Ameliorating Cancer Disparities in Medically Underserved Women:
A Community-Based Approach

Chapter for the Handbook of Prevention in Counseling Psychology

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Health disparities have been broadly defined as significant differences in “the overall rate of disease incidence, prevalence, morbidity, mortality, or survival rates in the population as compared to the health status of the general population” (Minority Health and Health Disparities Research and Education Act, 2000). With regard to cancer specifically, the National Cancer Institute (NCI) has asserted that health disparities are “differences in the incidence, prevalence, mortality, and burden of cancer and related adverse health conditions that exist among specific population groups in the United States” (Center to Reduce Cancer Health Disparities [CRCHD], 2011). Although a small portion of these disparities arise due to genetic factors, a great number of health disparities arise in the context of adverse psychosocial conditions (Commission on Social Determinants of Health [CSDH], 2008; Smedley, Stith, & Nelson, 2003). Thus, there is a need to focus on the psychosocial context in which disparities arise. Some of the social contributors to health disparities include inequitable distribution of power, financial and other resources, levels of formal education, gender, race and ethnicity, as well as living conditions including poverty, family context, neighborhood characteristics, access to health care, the natural environment, and the built environment (CSDH, 2008; Healthy People 2020, 2010). Given that psychosocial factors contribute greatly to the development and sustained effects of health disparities, and these factors are largely amenable to prevention, this phenomenon is of great interest to counseling psychologists.

For the purposes of this chapter, we define prevention as the “arresting of adverse developmental, psychological, educational, health, and other life outcomes,” as proposed by Reese and Vera (2007, p. 764). In addition, we focus on two specific cancers, breast and cervical, because they are amenable to prevention through effective intervention approaches. In adopting this definition, however, we must clarify the levels of prevention that are possible with regard to these
two cancer types. Currently, we cannot effectively prevent the occurrence of breast cancer at a public health level, therefore prevention through early detection is the best way to fight the disease. For example, the main risk factors for breast cancer cannot be changed (e.g., sex, age, genetic predisposition), and not all women exhibit the few lifestyle factors that have been shown to have a positive effect in lowering risk of disease (e.g., having children before the age of 30, engaging in regular physical activity; American Cancer Society [ACS], 2011a). Therefore, the best weapon we have against breast cancer is early detection. Early detection can be achieved through mammography (an x-ray of the breast that can detect tumors when they are too small to be felt by the woman or medical professionals), clinical breast exams (tactile exams performed by a physician or nurse) and breast self-examinations. Through early detection, tumors are detected at earlier stages when there are more opportunities for treatment and a cure (ACS, 2011a). Medical advances have attained remarkable outcomes. For localized tumors, the 5-year survival rate is 99%, for regional disease it is 84%, and for distant metastases it is 23%, reflecting the lower availability of effective treatments for cancers detected at more advanced stages (Howlader et al., 2011). In contrast with breast cancer, cervical cancer can be prevented through regular Pap smear exams (NCI, 2010). With a Pap smear, medical professionals collect cells from the cervix that may show abnormal cell growth before it becomes cancerous, in addition to having the opportunity to identify cells that may have already become malignant. Abnormal pre-cancerous cells may be treated effectively, preventing the cancer from developing; cancerous cells may be treated as well, with better prognosis when detected in the early stages (NCI, 2010).

Thus, given the opportunity to engage in prevention to ameliorate and possibly eliminate these health disparities, we can conceptualize cancer inequities as a social justice issue that must be addressed (Buki & Selem, 2012). What makes health disparities such a vital issue for counseling psychologists, specifically, is when the causes of these disparities cross beyond biology and into the
social realm (Buki & Selem, 2012). In addition, there are several key concerns that render this a timely issue. We highlight three of these factors next.

First, population projections show that ethnic minority populations, who are often most affected by health disparities, will undergo dramatic demographic shifts in the coming decades (U.S. Census Bureau, 2008). Latinos currently make up about 16% of the population, and will grow to 25% in the year 2035. Asian Americans currently make up about 4.7% of the population, and will grow to 6.7% in 2035. Among these two groups, most dramatic gains will occur in the older adult population (U.S. Census Bureau, 2008). With larger populations, existing health disparities are likely to worsen, especially within the current financial climate of diminishing resources (Buki & Selem, 2012). The potential sharper inequities would represent a tragic outcome for our national health overall.

