

RESEARCH PLAN

A. Specific Aims

The goal of *Poder es Salud/Power for Health* is to increase the capacity of members of the African American and Latino communities in Multnomah County, Oregon, to identify health issues and address health promotion and disease prevention, through the intervention of Community Health Workers (CHWs) who use Popular Education. By focusing on the implementation of an approach to conducting participatory research and program development, *Poder es Salud/Power for Health* will indicate how to increase participation of community members in defining the research questions, conducting and analyzing the research, and interpreting and applying the research findings.

Poder es Salud/Power for Health is the product of a collaboration between the Community Capacitation Center (CCC) of the Multnomah County Health Department (MCHD), the Sankofaa Institute of Cultural Learning, the Latino Network, the Urban League of Portland, and the School of Community Health at Portland State University (PSU). All of the partner organizations are already involved in joint projects. Project partners view *Poder es Salud/Power for Health* as an exciting new opportunity for the identification and accomplishment of mutual goals. Their input has shaped this proposal and they will continue to guide the project.

The specific aims of *Poder es Salud/Power for Health* are as follows:

- To identify culturally-specific elements of an effective CHW intervention in the African American and Latino communities;
- To identify supportive policies and environments that allow CHWs and community members to effectively identify and address health issues; and
- To determine how social capital both influences and results from an effective participatory approach to identifying and addressing health promotion and disease prevention.

Research has demonstrated multiple positive outcomes of CHW programs (4,8,40,41,47,93). Other research has pointed to the effectiveness of Popular Education and other liberating educational methodologies for promoting health (55,85). However, there is very little direct study about combining CHWs as the agents of change and Popular Education as the methodology for involving community members in the identification and resolution of health issues (55,89).

There is growing national interest in social capital; studies consistently document that higher levels of social capital are associated with better health (1,10,37,38,39). However, there are very few studies of social capital at the community level and fewer still that have operationalized the relational, material, and political aspects of social capital. There is no research that has specifically examined the role of social capital in the success of participatory approaches to identifying and resolving health issues. To fill these gaps, *Poder es Salud/Power for Health* will measure the relational, material, and political aspects of social capital in the two communities and assess the impact of the participatory approach on social capital and health-related quality of life.

To achieve project goals, research staff will collect baseline measures of social capital, health-related quality of life, and other key indicators from CHWs, 200 adults selected at random from “units of identity” in the two communities, and organizational representatives. In addition, qualitative data collection methods will contribute a wider range of responses and a deeper understanding of the issues. Measures will be repeated twice during the project period to capture changes in community social capital and individual-level health-related quality of life.

B. Background and Significance

B.1. Background. The existence of significant and persistent health disparities between minority communities of color and the Anglo-European majority is by now well established (48,61). In the words of Alan Nelson, special advisor to the chief executive officer of the American College of Physicians, “the real challenge lies not in debating whether disparities exist, because the evidence is overwhelming, but in developing and implementing strategies to reduce and eliminate them.” (28) The social patterning of health disparities suggests that the key to eliminating health disparities lies not in attempting to promote health and prevent disease and injury at the individual level, but rather in

building capacity in communities to identify and address the causes of ill health at the community level (42,44,85). According to Israel, “the emphasis on individual-level risk factors tends to obscure the contributions of social and environmental conditions to health and disease, most visible in the growing gap between the health status of rich and poor, white and non-white” (32).

B.1.1. History and Description of Health Issues in Our Community. The Latino and African American communities in Multnomah County, Oregon, offer an example of how health disparities affect two distinct communities, and how these disparities can be reduced through effective, community-driven approaches to health promotion and disease prevention.

B.1.1.1. Latino Community. The Latino¹ community in Multnomah County has experienced extremely rapid growth during the last decade. U.S. Census figures, widely assumed to underestimate true growth, suggest that the number of Latinos in Multnomah County “grew from 18,390 in 1990 to 34,282 in 1999, an increase of 87 percent” (52). Although the number of Latino students in Multnomah County schools and the number of births to Latina mothers more than tripled during the 1990s, the majority of the community’s growth is due to in-migration rather than birthrates. Until the recent economic downturn, immigrants (the majority from Mexico) were drawn to Portland by strong job growth. Population growth has been concentrated in particular areas of the County, such as Gresham and North Portland (52).

Health statistics for Latinos in Multnomah County mirror those of Latino immigrant communities around the country. While infant mortality rates are similar to those for white non-Hispanics, the rate of new AIDS cases among Hispanics is 2.1 times the rate among white non-Hispanics (58). Injury is the leading cause of death for Latino males under 45, and the death rate for Latino males is highest among youth (52). While the Hispanic mortality rate for diabetes appears to be lower than the rate for white non-Hispanics, the absolute numbers are too small to calculate reliable rates, and anecdotal evidence suggests that Hispanics may be at higher risk for diabetes, as they are nationally (75). Access to health insurance, expanded for many groups under the Oregon Health Plan, still eludes about one-fourth of Latino adults in the county, many of who are undocumented (52).

B.1.1.2. African American Community. In-migration was also responsible for the growth of Multnomah County’s African American community, though it occurred at a much earlier date and in two distinct waves. The first wave occurred during the “Great Migration” of 1915-1927. It was during this time that the residential community of African Americans in inner Northeast Portland began to develop (82). Despite gentrification and the ending of the practice of “redlining,” this area still remains the heart of Portland’s African American community. A second wave of African Americans came to Portland during World War II, attracted by employment opportunities in Portland’s shipyards.

The health status of African Americans in Multnomah County also reflects trends for the community at the national level. Infant mortality rates more than double those for whites led to the creation in 1996 of the Health Birth Initiative (HBI), a federally funded Healthy Start program that serves North and Northeast Portland. According to a Health Department report based on 1999 statistics, mortality rates for cancer, stroke, diabetes, and HIV/AIDS were all higher for African Americans in Multnomah County than for all other races/ethnicities examined. At 248 per 100,000, the African American cancer mortality rate was 14% higher than the rate for white non-Hispanics. The age-adjusted death rate for stroke in Multnomah County was substantially higher than for the nation as whole, and the rate for African Americans was 1.5 times higher than for non-Hispanic whites. Deaths from diabetes in Multnomah County (at 88 per 100,000) were almost twice the Healthy People 2010 target of 45 per 100,000. The African American mortality rate for diabetes (155 per 100,000) far exceeded the rate for the general population. Although in decline since 1994, HIV/AIDS death rates were still 15.4 per 100,000 for African Americans in 1999, compared to a rate of 5.3 per 100,000 in the general population. (58)

¹ We have chosen to use the term “Latino” throughout this application, although some statistics were reported for the “Hispanic” community.

B.1.2. Community Health Worker Model. With clear and pressing health issues confronting the Latino and African American communities in Multnomah County, proven strategies for building capacity in communities to promote health and prevent disease are clearly needed. The Community Health Worker (CHW) model has been used successfully both nationally and internationally to build capacity and promote health. Community Health Workers (CHWs) have been shown to be effective in addressing a variety of health conditions, including nutrition (92); immunization rates (9,76); perinatal health (23,34,88); mental health (59); hypertension (3); breast and cervical cancer screening (7); and smoking cessation (3,77). Demonstrated outcomes of CHW programs have included improved utilization management (8); increased access to preventive care (40,41); improved compliance with prescribed care (93); preventive health education and behavior change (93); successful chronic disease management (47); reduced costs of care (93); and community and individual mobilization and empowerment (4,93).

B.1.3. Popular Education. Various studies have pointed to the effectiveness of Popular Education and other liberating and participatory educational methodologies for promoting health. (55,85) Popular Education, most closely associated with the work of Brazilian educator Paulo Freire, is based on the premise that all people know a great deal as a result of their life experience. Therefore, educators should create situations where people can share what they know, combine it with the knowledge of other community members, and then develop plans to use that knowledge to create a more just and equitable society (15). Popular education involves the community affected by the health concerns in naming or defining key issues and creating the solutions to them, making community residents change agents rather than “objects” of change (68).

B.1.3.1. Popular Education and Participatory Research. The similarities to participatory research are more than coincidental. According to Minkler (2000), “the dialogical method of . . . Freire, with its accent on co-learning and action based on critical reflection, provided some of the critical philosophical grounding for . . . participatory research.” Indeed, participatory research grew out of the adult basic education movement of which Popular Education is a part (16).

B.1.3.2. Popular Education and CHWs. CHWs are community members who are carefully chosen based on their ability to relate to and build trust with people in their own communities. If their training utilizes an educational methodology that builds critical thinking skills and enables them to use that methodology in their work, they become uniquely able to help community members identify and address the underlying causes of ill health.

