiences can then be developed to focus on discovery of the needs of both individuals and groups, including assessment of readiness to make behavioral change.

Programs based on the Transtheoretical Model stages of change offer interventions that emphasize movement toward health on a continuum of change, based on readiness and incremental activity (Prochaska, Norcross, & DiClemente, 1994; Prochaska & Velicer, 1997). This stages of change model has been used in many studies related to the acquisition of preventive health behaviors (Banspach, Lefebvre, Rossi, Carleton, & Abrams, 1992; Nigg, English, Owne, Burbank, Connolly-Ballenger, Dufresne, Fey-Yensan, Garber, Luisi, Padula, Saunders, & Clark, 2002; Riebe, Green, Ruggiero, Stillwell, Blissmer, Nigg, & Caldwell, 2003; Spencer, Pagell, Hallion, & Adams, 2002). According to the model, individuals progress on a health continuum from pre-contemplation, not thinking about health behaviors, to contemplation, beginning to think about changing a behavior. In order to move from the pre-contemplation stage to the contemplation stage, individuals must acknowledge a personal need for health-related change and may be guided toward preparation for the possibility of positive change. Offering options and opportunities to try out health behaviors can be helpful at this stage and can open up possibilities for eventual adoption of long-term healthy lifestyle changes. Application of the model in the subsequent action phase requires repetitive practice of the new behaviors for several months if the behaviors are to become part of an ongoing lifestyle and continue to the maintenance stage.

In efforts to engage members of vulnerable populations who may be at various stages of the change process, it is generally considered beneficial to present a variety of interventions across the spectrum of change. Members of vulnerable population groups often have few opportunities to learn about or try out proactive health behaviors in supportive environments. Nurses are in a unique position to direct attention to issues involving wellness, health, physical activity, and recovery and to assist individuals in adoption of healthy behaviors (Dixon, Postradto, Delahanty, Fischer, & Lehman, 1999; Camann, 2001; Farkas, Gagne, Anthony, & Chamberlin, 2005; Camann, 2010). Both the process and outcomes of partnerships among nursing faculty, nursing students, and members of vulnerable population groups are important to the success of change behaviors. The engagement process uses the stages of change model to focus on wellness and health promotion while offering a positive environment in which to engage in enjoyable health promotion behaviors and make positive decisions.

Program Goals
Partnerships were developed with three community agencies that serve vulnerable populations and were interested in health-promoting activities. Nursing faculty members were charged with developing relationships with leaders and members of the agencies in order to facilitate identification of health-related needs and interests and to provide an opportunity to assess individual and group readiness to make health-related changes. The role of nursing students and faculty was envisioned as creating an atmosphere to consider the need for possible adoption of healthy behaviors and a comfortable forum to explore healthy behaviors. Students engaged the participants to contemplate behavior changes that would move the individuals and groups toward health.
The project partnerships involved persons of Hispanic, African-American, and Russian ethnicities living in a housing project (HELP: Health Education Learning Project); members of a psychosocial rehabilitation program for persons recovering from serious mental illness (To Your Health Project); and participants in a program for Hispanic Women with Diabetes (Project IDEAL). Many of the individuals represented in these groups had little access to preventive healthcare and often used emergency care facilities for episodic healthcare.

The three partnerships were developed to apply evidence-based practice guidelines that acknowledged key principles regarding behavior change. Behavioral change occurs in stages, and assessment of readiness to change makes it possible to support individuals along a health continuum. Health promotion programs can create a positive and pleasant atmosphere to experience behavioral change and lead to ongoing practice of healthy behaviors along the change continuum. The goals for the three programs, while developed in partnership with each specific group based on their defined needs, all focused on engagement and creation of environments where intentional health decision-making and behavior change could occur.

