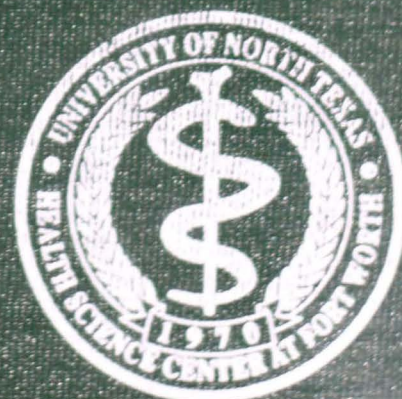




Medina, Amanda Y., Does a Community Health Worker Program Work among Latino Communities? Master of Public Health (Community Health), Dec. 2003, 77 pp., 8 tables, 5 illustrations, bibliography, 70 titles.

The study's goal was to investigate if and what makes a community health worker (CHW) education program work among Latino participants. First, the author developed a conceptual model to explain why a CHW program might effectively reach Latino communities. Second, the study tested the effectiveness of a CHW program, *Salud Para Su Corazón of North Texas*, by examining participants' self-reported healthy behaviors before and after receiving health education. The results indicated increased healthy behaviors from before and immediately after education. Third, the study examined potential CHW program components that predicted healthy behavior scores. These findings showed that pledging to the program and positive program evaluations predicted participants' scores. Past research and theories are in congruent with all these findings.

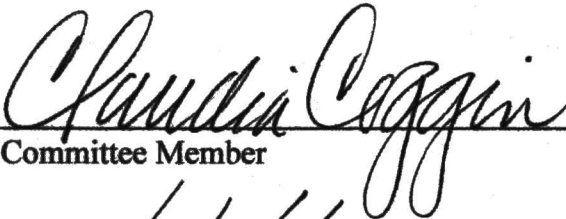
**DOES A COMMUNITY HEALTH WORKER PROGRAM
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Amanda Y. Medina, M.A.

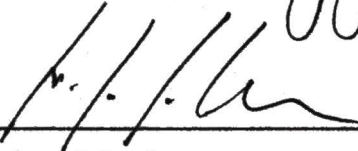
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DOES A COMMUNITY HEALTH WORKER PROGRAM

WORK AMONG LATINO COMMUNITIES?

THESIS

Presented to the School of Public Health

**University of North Texas
Health Science Center at Fort Worth
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CHAPTER I

INTRODUCTION

Health education constantly explores strategies by which information and health behavior are adopted and spread in the community (Festinger, 1957). One strategy for disseminating, educating, and changing people's health behaviors is the use of community health workers (CHWs). In particular, one function of CHW programs is to improve the health of undeserved, underrepresented, minority communities. A community health worker is someone who is a member of the community, who spreads new information, attempts to influence healthy behavior, and "naturally provides education, advice, social support, and aid" to their community (Eng & Parker, 2002). Among the CHW literature, there are countless of factors that affect the outcome of CHW delivering preventative education to the community. For instance, a few factors that affect the effectiveness of CHW educating their communities include the profile or role of the community health workers and the recipient's intentions and behaviors (Bandura, 1978, Berkman & Glass, 2000; Glanz, Rimer & Lewis, 2002; Helgeson & Gottlieb, 2000).

Although there are many CHW programs, a few have published their effectiveness or lack of effectiveness of education programs. One particular health education program, *Salud Para Su Corazón of North Texas* (SPSCNT), understood the relevance and used

CHWs, also called promotores, among the Latino communities residing in the Dallas/Fort Worth area. The SPSCNT program was used to meet this study's goal, purpose, objectives, and hypotheses (Luna Hollen, Balcázar, Ahmed, Medina, 2003).

Goal

The goal of this study is to evaluate whether a CHW education program increases healthy living among Latino communities.

Purpose

The purpose of this study is to conduct an outcome evaluation on a CHW education program, such as SPSCNT, for Latino communities. Within this purpose, there are three objectives.

Objective One. The first objective is to develop a conceptual model to explain how a CHW education program might effectively educate ethnic and culturally diverse communities through the use of CHWs. This specific health education model includes the following components: 1) message, 2) messenger, 3) recipients, 4) social network, and 5) cultural context. These components are hypothesized to work in conjunction with each other and result in an enhanced health education program for Latino communities.

Objective Two. The second objective is to test the message-recipient relationship of this model. Specifically, to examine whether SPSCNT health education delivered by CHWs increased healthy behaviors among the recipients.

Objective Three. Third, if there are changes in health behaviors among the recipients, this study identifies what SPSCNT education program characteristics are predicting these changes.

Hypotheses

Derived from the objectives, there are two hypotheses for this study. Specifically, the first hypothesis is that heart-healthy education delivered by CHWs will increase recipients' healthy behaviors. This first hypothesis tests the messenger-message relationship. The second hypothesis is that potential program's characteristics positively influence and predict the recipients' healthy behaviors.

There are five major sections of this thesis. First, this thesis describes the roles and characteristics of traditional CHWs. The second section describes the CHW models and the grounded theories that build these CHW models. The third section describes effective components of a CHW program. The fourth section describes an outcome evaluation on SPSCNT program for Latino communities with the emphasis on program's characteristics moderating or mediating the participants' healthy behaviors. The fifth section describes the results of this outcome evaluation and discusses this evaluation's limitations and application to other public health programs.

CHAPTER II

LITERATURE REVIEW

Roles of Community Health Worker

The CHW is recognized as an integral, yet often overlooked, member of the health-care team (Finocchio, 1994). CHWs are not a new concept. Health programs have recruited and trained CHWs to carry out a variety of health promotion, case management, and service delivery activities at the community levels for several decades. The main role of CHWs is to serve as a bridge between professional health staff and the community. They help the communities identify and address their own health needs (Center for Policy Alternatives, 1998). Other titles with similar definitions include paraprofessionals, lay health workers, natural helpers, community health aids, community advocates, community workers, family health promoters, health advocates, health counselors, indigenous health workers, and neighborhood health workers. According to Eng, Parker and Harlan (1997), the major difference between these CHW titles is that their roles fall on a continuum of formal to informal assistance, whereas the paraprofessional/outreach lay health worker is more formal and the natural helper is more informal. Throughout this thesis, CHW will be the title most regularly used. The CHW profiles vary across programs. For instance, CHWs may receive no formal training or several months of

training to accomplish these roles (Matormora, 1989). They may be employed by a single agency or a coordination of many agencies. They may be paid or not paid for the time they spend in training and performing their various roles. One constant profile of CHWs is that they are from the same community they serve. CHWs have numerous roles, such as translating cultural norms, values, practices and goals of the communities to the healthcare providers or investigators and those of the providers or investigators to the communities (House, 1981). They also provide community-based services, such as assessment of health and risk status, delivery of educational interventions, and tracking and monitoring fellow community members. Because they understand their community, they are able to work closely with the members to enhance health status. Through these roles, the CHW is able to help their community members and accelerate the research for an effective community health program (Glanz, et al., 2002). Thus, House (1981) describes CHW approach as the exchange of social support, such as information, advice, tangible aid, and referrals to external resources.

Because CHWs have been labeled a “social support” system for the community members they serve, CHW interventions have emerged as an important approach to community-level health education or promotion (Cassel, 1976; Broadhead, Kaplan, James, et al., 1983; Eng & Parker, 1994; Nuckoll, Cassel & Kaplan, 1972). For example, migrant farmworker women served as promotoras to address the maternal and child health needs of families traveling in the Midwest (Eng & Parker, 1994). Another natural

helper intervention implemented with migrant farmworker families reported that between 50-82% of maternal and child health patients at two migrant health centers interacted with a trained natural helper. Mothers who interacted with a trained natural helper were more likely to bring their children for sick care and had increased knowledge of health practices (Watkins, Harlan, Gansky, et al., 1994). Thomas, Earp, and Eng (2000) introduced a natural helper intervention to reduce transmission of STDs in a small southern town. After eighteen months, evaluation results showed a 60% increase in the number of women seeking STD care within three days of symptoms. In another program, a network of 160 lay health advisors was established across North Carolina to assist older African American women in breaking the silence about breast cancer screening (Eng & Smith, 1995). There was a significant increase in breast cancer screening among the community members. In north Texas, a group of promotores are promoting education for heart-healthy lifestyles among predominately Mexican families (Luna Hollen et al., 2003). During the 1990's, public health professionals implemented CHW interventions strategies at such a fast pace that the Center for Disease Control and Prevention (CDC) created a computerized public-access database of community health advisor programs throughout the United States and published a two-volume directory (Eng, et al., 1997; CDC, 1994). In addition to national programs, there are over 55 years of CHW interventions that have emerged throughout the world (CDC, 1994).

Justification for Community Health Worker Interventions

The current popularity of CHW programs is due to the successful outcomes of small-scale CHW interventions. The initial studies occurred from 1945 to 1959 in communities of various incomes and ethnicities in South Africa that were served through primary health care centers (Eng & Parker, 1994). Before incorporating CHWs in the health delivery system, these South African clinic-based services were not able to reach most of the people, focusing more on curative expensive services and not addressing the communities' major problems, such as immunizable diseases and malnutrition (Berman, Gwatkin & Burger, 1987). A solution to these problems required more a deliberate focus on the priority of the communities' needs. Then, the staff at these health care centers noticed that "natural helping" was a part of everyday living in these communities whose life conditions, such as rural poverty and apartheid, are health hazard. The staff conducted research on the connection between social relationships (e.g., natural helping) and health. The staff learned valuable lessons when two to three friends would informally gather in a home to discuss preventative measures for improved health (Kark, 1993; Salber, Beery & Jackson, 1976; Steuart, 1978). This natural helping mechanism prompted the use of natural helpers in others local health care systems. This research and application of natural helpers developed in South Africa, to rural communities in the United States, marks the origin of CHW interventions in public health (Eng & Parker, 1994; Eng & Young, 1992; Earp et al., 1997).

SPSCNT incorporates CHW in program delivery. Before the program planners implemented this program, they conducted a needs assessment of the Latino community residing in North Texas. They found a strong need for cardiovascular behavioral change (Luna Hollen, et al., 2003). To increase heart healthy lifestyles, the program planners adopted CHWs (e.g., *promotores de salud*) to educate the community on heart-healthy living. These promotores educate low socioeconomic, Spanish- and English-speaking, underserved Latino adults residing in the Fort Worth/Dallas area of Texas. SPSCNT promotores are “natural helpers or leaders within a community” who are able to identify with the community, address certain issues within that community, and take action to strengthen the community (Glanz, et al., 1997). These promotores are culturally and structurally sensitive to the characteristics of the target community. They share the same language, beliefs, perceptions, life experiences, practices, and socioeconomic characteristics, as the target population should, in theory, and make a positive contribution to the SPSCNT health promotion and education program (Luna Hollen, et al., 2003). See Program Theory of SPSCNT for a more complete visual model (Appendix A).

Theories and Models for CHW Programs

According to program planners, it is necessary to classify and explain a multitude of factors that can influence human behavior. Current theories and models that help explain human behavior, particularly related to health education, can be classified as: a)

individual (intrapersonal), b) interpersonal, and c) community theories and models (Campbell, 2001). For instance, there are intrapersonal factors, interpersonal relationships, organizational factors, and community factors that influence a CHW intervention program for various populations. The following section will describe the most relevant intrapersonal, interpersonal, and community theories that have been previously used to develop CHW programs.