Second, given the wide ranging evidence of health disparities (Smedley et al., 2003), several key organizations have identified the amelioration or elimination of health disparities as a top priority. As time has gone on, the elimination of health disparities has taken on a more pressing focus. For example, for the past 20 years Healthy People (a national initiative that identifies and prioritizes national health objectives for a 10-year period) has had an overarching goal focused on disparities. However, through the years the language used in crafting the goal has become stronger and more comprehensive. In Healthy People 2000, the goal was to reduce health disparities among Americans. By the time Healthy People 2010 was written, authors felt that the goal should go beyond reducing health disparities and call for their elimination. An even broader goal was crafted for Healthy People 2020, which included achieving health equity, eliminating disparities, and improving the health of all groups (Healthy People 2020, 2010).

Other federal initiatives include the creation of nine Centers of Excellence dedicated to eliminating ethnic and racial disparities in health, established in the year 2000 by the Agency for
Healthcare Research and Quality (AHRQ; AHRQ, 2001). Also in 2000, Congress founded the National Center on Minority Health and Health Disparities with the specific mission of helping the NIH reduce, and ultimately eliminate, health disparities. Through this initiative, each institute and center designed a plan for eliminating health disparities, and the plans have become part of a larger national strategic plan to reduce and ultimately eliminate health disparities (Institute of Medicine [IOM], 2006). Specifically with regard to cancer disparities, in 2001 the National Cancer Institute established the Center to Reduce Cancer Health Disparities, which is critical to the Institute’s efforts to reduce and eventually eliminate cancer health disparities through research, training, and outreach (CRCHD, 2009). We note, however, that most funding provided by the NIH for health disparities is in the form of time-limited projects that usually last about three years. There are several downsides to this. First, it takes time to develop trust and engage the community in a research project. Second, many ethnic minority communities are skeptical of individuals who come in to take information from the community without giving back in the form of a sustainable long-term gain. Finally, although it is possible that through these projects we may have garnered knowledge about the issue and even have ameliorated the health disparity, the fact that the funding is not permanent severely limits sustaining the longevity of the gains. These facts render the development of community-based, sustainable prevention projects even more critical if we are to truly make a difference in ethnic minority communities.

Closer to home, in its first ever strategic plan (Anderson, 2009), the American Psychological Association (APA) crafted a goal designed to expand psychology’s role in advancing health. Specifically, one of the objectives within this goal is to promote psychology’s role in the amelioration of health disparities (Clay, 2010). Consistent with this objective, the APA has engaged in several educational and legislative efforts to ameliorate health disparities in recent years (for a review, see Buki & Selem, 2012).
Lastly, the elimination of health disparities is consistent with counseling psychology’s social justice mandate (Vera & Speight, 2003). Historical injustices and oppressive conditions such as racism, classism, and sexism, continue today in the form of inequitable social conditions from which many health disparities arise (Buki, 2007; Jones, 2010; Smith, 2005). In the health care arena, injustice results when individuals’ negative health outcomes are the result of bias in health promotion efforts, societal conditions, negligence, or incompetence (Buki & Selem, 2012). Taking an expanded view of ethics, as required when viewing issues from a social justice lens (Speight & Vera, 2004), as counseling psychologists we are called to engage in prevention, advocacy, and outreach efforts that are culturally relevant and involve individuals in their communities (Reese & Vera, 2007).

In support of these goals, the purpose of this chapter is threefold. First, we sought to introduce our readers to some key factors that make our work in this area imperative. Second, we present an overview of breast and cervical cancer disparities and the main factors that influence screening in medically underserved populations (i.e., traditional predictors of low screening adherence, cultural explanatory models, and the structure of communities). Third, given the need to anchor prevention efforts in the communities in which disparities arise, as well as the need to involve community participants in the design and implementation of prevention programs (Reese & Vera, 2007), we describe the Community Readiness Model (Plested, Edwards, & Jumper-Thurman, 2006), a community-based model that has been successfully used to assess a community’s readiness for intervention regarding cancer screening. Further, we discuss a community-based intervention that has been widely used to increase cancer screening rates in medically underserved populations, namely the use of lay health advisors to inform women and recruit them for cancer screenings.

As we discuss the various topics, we place a particular focus on Latina populations. We selected issues related to Latina women as timely for various reasons: (a) Latinas experience a range
of health disparities related to these cancers that are well documented, (b) they are part of the fastest growing ethnic minority group, with demographic projections suggesting that as the number of Latina women increases, so will the number of women diagnosed with cancer, making it an even more pressing concern than it is today, and (c) as an immigrant population, mainstream approaches are unlikely to be effective. Instead, the factors that determine disparities are complex and require a focus on cultural aspects of screening and prevention. Thus, we begin by providing an overview of breast and cervical cancer statistics, including a description of key disparities among medically underserved groups.