Program Descriptions and Outcomes

Project HELP
Project HELP (Health Education and Learning Promotion) was designed to address the needs of the residents of a low-income housing project. Initially, this population was involved in the planning process via a survey of 200 individual adult participants living in the apartment complex where the project took place to determine specific needs and readiness for change. The survey had a 33% response rate. Programs and activities were then planned with discussion and involvement of the residents to meet the needs they identified and their readiness level. As indicated by the survey results and discussions, classes and health-related activities were planned to deal with topics related to positive nutrition, prevention of diabetes, obesity prevention, hypertension, depression, anxiety, and HIV/STD prevention. These offerings provided opportunities to engage in proactive health behaviors and activities along the stages of change continuum. The activities included screening for diabetes and pre-diabetes, as well as self-care activities for individuals experiencing hypertension, obesity, and diabetes, to increase awareness of the need for change.

The events offered opportunities for individuals to better understand their personal risk factors and to move through the change stages from pre-contemplation to contemplation to action, as they used the experience to explore health options in a supportive environment. Over 250 individuals (adults and children) participated in programs at the HELP Center. Group fitness activities were offered to allow participants to try new behaviors, and educational activities were offered to increase awareness of the positive effects of ongoing healthy behaviors, such as food choices. The action-oriented program provided a social system that positively supported healthy behaviors in a comfortable setting, close to home, to a population that had limited access to traditional healthcare. In the working partnership, both participants and faculty and nursing students learned that individuals are more likely to participate in health promotion activities when they are involved in the process of self-determining needs, interests, and readiness to adopt positive health behaviors. Creating an accepting and friendly environment also increased participation and integration of health-promoting behaviors in daily life.

To Your Health
To Your Health was a project developed to incorporate wellness and self-care activities into a psychosocial rehabilitation program serving persons recovering from serious mental illness. There is considerable evidence for the importance of integrating physical activity into men-
tal health services, as individuals with serious mental illness are often at higher risk of chronic disease associated with sedentary behavior, effects of certain medication, and poor access to healthcare (Farkas, Gagne, Anthony, & Chamberlin, 2005; Goldberg, Cooke, & Hackman, 2007; Harbin, 2003; Miller, Paschall, & Svendse, 2006; Richardson, Faulkner, McFivitt, Skrinar, Hutchinson, & Piette, 2005).

In developing the program, 139 members of the psychosocial rehabilitation program participated in an individual assessment process provided by nursing faculty and students that addressed recent health history, including blood pressure, diabetes, BMI, and other health risk factors. Individuals were asked about their readiness to consider healthy lifestyle changes and willingness to commit to work on new behaviors. As part of the assessment, individuals were assisted in identifying specific risk factors in their personal health histories, choosing health behaviors that might address individual risk factors, and setting personal health goals. Clients were also offered medical referral if they did not have a primary care provider and encouraged to establish a healthcare home. Invitations were issued to join a twice-weekly, one-hour class on healthy living behaviors that included participation in a two-mile walking exercise experience to support trying out new behaviors. The classes were taught by nursing students, faculty, and a peer support staff person who integrated the program into the ongoing program activities to provide for sustainability.

Health-related conditions were identified in 47% of the members assessed, including 15% with hypertension and 19% with diabetes. The three-year program for the 139 participants resulted in a total of 893 pounds lost. Fifty-six percent of the participants lost weight or did not gain weight (both considered measures of success in behavior change to manage weight). The maximum weight loss was 66 pounds with a mean weight loss of 14.4 pounds per person, resulting in 10% weight loss in persons with a BMI >30 (obese). Additionally, there was a statistically significant decrease in blood pressure in the group, as measured by pre and post blood pressure values. Forty-two percent of the total membership participated in the two-mile walking exercise class at least one or two times per week.

Perhaps the most important outcome was the increased awareness of health-related issues among the participants. Many of the members moved out of the contemplation phase and into the action phase of change as they began to incorporate improved food choices and increase exercise in their daily lifestyles. The participants and students learned that partnering with individuals and groups for risk identification, readiness for change, and health promotion activities was an effective way to engage individuals in incorporating healthy behaviors into their recovery from mental illness and to improve their overall health by assuming active roles in practicing self-directed health-promoting behaviors. Participants were acknowledged by their peers as health-related milestones were achieved, thereby providing additional support for continued positive behavioral changes.