Intrapersonal theories are theories that focus on an individual level. These theories give individual factors, such as knowledge, attitude, and intentions, as a key role in the process of adopting and/or changing behavior (Campbell, 2001; Glanz et al., 2002).

Social Learning Theory (SLT), developed by Bandura (1977b), incorporates an intrapersonal construct that might help explain the effectiveness of health education programs. The construct that stems from SLT is Self-Efficacy. Self-efficacy is a person's confidence in performing a particular behavior and in overcoming barriers to that behavior (Bandura, 1977b). Bandura and colleagues (1977b, 1978, 1982, 1986, 1997) proposed that self-efficacy is the most important prerequisite for behavior change because it affects how much effort is invested in a given task and what level of performance is attained. For example, self-efficacy was the primary predictor of intention to engage in eight healthy dietary practices among health education participants in a health education program (Sheeshka, Woolcutt, & MacKinnon, 1993). Role models might also increase self-efficacy (Bandura, 1977b). Perhaps by having CHWs engage in health education

delivery might potentiate recipients' self-efficacy and behavior change because the recipients see the CHWs as role models from the same background, understand the same health barriers, and overcame those barriers. This is a construct that seems to be important in community health worker interventions, but has not been tested.

The second type of theories that influence health are interpersonal ones.

Interpersonal theories are theories of relationships or social networks with family, friends, neighbors, and others that are important influences on one's individual's health behavior. For example, SLT addresses human behavior when there is a continuing interaction among characteristics of a person, the behavior of that person, and the environment within which the behavior is performed (Bandura, 1977b, 1978, 1982). Behavior is not simply the result of the environment or the person, just as the environment is not simply the result of the person or behavior. Instead, these three components are constantly influencing each other. A change in one component has implications for the others (Bandura, 1986). Concerning CHW intervention programs, Farquhar and colleagues (1977) reported the first community-wide intervention for heart disease prevention based on SLT, where the cognition (personal), behavior, and environment are altered to enhance healthy lifestyles. Navarro, et al. (1998) developed another CHW program, *Por La Vida*, that stemmed from SLT and targeted Hispanics. Specifically, 36 CHWs were recruited and trained to conduct educational group sessions. These community health workers (also called *consejeras*), were individuals who had a reputation in their community for

good judgment, sound advice, a caring ear, and being discreet. These consejeras established a social support relationship of trust and confidence among Hispanics within their own community. These researchers found a significant increase of cancer screening tests among participants in the intervention group, compared to those in the control group (Navarro, Senn, McNicholas, et al., 1998).

In particular, social support theories recognize the importance of the social environments on influencing health behaviors (Eng & Young, 1992). Drawing on numerous animal and human studies, a social epidemiologist by the name of John Cassel (1976) posited that social support served as a key psychosocial “protective” factor that reduced an individual’s stress on health. Other various sociological and psychological theories (e.g., exchange theory, attachment theory) are used to explain interpersonal processes that underlie the association between social networks and health (Cassel, 1976; Berkman, Glass, Brissette, & Seeman, 2000; Israel & Rounds, 1987; Glanz, et al., 2002). For example, CHWs serve foremost as a source of social support for a targeted community. CHWs and health agencies and organizations provide emotional, instrumental, and informational support to enhance preventative health behavior risks and promote healthy lifestyles (Eng et al., 1994). There are several examples of CHW programs across the country that adopted Social Support theories, such as the *Resource Mother’s Project* in South Carolina, *Camp Health Aid Program* in Michigan, and the

Community Health Advocacy Program in Mississippi (Glanz, et al., 2002; Parker, Schulz, Israel & Hollis, 1998).

Another group of interpersonal theories are interpersonal communication theories.

Communication theories are focused on changing the recipients' health behaviors because of their formal and informal relationship with those who influence them (Reis, Collins, & Berscheid, 2000). For instance, the bases of power approach is one theory derived from interpersonal theories (French & Raven, 1959). van Ryn and Heaney (1997) adapted the bases of power approach to describe the base of power in health educator-client relationship. This approach identifies six bases of power that make people influential in communication: expert, legitimate, coercive, reward, informational, and referent power. Referent power is one of the most effective source of influence or power for a dyadic relationship. Because the recipient identifies with the professional as a person like herself or himself, this generates feelings of community, security, and trust (Joos & Hickam, 1990). Interactions based on referent power are a more informal type of relationship. Glanz and colleagues (2002) offer many recommendations for how health educators and providers should use referent power. As for CHW literature, CHWs are naturally adopting the referent power relationship with their participants because they are community members that educate their fellow community members, without a hierarchy or power.

The third type of theories that affect health are community theories. Community theories are derived from community factors, such as family, church, informal or formal networks, and neighborhoods that provide social identity and resources, and that influence one's behaviors. For instance, Diffusion of Innovations Theory provides an explanation for how new ideas, products and social practices are diffused or spread within a community or from one community member to another (Rogers, 1995). The process of diffusion of an innovation involves an innovation (e.g., health idea), someone who has knowledge or experience using the innovation (e.g., CHW), someone else who does not have knowledge of the innovation (e.g., community member), and the communication channel between the two people (e.g., face-to-face exchange). This theory provides a model for effectively persuading an individual to adopt a new idea. CHW programs are consistent with the Diffusion of Innovations Theory because the person who has the knowledge and experience of using the innovation is a member of the same community, is respected, and a support provider to another community member who does not have the knowledge or experience (Eng & Parker, 1994).

One model, called the PEN-3 Model, arised from many intrapersonal, interpersonal, and community-level behavior change theories and is used in planning and development of culturally appropriate health education programs (Airhihenbuwa, 1992). The PEN-3 Model has three dimensions, and within each dimension, there are three categories. Identifying and understanding these dimensions and categories are essential

in promoting positive health changes among culturally diverse populations (Airhihenbuwa, 1992).

The first dimension of the PEN-3 model is health education domain. The categories within health education domain are the person, extended family, and neighborhoods. The second domain is the educational diagnosis of health behavior. The categories to within the health education domain are the cultural perceptions (e.g., attitudes, knowledge, values), enablers (e.g., cultural, societal, systematic, or structural influences or forces that may enhance or prevent health changes), and nurturers (e.g., those nurturing the health behavior changes). The third and most critical domain of the PEN-3 Model is cultural appropriateness of health behavior. Within this dimension, the three categories are positive behaviors (e.g., cultural practices that are beneficial to health), existential behaviors (e.g., cultural practices that have no harmful health consequences), and negative behaviors (e.g., cultural practices that have harmful health consequences). According to Airhihenbuwa (1992), it is important to identify and understand these dimensions and categories for an effective community-level health program.

In summary, intrapersonal theories, interpersonal theories, community theories, communication theories, and the PEN-3 Model are a few well-grounded theories that explain human behavior. They also attempt to explain what intrapersonal, interpersonal, and community factors influence behavior. This is not an exhaustive list of theories used

in CHW programs, but these are the most researched ones in the CHW field.

Literature on CHW Programs and Development of Conceptual Model

There are many documented community health worker programs, but few that have been extensively evaluated for their effectiveness. Please note that CHW programs globally reflect a wide range of intensity of training and mix of CHW tasks, not all which can have immediate or direct effect on a community's health (Berman et al., 1987). The effectiveness of programs is usually measured by positive health changes, such as changes in lifestyle behaviors and mortality rates. This thesis will describe and test a measurable outcome that falls within that recipient component. Although no single CHW model is applicable to all communities and circumstances, international and domestic studies have identified common components or characteristics of successful programs (Giblin, 1989; Gilson, 1989; Mahler, 1978; Moore & Stewart, 1992; Richter, Bengen, Alsup, et al., 1974; Walt, 1990; Witmer, Seller, Finoccio, et al., 1995). The components described in this thesis include: a) CHW, b) recipients, c) educational message, d) social networks, and e) cultural context.

The Community Health Worker. The messenger component adds the personal aspect of the model by adding the relevance of the community's circumstances. Specifically, the messenger or CHW links very well with the message and the community because he or she understands the community's circumstances. There are valuable and consistent characteristics that create the CHW component. These characteristics include:

1) increased knowledge on health issue and solutions; 2) good teaching skills; 3) reflects community characteristics; 4) participates and is committed to community activities; 5) increased self-efficacy; and 6) caring for others; 7) trustworthy, respectful; and 8) a good listener (Berman et al., 1987; Butcher & Davis, 1988; Byrd, 1992; Eng & Parker, 1994; Giblin, 1989; Meister, Warrick, de Zapién & Wood, 1992; Parker, et al., 1998; Roman, Lindsay, Moore, et al., 1999; Ramirez-Valles, 1998; Werner & Bower, 1987; Witmer et al., 1995).

As discussed earlier, an important characteristic of CHW intervention models is the CHW roles as a social support system for their communities (Israel & Rounds, 1987; Glanz, Rimer, & Lewis, 2002). According to Eng and Parker (1994), social support is characteristic of a CHW because he or she knows about his or her neighbors and shows willingness to lend cognitive, instrumental, and emotional support to their neighbors (Berkman, et al., 2000; Cassel, 1976; Glanz, et al., 2002; Israel & Rounds, 1987). For example, Eng & Smith (1995) conducted focus group interviews with older African American women in rural North Carolina and the women revealed that they delayed or avoided annual breast cancer screenings largely due to their memories of a segregated health care system. Natural helpers who shared the same history, thereby placing themselves as trustworthy individuals, helped the women overcome this barrier through education. In the first two years of the project, mammography use increased by 42%.

Another important characteristic is the empowerment emphasized by CHWs. Empowerment, based on the Social Learning Theory's self-efficacy construct, is one's own personal strength and ability to grow (Bandura, 1977b; Wheeler, 1991). McFarlane and Fehir (1994) describe a program called De Madres a Madres, a volunteer mother-community health worker program in Houston where the CHWs learned how to provide information and increase access to healthcare. CHWs gained their information through community coalitions formed with clinics, social service agencies, local businesses, schools, churches, elected officials and the media. This program aimed for CHW women to achieve greater personal strength, ability to cope, and work within the system for better community health. The program staff aimed at empowering the CHWs and stressed the importance of this empowerment education model (Freire, 1993; Meister et al., 1992; Wallerstein, 1988;). Another example of empowerment is derived from the Latino Health Advocacy Program (Baker, Bouldin, Durham, et al., 1997). The CHWs taught many community members to make connections with individuals and services to promote individual and community health. This empowered the CHWs to become leaders among other health professionals.

The Recipient. There are several community recipient characteristics that reflect the effectiveness of a CHW intervention program. The first characteristic for program planners is to really understand the recipient one serves (Berman et al., 1987). According to the PEN-3 Model, identifying and understanding the recipient's perceptions, attitudes,

values, beliefs, customs, health practices, enablers, and nurturers facilitates or hinders health behaviors (Airhihenbuwa, 1992). For example, one important characteristic of the community recipient is their level of self-efficacy (Bandura, 1977b, 1978, 1982, 1989). The community recipient must feel confident about performing the particular activity, overcoming the barriers of performing the activity. According to Bandura (1977b, 1978), this is the most important prerequisite for healthy-behavior-change because it is how much effort the community member is investing. Thus, program planners must identify and understand the community recipients before implementing a program to achieve successful outcomes.