**Cancer Disparities in Medically Underserved Women**

In the United States in 2011, it was estimated that 288,130 women would be diagnosed with breast cancer and 39,520 would die from it. Men can develop breast cancer as well, accounting for 1% of all breast cancer cases (ACS, 2011a). However, given the disproportionate prevalence in women, as well as the fact that prevention approaches are not recommended for men at this time (ACS, 2011a), women will be the focus of this chapter.

With regard to cervical cancer, it was projected that 12,710 new cases of invasive cervical cancer would be diagnosed in 2011, although estimates suggest that non-invasive cervical cancer occurs about four times more often. Approximately 4,290 women were expected to die from cervical cancer in 2011, an unfortunate fact given that cervical cancer can be prevented through regular use of Pap tests (ACS, 2011c).

Ethnic minority, low socioeconomic status (SES), immigrant, and older women suffer a disproportionate burden of breast and cervical cancer (IOM, 1999). For example, in the period 2003-2007, the breast cancer mortality rate for African American women was 39% higher than for non-Latina White women, despite the fact that African American women had a lower incidence rate overall. Similarly, although the number of new cervical cancer cases has declined overall, African
American women have an incidence rate that remains 39% higher than that of non-Latina White women. The 5-year relative survival rate is lower for African American women (61%) than non-Latina White women (72%). Overall, African American women are twice as likely to die from cervical cancer as non-Latina White women (ACS, 2011b).

Cancer health disparities are evident in other groups as well. For example, across all regions in the United States, American Indian/Alaskan Native women are less likely to be diagnosed with localized breast or cervical cancer than non-Latina White women. Moreover, despite the fact that across groups, Asian American women have the lowest incidence and mortality rates for cervical cancer, women of Vietnamese descent have the highest rates of all ethnic minority women (ACS, 2008). Extant research reveals that Latina women, in particular, suffer a disproportionate burden of breast and cervical cancer. Breast cancer is the leading cause of cancer death among Latina women (ACS, 2009). Despite having lower breast cancer incidence rates than non-Latina White women (Siegel, Ward, Brawley, & Jemal, 2011), Latinas are at higher risk of being diagnosed at later stages, when there are less treatment options and prognosis is more guarded. Conservative estimates show that the 5-year breast cancer survivorship rate for Latinas is 85.8%, which is lower than that for non-Latina Whites, at 88.5%. Overall, Latina women are 20% more likely to die from breast cancer even when accounting for age and stage (ACS, 2009). In addition, there is growing evidence that Latina women are being diagnosed at younger ages and are disproportionately affected by a more aggressive type of cancer (Biffl, Myers, Franciose, Gonzalez, & Darnella, 2001; Miranda et al., 2011). Latina women also have higher cervical cancer incidence rates, 12.5 per 100,000, compared to 7.7 per 100,000 among non-Latina White women (Siegel et al., 2011). Moreover, the cervical cancer mortality rate for Latinas is a third higher, 3.1 per 100,000 compared to 2.2 per 100,000 for non-Latina White women (Siegel et al., 2011). The lower breast cancer survivorship
rate and higher cervical cancer incidence and mortality rates among Latina women are primarily attributed to this group’s lower mammography and Pap smear screening participation (ACS, 2009).

Latinas have consistently shown lower breast and cervical cancer screening rates than non-Latina White women. Data from the 2005 National Health Interview Survey (NHIS) indicated that only 59.6% of Latinas reported having had a mammography exam within the past two years compared to 68.1% of non-Latina White women (ACS, 2009). Similarly, Latina women are less likely to adhere to Pap smear screening guidelines than non-Latina Whites, with 74.5% of Latinas reporting a Pap smear within the past three years compared to 81.4% of non-Latina White women (ACS, 2009). In addition, Latina women are less likely than non-Latina White women to engage in timely follow up when abnormal cancer findings are present (Press, Carrasquillo, Sciacca, & Giardina, 2008). There are many factors that contribute to medically underserved women’s lower rates of screening and follow up. We take these up next.

Factors Influencing Breast and Cervical Cancer Screening

Multiple structural, cultural, and individual-level barriers contribute to decreased screening participation rates and, consequently, to the wide cancer disparities in incidence, mortality, and survival rates among those who are medically underserved (Akers et al., 2007; Peek & Han, 2004). It is critical to understand the factors that contribute to these disparities if we are to design effective preventive interventions (Reese & Vera, 2007). In the remainder of the section, we address the following barriers to screening: (a) traditional predictors of low mammography and Pap smear screening rates, (b) cultural explanatory models, and (c) the structure of communities in which women reside.