While various researchers have endorsed the role of CHWs in promoting health and preventing disease, and others have emphasized the importance of using participatory methodologies for promoting health, few have measured the results of employing CHWs as the agents of change, and Popular Education as the participatory methodology (55,89). Doing so resolves the dilemma posed by Wallerstein (1994) of how health educators, who are not necessarily of the community, can genuinely use participatory methods to promote community health.

Raczynski and colleagues (2001) suggest that a CHW model using popular education methodology in the African American community would be “consistent with methods for increasing” community capacity, but provide no empirical support for this model. Building community capacity and enhancing social capital through the intervention of CHWs using Popular Education is consistent with the vision expressed in a recent publication by the Urban League of Portland: “Change is a matter of like-minded people joining together and mobilizing one another to do what is fair and just” (83). When community members are the agents of change, they are truly “mobilizing *one another*.”

B.1.4. Social Capital and Public Health. Following Robert Putnam’s characterization of social capital, Healthy People 2010 defines social capital as “the process and conditions among people and organizations that lead to accomplishing a goal of mutual social benefit, usually characterized by four interrelated constructs: trust, cooperation, civic engagement, and reciprocity” (66,67). Social capital

has become increasingly prominent as a potential explanation of how socioeconomic factors influence health disparities at the community level (36). Recent original public health research has proposed social capital as a pathway between lower socioeconomic status and poorer health, by documenting associations between social capital and health, including all-cause mortality and self-reported health, crime, adolescent mental health, and adolescent birth rates (1,10,37,38,39).

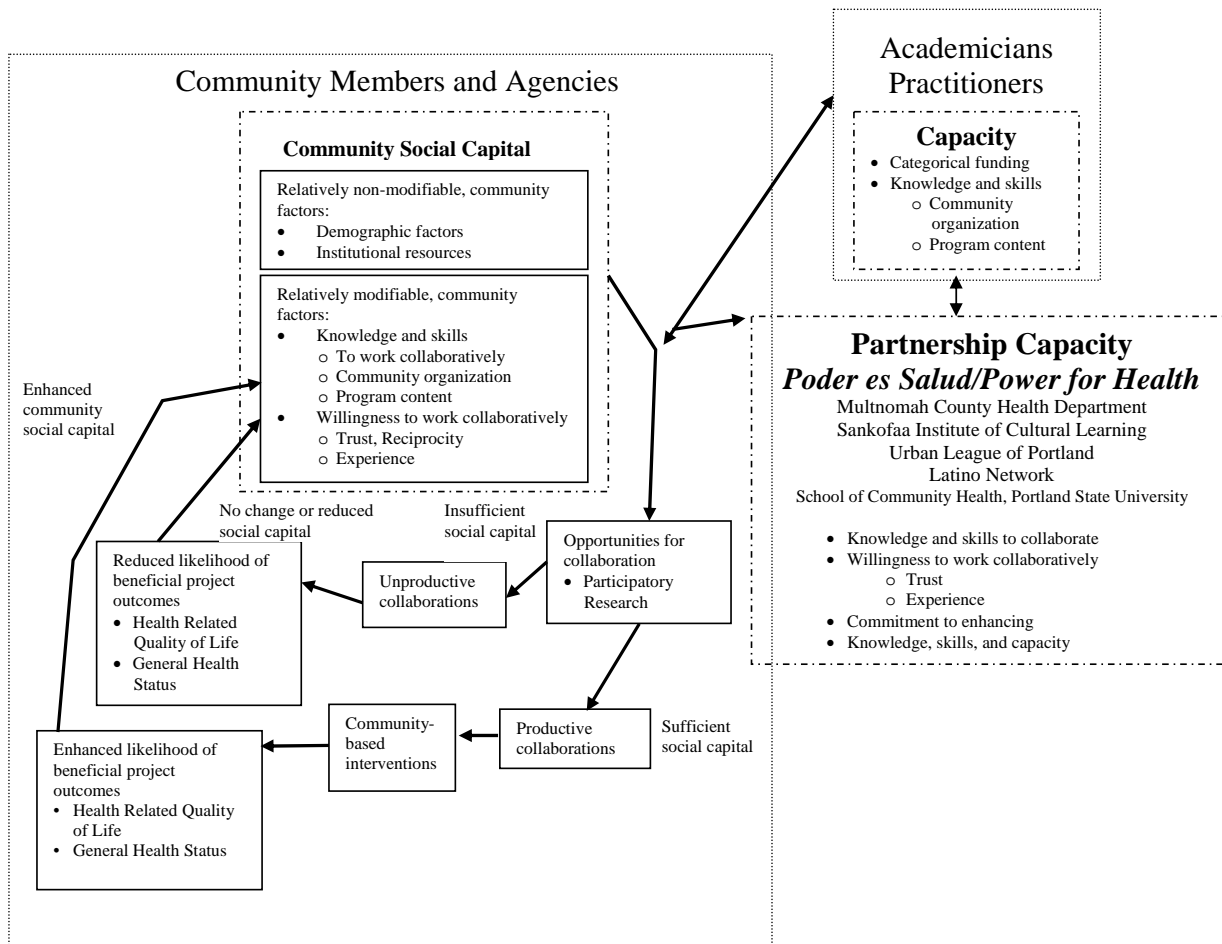
Central to the theoretical definition of social capital proposed by Coleman (1990) is that it allows groups to achieve ends that otherwise would be beyond their capacity. As such, if properly “harnessed,” social capital may also be an important determinant of the success of health promotion programs directed towards eliminating health disparities among socially and economically marginalized communities. However, many in public health have suggested that for social capital to be useful for creating “healthy” public policies, cities and places, we must begin to explain the complex mechanisms through which it works to improve health and use this information to reduce it to “doable actions.” (21,46). Additionally, critics have suggested that the models of social capital most used in the research rely primarily on building relationships and ignore the issues of politics and power (2,50). Thus, “encouraging such forms of capital formation may actually end up reinforcing disparities in health . . .” (35).

B.1.4.1. Measurement of Social Capital. Inconsistent definitions and reliance on previously collected data has had negative implications for the operationalization and measurement of social capital. Drawing on the work of Hawe and Shiell (2001), we have chosen to operationalize social capital in terms of its relational, material, and political aspects. The relational elements refer to network structure, including dense (intimate) and loose networks, as well as network function, e.g. social support. Material relates to the resources that members of the group possess by virtue of membership, including physical resources, trust and reciprocity. Political relates to the connection between the needs of the group and the political goals they are able to achieve.

B.1.5. Conceptual Model for the Proposed Study. The proposed study builds on the framework suggested by Raczynski and colleagues (2001), and will operationalize social capital as these researchers operationalized community capacity. The study proposes an iterative process in which the development of social capital is dependent on baseline and evolving social capital of all community members, public health practitioners (such as CHWs), agencies and community-based organizations. The intervention employing CHWs who use Popular Education will enhance several modifiable elements and will be unlikely to change several less modifiable elements of community capacity. Among the modifiable elements are trust, reciprocity, knowledge and skills. Among the less modifiable elements are physical resources (such as parks and buildings) and social resources (such as agencies and voluntary associations). The baseline level of social capital will influence the ability of successful collaborations to emerge, which will in turn influence future growth in social capital. Enhanced social capital will result in improved general health status and health-related quality of life (see Figure 1).

Figure 1

Enhancing Social Capital
(Adapted from Raczynski and Colleagues, 2001)



B.2. Significance. The findings from this study will contribute to preventing disease and promoting health in multiple ways. Enhanced understanding about how to involve community members in identifying and addressing health problems will produce stronger research designs, better interventions, and healthier communities. Research-based findings that identify culturally-specific elements of and supportive policies and environments for successful CHW interventions will allow communities and the health care system to use the CHW model more effectively to promote health and prevent disease. Findings about the interaction between the CHW model and Popular Education methodology will lead to more concordance between the agents of change and the health promotion methodology.

The proposed research will make significant contributions to the existing research on social capital and health. First, it will incorporate the importance of community context and political aspects in the process of defining and operationalizing social capital. Second, it will use a multi-disciplinary, theory-driven approach that draws on theories of community capacity (68) and empowerment (85). Third, it

will specify the agents (CHWs) and the methodology (Popular Education) that enhance social capital and describe the iterative process by which this occurs at multiple levels.