One program intervention that addressed these factors of the recipients before implementing a CHW program is the East Side Village Health Worker Partnership. This program addressed factors associated with women's and children's health in the targeted area within east-side Detroit. Specifically, the researchers established a steering committee comprised of community members, community agency workers, and the research institution, and developed the intervention plan, process, and evaluation strategies. This steering committee allowed the researchers to tailor the investigation to the needs, values, self-efficacy, and context of the local communities (Parker, et al., 1998). Another CHW program that addressed the health behaviors of the community recipient is SPSCNT. The researchers conducted a community assessment to examine what health behaviors are common among the recipients before implementing a health

program (Luna Hollen, et al., 2003). The results of the needs assessment indicated that overall there is room for improvement to encourage healthy changes among Latino communities.

The Health Education Message. Health education assists individuals, groups, and larger populations to move from participating in health behaviors that are presumed to be detrimental to health, to adopting behaviors that are conducive to present and future health (Simonds, 1976). In 1976, Simonds defined health education as “any combination of learning experiences designed to facilitate voluntary adaptations of behavior conducive to health” (p. 34). Although some health programs focus on the knowledge change of individuals, the ultimate goal is behavioral change through new knowledge. For instance, Diffusion of Innovations Theory provides an explanation for how new health education are successfully diffused or spread within a community or from one community member to another for ultimate behavioral change (Rogers, 1995). Possible elements of an effective health education message are appropriate languages, format, and content relevance.

Social Networks. The CHWs and their health education cannot change health behavior alone. They will need the support, aid, guidance, resources, and effort from the recipients’ families and friends. Based on social support theories, the existence of social ties provide different types of social support such as emotional, instrumental, informational, and appraisal support to the recipients (House, 1981). These types of

social support aid and assist the behavioral change through social relationships and interpersonal transactions (Berkman, et al., 2000; Cassel, 1976; Glanz, et al., 2002; Israel & Rounds, 1987; Israel, 1982).

Cultural Context. According to the PEN-3 Model discussed earlier, understanding the cultural context of the community, which includes the messenger, message, and recipients, is extremely important in ensuring effectiveness and success of a CHW program (Airhihenbuwa, 1992). Program planners and researchers must understand why cultures have certain beliefs, traditions, behaviors, and lifestyles that affect a community's health. By understanding the cultural context of the community, one might understand the community's health behaviors. After understanding the cultural context, program planners shape, develop, and organize the program to mirror the community's culture (e.g., cultural beliefs, values, traditions, and views). One method of understanding and mirroring cultural context is by implementing culturally relevant and competent CHWs' curricula, staff, institutions, network partners, and information. For example, if the program is targeting Latinos, a curriculum needs to be in Spanish and English, the staff reflects the community's linguistic and cultural values, and the education displays the various Latino traditions and values (Meister et al., 1992; Witmer, 1995).

Other examples include more easily accessible health education sessions for community members, such as various locations in the community. Also, making the

education sessions less formal and more flexible (Aguirre-Molina, Ramirez & Ramirez, 1993; Cohen, 1972;). While further health education research is needed for serving Latino communities, other minority-group-targeted studies have suggested several principles that can help guide the cultural development (e.g., cultural appropriateness, relevance, and competence) of programs in Latino communities. For example, research suggests that programs need to be culturally appropriate - that is, they need to be “developed within the group’s value systems and be relevant to the needs and expectations of the community” (Abad, Ramos & Boyce, 1974; Cohen, 1972).

In summary, these are five basic research-based components that create an effective CHW program model. The components are derived from effective characteristics from the community health worker, the community, the community health education and institution, network partners, and cultural context. First, the Community Health Worker component (e.g., Messenger) includes good teaching skills, he or she reflects community they serve, participates and is committed to community activities, obtains high self-efficacy, cares for others, is trustworthy, respectful, and a good listener, provides a social support system, and seeks empowerment. Second, the Health Education component (e.g., Message) attempts to reduce the gap of present health behaviors and optimal positive health behaviors among recipients through education. Third, the Community component (e.g., Recipients) includes identifying and understanding community’s attitudes, beliefs, customs, values, needs, assets, social and cultural

backgrounds. Fourth, the Family and Friends (e.g., Social Network) include the social support provided by the importance of the recipients' friends and family and the provided social support that enhances positive health changes. Finally, the Cultural Context ensures the community that the program is tailored and mirrors their cultural values, beliefs, traditions, and ideas.

These components have one-direction, reciprocal, or both types of relationships with each other. This creates an effective, stable, and successful CHW program for a minority culture, such as a Latino community. For example, CHW messenger component has one-direction relationship with the Community Recipients, mediated by the Community Health Education; CHW messenger affects the delivery of Health Education, that affects the Recipients. The CHW messenger has reciprocal relationships with the Community Health Education, and Social Networks; CHW affects and is affected by the Community Health Education and Social Networks. The Cultural Context is the component that surrounds and ultimately affects the Messenger, Health Education, and Social Networks components and their relationships. Figure 2 illustrates the Conceptual CHW Education Model. This conceptual model meets Objective One in this thesis. Figure 3 is the message-recipient relationship, derived from the model, tested in this study.

Figure 2

Hypothesized CHW Framework based on intrapersonal, interpersonal, communication, and community theories

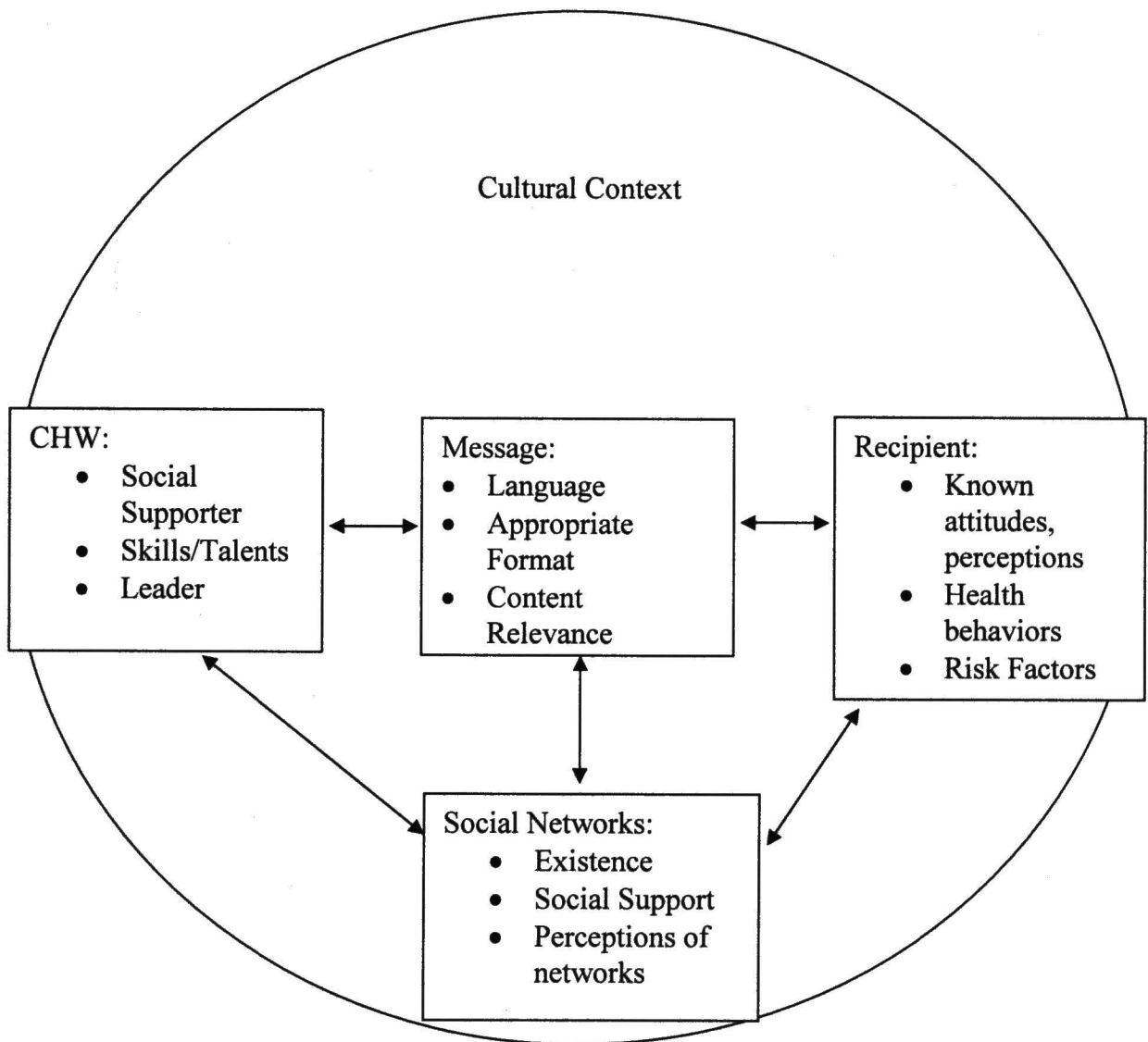
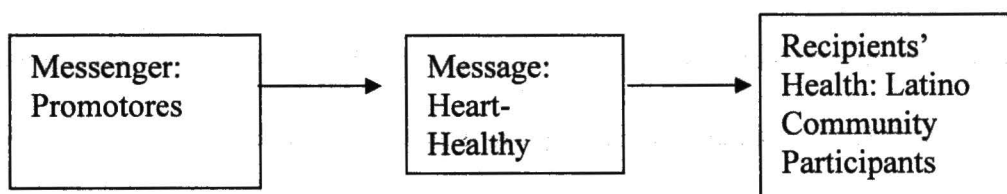


Figure 3

Program-Recipients' Health Behaviors Relationship, extracted from the hypothesized CHW framework, tested in this study



CHAPTER III

METHOD

Design

The original SPSCNT program design is a pre-post, quasi-experimental design, with three groups: 1) comprehensive group (recipients without diabetes or medicated for high blood pressure; 2) unequivocal comparison group (recipients without diabetes or medicated for high blood pressure, but not participating in education; and 3) a clinical group (e.g., recipients with diabetes or high blood pressure and participating in education). The independent variable is the six-session education given by promotores. The main dependent variable is the pre-test (immediately before education), post-test (immediately after six-session education), and follow-up test (6 months after pre-test assessments), self-reported, healthy behaviors survey (described in *Measures* section). Please see Program Research Design (Figure 4).

For this specific research study, the researcher used previously collected data (e.g., secondary data collection) from questionnaire packets to conduct the process evaluation from a one-group, pre-post test design. The intervention group (e.g., pre and post-test on health behaviors) was the only group examined in this evaluation. Because of the present

small number of comparison group post-tests, the study was not able to statistically compare these two groups.

Participants

One hundred, fifty female and male Latino family contact persons from Dallas/Fort Worth area volunteered to participate in the cardiovascular health education program. Ninety participants completed the program. The mean age was 37 years old (range 17-68). Ninety percent of the participants were females, 80% were mothers, 88% were born in Mexico and resided in the U.S. for an average of 14 years. The mean number of family members was four; two parents and two children. Regarding high risk factors for heart disease, 52% of participants were overweight, 48% lack physical activity, and 28% have a history of heart disease. See Table 1 and 2 on participant demographics and heart disease risk factors.

Promotores

Nineteen (1 male, 18 females) promotores volunteered to educate participants in the cardiovascular health education program. The mean age was 45 years old (range 23-68). Seventy-five percent were married, 74% were born in Mexico and resided in the U.S. for an average of 26 years. Their mean education level was equivalent to middle school, and 58% preferred speaking English and Spanish. After the CHW training, these individuals graduated to become SPSCNT promotores.