Traditional predictors of low screening adherence. Among medically underserved women, lack of access to health insurance, not having a usual source of care, low levels of formal education, and low income are consistent markers for mammography and Pap smear underuse (Akers et al.,
2007; Buki & Selem, 2009; Peek & Han, 2004). In addition, linguistic issues act as barriers for many immigrant women, who may be overwhelmed by the complexities of the U.S. health care system and may not receive interpretation services, despite the fact that language and culture have been recognized as key issues in health care delivery. In fact, there is a federal mandate to provide linguistically and culturally appropriate services by organizations receiving funds from the federal government (U.S. Department of Health and Human Services, 2001), but unfortunately it is not widely implemented as it is an unfunded mandate. In addition, recent research has yielded some interesting findings suggesting that societal factors may trigger psychological responses that interact with biological factors to foster disease. For example, neighborhoods with unhealthy social environments (e.g., poverty, crowding) engender social isolation and depression (Yen & Kaplan, 1999) which, in turn, alter the stress-hormone response. This response activates biochemical pathways that make it possible for cells in breast cancer tumors to survive for longer periods of time, possibly accounting for high mortality rates in African American women (Gehlert et al., 2008).

**Cultural explanatory models.** In conceptualizing cancer health disparities, it is critical to address issues of culture. Culture is a lens that is used to derive meaning from information, thus culture influences individuals’ understanding of their health status and options for diagnosis and treatment (Smedley et al., 2003). Culture has been defined as the values, beliefs, expectations, and group norms that are related to particular behaviors or outcomes (Betancourt & Lopez, 1993). For most individuals, their conceptions of health and illness are filled with emotional meaning which emerges from cultural beliefs and values, personal and idiosyncratic beliefs, popular conceptions of illness, and biomedical explanations of illness (which are subject to change over time; Rajaram & Rashidi, 1998). With regard to cancer screening, most health decision-making models tend to focus on cognitive processes and overemphasize rationality (Flynn, Betancourt, & Ormseth, 2011;
Rajaram & Rashidi, 1998). Oftentimes, these models do not consider affect and the emotional components of help seeking that are likely to influence women’s decisions to obtain screenings. For example, a Latina woman who espouses traditional social values such as *familismo* is likely to prioritize the needs of the family over her own. Consistent with *familismo*, family issues take precedence over individual concerns (Sanchez-Burks, Nisbett, & Ybarra, 2000). If a woman has a busy schedule that includes work and caring for several children, she may readily make a medical appointment for a sick child but may not take the time to schedule a mammogram for herself in the absence of overt symptoms of illness. Thus, this woman may not be influenced by health messages that target only the individual and ignore her sociocultural context (Elder et al., 2009). Most researchers and health professionals fail to recognize CEMs despite the fact that by identifying and addressing them, they are more likely to develop health promotion strategies that effectively target the beliefs of medically underserved women (Baker et al., 1997; Rajaram & Rashidi, 1998). Thus, it is important to conceptualize breast and cervical cancer screening as behaviors that are influenced by a woman’s sociocultural realities.

**Structure of communities.** A growing number of studies indicate that the communities in which women reside have significant effects on their health promotion behaviors such as mammography and Pap smear screening participation (McElroy, Remington, Gangnon, Hariharan, & Andersen, 2006; Mobley, Kuo, Clayton, & Evans, 2009; Wells & Horm, 1998). Thus, we argue that it is critical to also examine an understudied factor in cancer prevention: the structure of communities in which women reside. That is, the resources and assets, or lack thereof, of a community play a key role on women’s health behavior and decision making. These resources and assets include the availability of educational programs and screening exams, accessibility to information and services, and quality of the resources available (Bigby, 2007). Regardless of individual sociodemographic characteristics such as race, ethnicity, or income status, women
receive widely varying medical care according to where they live and the health system that provides their care. Community context is particularly important to examine among medically underserved women because they are more likely to live in more segregated and economically disadvantaged areas than non-Latina White women (U.S. Census Bureau, 2011; Williams & Collins, 2001). In economically disadvantaged areas, women not only have poor access to health care-related resources, but also to education and employment opportunities (Bigby, 2007). Women with lower levels of formal education are less likely to obtain information about the importance of screening exams (Kim & Jang, 2008), and women with limited employment opportunities are less likely to have employer-based health insurance (Carrasquillo & Pati, 2006), which would offer the means to pay for the cost of mammograms and Pap smears.