The intervention will result in increased capacity in the African American and Latino communities: 1) to promote health and prevent disease, disability and injury; 2) to identify mutual goals and work together to achieve those goals; and 3) to influence public policy that impacts health in the two communities. All partners will enhance their research and program development capacities. Additionally, as a result of the intervention, the campus-community partnership between community based organizations (CBOs), Portland State University (PSU), and the Multnomah County Health Department (MCHD) will be strengthened.

C. Preliminary Studies

This section demonstrates the experience of the research and project team with prevention research, measurement of social integration and social capital, evaluation of CHW programs, and development of interventions. Because of the prominent role of all the partner organizations in the development of this proposal and the eventual implementation of the project, this section includes information about the Community Steering Committee composed of project partners.

C.1. Lawrence Wallack, PhD, Principal Investigator. Lawrence Wallack has long been involved in the development, implementation and evaluation of community programs. His work has focused on alcohol, tobacco, violence, and a range of other public health issues. A strong and continuing theme in his research has been the challenge of blending theory, research and practice in the community context. While the recent focus of his work has been on combining mass media, community organizing, and policy development to create social change (Wallack, 1994; Wallack et al., 1999, 1993; Wallack and DeJong, 1995; Wallack, Dorfman, and Woodruff, 1997; Wallack and Dorfman, 2001), much of his work has addressed community approaches to the prevention of alcohol, tobacco, and violence related problems (e.g. Mosher and Wallack, 1979; Wallack and Barrows, 1983; Wallack, 1984, 1984-85, 1985, 1986, 1994, 1999, 2000; Holder and Wallack, 1986; Wallack and Wallerstein, 1986-87; Flora and Wallack, 1990; Thompson, Wallack et al., 1990-91; Wallack and Dorfman, 1996; The COMMIT Research Group, 1995; The COMMIT Research Group, 1995a).

His earliest work applied the general conceptual model developed for the Stanford Three Community Heart Disease Prevention Project to the area of reducing alcohol related problems in three northern California communities (Wallack, 1978, 1979; Wallack and Barrows, 1981; Wallack and Barrows, 1983).

In 1983, Dr. Wallack was the founding Principal Investigator (PI) for the Prevention Research Center. This center was the first national alcohol research center funded by the National Institute on Alcohol Abuse and Alcoholism that had a primary focus on prevention. Much of the work in that center emphasized local community approaches to developing policies in partnership with communities to reduce alcohol-related problems. The PhD level staff of the center included researchers from anthropology, law, sociology, psychology, land use planning/architecture, and public health.

Dr. Wallack was the PI for the California site of the Community Intervention Trial to Reduce Heavy Smoking (COMMIT). This eight-year NCI trial remains the largest truly randomized community study ever undertaken, involving 22 communities in the United States and North America (The COMMIT Research Group, 1995; The COMMIT Research Group, 1995a; Cummings et al., 1992; Lichtenstein, Wallack, and Pechacek, 1990-1; Wallack and Sciandra, 1990-91; Thompson, Wallack et al., 1990-91). An extensive protocol was implemented through a community board over the four-year intervention period.

Dr. Wallack was also the founding director of the Berkeley Media Studies Group, a center that combines research, training, and professional education in a wide range of diverse geographic and professional communities. Some publications associated with this organization include Wallack, 1994; Wallack et al., 1999, 1993; Dorfman and Wallack, 1996, 1997, 1998; Dorfman et al., 1997; Winnett and Wallack, 1996.

Most recently, Dr. Wallack has turned his attention to the assessment of large-scale public health/social interventions to reduce violence. His work on the early success of the \$60 million, 10 year comprehensive youth violence prevention initiative in California (Wallack, 1999, 2000a) has led to a large scale study to assess the long term implications of the initiative for building social capital to create community and policy change in California. This work, funded by the California Wellness Foundation, is currently underway.

In a recent paper commissioned by the Institute of Medicine (Wallack, 2000) combines the concepts of social determinants of health, social capital, and mass media. This paper provides a conceptual and practical approach to using mass media as a participatory vehicle for involving communities in the definition of, and approaches to, public health problems.

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C.2. Yvonne Michael, ScD, Co-Investigator. Yvonne Michael was trained as a social epidemiologist at the Harvard School of Public Health. Dr. Michael has substantial experience with cross-sectional and longitudinal analyses using social characteristics, including social integration and social capital. The results from these analyses are novel, and demonstrate that there is a cross-sectional association between social integration, social capital and function in a national sample of middle-aged and older women. Furthermore, in longitudinal analyses of cancer patients and older women, there is an association between level of social connectedness and functional health status.

C.2.1. Michael YL, Colditz GA, Coakley E, Kawachi I. Health behaviors, social networks, and health aging: Cross-sectional evidence from the Nurses' Health Study. *Quality of Life Research* 1999;8:711-722. Physical function is a significant component of health-related quality of life among older adults. Potential correlates of health aging, including health behaviors and social network characteristics were examined among 56,436 US women aged 55-72. After controlling for health behaviors and other confounders (age, race, education, and co-morbid conditions), elements of a woman's social network were significantly correlated with functional status. Strong predictors of high functioning among older women were having close friends and relatives and presence of a confidant. For example, the absence of a confidant was associated with a 4.44 point reduction in physical functioning (95% CI: -7.0, -1.9), and a 5.68 point reduction in vitality (95% CI: -7.9, -3.4).

These effects were comparable in magnitude to those observed among heavy smokers, or women in the highest category of body mass.

C.2.2 Yvonne L. Michael, Lisa F. Berkman, Graham A. Colditz, Ichiro Kawachi. Living arrangements, social integration, and change in functional health status. *American Journal of Epidemiology* 2001; 153:123-31. The authors assessed whether older women living with a spouse were less likely to experience decline in mental health, vitality, or physical function compared to women living alone or with non-spouse others. The association between living arrangement and four-year change in functional health status was examined prospectively among 28,346 women aged 60-72 years in the Nurses' Health Study. Adjusting for age, baseline function, co-morbid conditions, and health behaviors, women living alone had lower risk of decline in mental health (relative risk (RR) = 0.73, 95 percent confidence interval (CI) 0.65 - 0.81) and vitality (RR=0.90, 95 percent CI 0.84 - 0.97), compared to those living with a spouse. Contact with friends and relatives and level of social engagement were significantly protective against a decline in mental health among women living alone though not among women living with a spouse. These results suggest that women living independently are not at increased risk for decline in functional health status. In fact these women actually fare better on measures of psychological function than women living with a spouse.

C.2.3 Yvonne L. Michael, Lisa F. Berkman, Michelle D. Holmes, Graham A. Colditz, Ichiro Kawachi. Social networks and health-related quality of life in breast cancer survivors: A prospective study. *Journal of Psychosomatic Medicine* (In press). Social networks and HRQoL were assessed among women free of breast cancer in the Nurses' Health Study (NHS) in 1992. Women who developed breast cancer over the next four years (n=708) were asked to complete detailed questions related to treatment together with an assessment of general and cancer-specific HRQoL. On average, socially isolated women were more adversely affected by breast cancer -- their role function was lower by 14 points, vitality lower by 7 points, and physical function lower by 6 points compared to the most socially integrated women. The findings still held after adjustment for women's pre-illness level of health status. Socially isolated women were more likely to report problems related to provision of instrumental support and anxiety. Rehabilitation programs should incorporate interventions that address the availability of adequate social support among breast cancer survivors.

C.2.4 Yvonne L. Michael, Matthew Schirmer. Neighborhood Social Capital and Aging: Characteristics of Seniors Living in Urban Baltimore (in preparation). We utilized cross-sectional data from interviewer administered survey on health and participation conducted in 1984, in combination with 1990 Census data at census tract level to examine the following specific aims: (1) Describe level of social capital within 18 contiguous urban neighborhoods in Baltimore, MD, and (2) describe the individual and neighborhood characteristics by level of social capital. We found considerable variability between census tracts with respect to social capital, age composition, race, and wealth. For example, the percent black in census tract ranges from less than 1% to 55%. High social capital tracts were more likely to be neighborhoods with larger proportions of non-white. However, we found little association between level of social capital and neighborhood poverty level or level of neighborhood age segregation. Respondents living in census tracts with high social capital were significantly less likely to report limitations of physical and instrumental activities of daily living. For example, respondents in the highest group membership quartile reported excellent health status compared to those living in the lowest quartile (p<0.05). While this cross-sectional study does not allow us to make conclusions about the association between social capital and health among older persons, it suggests that this is a ripe area for study.