Table 1

Demographics of Participant Sample

Variable	Frequency	Percent
Age	37 (Mean)	17-66 (Range)
Gender		
Males	15	10.0%
Females	135	90.0%
Number family members	4 (Mean)	1-10 (Range)
Relationship of family contact		
Mother	120	80.0%
Father	9	6.5%
Child	4	2.9%
Grandparent	1	0.7%
Language Preferred		
Spanish	150	100.0%
English	0	0.0%
Country of Origin		
United States	14	10.1%
Mexico	121	87.7%
Other	3	2.2%
Years residing in U.S.	14 (Mean)	.5-60 (Range)

Table 2

Risk Factors of the Participant Sample

Variable	Frequency	Percent
Risk Factors		
Smokes	4	2.9%
Exposed to Second-Hand Smoke	24	17.6%
High Blood Pressure	25	18.7%
High Cholesterol	26	19.3%
Diabetes	9	6.8%
Overweight	71	51.9%
Lacks Exercise	56	41.8%
History of Heart Disease	38	28.1%
Number of known risk factors	2 (Mean)	0-9 (Range)
Number of members pledging	2 (Mean)	0-8 (Range)
Percent essentials completed¹		
0 sessions	8	5.3%
1 session	10	6.7%
2 sessions	8	5.3%
3 sessions	40	26.7%
4 sessions	84	56.0%

¹Number of educational topics, activities, and materials given to each participant per each of the first four sessions, divided by the total number of all topics, activities, and materials per each of the first four sessions.

Measures

Participants' Healthy Behaviors. The main outcome measure was a 38-item, self-report 4-point scale (1 = never, 4 = always) that assessed family contact persons' heart-healthy behaviors. The researchers and promotores assessed the participants before and immediately after a six-session course to complete the survey. The items were presented in a pencil and paper format and the participants were asked to circled their answers (Appendix B).

There are valuable steps to obtain content validity on the main measure (Cook & Campbell, 1979). To obtain content validity on each scale, the SPSCNT principle investigator first created the items from the National Heart, Lung, and Blood Institute (NHLBI) SPSC comic book (e.g., photonovela) based on heart-healthy living among Latinos. Second, a panel of cardiovascular and public health researchers discussed the relevance of each item. Third, the researchers tested the items on a group of promotores. The panel of researchers and promotores agreed that the items had content validity that was specific to the program. Cronbach's alphas, statistical test for scale reliability, were computed to assess reliabilities of each subscale. The results show that the subscales had good reliabilities (e.g., $\alpha > .60$, Tabachnick & Fidell, 1996). The following subscales are Salt and Sodium (10 items, $\alpha = .73$), Fat & Cholesterol Behaviors (10 items, $\alpha = .82$), Weight Control Behaviors (5 items, $\alpha = .75$), Physical Activity Behaviors for Contact Persons (10 items, $\alpha = .83$), and Smoking Behaviors (3 items, $\alpha = .71$).

Pledge. Before the promotores began teaching participants, the participants answered whether they pledged to increase their heart-healthy lifestyle by participating in the program, and how many family members would pledge to participate in the program.

Attendance. The promotores assessed each participant's attendance throughout the six-session course.

Participant evaluations. Promotores assessed participants' attitude of the program using a nine-item, self-report 5-point Likert scale (1=very satisfied, 5=very unsatisfied). This measure was assessed immediately after the six educational sessions. This measure had a very good reliability (9 items, $\alpha = .86$).

Procedure

The information to test the hypothesis has been previously collected by the SPSCNT team members and promotores. There were approximately 16 SPSCNT sites throughout the Dallas/Fort Worth area. For each site, there were four main sections to the program's procedure: a) recruitment; b) baseline assessment; c) education sessions; and d) post-test assessment immediately following education.

First, recruitment occurred throughout city-wide Hispanic events, such as the Hispanic Wellness Fair in Fort Worth, and on-going programs, such as General Education Diploma (G.E.D.) classes and a toddler/pre-kindergarten class for parents. Promotores were present for most of the recruitment events. Individuals interested in the education sessions wrote their names and telephone number on a "participant list" sheet. Then,

promotores made contact with the families following the event and provide the day, time, and place for the initial baseline assessment meeting.

Second, during baseline assessment day and before the health education sessions began, the promotores introduced the goals of the program and allowed participants to select their group membership (intervention vs. comparison). The promotores administered baseline measures (demographics, risk factors, pledge to participate in program, and pre-test health behaviors). The promotores administered these participants' questionnaires approximately one week before the educational sessions began.

During the educational sessions, the promotores met with participants once or twice a week to conduct the six-session education course. The six sessions consisted of topics found in the SPSCNT curriculum. These six topics included: 1) "Are you or your family at risk of heart disease?"; 2) "Be more physically active"; 3) "Blood pressure, salt, and sodium"; 4) "Eat less fat, saturated fat, and cholesterol"; 5) "Maintain a healthy weight"; and 6) "Make heart healthy eating a family affair." Each class session lasted over 1½ hours. Throughout the six-session course, the promotores completed the Family Education Sessions Checklist and participant attendance sheet to ensure that they taught various components of each session and the participants attending their sessions, respectively.

During the post-test assessment, promotores assessed the healthy-behaviors questionnaire (first post-tests) and participants' evaluation scale. Then, they presented

the families with a SPSC certificate of graduation. The same healthy behaviors questionnaire will be administered six months after educational sessions (second post-tests).

Statistical Analyses Strategy

There were two hypotheses of this study. The first hypothesis examined any differences between the health behavior scores before and immediately after the program. To test this hypothesis, there were separate paired t-tests conducted on each pre-test and post-test health behaviors, such as pre- and first post-overall health scores (prehealth vs. posthealth), pre- and post-Salt and Sodium scores (presalt vs. postsalt), pre- and post-Fat and Cholesterol (prefat vs. postfat), pre- and post-Weight Control (preweight vs. postweight), pre-and post-Physical Activity (prephysical vs. postphysical), and pre-Nonsmoking and post-Nonsmoking habits (presmoking vs. postsmoking).

The second hypothesis investigated any potential program characteristics that might predict the post-test health behavior scores. To examine any predictions, there were six hierarchical multiple regression models conducted that determined what factors predict each of the 6 post-test health behavior scores (e.g., Salt and Sodium, Cholesterol and Fat, Weight Control, Physical Activity, and Nonsmoking behaviors). Three sets of predictor variables were entered into the analyses in the following order for each of the six models: (1) pre-test health behavior scores; (2) sociodemographic variables; and (3) SPSCNT program components. Hierarchical entry of the variable sets into the regression

models allowed for assessment of the program characteristic predictors while statistically controlling for the pre-test scores and the sociodemographic variables. This order of the variable sets was determined by their presumed causal priority to control for possible confounding among the predictors (Tabachnick & Fidell, 1996).

CHAPTER IV

RESULTS

Correlations

Table 3 displays the zero-order correlations of sociodemographic, program characteristic and pre- and post-test health behavior scores. Among the pre-test health scores, there were positive significant relationships among most of the pre-test health behavior scores. Specifically, pre-salt scores were highly related to pre-fat, pre-weight, and pre-physical activity scores ($ps < .01$), pre-fat scores were related to pre-nonsmoking, pre-weight, and pre-physical activity scores ($ps < .05$), and pre-weight scores were highly related to pre-physical activity scores ($p < .01$). Among the post-test health behavior scores, post-salt scores were related to post-fat, post-weight, and post-physical activity scores ($ps < .05$), post-fat scores were related to post-weight and post-physical activity scores ($ps < .05$), and post-weight scores were highly related to post-physical activity scores ($p < .01$). Thus, the four pre-test health behavior scores and the four post-test health behavior scores are significantly correlated among each other. This excluded the pre- and post-nonsmoking behaviors.

Due to high positive correlations among the pretest scores and posttest scores, the researcher computed a composite overall pre-health behavior scores (e.g., Pre-Health), devised from the four pre-test health scores, and overall post-health behavior

Table 3

Correlations of Variables

	Gender	Age of family contact	#family members	% essentials	Evaluation #	# pledge	Pre-smoke	Post-smoke	Pre-Salt	Post-Salt	Pre-fat	Post-fat	Pre-weight	Post-Weight	Pre-physical
Gender	1.00														
Age of family contact	-0.09	1.00													
#family members	0.11	-0.18*	1.00												
% essentials	-0.03	-0.15	-0.09	1.00											
Evaluation	-0.26*	0.09	-0.07	-0.07	1.00										
# pledge	-0.01	-0.05	0.17*	0.13	-0.03	1.00									
Presmoke	0.17*	0.00	0.05	-0.11	0.05	-0.06	1.00								
Postsmoke	0.13	0.11	-0.10	-0.15	0.08	0.22*	0.59*	1.00							
Presalt	0.04	0.09	-0.09	0.05	-0.20	0.00	0.01	-0.12	1.00						
Postsalt	-0.03	0.25*	-0.05	0.02	-0.10	0.00	-0.11	-0.06	0.44**	1.00					
Prefat	0.22*	0.15	-0.18*	-0.03	-0.11	-0.10	0.20*	0.08	0.47**	0.30**	1.00				
Postfat	-0.02	0.24*	-0.33**	0.00	-0.23*	0.13	0.05	0.14	0.20	0.54**	0.34**	1.00			
Preweight	0.10	0.13	-0.22**	0.06	-0.15	-0.04	0.16	0.20	0.51**	0.42**	0.71**	0.36**	1.00		
Postweight	0.00	0.08	-0.26**	0.07	-0.25*	0.17	0.06	0.19	0.20	0.44**	0.25*	0.76**	0.44**	1.00	
Prephysical	0.04	0.06	-0.24**	0.13	0.06	-0.07	0.14	0.05	0.24**	0.26*	0.41**	0.25*	0.45**	0.27*	1.00
Postphysical	-0.04	0.17	-0.11	0.06	0.04	-0.01	0.03	0.11	0.11	0.46**	0.12	0.57**	0.23*	0.54**	0.36**

* p < .05, two-tailed

** p < .01, two-tailed

scores (e.g., Post-Health), devised from the four post-test health behavior scores. Please note that the pre- and post-nonsmoking behavior scores are excluded from the composite overall scores due to their lack of significant relations with the other health scores. Thus, in addition to the five health behaviors, the Pre- and Post-Health scores were analyzed in a separate paired t-tests analysis and a separate hierarchical multiple regression model.