In fact, data on breast and cervical cancer incidence and mortality rates, as well as screening participation rates, differ by geographical location (Eschbach, Mahnken, & Goodwin, 2005). Moreover, variations in diagnosis stage of breast and cervical cancer based on a woman’s place of residence have also been documented (Barry & Breen, 2005; Reyes-Ortiz, Eschbach, Zhang, & Goodwin, 2008). Perhaps most interesting are findings showing that for women of a specific ethnic or racial group, rates differ nationally along several dimensions. For instance, African American women are more likely to have obtained at least one mammogram than their non-Latina White counterparts in ten regions in the country (Goodman, Brownlee, Chang, & Fisher, 2010). Yet, nationally, African American women ages 67-69 are 13% less likely to have obtained at least one mammogram in a two-year period than non-Latina White women in the same age group (Goodman et al., 2010). Similarly, another study showed that although Latina women made some gains in screening participation rates, these were not uniformly distributed across various Latino communities (e.g., Kang-Kim et al., 2008; Nelson, Bolen, Marcus, Wells, & Meissner, 2003). A longitudinal study conducted in 10 states found that between 1994 and 2004, mammography
participation rates among Latina women increased 16% points in New Jersey and 10% points in Florida, yet decreased in Texas and remained unchanged in several states (Kang-Kim et al., 2008).

Even among women with similar socio-demographic and health care characteristics, differences in screening by region have been identified. In a multi-state study of Mexican American women, those living in San Francisco were more likely to report having obtained a mammography screening exam within the past two years (60%) than those living in Laredo (45%) or Houston (55%), despite having similar demographic characteristics (Ramirez et al., 2000). Findings also suggest that the income level of the neighborhood affects screening rates: Women living in impoverished neighborhoods are 33% less likely to obtain a mammography exam than women living in communities with a lower percentage of older adults in poverty (Mobley et al., 2009). In addition, research suggests that racial and ethnic segregation may act as a facilitative factor or barrier to screening for different groups. For example, Native American women living in areas with greater segregation of Native Americans are 16% more likely to have used mammography than those living in less segregated neighborhoods (Mobley et al., 2009). In contrast, Latina women living in higher segregated Latino neighborhoods are 3% less likely to engage in mammography screening than those living in other areas (Mobley et al., 2009).

Interestingly, several studies have examined screening rates among women in Chicago, allowing for a comparison of rates along various factors. Findings suggest that Chicago has the lowest mammography screening rates for Medicare recipients in the country (50.1%) in comparison with the national rate (63.2%; Goodman et al., 2010). Yet, there is wide variation in screening rates among women overall. A community health survey of six different communities in Chicago found that women residing in South Lawndale, a predominately Mexican immigrant neighborhood, had higher breast and cervical cancer screening rates than women in more affluent and predominately non-Latina White communities (Whitman, Shah, Silva, & Ansell, 2007). Specifically, 87% of the
women living in South Lawndale reported having ever had a mammography exam and 90% reported having had a Pap test at some point in their lives (Whitman et al.). A second study, a survey of immigrant Mexican women also in South Lawndale, provided support for these findings. Among women who were at least 40 years of age, 87% reported having had mammogram and 95% reported having had a Pap smear screening exam at least once in their lives. These high rates of screening were reported by women with low incomes, no health insurance, and low levels of formal education (Montoya, 2011).

Several aspects of the community context influence screening participation: The physical environment, health care system factors, the availability of social services and other types of organizational support, and the community’s social context. The physical environment includes the health care system infrastructure, social institutions, transportation systems, policies, and regulations that determine access to cancer screenings and non-health-related services (Mobley et al., 2009). In a large, national study of racially and ethnically diverse women living in 35 metropolitan areas, researchers found that among women with low incomes, those living in more affluent communities were less likely to report receiving a mammography exam than those living in less affluent communities (Coughlin et al., 2005). This finding suggests that in the high income community, issues such as limited public transportation, low availability of free or reduced cost screenings, and limited accessibility to health centers and information may have influenced the ability of women with low income to obtain cancer screenings (Coughlin, King, Richards, & Ekwueme, 2005). Similarly, transportation barriers for women living in isolated rural communities effectively hinder women’s mammography and Pap smear screening participation (Coronado, Thompson, Koepsell, Schwartz, & McLerran, 2004).

Health care system factors that contribute to health disparities include location, hours of operation, reduced cost screenings, bilingual providers and health professionals, availability of
support services (e.g., interpreters, outreach workers, health educators), and quality of care (e.g., patient centeredness, efficiency, appropriateness; Akers et al., 2007; Bigby, 2007; Peek & Han, 2004). Women who have reported regular mammography screening have cited that getting health care when they need it is easy, and also reported having a usual source of health care such as a neighborhood clinic (Otero-Sabogal et al., 2004).