C.3. Stephanie Farquhar, PhD, Co-Investigator. Stephanie Farquhar draws primarily from the principles of community-based participatory research to address issues of social and environmental equity as it relates to health. Prior to arriving at the Portland State University School of Community Health, Dr. Farquhar completed a one-year W.K. Kellogg Foundation Community Health Scholars postdoctoral fellowship and worked with rural Eastern North Carolina community members to change

discriminatory local and state-level policies. At the University of Michigan School of Public Health, Dr. Farquhar collaborated with residents of Detroit, Michigan to document the presence of neighborhood-level environmental and social stressors. The results were used to mobilize communities to begin to seek changes in city environmental policies and practices. Additional interests include the effects of grassroots participation on health and the role of the university in academic-community public health partnerships. Published results and relevant lessons learned from past studies are presented.

C.3.1. Farquhar SA, Parker EA, Israel BA, Schulz AS. (Accepted for publication in the *Journal of Environmental Psychology*, Fall 2002). The effects of the physical environment on health and well-being in residents of eastside and southwest Detroit, Michigan. This study examined the association between stressors in the physical environment and physical and mental well-being among residents of Detroit. Measures of residents' general health, depressive symptoms, demographic characteristics, and perceptions of environment were derived from survey questionnaires from 208 respondents. Observational data of environmental stressors in the study participants' neighborhoods were collected and included in regression analyses. The findings suggested that residents' perceptions of environmental annoyances ($p < .001$), blight ($p < .001$), and industry ($p < .01$) were significantly associated with depressive symptoms. Perception of environmental annoyances ($p < .01$) was significantly associated with general health. Perception of the physical environment, especially those stressors related to blight and physical degradation, are associated with well-being and worthy of inclusion in public health research and practice.

C.3.2. Israel BA, Farquhar SA, James SA, Schulz AS, Parker EA, Schork T (2002). The relationship between social support, stress and health among women on Detroit's eastside. *Health Education and Behavior*. The study included interviews with 679 African American women, 18 and older, living in predominantly low-income neighborhoods on the east side of Detroit. Women with the highest levels of chronic stress (e.g., concerns about money and family) were more likely to report being in poor general health and have more depressive symptoms than those with low stress. The study was based on surveys conducted by the East Side Village Health Worker Partnership, a community-based participatory research project of the Detroit Community-Academic Urban Research Center and funded by the Centers for Disease Control and Prevention. The results of the study provide further evidence of the value of examining the social determinants of health within a conceptual framework of stress, health, and community context. Further, there is the need to better understand the complex relationships between the multiple stressors that people face, and the nature of the resources available to them to address these stressors.

C.3.3. Farquhar SA, Wing S (2002). Methodological and ethical considerations of community-driven environmental justice research: Examination of two case studies from rural North Carolina. In Minkler, Wallerstein (eds). *Community-based Participatory Research for Health*. New York, NY: Jossey-Bass Publishers. This study examines issues of CBPR through an examination of two community-based participatory public health projects initiated by residents of rural eastern North Carolina. Both projects – one addressing the environmental injustices of the agricultural industry and one focused on discrimination in black rural communities -- provide examples of the collective efforts of community-academic partnerships that were organized to challenge environmental, social, and health disparities. The success of the projects depended on a history of effective community organizing, the existence of social capital and civic participation, and the identification of powerful community assets. The examination includes a discussion of the similarities and differences of the projects, highlighting some of the universal challenges that many CBPR projects must address.

C.3.4 Farquhar SA, Parker EA, Israel BA, Schulz AJ (under review). Applications of qualitative methods in program planning for community-based participatory interventions. This manuscript describes the application of qualitative data to four broad stages of program planning. Examples of the application of qualitative data to program planning are drawn from a community-based

participatory research initiative known as the East Side Village Health Worker Partnership (ESVHWP), funded by the Centers for Disease Control and Prevention, and suggest a number of implications for health educators. First, qualitative data may be gathered before, and may contribute to decisions about, program objectives and activities. Second, the usefulness of qualitative data depends on the process used to collect and interpret the data. The quality and applicability of qualitative data, such as in-depth and group interviews, may be enhanced if conducted within the context of established relationships in which partners have achieved a degree of trust and common purpose.

C.4. Noël Wiggins, MSPH, Project Manager. Noël Wiggins has sixteen years' experience developing, managing and evaluating Community Health Worker (CHW) programs, both in the U.S. and in the developing world. As Project Director for the *La Familia Sana* (The Healthy Family) Program, jointly funded by the Office of Minority Health and the Office of Rural Health Policy, Ms. Wiggins designed and conducted an evaluation that measured changes in knowledge about and attitudes toward four psychosocial health issues in the Latino farmworking community in Hood River, Oregon. Subsequently, Ms. Wiggins developed a partnership with researchers from the School of Community Health at the University of Oregon to evaluate *La Comunidad Sana* (The Healthy Community), a three-year project designed to prevent and ameliorate family and youth violence in the Latino farmworking community. The W.K. Kellogg Foundation funded this project. In the spirit of participatory research, Ms. Wiggins has consistently involved her CHW colleagues in the design and evaluation of their projects, both to help them build skills and to ensure the success and usefulness of the projects.

Ms. Wiggins is nationally recognized for using Popular Education to build capacity in CHWs and for helping CHWs learn to use Popular Education in their communities. She is the founder and manager of the Community Capacitation Center (CCC), a partnership between the Multnomah County Health Department, Portland Community College (PCC), and a variety of community based organizations employing CHWs. For CHWs, the CCC provides initial and on-going capacitation (empowering training utilizing Popular Education) that confers academic credit, as well as opportunities for networking and professional development. For the general community, the CCC provides leadership development and capacitation in the use of Popular Education methodology. In March of 2002, the CCC formally convened its community advisory board, which includes representatives from several of the community partners included in this proposal.

Ms. Wiggins has shared invited, interactive presentations on the topics of the CHW model and Popular Education methodology at over 50 state and national conferences. With Dr. Nina Wallerstein and other colleagues, Ms. Wiggins developed and presented daylong institutes at the annual conference of the American Public Health Association on the intersection between Popular Education and asset-based community development (45). Ms. Wiggins was sought out as a consultant on Popular Education by ROW Sciences of Rockville, Maryland, and developed and presented workshops on this topic at one national and one regional training for grantees of the CDC-funded Breast and Cervical Cancer Program. More recently, Ms. Wiggins has provided consultation to the American International Health Association's project in Baku, Azerbaijan on involving refugees and internally-displaced persons in the development and implementation of health programs. She has also taught health services personnel in Baku to use Popular Education as a strategy for community involvement.

Ms. Wiggins has been at the forefront of national policy research studies in the CHW field. She served as Associate Director of the National Community Health Advisor Study, funded by the Annie E. Casey Foundation, and wrote the study chapter on roles and competencies of CHWs. In this capacity, Ms. Wiggins helped to design and conduct focus groups, one-on-one interviews and a national survey with CHWs and program managers. She collected, analyzed and reported on the data specific to roles and competencies.

Ms. Wiggins is committed to sharing leadership with CHWs and to mentoring CHWs into leadership roles in their field. For example, Ms. Wiggins' long-time CHW colleague Teresa Rios serves as the Chair of the CHW Special Primary Interest Group of the American Public Health Association (APHA). Ms. Wiggins is bilingual and biliterate in Spanish. Ten years of her professional

experience has been in the Latino community. Ms. Wiggins graduated Phi Beta Kappa with a B.A. in History from Yale University, and gained an MSPH in Health and Social Behavior from the Harvard School of Public Health.

C.5. Community Steering Committee. A Community Steering Committee composed of representatives of the partner organizations has guided the development of this proposal and will continue to guide the eventual implementation of this project. An exploratory committee of partner organizations came together shortly after the Program Announcement was published to determine interests in responding to the announcement. In subsequent regular meetings, the partner organizations identified mutual goals, core concepts, and proposed research questions. They identified a lead agency and, based on a mutually agreed upon list of characteristics, identified a research team and Research Advisory Board (see below.) They divided up responsibilities for developing the proposal. Finally, they jointly presented their plan to the Multnomah County Board of Commissioners. In addition, in all their meetings they sought to continuously develop a greater level of trust within the group. Because of their strong belief in the importance of this project, they have agreed that they will continue to work together whether or not this project is immediately funded. When the project is funded, the Community Steering Committee will be formally convened and additional partners and members may be added (see Intervention Plan, Action Step 7.3.1 below.) The Community Steering Committee is committed to being integrally involved in all phases of project implementation.