Comparisons between Health Behavior Scores

The primary hypothesis for this study was to examine whether the family contact participants showed increased healthy behaviors after SPSCNT program. The mean scores on the pre-test and post-test health behavior scores for the sample are presented in Table 4 and Figure 5. The researcher performed six paired sample t-tests using the pretest and posttest behavior scores. There were significant differences between all pretest and posttest behavior scores ($p < .05$). The participants expressed increased Overall Health (14.3% overall mean score change), Salt and Sodium (8.3% overall mean score change), Fat and Cholesterol (14.3% overall mean score change), Weight Control (15.5% overall mean score change), Physical Activity (12% overall mean score change), and Nonsmoking (2% overall mean score change) healthy behaviors. The results support the hypothesis that SPSCNT program intervention program increased healthy behavior scores among the same participants

Table 4

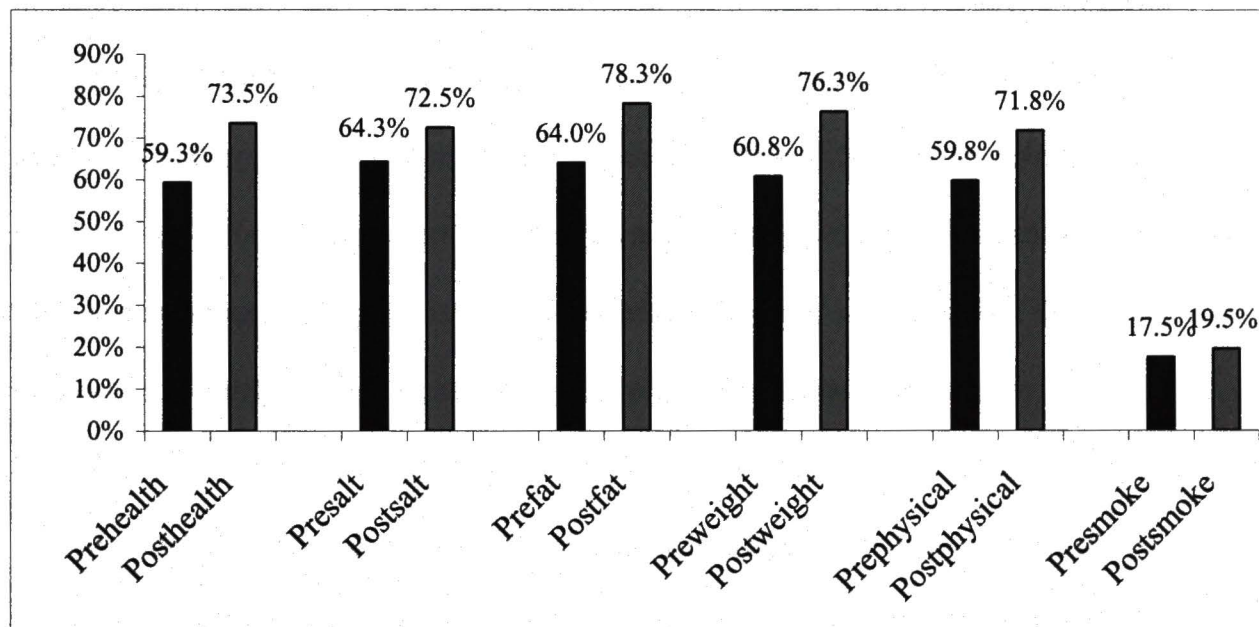
Participants' Healthy Behavior Scores and Analyses

Measures	N	Mean	SD	Percent	Pair	t-value	p-value
Pre-health	90	2.37	0.49	59.3%	Pre-health – Post-health	7.49	.00**
Post-health	90	2.94	0.52	73.5%	Pre-salt – Post-salt	5.70	.00**
Pre-salt	87	2.57	0.43	64.3%	Pre-fat – Post-fat	6.62	.00**
Post-salt	87	2.90	0.49	72.5%	Pre-weight – Post-weight	6.49	.00**
Pre-fat	90	2.56	0.64	64.0%	Pre-physical – Post-physical	5.31	.00**
Post-fat	90	3.13	0.90	78.3%	Pre-smoke – Post-smoke	2.06	.04*
Pre-weight	90	2.43	0.74	60.8%			
Post-weight	90	3.05	0.74	76.3%			
Pre-physical	81	2.39	0.61	59.8%			
Post-physical	81	2.87	0.63	71.8%			
Pre-smoke	85	0.7	0.37	17.5%			
Post-smoke	85	0.78	0.36	19.5%			

* $p < .05$, ** $p < .01$

Figure 5

Percents of Participants' Pretests (n = 81) and Posttests (n = 81) on various Healthy Behavior Scores



Hierarchical Regression Models

To examine any potential predictors on increased healthy behaviors, the researcher performed hierarchical regression analysis on each of the six post-test health behaviors. Each post-test health behavior was the dependent variable for each of the six regression models. The dependent variables were: 1) post-test Overall Health; 2) post-test Salt and Sodium; 3) post-test Cholesterol and Fat; 4) post-test Weight Control; 5) post-test Physical Activity; and 6) post-test Nonsmoking habits. The following information describes what variables were entered at different steps: Step 1) pre-test health behavior scores; Step 2) the same pre-test health scores and sociodemographic variables, such as gender, age of family contact, number of household members; Step 3) the same pre-test health scores and sociodemographic variables, and the program component variables, such as percentage of program sessions attended, participants' evaluations of the program, and number of family members who pledged in joining the program. Tables 5 through 8 display each of the four statistically significant hierarchical multiple regression models which includes the unstandardized regression coefficients (B), the standardized regression coefficients (β), the semi-partial correlations (sr), p-values, and adjusted R^2 for each of the steps. Two of the hierarchical regression models, involving Salt and Sodium, and Physical Activity, were found to be insignificant change from zero and were not included in this thesis.

In Table 5, the hierarchical regression model illustrates the analysis of predicting post-test Overall Health behaviors from a series of variables. The overall R was

Table 5

Regression analysis predicting post-test Overall Health behaviors multiple variables

Predictors	B	B	Sr	p-value	R ²
Step 1					0.16
Pre-health	0.46	0.40	0.40	0.00**	
Step 2					0.21
Pre-health	0.42	0.36	0.36	0.00**	
Gender	-0.12	-0.07	-0.08	0.51	
Age of contact	0.01	0.12	0.13	0.29	
Number of family members	-0.01	-0.14	-0.15	0.21	
Step 3					0.25
Pre-health	0.40	0.35	0.35	0.00**	
Gender	-0.19	-0.11	-0.12	0.33	
Age of family contact	0.01	0.13	0.15	0.23	
#family members	-0.01	-0.17	-0.18	0.13	
% essentials	0.00	0.01	0.01	0.92	
Evaluation	-0.41	-0.17	-0.19	0.12	
# pledging	0.00	0.14	0.15	0.20	
F-value	$F(7,75) = 3.32, p < .01$				

Note. Pre-health and Post-health names are abbreviations for pre-test Overall health and post-test Overall health, respectively.

statistically different from zero, $F(7,75) = 3.32, p < .01$. However, changes in R^2 were not significant after each step. Focusing on the potential predictors, each set of variables entered into the model after Step 1 did not add to post-test Overall Health Behaviors. Specifically, during Step 1, pre-test Overall Health scores accounted for 16% of the variance and was a significant predictor for the post-test Overall Health ($\beta = .40, t(75) = 3.76, p < .001$). After Step 3, the pre-test Overall Health scores continued to have a significant effect after entering the other variables ($\beta = .35, t(75) = 3.12, p < .003$). Thus, higher pre-test Overall Health scores predicted higher post-test Overall Health Scores. However, the program components were not significant predictors for post-test Overall Health Behaviors.

In Table 6, the hierarchical regression model illustrates the prediction analysis of post-test Fat and Cholesterol behavior scores from pre-test Fat and Cholesterol scores and the previous variables. The overall R was significantly different from zero, $F(7,75) = 4.59, p < .01$. In addition, the changes in R^2 were significant after each step ($p < .05$).

The following information describes the steps for the Fat and Cholesterol regression model. Step 1, with pre-test Fat and Cholesterol scores as the only variable entered, accounted for 12% of the variance in post-test Fat and Cholesterol Health Behaviors, the model was statistically significant from zero [$F(1,74) = 14.12, p < .00$], and the pre-test Fat and Cholesterol scores were a significant predictor ($\beta = .34, t(74) = 3.14, p < .002$).

Inclusion of gender, age, and number of family members in Step 2 affected a significant change of 9.7% [F change (4,71) = 2.99, $p < .04$]. Pre-test Fat and Cholesterol had the greatest impact on the post-test scores ($\beta = .29$, $t(71) = 2.58$, $p < .012$), followed by number of family members ($\beta = .25$, $t(71) = 2.25$, $p < .028$). In Step 3, adding the percentage of program sessions attended, participants' evaluations, and number of family members who pledged to the program, increased the variance by 10.4% [F change (7,68) = 3.47, $p < .021$].

In Step 3, number of household members had the greatest impact on the post-test scores ($\beta = -.30$, $t(68) = 2.76$, $p < .007$), followed by pre-test scores ($\beta = .28$, $t(68) = 2.63$, $p < .011$), followed by participants' evaluations ($\beta = -.25$, $t(68) = 2.42$, $p < .018$), and followed by the number of family members who pledged ($\beta = .21$, $t(68) = 2.08$, $p < .042$). Families with less members, higher pre-tests, higher program evaluations, and pledges to the program generated higher post-test Fat and Cholesterol scores.

In Table 7, the hierarchical regression model illustrates the prediction analysis of post-test Weight Control behavior scores from pre-test Weight Control scores and the previous variables. These findings are similar to the previous Fat and Cholesterol regression model. The overall post-test Weight Control R was significantly different from zero, $F(7,75) = 4.38$, $p < .01$. In addition, the change in R^2 was significant only after Step 3 ($p < .05$).

Table 6

Regression predicting Post-test Cholesterol & Fat behaviors from multiple variables

Predictors	B	B	Sr	p-value	R ²
Step 1					0.12
Pre-fat	0.34	0.34	0.34	0.00**	
Step 2					0.217*
Pre-fat	0.28	0.29	0.29	0.01*	
Gender	-0.09	-0.05	-0.05	0.69	
Age of family contact	0.01	0.15	0.16	0.17	
Number of family members	-0.10	-0.25	-0.26	0.03*	
Step 3					0.321*
Pre-fat	0.28	0.28	0.30	0.01*	
Gender	-0.21	-0.10	-0.11	0.35	
Age of family contact	0.01	0.17	0.19	0.12	
#family members	-0.12	-0.30	-0.32	0.01*	
% essentials	0.00	-0.04	-0.05	0.69	
Evaluation	-0.73	-0.25	-0.28	0.02*	
# pledging	0.08	0.21	0.24	0.04*	
F-value	$F(7,75) = 4.59, p < .01$				

Note. Pre-fat and Post-fat names are abbreviations for pre-test Fat and Cholesterol and post-test Fat and Cholesterol, respectively.

*R² Change $p < .05$, $p < .05$, ** $p < .01$.

The following information describes the steps for the Weight Control regression model. Step 1, with pre-test Weight Control scores as the only variable entered, accounted for 16% of the variance in post-test Weight Control Behaviors, the model was statistically significant from zero [$F(1,74) = 17.66, p < .00$], and the pre-test Fat and Cholesterol scores was a significant predictor ($\beta = .44, t(74) = 4.20, p < .000$). In Step 2, that included gender, age, and number of family members, there was an insignificant change of R^2 by 3% [$F \text{ change}(4,71) = .861, p < .465$]. In Step 3, adding the percentage of program sessions attended, participants' evaluations, and number of family members who pledged to the program, significantly increased the variance by 9.1% [$F \text{ change}(7,68) = 2.95, p < .039$]. The pre-test Weight Control scores had the greatest impact on the post-test scores ($\beta = .37, t(68) = 3.51, p < .001$), followed by participants' evaluations ($\beta = -.22, t(68) = -2.08, p < .042$), followed by the number of family members who pledged ($\beta = .21, t(68) = 2.07, p < .042$), then followed by number of family members ($\beta = -.22, t(68) = -2.06, p < .044$). Pre-test scores generated higher post-test Weight Control scores, higher program evaluations generated higher post-test Weight Control scores, number of family members pledging to the program generated higher post-test Weight Control scores, and participants with less family members had higher post-test Weight Control scores.