Another characteristic of the physical environment that influences screening is the availability of social services and other types of organizational support for women’s health promotion services (Sorensen et al., 2003). Non-health care community organizations such as advocacy groups and religious organizations have proven to be effective collaborators in interventions oriented toward improving cancer prevention among Latinos (Puschel, Thompson, Coronado, Lopez, & Kimball, 2001). For example, Latina immigrants report receiving information on the importance of cancer screening from community sources such as community organizations and church more often than from their health care providers, clinics, or hospitals (Gany, Herrera, Avallone, & Changrani, 2006). Having access to this information has been positively associated with screening among Latina immigrants (Gany et al., 2006). Consequently, state programs that offer free or reduced cost screening exams must be complemented with local efforts that can inform women about services the importance of early detection (Otero-Sabogal et al., 2004).

Another key aspect of the community environment that may influence a woman’s cancer screening behavior is the social context of her neighborhood (Katapodi, Facione, Miaskowski, Dodd, & Waters, 2002; Kreuter & McClure, 2004). Social interactions have the potential to shape a woman’s attitudes, beliefs, knowledge, and emotions about breast and cervical cancer and screening exams (Mobley et al., 2009). Specifically, a woman’s social network is a social structure that consists of friends, family, colleagues, and other sources of contact (Katapodi et al., 2002). Typically, women receive various forms of social support through these relationships, which lay the
foundation for information acquisition about health (e.g., through discussions within the family and peer education; Campos et al., 2008; McCloskey, 2009). Strong social networks through family, friends, neighbors, community- and faith-based organizations, and culturally distinct social services help support and enable preventive health behaviors in ethnic minority women (Bigby, 2007). In addition to providing health information, social networks have been found to provide other types of support such as financial assistance, transportation, and information about other resources within the community (Suarez et al., 2000; Tejada, Thompson, Coronado, & Martin, 2009). However, a social network may also negatively influence screening behavior. For example, a woman who discusses health issues with others who have limited information like she does, may erroneously conclude that she is not at risk for breast cancer because she does not have a family history of the disease, when in fact the proportion of breast cancers that is genetically determined is only 5% (ACS, 2011a). Thus, in order for effective health behavior change to occur, high quality health information and knowledge must permeate the woman’s socio-cultural context, facilitating accurate information transfer through close social relationships.

The need to attend, specifically, to Latinas’ social context is underscored by results of a recent survey showing that 71% of Latinos reported receiving health information from their doctor, friends, family, church groups, or community groups within the past year (Livingston, Minushkin, & Cohn, 2008). Among Latina immigrants from Mexico, encouragement to obtain this exam from trusted women such as daughters and friends has been found to facilitate screening (Tejada et al., 2009).

In sum, there are several community factors that have the potential to greatly influence prevention efforts. We argue that knowing the condition and characteristics of the communities in which medically underserved women reside is critical to changing the current context and improving cancer screening participation. To understand the community context, there are several
empirically-derived methodologies that can be used by those intending to increase cancer screening rates in ethnic minority women, such as Action Oriented Community Diagnosis (Eng & Blanchard, 1991), Rapid Assessment (McNall & Foster-Fischman, 2007), and the Community Readiness Assessment (CRA), which is an application of the Community Readiness Model (CRM; Plested et al., 2006). Because the CRM has been used specifically in an effort to conceptualize and uncover community factors affecting cancer screening in medically underserved populations, we focus on the CRM in this chapter. Next, we describe the purpose of the CRM and the methodology associated with the CRA, as well as provide an example of its use with the Latina population. We follow that discussion with an example of a community-based intervention that has been used extensively to increase rates of cancer screening in Latina populations, namely the use of lay health advisors (LHAs) to inform and recruit women for screenings, and to help women navigate our complex health care system.

**Community Readiness Model and Assessment**

Given the importance of community context on breast and mammography screening participation, effective interventions must take into account community conditions. The CRM assists in the conceptualization of the economic, physical, and social environments of a community (Oetting et al., 1995), thus facilitating the identification and development of effective preventive strategies (Jumper-Thurman, Plested, Edwards, Helm, & Oetting, 2001). The CRM adopts a strength-based perspective by taking note of current and potential resources including time, people, money, and space available for prevention efforts (Plested et al., 2006). It emphasizes that all communities are different and that the specific social climate, resources, and leadership characterizing each community determine its ability to address the issue. The CRM proposes that there are six elements that need to be examined to determine a community’s readiness to change.
The following are the CRM’s six elements, adapted specifically as they pertain to the issue of breast and cervical cancer screening in a particular community:

1. Current efforts, programs, or policies on breast and cervical cancer screening targeting women;
2. Level of knowledge about breast and cervical cancer efforts, programs, or policies among women in the community;
3. Extent of support from appointed leaders and influential community members toward programs and services related to breast and cervical cancer screening efforts;
4. The prevailing attitude among women in the community toward breast and cervical cancer screening;
5. Community knowledge about breast and cervical cancer, including the importance of cancer screening and how screening services influence women in the community, and
6. Availability of local resources (e.g., people, time, money, space) to support breast and cervical cancer screening efforts (Plested et al., 2006).