C.6. Research Advisory Board. In addition to the research team and project staff mentioned above, *Poder es Salud/Power for Health* will also employ a Research Advisory Board (RAB) to ensure the cultural competence of the research design. Responsibilities of the RAB members will include review of the research design and methods, on-going consultation about the implementation of the research, and consultation regarding appropriate and accessible methods for sharing findings with the communities. To date, we have identified James L. Mason, PhD, and Joseph S. Gallegos, PhD, as members of the RAB. Dr. Mason is an Assistant Professor in the Graduate School of Social Work at PSU. He is also Senior Project Consultant for the National Center for Cultural Competence at the Georgetown University Child Development Center. Dr. Gallegos is Associate Professor of Social Work and Gerontology, Director of the Social Work Program, and Research Director of the Hispanic Initiative at the University of Portland. (See attached letters of support and collaboration, Section I.) We intend to identify other members for the RAB.

D. Research Design and Methods

D.1. Overview. The research design and evaluation methods will be used to accomplish the specific aims and answer the research questions. Adhering to community-based participatory methodology, all phases of the research process – including data collection, analysis, and interpretation – will involve the project partners (72). *Poder es Salud/Power for Health* will use a Community Health Worker (CHW) approach to define the underlying causes of health disparities and develop solutions that will contribute to a healthy environment, policies, and behaviors.

The CHW model has been established as an effective strategy for change in economically and politically disadvantaged communities in both national and international settings (12,32). Most programs described in the literature have focused on change at the individual level, and have not described how to apply the model to bring about change at the community and policy levels (13). This project seeks to contribute to a better understanding of the role of the CHW model, as well as the role of social capital, to bring about change at multiple levels. As such, *Poder es Salud/Power for Health* will evaluate the extent to which CHWs using popular education are able to create change at the individual, organizational, community, and policy levels (17,54,78).

Community-based research projects make it challenging to assign community members into “treatment” and “control” cohorts. Identifying a control community with like cultural and political dimensions is especially difficult (17). *Poder es Salud/Power for Health* will follow a case study

design to assess the extent to which the CHW and popular education approaches can assist in the identification of health concerns and development of community programs to address those concerns and, ultimately, improve well-being. The case study design has been recognized for its application of rigorous methods used to better understand and explain social phenomenon (94). Case studies typically focus on issues that are fundamental to understanding the phenomenon being examined. This design allows such complex variables as social and historical context, as well as level of social capital, to be compared between two communities. The following program goals and objectives will be used to guide the project activities and evaluation in an effort to answer the research questions.

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D.2. Goals and Objectives

Goal 1. Identify culturally specific elements of a successful CHW intervention in the African American and Latino communities

Goal 2. Identify and promote supportive policies and environments that allow CHWs and community members to effectively identify health issues and develop solutions

Goal 3. Identify and increase dimensions of social capital in the African American and Latino communities that enable CHWs and community members to identify health issues and develop solutions

Goal 4. Develop and implement community-driven interventions to promote healthy environments and policies and prevent disease

Goal 5. Develop a successful campus-community partnership with representatives from the communities, community-based organizations and agencies, the local health department, and Portland State University College of Urban and Public Affairs

D.2.1. Individual Level Objectives [Goals 1, 3, and 4]

D.2.1.1. Community Health Workers (CHWs)

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To be measured at baseline, 18 and 30 months using the survey and in-depth interviews.

- To increase capacity to work with community members to identify and address health disparities;
- To increase knowledge about the social determinants of health;
- To increase knowledge and skills in the following areas: group facilitation, community organizing, policy-change strategies, research and data collection, and popular education methodology;
- To increase knowledge of and collaboration with community resources and programs (e.g., health clinics, employment agencies, training programs, local media, grassroots organizations);
- To create intervention projects with community members to promote healthy policy, environments, and behavior;
- To increase knowledge of and skills necessary to create change at multiple levels (e.g. individual, organizational, community);
- To improve physical and emotional well-being and quality of life; and
- To increase knowledge about and the ability to use intervention strategies for affecting health outcomes (e.g. media advocacy, support and education groups, etc.)

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D.2.1.2. Community Residents

To be measured using the survey at baseline, 18 and 30 months.

- To increase the number and efficacy of connections between community members;
- To increase capacity to identify and address health disparities;
- To increase knowledge about the social determinants of health;

- To increase knowledge and skills in the following areas: group facilitation, community organizing, policy-change strategies, research and data collection, and popular education methodology;
- To increase collaboration with community resources and programs (e.g., health clinics, employment agencies, training programs, local media, grassroots organizations);
- To create intervention projects to promote healthy policy, environments, and behavior;
- To improve physical and emotional well-being and quality of life; and
- To increase knowledge about and the ability to use intervention strategies for affecting health outcomes (e.g. media advocacy, support and education groups, etc.)

D.2.2. Organizational Level [Goal 5]

To be measured using in-depth interviews with project partners, CHWs, and ongoing review of documents.

- To encourage and facilitate a co-learning and cooperative environment in which all members of the research and intervention partnership are meaningfully involved;
- To increase the capacity of CBOs in the Latino and African American communities to work together to achieve mutually-defined goals;
- To increase knowledge of local, state, and federal policies and the ways the partnership can collaborate to improve such policies;
- To coordinate and integrate social, health, and environmental services among partner organizations and agencies;
- To increase skills among all partners in research and data collection and effective use of the CHW model;
- To increase cultural competence of all partners through mutual capacity-building; and
- To involve all partners in the creation of research and intervention documents, publications, and presentations.

D.2.3. Community Level [Goals 1 and 2]

To be measured at baseline, 18 and 30 months using the survey and in-depth interviews and ongoing measurement using other data sources.

- To identify and increase resources, programs, and infrastructure available to support healthy environments, policies, and behaviors;
- To identify community characteristics that support or hinder program effectiveness and to capitalize on these community assets;
- To improve communication and collaboration between members of the Latino and African American communities and local health and social organizations; and
- To increase activities aimed at meeting community health needs.

D.2.4. Policy Level [Goal 2]

To be measured at 18 and 30 months using the survey and in-depth interviews and ongoing measurement using evaluation forms and document review.

- To identify weak or nonexistent local, state, and federal policies and advocate for healthier policies;
- To more effectively present research and intervention results to policy and decision-makers;
- To better understand how to use media to increase community's awareness of and bring about changes in policy.

D.3. Evaluation Design, Methods and Measures of Effectiveness

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D.3.1. Process and Impact Evaluation. The evaluation will include both process and impact evaluation strategies and will collect quantitative and qualitative data (95). An *impact* evaluation aims to document the degree to which the intervention had an effect on the participants' knowledge, skills, attitudes and practices related to identifying and addressing community health issues. A *process* evaluation assesses the degree to which an activity was implemented as planned and with the quality and results intended (30,71). Aims of the process evaluation include: 1) to document and describe the activities of the intervention; 2) to document and describe the experience and satisfaction of the CHWs, community members, and partnership members; and 3) to identify social and political barriers and facilitators regarding the intervention activities. The evaluation will also document the political, social, and ethical challenges of using a popular education approach to build capacity and support the work of CHWs. A more detailed description of the methods used to measure, collect, analyze, and share the evaluation data follows.

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D.3.2. Multiple Sources. Intervention and prevention research studies frequently use multiple sources of information and multiple methods of data collection (73,96). Both qualitative and quantitative data will be gathered to assess the progress towards the project goals and to provide ongoing feedback to the project team (e.g., CHWs, staff, investigators). Using multiple methods of data collection and analysis increases the breadth of information collected (64) and also increases the validity of conclusions reached by identifying areas in which there is and is not broad agreement across data sources (74). Qualitative data are also useful for examining broader social determinants of health, and paying attention to the social, historical, and temporal context of health outcomes (32,64). Data collection methods will include: in-depth interviews with CHWs and community residents; focus groups with community residents; face-to-face surveys with 200 African American residents and 200 Latino residents; weekly documentation of CHWs' activities; notes and evaluations from capacitation sessions; materials from publications and presentations; and newspaper and document reviews. CHWs and Steering Committee members will contribute to all data collection instruments and protocols. A description of each data collection method follows.

D.3.3. Quantitative Data Collection and Measures and Measures of Effectiveness

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D.3.3.1. Survey (baseline, 18 and 30 months). "Units of identity" will be identified within the two communities. These may include: neighborhoods, churches, sororities, soccer leagues, people from same region or town in Mexico, etc. For recruitment for the questionnaire, we will randomly sample units of identity identified by the focus groups and interviews with steering committee and exploratory focus groups with community members. After selecting a random sample of units of identity, we will count all individuals in the selected identity units to create a sample frame for each unit of identity. Finally, we will use the list of individuals to draw a random sample.