In Table 8, the hierarchical regression model illustrates the prediction analysis of post-test Nonsmoking behavior scores from pre-test Nonsmoking behavior scores and the previous sociodemographic and program characteristic variables. The overall post-test

Table 7

Regression analysis predicting Post-test Weight behaviors from multiple variables

Predictors	B	B	Sr	p-value	R ²
Step 1					0.19
Pre-weight	0.48	0.44	0.44	0.00**	
Step 2					0.22
Pre-weight	0.44	0.41	0.39	0.00**	
Gender	-0.06	-0.02	-0.02	0.83	
Age of family contact	0.00	-0.01	-0.01	0.93	
Number of family members	-0.08	-0.17	-0.16	0.13	
Step 3					.311*
Pre-weight	0.40	0.37	0.39	0.00**	
Gender	-0.17	-0.07	-0.79	0.52	
Age of family contact	0.00	0.01	.01	0.93	
#family members	-0.11	-0.22	-0.24	0.04*	
% essentials	0.00	-0.02	-.02	0.87	
Evaluation	-0.76	-0.22	-0.24	0.04*	
# pledging	0.09	0.21	0.24	0.04*	
F-value	$F(7,75) = 4.38, p < .01$				

Note. Pre-weight and Post-weight names are abbreviations for pre-test Weight Control and post-test Weight Control scores, respectively.

*R² Change $p < .05$, $p < .05$, ** $p < .01$.

Nonsmoking R was significantly different from zero, $F(7,74) = 8.64, p < .01$, and the change in R^2 was significant only after Step 3 ($p < .05$).

The following information is the steps involved in the Nonsmoking regression model. Step 1, with pre-test Nonsmoking scores as the only variable entered, accounted for 35% of the variance in post-test Nonsmoking Behaviors, the model was statistically significant from zero [$F(1,73) = 38.54, p < .00$], and the pre-test Nonsmoking scores was a significant predictor ($\beta = .59, t(74) = 6.21, p < .00$). In Step 2, including the sociodemographic variables, insignificantly increased the change by only 2% [F change $(4,70) = .105, p < .38$]. In Step 3, adding the program's characteristic variables significantly increased the variance by 10.1% [F change $(7,67) = 4.29, p < .01$]. The pre-test Nonsmoking scores had the greatest impact on the post-test scores ($\beta = .59, t(67) = 6.47, p < .00$), followed by number of family members who pledged ($\beta = .31, t(67) = 3.44, p < .00$), and followed by the number of family members ($\beta = -.19, t(67) = -2.03, p < .05$). Pre-test scores generated higher post-test Nonsmoking scores, number of family members pledging to the program generated higher post-test Nonsmoking scores, and participants with less family members had higher post-test Nonsmoking scores.

In summary, the Overall Health Behaviors regression model showed that the pre-test scores were the only predictors in the model. However, when one examines the different health behaviors more closely, there are more significant predictors that arise. Across the three specific health behavior regression models (e.g., Fat and Cholesterol, Weight Control, and Nonsmoking), the same variables predicted the specific post-test

Table 8.

Regression analysis predicting Post-test Nonsmoking behaviors multiple variables

Predictors	B	B	Sr	p-value	R ²
Step 1					0.35
Pre-smoking	0.53	0.59	0.59	0.00**	
Step 2					0.37
Pre-smoking	0.53	0.59	0.59	0.00**	
Gender	0.06	0.05	0.06	0.60	
Age of family contact	0.00	0.09	0.12	0.34	
Number of family members	-0.03	-0.12	-0.15	0.21	
Step 3					0.46*
Pre-smoking	0.53	0.59	0.62	0.00**	
Gender	0.08	0.07	0.09	0.48	
Age of family contact	0.00	0.08	0.10	0.40	
#family members	-0.05	-0.19	-0.24	0.04*	
% essentials	0.00	-0.12	-0.16	0.19	
Evaluation	0.01	0.05	0.07	0.58	
# pledging	0.01	0.31	0.39	0.00*	
F-value	$F(7,74) = 8.64, p < .01$				

Note. Pre-smoking and Post-smoking names are abbreviations for pre-test Nonsmoking and post-test Nonsmoking scores, respectively.

*R² Change $p < .05$, $p < .05$, ** $p < .01$.

health behaviors. In particular, the pretest scores, the number of family members residing with the participant, and the number of family members pledging to the program predicted the participants' post-test scores. The participants' evaluation scores also predicted the participants' post-test scores on two of the three models (e.g., Fat and Cholesterol, and Weight Control Health Behaviors). This consistency of significant predictors across specific health behavior models provides more reliable findings for this study. Thus, pre-test scores, how many family members pledged to the program, and how much they liked the program predicted their post-test healthy behavior scores.

In regards to the second hypothesis for this study, the prediction of post health behavior scores by family members' pledges to the program partially supports the hypothesis that program's components influence the participants' health behaviors. However, this program component was the only significant predictor among the other program components in this study.

CHAPTER V

DISCUSSION

In this thesis, the researcher's goal was to determine whether a CHW program is effective in changing community member health behaviors. The purpose was to examine whether there was increased heart-healthy behaviors among community participants by conducting a process evaluation on a community-health-worker education program, such as SPSCNT that targets Latino communities. Within the purpose, there were three objectives. This discussion section will describe how each of the three objectives were met, the limitations of this evaluation study, and application of the findings and general CHW programs.

Objective One

This thesis examined the first objective by describing and conceptualizing a theoretical, interactive community health education model that includes the following components: 1) message; 2) messenger; 3) recipients; 4) social network; and 5) cultural context. Based on intrapersonal, interpersonal, communication, and community theories and models, these components are hypothesized to work in conjunction with each other and result in an enhanced health education program for Latino communities. See Figure 2.

Objective Two

The thesis investigated the second objective by testing the message-recipient relationship of this conceptual model. The results support the hypothesis that SPSCNT program intervention program increased healthy behavior scores among the same participants. Specifically, The SPSCNT health education delivered by promotores increased the Latino participants' Overall Health, Salt and Sodium, Cholesterol and Fat, Weight Control, Physical Activity, and Nonsmoking healthy behaviors. Consistent with the findings from other studies, community members, from various CHW programs, showed increases in healthy behaviors, such as increased breast cancer screenings, sexually transmitted infection care, knowledge of child care, and cervical cancer screenings (Eng & Smith, 1995; Thomas, Earp, & Eng, 2000; Watkins et al., 1994; Navarro et al., 1998).

Objective Three

Because there were positive changes in health behaviors among Latino participants, the researcher met the third objective by identifying what SPSCNT education program characteristics are predicting these changes. Higher pre-test scores, how many family members pledged to the program, and how much they liked the program predicted their post-test healthy behavior scores. In regards to the second hypothesis, the finding that pledging the program influences the participants' health behaviors supports the second hypothesis. However, this program component was the only significant predictor among the other program components in this study.

Regarding pledges to the program as a predictor for post-health behaviors, pledging to the CHW might be one measure of each participant's and family members' commitment. As a possible measure of self-efficacy, by signing the pledge, the family contact person and family members might have felt confident about participating in the SPSCNT program and increasing their heart-healthy lifestyles. According to Bandura (1977b), this is the most important prerequisite for healthy-behavior-change because it is a measure of how much effort each participant is investing in SPSCNT program to increased, various heart-healthy behaviors.

Regarding participants' evaluation of SPSCNT program as a predictor for post-health behaviors, the evaluation predictor is consistent with current attitude literature (Ajzen & Fishbein, 1980; von Haeften, Fishbein, Kasprzyk, & Montano, 2001). An attitude, is a positive or negative evaluation of a behavior, is linked with performing a behavior (Ajzen & Fishbein, 1980). Consistent with previous literature, the evaluation predictor influenced participants' completion of the program and their reported heart-healthy lifestyles.

Limitations of Study

There are many limitations of this study. These limitations are categorized as threat to: 1) internal validity; 2) construct validity; and 3) external validity (Cook & Campbell, 1979). Please note that this is not an exhaustive list of all threats to validity.

First, history, maturation, testing, and selection bias threats are a few possible threats to this study's internal validity. Possible external events occurring (history),

psychological changes (maturation), how the participants' answered the pre-test questions (testing), and the type of individuals wanting to participate in program (selection bias) might have affected the findings. A quasi-experimental design that includes a comparison group is considered most useful in demonstrating a program's impact (Boruch & Wortman, 1979; Cook & Campbell, 1979).

Second, mono-method bias, mono-operation bias, and acquiescence responses are a few threats to the study's construct validity. Perhaps not measuring lifestyle behaviors with multiple biological and observational methods (mono-method bias), not assessing other measures that relate to health lifestyles (mono-operation bias), and the possibility of participants' faking well to make the results more impressionable (acquiescence) may have affected the findings (Marín & Marín, 1991; Cook & Campbell, 1979). By having more than one method and measure assessing healthy lifestyles, might eliminate these threats to the study's construct validity.

Third, the inability to generalize the program to persons beyond the group and time studied are threats to the study's external validity. Because this study focused on Latino communities, the generalizing the program to other minority groups will be a problem. Interestingly, because this program is culturally structured for Latino communities residing in the Dallas/Fort Worth area, this threat does not undermine the study's findings. However, because the study lacked multiple follow-up assessments, SPSCNT program might lose its effectiveness throughout time. A solution would be to include multiple assessments after the six-session course (Cook & Campbell, 1979).

There should be further research regarding other threats to SPSCNT program's validity on health behaviors.

Advantages and Applications

These preliminary findings indicated an increased change from pre-test to post-test health lifestyle scores among family participants, and what program components predict a successful program (e.g., healthier participants). Because there is a limited number of published evaluations of CHW programs, this process evaluation, that includes a CHW conceptual model with the evaluation's findings, is one of the few that illustrate CHW program's effectiveness and possible reasons for its effectiveness in health education.

This conceptual community health worker model with the current findings will be beneficial to program planners interested in implementing a CHW program in various communities. Specifically, program planners might see the benefit of having CHWs, instead of professional health workers, for preventative health education. A CHW is a person with good teaching skills, reflects community they serve, participates and is committed to community activities, cares for others, is trustworthy, respectful, and a good listener, provides a social support system, and seeks empowerment. These characteristics enhance the effectiveness of a health education program.