Project IDEAL

Project IDEAL (Initiative for Diabetes Educational Advancement for Latinos) involved nursing faculty and students in providing a health-focused program for over 350 Latinos with diabetes. The activities focused on improving health outcomes and positively impacting readiness by providing diabetes education, health-focused activities, and support group follow-up for the participants. Key to the program was the development of unique language and culturally-specific educational materials, such as photo-placemats with information on portion control in Spanish so that knowledge gained using traditional foods could be put into action at daily meals. Fitness activities were incorporated via exercise groups and strategies...
for incorporating exercise into daily activities. The activities of the program supported both increased understanding of the behaviors needed to manage diabetes and adoption of healthy behaviors that moved participants from the contemplation stage to the action stage of change.

Nursing faculty and students assisted with health screening and client-focused assessment that involved individuals in identification of risk factors. Health-related action steps were supported by participation in focused education sessions, support groups, and case management follow-up, efforts based on the needs and readiness of individuals and the at-risk population. Nursing students conducted height and weight screening, body mass index calculation, and one-on-one teaching for those participants at overweight and obese levels of weight. A native Spanish-speaking health educator worked with faculty to help build trusting relationships with participants and their families. Through participation in health screenings, clinical assessments, and time spent getting to know the participants and their culture, students learned the importance of using health-focused contact as teachable, action-focused moments for the participants.

Screening exams such as blood glucose measurement were used to incorporate demonstrations of glucose monitoring, assisting individuals in understanding the meaning of their results and how blood glucose could be positively impacted by adoption of healthy behaviors. Diabetes education classes offered educational activities for longer term maintenance groups and supported the continued practice of new behaviors. Exercise sessions preceded each support group and offered an opportunity to experience healthy behavior in a positive environment. The program outcomes for over 350 participants resulted in participants reaching many of their behavioral goals for healthy living. Some of the outcomes included hemoglobin A1C reduction of 1-10 points, increased frequency for monitoring blood glucose, and improved nutritional behaviors and exercise time in 50% of the population. While BMI was not significantly reduced in the population, it did not increase during the program time. Participants and nursing students gained insight into using culturally competent strategies and techniques, based on understanding the stages of change, with a vulnerable Latino population in a community setting and supported adoption of healthy lifestyle behaviors to address diabetes.

Discussion

All three programs were client-focused and adapted to meet the needs of individuals and the general needs of the identified vulnerable population group. IRB approval was obtained for the To Your Health project and Project IDEAL. The HELP project was conducted as part of a negotiated community health course contract. Participation in all of the projects was voluntary. The programs provided opportunities for nursing faculty and students to be involved in proactive preventive activities that helped individuals move along the stages of change continuum and closer to the action stage, where healthy behaviors are more likely to be incorporated into daily life. The programs’ components addressed the need for assessment of behavioral readiness and action-focused activities in a supportive environment. The programs provided real-time experience for understanding the role of healthcare professionals in assisting individuals to move along the continuum of wellness and self-care through targeted education, experience in trying out healthy behaviors, and finding support in making positive changes. Each program served populations that historically had limited access to primary care services because of stigma associated with either the cultural group or the illness experienced, populations that in many instances lacked access to proactive wellness-focused care. The educational strategies also supported nursing students in positive engagement with commu-
nity populations and offered opportunities to provide programs that increased understanding of readiness and stages of change behaviors among both population groups and individuals.

Both the diverse participant groups and the healthcare providers learned the importance of developing proactive communication, trust, and partnerships. These collaborative skills were vital in creating client-focused health promotion activities that empowered individuals and groups to make choices about self-care and to integrate positive health-promoting behaviors into their lifestyles. In the future, collaborative care models that proactively address stages of change and positive health behaviors are likely to be important features of preventive care and related disease prevention efforts.

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