According to the CRM, a community’s readiness to address an issue can be classified into 1 of 9 stages, starting from the No Awareness stage, in which the community and its leaders do not recognize the issue as a problem, to the Professionalization stage, in which a community and its leaders are knowledgeable about the prevalence, risk factors, and causes associated with the issue, and effective programs are in place (Plested et al., 2006). Importantly, the CRM provides guidelines about how to develop interventions tailored to a community’s readiness stage, optimizing resources to change the health behavior. Thus, by using the CRA (Plested et al., 2006), which was developed to assess the various aspects of the CRM, researchers can assess the “readiness” of a community to increase screening rates by interviewing leaders of the community who can speak about their professional, social, and community experiences and observations regarding this health behavior.
The CRM has been useful in examining the role of community on breast and cervical cancer screening among Latina women (Borrayo, 2007; Montoya, 2011). For example, Borrayo (2007) applied the CRM to understand the perceived factors Latina women hold toward participating in breast cancer control (screening procedures) and prevention (e.g., risk factor modification, lifestyle changes, and chemoprevention) activities. The information gathered was used to develop breast health education materials that incorporate how “the cultural and psychosocial factors, in the context of important systematic factors, influence women’s views about BC [breast cancer] and their decision to participate in BC prevention and control activities” (p. 613).

The CRM model was also adopted to uncover the factors that accounted for the disproportionately high mammography and Pap smear screening participation rates among Mexican immigrant women living in South Lawndale (Montoya, 2011). The CRA revealed that medical, faith-based, and community institutions in South Lawndale mitigate barriers related to language access and awareness of resources, which enhance accessibility to screening exams and services (Montoya, 2011). Specifically, several health facilities, community, and faith-based organizations in the community work on reducing and eliminating place-based factors to increase women’s access to information and screening services. Organizational and institutional practices effectively reduced or eliminated known barriers to screening such as language access, transportation, and difficulty navigating the health care system. For example, community organizations played a crucial role in helping women navigate the health care system and become aware of screening resources available in the community (Montoya, 2011). This supports the notion that community members “are in a unique position to formulate priorities for addressing neighborhood level factors that influence health outcomes, to mobilize and advocate for improved healthcare and other services, are effective agents of change and information, and enhance the effectiveness of initiatives to address health problems” (Bigby, 2007, p. 234)
Community Based Intervention: Using Lay Health Advisors

Several approaches have been employed to improve mammography screening rates among community dwelling Latinas (Martínez-Donate, 2009). Most interventions have been designed around existing community structures such as a local church or community center. These centers house extant peer networks and infrastructures that can be utilized to transmit health knowledge or information across a community. To realize this potential, health promotion programs have drawn on lay health advisors (LHAs). LHAs are individuals who work within the local community to inform their peers, mobilize community resources, and connect consumers with healthcare providers to promote healthy behaviors (Rhodes, Foley, Zometa, & Bloom, 2007). Within the literature, there are many similar terms used for LHAs such as community health advisors and workers, health aides, natural helpers, navigators, paraprofessionals, peer educators, promotores/as, and outreach workers (Eng, Parker, & Harlan, 1997). Their roles may vary from one project to another and range on a continuum from natural helping (informal) to the paraprofessional (formal), reflecting the different strategies used in public health interventions (Eng et al., 1997; Rhodes et al., 2007). In a qualitative study of LHAs working on a breast cancer screening promotion project, researchers found that LHAs varied in regards to levels of activity, participation and proactivity over time, which may explain why the research is equivocal in regards to formulating a clear definition of LHAs (Altpeter, Earp, Bishop, & Eng, 1999).