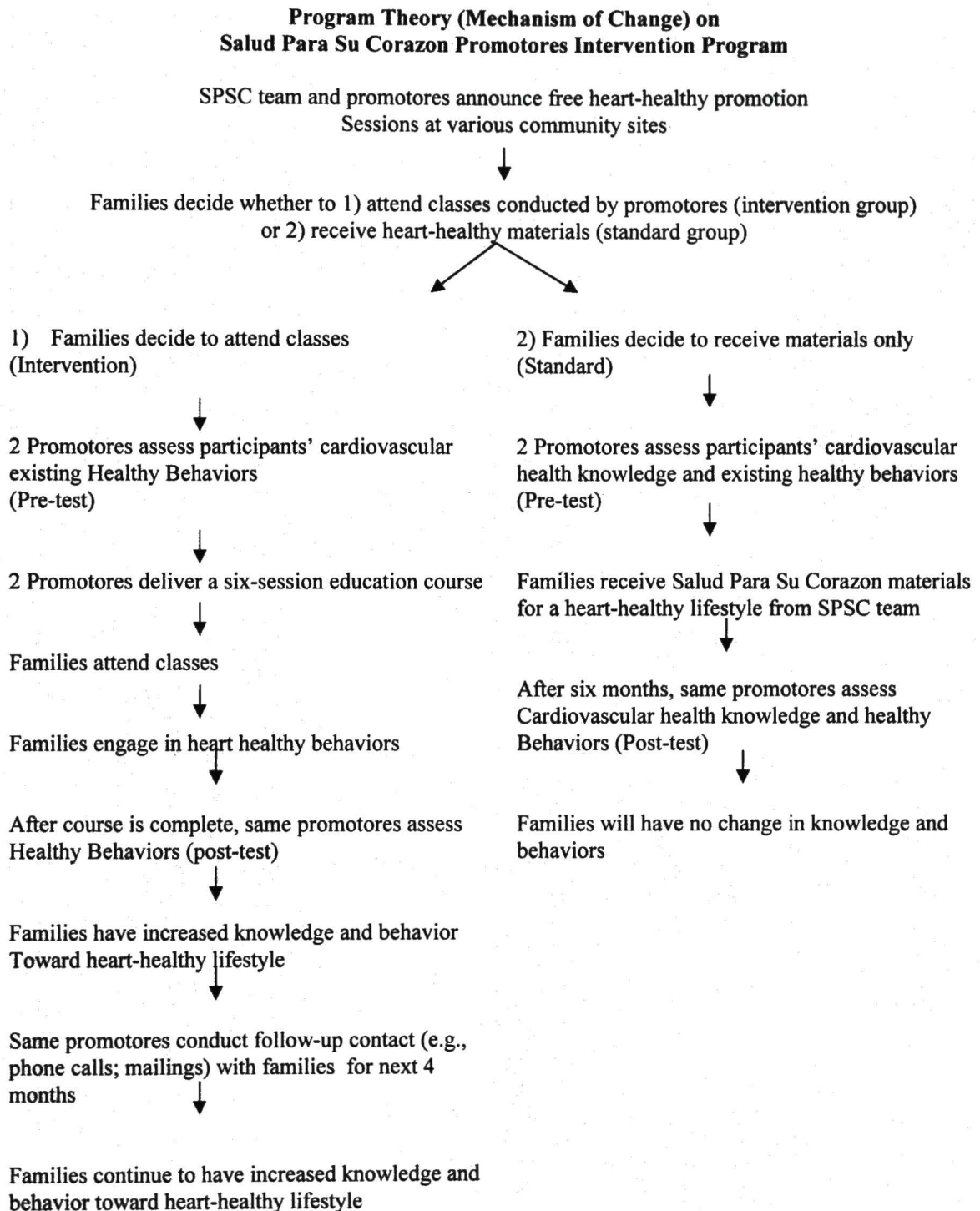
In summary, this thesis describes a theoretical, conceptual model of community health worker program. This thesis also presents an evaluation study that supports the hypotheses that a CHW program, SPSCNT, increased healthy behavior scores among the

same participants, and a specific program component predicts these post-test healthy behavior scores. Overall, this study shows that a CHW is an effective strategy in increasing heart-healthy lifestyles among Latino communities residing in North Texas.

APPENDIX A

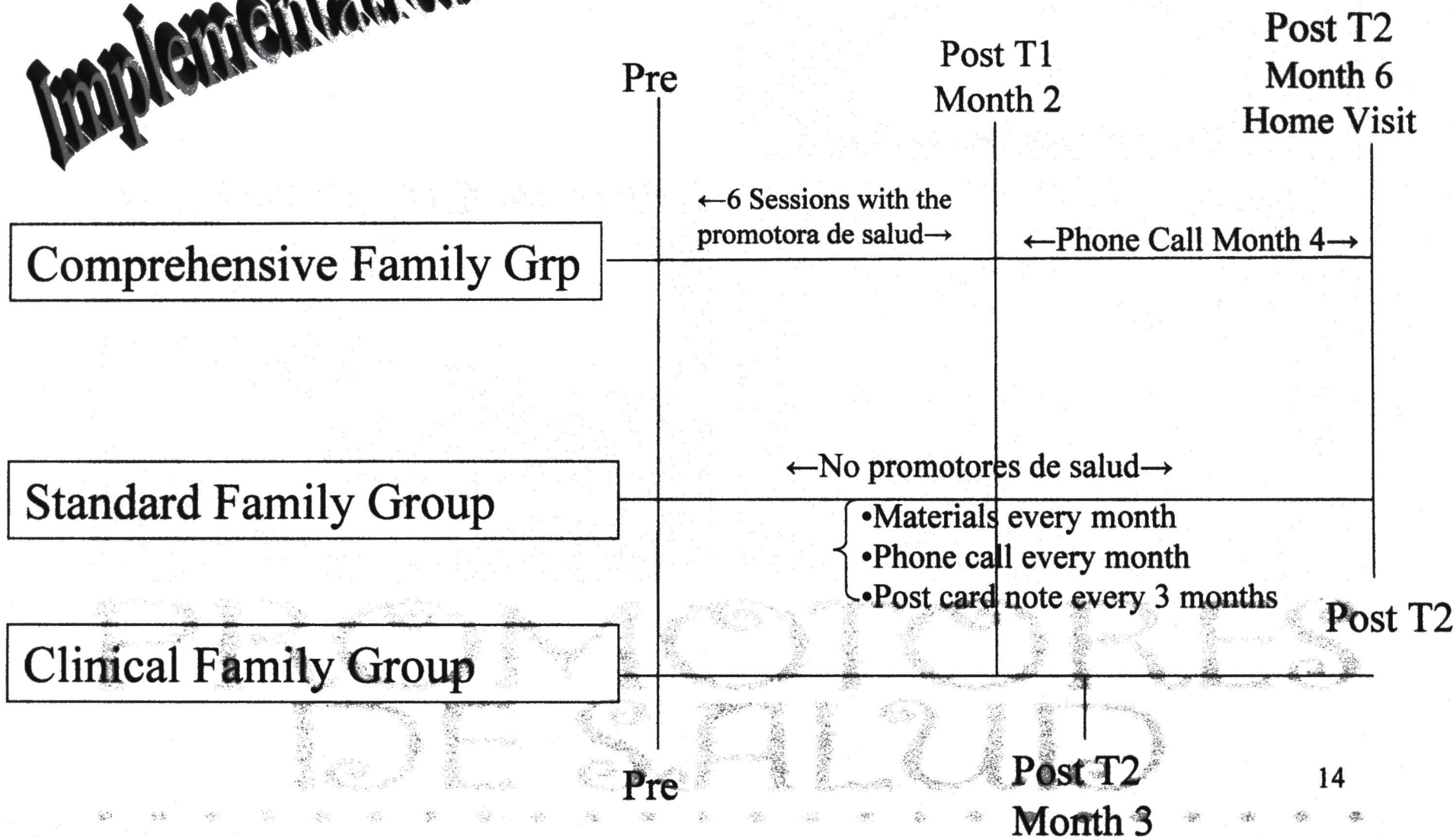
SPSCNT FIGURES

Figure 1: Program Theory of Salud Para Su Corazon



Promotora Implementation Model

SPSCNT 2003



APPENDIX B

MEASURES

Código de la Promotora

Código de la Promotora

Código familiar

Membresía Salud para su Corazón

Nombre de la Familia: _____

Nombre de la persona contacto: _____

Dirección: _____

Teléfono: _____

Mejor día y hora para hablar: _____

Número de personas en la familia: _____

Número de adultos: _____

Número de niños: _____

Número de personas con riesgo de enfermarse del corazón: _____

Número de personas en la familia participando en el compromiso: _____

Personas en la familia recibiendo la información:

☐ Madre

☐ Padre

☐ Hijos

☐ Abuela

☐ Otro: _____

¿La familia aceptó que le tomará una fotografía? _____ SI _____ NO

Explique: _____

Código de la Promotora

Código de la Promotora

Código familiar

Membresía Salud para su Corazón

Nombre de la Familia: _____

Nombre de la persona contacto: _____

Dirección: _____

Teléfono: _____

Mejor día y hora para hablar: _____

Número de personas en la familia: _____

Número de adultos: _____

Número de niños: _____

Número de personas con riesgo de enfermarse del corazón: _____

Número de personas en la familia participando en el compromiso: _____

Personas en la familia recibiendo la información:

☐ Madre

☐ Padre

☐ Hijos

☐ Abuela

☐ Otro: _____

¿La familia aceptó que le tomará una fotografía? ____ SI ____ NO

Explique: _____

Exhibición:

La familia recibió dos fotografías más (fotografías) 21 N.O

■ Otro

■ Varios

■ Muchos

■ Pocos

■ Ninguno

Exhibición en la familia recibiendo la información:

Numero de personas en la familia beneficiando en el combustible

Numero de personas con licencia de conducir de la familia

Numero de autos:

Numero de personas en la familia

Nombre y apellido de la persona que recibe la información

Dirección:

Numero de la persona beneficiada

Nombre de la familia:

Atestado de la familia

Exhibición de la familia

Exhibición de la familia

Exhibición de la familia

¿Está usted y su familia en riesgo de enfermarse del corazón?

Código familia: _____

Fecha: _____

Fecha: _____

CPromotor(a): _____

CPromotor(a): _____

Contacto inicial:

1. Yo soy: _____

Edad: _____

Relación: _____

Lugar de nacimiento: _____

Años viviendo en los USA: _____

2. Yo soy: _____

Edad: _____

Relación: _____

Lugar de nacimiento: _____

Años viviendo en los USA: _____

Riesgos Marque los que aplican	Compromiso:
☐ 1-Fuma ☐ 1a-¿Cuántos cigarrillos fuma por semana? _____ ☐ 1b-Esta expuesto al humo de segunda mano	
☐ 2-Le ha dicho el médico que tiene presión arterial alta ☐ 2a-No sabe	
☐ 3- Le ha dicho el médico que tiene colesterol alto ☐ 3a-No sabe	
☐ 4- Le ha dicho el médico que tiene diabetes ☐ 4a- No sabe	
☐ 5-Tiene sobrepeso ☐ 5a- No sabe	
☐ 6-Falta de actividad física	
☐ 7-Edad 45+ hombres, 55+ mujeres	
☐ 8-Tiene historia familiar de enfermedades del corazón ☐ 8a- No sabe	

Riesgos Marque los que aplican	Compromiso:
☐ 1-Fuma ☐ 1a-¿Cuántos cigarrillos fuma por semana? _____ ☐ 1b-Esta expuesto al humo de segunda mano	
☐ 2-Le ha dicho el médico que tiene presión arterial alta ☐ 2a-No sabe	
☐ 3- Le ha dicho el médico que tiene colesterol alto ☐ 3a-No sabe	
☐ 4- Le ha dicho el médico que tiene diabetes ☐ 4a- No sabe	
☐ 5-Tiene sobrepeso ☐ 5a- No sabe	
☐ 6-Falta de actividad física	
☐ 7-Edad 45+ hombres, 55+ mujeres	
☐ 8-Tiene historia familiar de enfermedades del corazón ☐ 8a- No sabe	

Firma: _____

Firma: _____

Me comprometo a participar en el programa

Los hábitos de mi familia: PRE TEST

¿Qué tan seguido su familia hace lo siguiente?