Community members will be hired and trained to conduct the baseline and follow-up surveys with the CHWs and community participants. The training will take place over a one-week period during four separate sessions. The training sessions will include an introduction to *Poder es Salud/Power for Health*, and an overview of the survey. Interviewers will learn about the roles and responsibilities of being an interviewer, issues of confidentiality, safety in the field, and the ethics of interviewing. The interviewer training will discuss basic interviewing skills such as how to be an active listener and clarify and probe for responses and the opportunity to practice conducting the interview and recording responses.

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Pasick and colleagues (1996) discussed the challenges associated with collecting survey data in a multicultural and multiple-language setting. For example, items that are not correctly translated can lead to false conclusions and comparisons between groups. Thus, the *Poder es Salud/Power for Health* data collection activities will follow the methods outlined in Pasick and colleagues (1996) in an attempt to decrease threat to the study's validity and conclusions. The data collection instruments will be translated from English to Spanish and then back translated into English to ensure that the instruments are equivalent. The project's Research Advisory Board will provide consultation on these and all data collection instruments. In addition, the instruments and measures will be developed using

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a team effort, with multiple disciplines and multiple cultures involved. Finally, the survey instrument will be pre-tested with English and Spanish-speaking respondents and revised based on the pretest results. The survey will take an average of 60 minutes to complete and will collect data using the following measures:

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Self-reported Physical and Mental Well-being. The SF-36 includes one multi-item scale that will be used to assess eight health concepts: 1) limitations in physical activities because of health problems; 2) limitations in social activities because of physical or emotional problems; 3) limitations in usual role activities because of physical health problems; 4) bodily pain; 5) general mental health (psychological distress and well-being); 6) limitations in usual role activities because of emotional problems; 7) vitality (energy and fatigue); and 8) general health perceptions. The survey was constructed for self-administration by persons 14 years of age and older, and for administration by a trained interviewer in person or by telephone (87). Additionally, the survey will assess self-reported health by measuring general health. General health -- evaluated as excellent, good, fair, or poor-- is a one-item measure that has proven to be very predictive of health as indicated by medical records (27).

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Social Capital. Items to measure social capital were taken from the Social Capital Module of the General Household Survey (22) and the Social Capital Assessment Tool developed by the World Bank (43). Both of these instruments were specifically designed to measure social capital at the community or neighborhood level. The Social Capital Module of the General Household Survey was developed through 31 in-depth interviews that examined respondents' understanding of the aspects of social capital, as well as other key concepts (11). The survey includes questions assessing five main topics described below.

1. View of local area. The physical environment in which people live, the facilities in their area and whether they feel safe in the area.
2. Civic engagement. People's role in the community, and whether they feel they can influence events within the community, the amount of self-empowerment and control that people think they have, and their involvement.
3. Reciprocity and local trust. How many local people respondents know and trust, and whether people would do favors for them, or vice versa.
4. Social networks. How often respondents see or speak to relatives, friends or neighbors, and how many close friends or relatives live nearby. The number and types of exchanges between people within the network, and shared identities that develop, can influence the amount of support an individual has, as well as giving access to other sources of help.
5. Social support. How many people the respondent could turn to if they needed help - ranging from practical to financial to emotional support, and whom they would turn to for help. The degree of individual support a person has can influence health outcomes and health behavior.

Demographic Variables. The survey will collect information on demographic variables, including age, gender, income, education, race/ethnicity, and home ownership. These data will be used to examine their relationships to other study variables, including social capital and measures of physical and mental well-being. Age is computed based on respondent's birth date and included in the regression models as a continuous variable. Education is measured as an ordinal variable with four categories (less than high school, graduated from high school or having the G.E.D., some college, and graduated from college). Income is an ordinal variable with nine categories corresponding to ranges of total household income (<\$5,000/yr, \$5,001-10,000/yr, \$10,001-15,000/yr, \$15,001-20,000/yr, \$20,001-30,000/yr, \$30,001-40,000/yr, \$40,001-50,000/yr, and >\$50,000/yr). A home ownership variable will

indicate whether the respondents own or rent their home, a powerful predictor of sense of community and civic engagement (19).

D.3.4. Qualitative Data Collection and Measures of Effectiveness

D.3.4.1. In-depth Interviews (Baseline, 18 and 30 months)

Using purposive sampling (64), 10 community members each from the African American and the Latino communities will participate in the qualitative in-depth interviews. The qualitative interviews will use open-ended questions, allowing the participant to provide a wider range of responses and providing the researcher the opportunity to probe for a deeper understanding of the issues (26). The interview questions will fit into three broad categories, including: 1) participants' perceptions about their ability to identify health issues in their community; 2) participants' perceptions about their ability to develop and implement solutions to health problems; and 3) participants' perceptions about their ability to make their voices heard by policy makers. These data will be used to identify strengths and weaknesses of the participatory approach.

D.3.4.2. CHW Lesson Plans and Tracking Forms (on-going). CHWs will complete detailed lesson plans using the "Learning Loom" format (see example, Appendix A) for all classes and group activities in the community. In addition, after each class or group activity, CHWs will complete a "Classes with Groups Form" on which they will record the number of attendees, basic demographic information about the group, the location of the class, their perceptions of the strengths and weaknesses of the class, and plans for future meetings with this group. Finally, CHWs will maintain personal logs on which they will record their daily activities. These logs will be submitted with their timesheets at the end of each pay period. This tracking method will be used to evaluate the extent and impact of informal and formal interactions, and participation in activities and events.

D.3.4.3. Field Notes (on-going). The project researchers will attend selected CHW capacitation sessions, weekly team meetings and other events as participant observers. Detailed notes will be taken, documenting the content of verbal discussions and nonverbal exchanges or communication. After the meetings, a set of field notes will be produced and filed along with any documents or materials distributed at the meeting or capacitation session.

D.3.4.4. Meeting and Session Notes (on-going). Notes will be taken at all steering committee meetings. In capacitation sessions, notes produced on chart paper will be transcribed and shared with all participants. These session notes will include the group evaluation of skills and knowledge gained in each session.

D.3.4.5. Participant Evaluation Forms (ongoing). Participant Evaluation Forms will be distributed and completed by CHWs at each CHW capacitation session (see Appendix B). Data from these forms will help identify strengths and weaknesses of the capacitation content and format, and will be used to modify subsequent capacitation sessions.

D.3.4.6. Interactive Competency Assessment (Month 6 and end of Years 2 and I3). Since Popular Education methodology emphasizes the knowledge and skills that learners bring to any learning opportunity, traditional pre- and post-tests are inappropriate and contradictory to this basic philosophy. Interactive skills assessments that measure CHWs' competence in using skills in real or "near-real" situations, however, can provide useful feedback to both CHWs and facilitators about areas where more capacitation is needed. At the end of the initial capacitation period, CHWs will participate in an assessment where an interaction with community members will be simulated. Project staff and facilitators will assess strengths and weaknesses and provide feedback. The information gained from the competency assessment will also be used to plan future capacitation sessions.

D.3.4.7. Document Reviews (ongoing). Review of historical, political, and social documents – both historical and contemporary – will be ongoing. These data will contribute to the context evaluation and the assessment of contextual factors that facilitate or hinder the implementation of the CHW program. Additionally, a review of local television, radio, and print media will help to document the reach and content of the interventions that result from the CHWs' efforts.

D.3.4.8. Evaluation of Steering Committee. The partnership will be evaluated at regular intervals to determine how well it conforms to the Principles of Good Campus-Community Partnerships identified by the CCPH.

D.4. Data Analysis: Quantitative and Qualitative Methods. Analysis of evaluation data will be continuing throughout the project period. Several statistical procedures will be used to analyze the survey data. Descriptive statistics, such as frequencies and distributions, will be used to describe the characteristics of the study population. Correlation matrices and Cronbach's alphas determine the level of association of items within the social capital and health data. A series of linear and logistic regression models will be conducted to examine the association between the study variables and their ability to explain variance in the outcome variables. The data will be analyzed for the entire sample, and to examine differences across such variables as race/ethnicity, age, and degree of familiarity with the intervention. Changes in study variables will be assessed longitudinally and compared between the African American and Latino communities.

This proposal considers social capital and individual data collected in a hierarchical fashion. Multivariate modeling of such data is most frequently conducted as if the data were obtained as a simple random sample from a single population. Hence the standard assumption of independent and identically distributed observations is made. However, analyzing data as a simple random sample ignores that the observations are not all independent and tends to lead to deflated standard errors of estimates and inflated values of model fit. A hierarchical approach avoids these distortions.