For the purposes of this chapter, we define an LHA as a community-dwelling individual who takes a proactive, multimodal role within the community and possesses a high degree of initiative (Earp & Flax, 1999; Rhodes et al., 2007). In addition, because LHAs work across various levels of the social and physical environment to enact health behavior change (Ayala et al., 2010), we conceptualize LHA interventions from a socioecologic framework, as tailored to the health promotion arena by Stokols (1996). In accordance with social ecological theory (Bronfenbrenner,
1979), health is influenced by multiple aspects of the physical and social environment, and health behaviors are shaped by the interdependence of environment and social connections; therefore, health promotion is enhanced when multiple levels of the framework are targeted (Grzywacz & Fuqua, 2000; Stokols, 1996, 2000). These systems or levels are adapted from Bronfenbrenner’s ecological systems theory (1979) and consist of the following: (a) the microsystem, which includes basic individual or psychosocial components (e.g., emotional processes, genes, gender), (b) the mesosystem, which refers to the institutional factors that shape or structure the environment (e.g., family, religion), (c) the exosystem, which includes the social settings that affect the environment of the individual (e.g., community, culture), and (d) the macrosystem, which refers to external values, policies and resources that create a context for society to function (e.g., societal values, governmental health policies; Grzywacz & Fuqua, 2000).

Because LHAs share program participants’ language, attitudes, norms, beliefs, and ethnic backgrounds, they have the potential to address several systems at once (Earp et al., 1997). Their roles span across several systems including the exosystem (e.g., cultural mediators), and the macrosystem (e.g., informal counselors, health educators, advocates, and community organizers; Earp et al., 1997; University of Arizona, 1998.). For example, in a study among Latinas in Colorado, participants were exposed to a promotora intervention at a church or culturally-tailored print intervention to increase breast cancer screening rates (Sauaia et al., 2007). Participants in the promotora intervention had a significantly higher increase in biennial mammograms than women who were exposed to the print materials alone. The promotora intervention was more successful because it addressed several systems, namely the microsystem, mesosystem, and exosystem, when compared to the print intervention which focused only on the microsystem. Thus, using LHAs is advantageous because the intervention can target various systems at once (Brownstein et al., 2007).
The use of LHAs is also consistent with several elements that have been identified as key in the design of culturally responsive interventions (see Reese & Vera, 2007). First, in using LHAs there is an understanding of how culture influences behavior change, and the intervention is tailored to program participants’ culture. Second, there is an understanding that researchers must have knowledge of the community to tailor an invention; this takes place by garnering knowledge from participants and community-dwelling LHAs. Third, there is an understanding that participants should partake in the intervention, and they are involved in the intervention (Reese & Vera, 2007). These elements highlight fundamental aspects of culturally responsive intervention.

Despite the interventions’ potential cultural relevance, research has been equivocal in supporting their effectiveness (Elder et al., 2009). Some authors have suggested that the mixed findings arise from the need to have a stronger empirical basis (Rhodes et al., 2007). Also, most studies lack a comparison group or fail to collect pre- and post-test data (Martínez-Donate, 2009; Rhodes et al., 2007). Consistent with Reese and Vera (2007), we note that community-based research is complex and challenging to document. Moreover, preventive interventions of this nature are often difficult to replicate or evaluate because each community has different needs, histories, and barriers, and LHAs may take on different roles depending on need. For example, in a national project using LHAs to increase Latina women’s rates of breast and cervical cancer screening, an intervention that was most successful in the Dallas Metroplex area was to hold day-long health fairs at local churches, whereas the most successful intervention in the Hartford, CT area was to go door to door to identify women in need of screenings (Buki, 1999). Although randomized clinical trials are considered the prototype of scientific evidence, these designs are difficult to achieve in community research because it is not always possible to randomize communities and populations (Meissner et al., 1998; Sauaia et al., 2006). Given the pressing need to reach all women in need of
screenings, it is ethically questionable to have a control group in a context of limited resources to assist women with an exam that is potentially life lifesaving.

Conclusion

Counseling psychologists have much to contribute to the promotion of healthy behaviors in medically underserved communities. Viewed from a social justice lens, health disparities are a form of oppression that is not inevitable. We have reviewed cancer disparities that are amenable to intervention, where women can successfully increase their adherence to screening behaviors. In this chapter, we proposed that it is imperative that researchers take into account women’s community context. In fact, there are multiple, complex factors that influence women’s mammography and Pap smear screening. However, we argue that anchoring interventions in the community is critical, given that known predictors of screening participation, such as access to care, access to information about breast and cervical cancer, and knowledge about screening services available varies across different regions, states, and communities. In addition, we argue that researchers must understand sociocultural aspects of health for their interventions to be effective. Traditional frameworks based on the biomedical model fail to recognize that decision making is not always individualistic and linear. Therefore, conceptualizing women’s screening decisions drawing from these frameworks may limit our ability to effect behavior change among medically underserved women. We hope through this chapter to inspire counseling psychologists who wish to widen their reach and contribute in a purposeful manner to the amelioration of health disparities in society.
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