Sal y sodio

Compran verduras frescas o congeladas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Compran verduras enlatadas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Compran ajos frescos o en polvo en lugar de sal con ajo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Compran los alimentos con etiquetas en las que se lee: "bajo contenido de sodio," "sin sodio" o "sin agregado de sal."	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Comen las frutas sin sal.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Cuando se cocinan frijoles, arroz, fideos y verdura, les ponen poca sal o nada de sal al agua.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Usan carnes ahumadas, curadas o elaboradas como: Jamón, mortadela o chorizo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Ponen el salero en la mesa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Llenan el salero con una mezcla de hierbas y especias en vez de sal.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Comen frutas y verduras en lugar de bocadillos salados como papitas (Chips).	Nunca	Pocas veces	Casi siempre	Todo el tiempo

Colesterol y grasa

Toman la leche sin grasa o con 1% de grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Comen el queso sin grasa o con poca grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Usan un rociador ("spray") de aceite para cocinar. Rocía las sartenes en lugar de usar gran cantidad de manteca para engrasarlas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo

Leen las etiquetas de los alimentos para elegir los que tienen bajo contenido de grasa, grasa saturada y colesterol.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Cortan la grasa de la carne. Quitan el pellejo y la grasa al pollo o al pavo antes de cocinarlo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Cocinan la carne molida y escurren la grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Enfrían la sopa y le quitan la capa de grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Usan mayonesa, aderezos y crema agria sin grasa o bajos en grasa.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Usan pequeñas cantidades de margarina en lugar de mantequilla.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Elijen frutas y verduras en lugar de alimentos con mucha grasa, como papitas fritas.	Nunca	Pocas veces	Casi siempre	Todo el tiempo

Peso

Leen las etiquetas para elegir los alimentos con menos calorías.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Cocinan el pescado al horno en lugar de freírlo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Comen verduras y arroz con una pieza de pollo en lugar de comer tres piezas de pollo.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Sirven porciones pequeñas de comida.	Nunca	Pocas veces	Casi siempre	Todo el tiempo
Dejan de desayunar, almorzar o cenar a propósito.	Nunca	Pocas veces	Casi siempre	Todo el tiempo

La Actividad Física

Hacen alguna actividad física por 30 minutos.
Si no se tiene tiempo, hace en tres períodos de 10 minutos.

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Usan las escaleras en lugar del ascensor.

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Se bajan del autobus una o dos paradas antes y caminan.

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Estacionan el auto o carro unas cuerdas antes y camina por 10 minutos.

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

¿Que hace la familia para estar físicamente activa?

Caminan

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Bailan

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Pedalean en una bicicleta estacionaria

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Trabajan en el jardín

☐ 1. Madre	1. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 2. Padre	2. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 3. Hijos	3. Nunca	Pocas veces	Casi siempre	Todo el tiempo
☐ 4. Otros _____	4. Nunca	Pocas veces	Casi siempre	Todo el tiempo

Hacen ejercicios aeróbicos

- ☐ 1. Madre
☐ 2. Padre
☐ 3. Hijos
☐ 4. Otros _____

- | | | | |
|----------|-------------|--------------|----------------|
| 1. Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 2. Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 3. Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 4. Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Juegan al fútbol (soccer)

- ☐ 1. Madre
☐ 2. Padre
☐ 3. Hijos
☐ 4. Otros _____

- | | | | |
|----------|-------------|--------------|----------------|
| 1. Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 2. Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 3. Nunca | Pocas veces | Casi siempre | Todo el tiempo |
| 4. Nunca | Pocas veces | Casi siempre | Todo el tiempo |

Otras actividades:

(Diga) _____

El Hábito de fumar — ¿Han hecho lo siguiente?

Hablan con sus hijos desde muy temprana edad acerca del daño que le hace a su cuerpo el hábito de fumar.

Lo hacen No lo hacen

¿Alguien fuma en su familia?

Lo hacen

Quien: _____

No fuman

La persona que fuma quiere dejar de fumar.

Lo desea

No lo desea

No fuman

No permiten que las personas fumen en su casa (o ponen un aviso que diga: "Gracias por NO FUMAR.")

Lo hacen

No lo hacen

Practica con su hijo(os) cómo decir NO a los cigarrillos.

Lo hacen

No lo hacen

Los hábitos de mi familia: Post test

¿Qué tan seguido su familia hace lo siguiente?

Sal y sodio

Compran verduras frescas o congeladas.	Nunca	Algunas veces	Usualmente	Siempre
Compran verduras enlatadas.	Nunca	Algunas veces	Usualmente	Siempre
Compran ajos frescos o en polvo en lugar de sal con ajo.	Nunca	Algunas veces	Usualmente	Siempre
Compran los alimentos con etiquetas en las que se lee: "bajo contenido de sodio," "sin sodio" o "sin agregado de sal."	Nunca	Algunas veces	Usualmente	Siempre
Comen las frutas sin sal.	Nunca	Algunas veces	Usualmente	Siempre
Cuando cocinan frijoles, arroz, fideos y verdura, les ponen poca sal o nada de sal al agua.	Nunca	Algunas veces	Usualmente	Siempre
Usan carnes ahumadas, curadas y elaboradas como: Jamón, mortadela o chorizo.	Nunca	Algunas veces	Usualmente	Siempre
Pone el salero en la mesa.	Nunca	Algunas veces	Usualmente	Siempre
Llenan el salero con una mezcla de hierbas y especias en vez de sal.	Nunca	Algunas veces	Usualmente	Siempre
Comen frutas y verduras en lugar de bocadillos salados como papitas (Chips).	Nunca	Algunas veces	Usualmente	Siempre

Colesterol y grasa

Toman la leche sin grasa o con 1% de grasa	Nunca	Algunas veces	Usualmente	Siempre
Compran el queso sin grasa o con poca grasa.	Nunca	Algunas veces	Usualmente	Siempre
Usan un rociador ("spray") de aceite para cocinar. Rocía las sartenes en lugar de usar gran cantidad de manteca para engrasarlas.	Nunca	Algunas veces	Usualmente	Siempre

Leen las etiquetas de los alimentos para elegir los que tienen bajo contenido de grasa, grasa saturada y colesterol.	Nunca	Algunas veces	Usualmente	Siempre
Cortan la grasa de la carne. QUITAN el pellejo y la grasa al pollo o al pavo antes de cocinarlo.	Nunca	Algunas veces	Usualmente	Siempre
Cocinan la carne molida y escurren la grasa.	Nunca	Algunas veces	Usualmente	Siempre
Enfrían la sopa y le quitan la capa de grasa.	Nunca	Algunas veces	Usualmente	Siempre
Usan mayonesa, aderezos y crema agria sin grasa o bajos en grasa.	Nunca	Algunas veces	Usualmente	Siempre
Usan pequeñas cantidades de margarina en lugar de mantequilla.	Nunca	Algunas veces	Usualmente	Siempre
Eligen frutas y verduras en lugar de alimentos con mucha grasa, como papitas fritas.	Nunca	Algunas veces	Usualmente	Siempre

Peso

Leen las etiquetas para elegir los alimentos con menos calorías.	Nunca	Algunas veces	Usualmente	Siempre
Cocinan el pescado al horno en lugar de freírlo.	Nunca	Algunas veces	Usualmente	Siempre
Comen verduras y arroz con una pieza de pollo en lugar de comer tres piezas de pollo.	Nunca	Algunas veces	Usualmente	Siempre
Sirven porciones pequeñas de comida.	Nunca	Algunas veces	Usualmente	Siempre
Dejan de desayunar, almorzar o cenar a propósito.	Nunca	Algunas veces	Usualmente	Siempre
Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____				

La Actividad Física

Hacen alguna actividad física por 30 minutos. Si no se tiene tiempo, la hacen en tres periodos de 10 minutos. Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____	Nunca	Algunas veces	Usualmente	Siempre
Usan las escaleras en lugar del ascensor. Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____	Nunca	Algunas veces	Usualmente	Siempre

Se bajan del autobus una o dos paradas antes y caminan. **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Estacionan el auto o carro unas cuadas antes y camina por 10 minutos. **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

¿Que hace la familia para estar físicamente activa?

Caminan **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Bailan **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Pedalean en una bicicleta estacionaria **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Trabajan en el jardín **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Hacen ejercicios aeróbico **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Juegan al fútbol (soccer) **Nunca Algunas veces Usualmente Siempre**
 Quienes: ☐ Madre ☐ Padre ☐ Hijos ☐ Otros _____

Otras actividades: _____

El Hábito de fumar — ¿Han hecho lo siguiente?

Hablan con sus hijos desde muy temprana edad acerca del **Lo hacen No lo hacen**
 daño que le hace a su cuerpo el hábito de fumar.

Alguien fuma en su familia. **Lo hacen No lo hacen**
 Quien: _____

La persona que fuma quiere dejar de fumar. **Lo desea No lo desea No fuman**

No permiten que las personas fumen en su casa (o ponen **Lo hacen No lo hacen**
 un aviso que diga: "Gracias por NO FUMAR.")

Practican con mi hijo(os) cómo decir NO a los cigarrillos. **Lo hacen No lo hacen**

CP

1. Poner iniciales en cada clase que asistan.
2. Si pierden más de 2 clases no hay diploma.

Fecha que comenzó: _____ **Fecha que termino:** _____

[illegible]

Cuestionario para los participantes

Nos gustaría conocer su opinión acerca del programa para cuidar su corazón. Por favor conteste las preguntas. Ponga la hoja con sus respuestas en el sobre adjunto.

1. En general, ¿qué tan satisfecho está con el programa Salud para su Corazón presentado por promotoras?

Muy satisfecho **Un poco satisfecho** **Un poco insatisfecho** **Muy insatisfecho** **No sé**
☐ ☐ ☐ ☐ ☐

2. ¿Qué tan contento está con los materiales?

Muy contento **Un poco contento** **Un poco descontento** **Muy descontento** **No sé**
☐ ☐ ☐ ☐ ☐

3. ¿Qué tan contento está con los consejos que le dieron?

Muy contento **Un poco contento** **Un poco descontento** **Muy descontento** **No sé**
☐ ☐ ☐ ☐ ☐

4. ¿Qué tan contento está con el estímulo y apoyo que se le brindó?

Muy contento **Un poco contento** **Un poco descontento** **Muy descontento** **No sé**
☐ ☐ ☐ ☐ ☐

5. ¿Qué tan importante para usted y su familia fue recibir información práctica sobre colesterol y la grasa?

Muy importante **Un poco importante** **No es importante** **No sé** **No Recibí**
☐ ☐ ☐ ☐ ☐

6. ¿Qué tan importante para usted y su familia fue recibir información práctica sobre la presión arterial, la sal y el sodio?

Muy importante **Un poco importante** **No es importante** **No sé** **No Recibí**
☐ ☐ ☐ ☐ ☐

7. ¿Qué tan importante fue para usted y su familia recibir información práctica sobre cuidar su peso y el tamaño de las porciones?

Muy importante **Un poco importante** **No es importante** **No sé** **No Recibí**
☐ ☐ ☐ ☐ ☐

8. ¿Qué tan importante fue para usted y su familia recibir información práctica sobre como estar más activo físicamente?

Muy importante **Un poco importante** **No es importante** **No sé** **No Recibí**
☐ ☐ ☐ ☐ ☐

9. ¿Qué tan importante fue para usted y su familia recibir información práctica sobre el hábito de fumar y el humo de segunda mano?

Muy importante **Un poco importante** **No es importante** **No sé** **No Recibí**
☐ ☐ ☐ ☐ ☐

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