We propose a hierarchical statistical model representing item variation within persons (level 1), personal variation within communities (level 2), and variation between communities (level 3). We will model the effect of social capital on health-related quality of life (SF-36) and general health controlling for individual psychosocial factors (social support, self-efficacy, and personality), health status, and behavior.

The decision to use hierarchical linear modeling depends on satisfying assumptions that are also necessary for more traditional analyses, such as error that are normally distributed and are independent of the variables in the equation. Generalized estimating equations (GEE) (98) provide an approach that extends the generalized linear models framework of McCullagh and Nelder (1983) to handle correlated observations. Moreover within the GEE framework one can pick from a variety of mean/variance relations when estimating mean structure or regression models.

Analyses of other data generated by the evaluation will primarily involve qualitative approaches. Data from the in-depth interviews, weekly documentation, meeting minutes and field notes, and document review will be analyzed using a modified version of focused coding and grounded theory methods, both of which are reproducible and scientifically rigorous (79,99). An important step in a grounded theory analysis is the process of "open coding." This involves a transcript or other type of textual data to be reviewed systematically. Categories that capture important themes or recurring issues are identified and interpreted, and discussed with project members to inform and strengthen the intervention project. Results are useful for examining progress towards the process and impact objectives, as well for triangulation and comparison with the results of the quantitative survey. This method of data analysis is flexible enough to allow new categories and ideas to emerge while maintaining a certain degree of structure based on the interview guide and the more general research questions.

D.5. Data Sharing. Miles and Huberman (1984) suggest conducting feedback sessions after preliminary analysis of data in an effort to verify or validate the study conclusions. Feeding back the data, or member checking, may also provide evidence of credibility, the criterion parallel to 'internal

validity' in quantitative studies (49,69). Survey and in-depth interview respondents will be invited to participate in feedback sessions during which preliminary results from this analysis will be shared. At the beginning of each feedback session, respondents will be reminded of the purpose and content of the survey or the in-depth interviews. For the in-depth interview feedback sessions, code categories and recurring issues will be presented and paired with relevant interview excerpts in an effort to illustrate the overarching themes and conclusions. Respondents' reactions and feedback to the data collection results will be solicited and used to inform intervention and research conclusions.

D.6. Limitations and Challenges. Many of the challenges of the proposed research are related to common issues in community-based research. Following the framework suggested by Israel et al. (1998), we will focus on issues related to developing community research partnerships and methodological issues involved in community-based research.

Partnership-related issues. Israel and colleagues (1998) suggest a number of partnership-related issues that will be challenges for this project. These include: maintaining the trust and respect between researchers and community members, inequitable distribution of power and control, conflicts associated with differences in priorities, values, and language, and definition of community. We will address these issues in a number of ways: use of the Research Advisory Board, use of Popular Education as the methodology, use of a community organizer, and dependence on prior history of positive working relationships. It is the role of the Research Advisory Board (RAB) to ensure that the research is responsive to the community needs and that appropriate methods are selected to share information with the community and to request feedback. The use of Popular Education as our methodology will help to ensure that community voices are valued and have influence over decision-making. Additionally, we have included a community organizer on the staff of this project. The individual chosen for this position will have a history of community involvement and be respected as a leader in the community. Finally, project partners came together on the basis of pre-existing trusting relationships and collaborations.

Methodological issues. Methodological issues include inability to fully specify all aspects of research up-front, e.g., the specific health issues selected by the community for attention, and maintaining a healthy balance between responsiveness to the research questions without taking away from the importance of developing actions to address the health issues identified by the community. In order to deal with the unknowns in the research design and intervention, the evaluation will include both process and impact evaluation strategies and will use multiple sources of information and multiple methods of data collection. This will allow us to gather information about growth in community-level social capital, individual-level general physical and mental health, as well as quality of life, which is directly associated with health and well-being. In addition, it is central to our project to assess the process through which community members identify and address health issues; therefore, identifying a specific health outcome would be counter to this purpose. Finally, we have addressed the latter issue of balancing research and action in that our research goal, e.g., understanding the impact of the intervention on social capital, is explicitly tied to the action of developing capacity within the community to address the identified health issues.

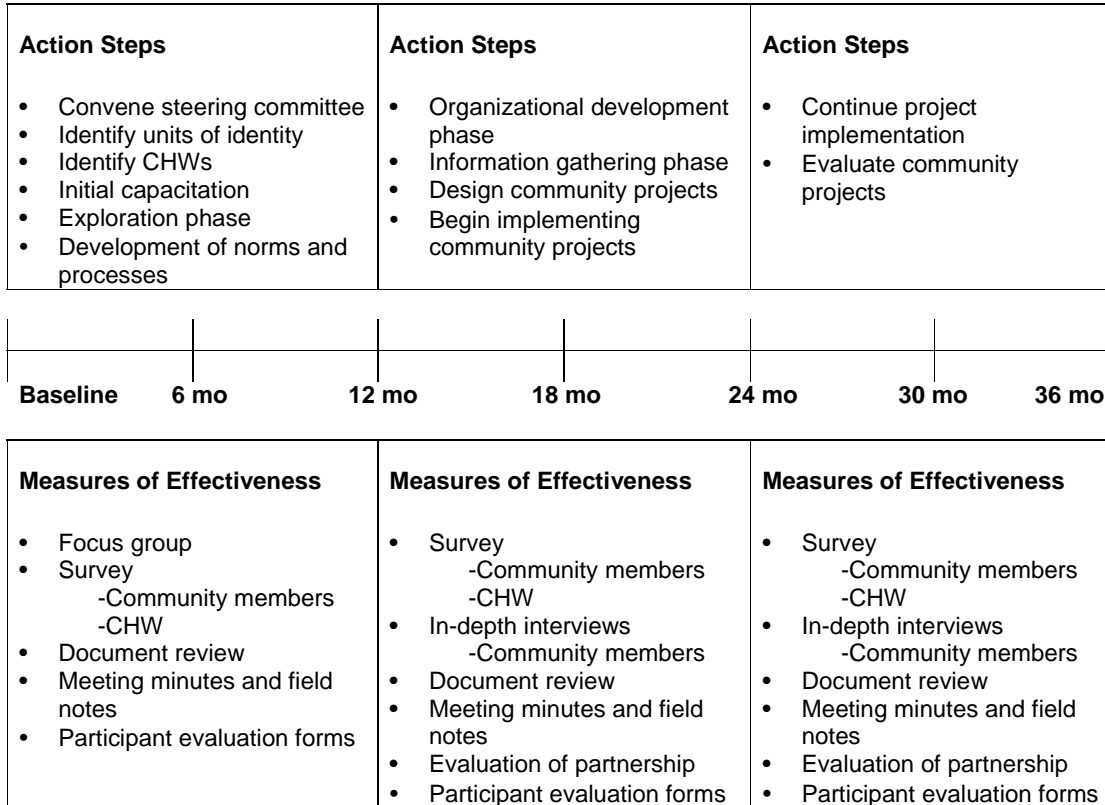
There are also limitations of the methods used to delineate and measure "community" in this study. As noted in the literature, community is defined differently for different people and is difficult to operationalize (19,53). This study will allow individual participants to determine what community means to them for purposes of data collection and intervention-related activities.

It is highly likely that there are other variables that determine how one perceives their community above and beyond those that are included in this intervention research project. For example, research suggests that conditions related to crime, violence, and social disorder are predictive of one's assessment of their community (19,65,86). This study will attempt to assess those political, social, and cultural conditions that influence civic participation and general well-being.

The study's data will be collected from participants who are willing to be involved in the project. There may be an inherent response bias in that those who are available and willing to participate may

differ on some important characteristics from those who are not. To reduce the effects of such bias, the project will seek the participation of residents of varying age and race/ethnicity, for example. Finally, as the results of the study are based upon the experiences of African American and Latino residents in Multnomah County, Oregon, any effort to generalize the results to other populations in other contexts should be made with caution.

D.7. Intervention Plan, Action Steps, and Project Timeline. The goal of Poder es Salud/Power for Health is to study the implementation of a participatory approach to identifying health problems and developing solutions. The Project Timeline (Figure 2) provides a visual of how the steps in this approach of employing CHWs who use Popular Education (as described below in Sections D.7.1-D.7.3) are related to the collection of the measures of effectiveness (described in the Section D.3. Evaluation Design and Measures of Effectiveness). In Figure 2, the action steps proposed for the intervention are listed above the time line during the year in which they will take place. The measures of effectiveness are listed below the time line during the year in which they will be measured.



D.7.1. Build the Capacity of the CHW Team

Action Step 7.1.1: Conduct preliminary identification of communities. This action step, which will take place by month 3, will involve conducting additional community assessment to strengthen understanding of the historical forces that have shaped development of the African American and Latino communities and identify similarities and differences in experience. Methods of assessment will include focus groups and interviews with steering committee members and exploratory focus groups with community members.

“Units of identity” will be identified within the two communities. These may include: neighborhoods, churches, sororities, soccer leagues, people from same region or town in Mexico, etc. Methods of identification will include focus groups and interviews with steering committee and exploratory focus groups with community members.

Action Step 7.1.2: Identify 4 CHWs/promotores/as de salud. Between months 1-4, project staff will develop a list of qualities essential for effective CHWs. The list will be based on input from the steering committee and findings of the “Roles and Competencies” chapter of the National Community Health Advisor Study (70). (See Appendix C-E.)

In consultation with community partners, project staff will determine what distribution of CHW FTE is most appropriate in each community and prepare job descriptions and announcements accordingly. Role descriptions will be based on input from the steering committee and the roles of CHWs identified in the National Community Health Advisor Study.

A variety of methods will be used to identify potential candidates for CHW positions including the following: 1) Steering committee members will use community networks (church bulletins, announcements at services, word of mouth, etc.) to publicize positions; 2) Steering committee members and project staff will use a modified “reputational method” (62) to identify names of natural community leaders; and 3) Position announcements will be advertised in community newspapers and on community radio. Based on applications received, interviews will be conducted and CHWs/promotores/as will be selected.

Action Step 7.1.3: Develop initial capacitation curriculum for CHWs. This action step will take place concurrently with the identification of CHWs. During this phase, project staff will assess the existing curriculum of the Community Capacitation Center (CCC) to determine what changes need to be made for this project. (The curriculum of the CCC is based on the findings of the “Roles and Competencies” chapter of the National Community Health Advisor Study and uses Popular Education as the methodology for all sessions. A majority of the facilitators are experienced CHWs. See Appendix F.)

Based on the assessment, project staff will identify facilitators for new sessions and ensure that all facilitators are capable of using Popular Education methodology, either by selecting facilitators who are already capable or by providing workshops in the theory and practice of Popular Education. Existing modules will be enhanced and new modules developed as needed. Foci for initial capacitation will include: research and evaluation methodology, social determinants of health, group facilitation, community organizing, and public health intervention models. Project staff will establish the number of academic credits to be awarded by the Institute for Health Professionals of Portland Community College and prepare a contract.

Action Step 7.1.4: Provide 160 hours of initial capacitation. Experience has shown that while initial capacitation of CHWs is extremely important, most new CHWs are eager to begin their work in the community as soon as possible. Therefore, the project will divide the initial capacitation into two segments. Between months 5-6, CHWs will participate in 80 hours of initial capacitation. Eighty additional hours of capacitation will be provided between months 11-12.

Action Step 7.1.5: Provide on-going support, capacitation, networking and professional development for CHWs. Between months 7 and 36, CHWs will participate in a variety of activities designed to encourage their professional and skill development. These will include on-going capacitation sessions (at least 8 hours per month); process groups in which CHWs will discuss how their work is affecting their lives and vice versa; and attendance at monthly meetings of the Oregon Public Health Association’s CHW Committee.

D.7.2. Develop successful, community-driven interventions

Value-based organizing (60) has proven to be an effective strategy for involving community members in the identification and resolution of community problems, and will provide the structure in which

CHWs will use Popular Education methodology. *Poder es Salud/Power for Health* is indebted for the clear explanation of this method to organizer and participatory researcher Fred Nash.

Action Step 7.2.1: Exploration Phase. By month 9, CHWs will conduct additional identification of potential groups and units of identity with which to work. In the Latino community, these units of identity may include groups already identified by the Latino Network (see Item F: Activities Related to the Grant.) In their assessment, they will take into account the existing level of social capital and cohesiveness within groups. They will meet with existing groups and leaders of those groups to explain the process and the goal, and identify groups that wish to be involved.

Once groups have been identified, CHWs will meet with them approximately twice monthly between months 9-12. They will use Popular Education to accomplish a number of objectives, including: 1) to define health and a healthy community; 2) to identify community strengths, health problems, and causes of health problems; and 3) to become familiar with a range of possible strategies for promoting health. In addition, CHWs will share with community members some of the same topics covered in their capacitation, including: 1) An introduction to the public health system; 2) Leadership skills; 3) Meeting facilitation and agenda preparation; and 4) Interviewing skills.

Action Step 7.2.2: Organizational Development Phase. During this phase, which will take place between months 13-14, group members will conduct one-on-one interviews with people in their units of identity to further define issues. New group members will be recruited as appropriate. Rather than simply asking for a laundry list of concerns, interviewers will listen for deeper concerns and ask people to share their stories to shed additional light on concerns and causes. They will seek to build relationships with the people they interview as a basis for future action. Throughout this period, CHWs will continue to conduct regular meetings with group members to process their experience and help solve problems that arise in the course of conducting the interviews. Also during this phase, group members will begin to share responsibility with CHWs for preparation of agendas and facilitation of meetings in order to practice skills learned in the exploration phase.

Action Step 7.2.3: Information-Gathering Phase. During this phase, lasting from month 15 through 16, groups will further define the issues on which they wish to focus. "Issues," as defined by Nash (1993), are more concrete than values but more narrow than problems. Two methods will be used to explore the causes of issues. Based on group requests, project researchers, project staff and CHWs will prepare and present sessions on causes of health issues, including structural inequities and other social determinants of health. In addition, group members will conduct information-gathering actions "with people who are directly affected by and, more importantly, who can directly affect an issue" (60). These people may include police officers, school officials, Health Department staff, and CBO staff, among others. The objective of these actions will be to provide further information about the causes of health issues and possible solutions.

Action Step 7.2.4: Design community interventions. From month 17 to month 19, CHWs will assist group members to design the interventions they will employ to address the issues they have identified. Interventions may include media advocacy, creation and facilitation of health classes and support groups as well as other interventions. Intervention design will include development of evaluation mechanisms and initial development of lesson plans and educational and promotional materials, as well as resolution of concrete issues such as where and when meetings will be held, what provisions will be made for childcare and transportation, and how participants will be recruited.

Action Step 7.2.5: Conduct community interventions. The yearlong period from month 19 to month 30 will be dedicated to conducting the interventions. We expect that during this period, project staff and CHWs will have to contend with substantial attrition from groups, and possibly the dissolution of some groups and the creation of new groups. In this case, CHWs will use the skills they have developed and the support and consultation from project staff to recreate the process already

described, enlightened by new learnings. This phase may include seeking additional funding to enable groups to conduct or expand their interventions.

Action Step 7.2.6: Evaluate community interventions. The final six months of the project period will be dedicated to assessing the success of the interventions in achieving their stated goals, and reporting evaluation results to the community groups, project and research staff, and other interested groups and audiences. During this phase (as well as during earlier phases as appropriate), CHWs and group members will collect, evaluate and analyze data as specified in their evaluation design, using the research and evaluation skills they have developed in the earlier phases. They will make decisions about how and with whom to share their evaluation data to most effect. This data will also be shared in the final project report.

D.7.3. Develop a Successful Campus-Community Partnership

Action Step 7.3.1. Convene the steering community. During month 1, project staff will assess the planning team to determine if any other organizations or groups need to be represented on the formal steering committee for the project. They will identify other organizations conducting similar interventions in the two communities and recruit other members and organizational representatives as needed.

Action Step 7.3.2. Establish role, norms and processes for working together. Campus-Community Partnerships for Health has identified the establishment of roles, norms and processes as essential for effective partnerships. This process will take place by month 3.

Action Step 7.3.3. Conduct regular meetings of the steering committee. The steering committee will meet at least monthly during the first year of the project, and at least six times per year in the second and third years of the project. Popular Education methodology will be used to conduct team building and capacity building with steering committee. Topics of capacity-building will include: research and evaluation methodology; ways of reporting research findings; origins and applications of the CHW model; Popular Education methodology applied to health; types of public policy and the ways in which public policy affects health; and ways to impact public policy. Steering committee members will also capacitate one another about culturally competent health promotion strategies in their respective communities. After the first six months, preparation of agendas and facilitation of meetings will rotate among all steering committee members.