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**Women's Heart Health
in Singapore:
A Culture-Centered
Framework**

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ABOUT CARE

Funded by a \$1.9 million grant from the National University of Singapore (NUS), CARE is a global hub for health communication research that uses participatory and culture-centered methodologies to develop community-driven health communication solutions. CARE is an affiliate organization of the Department of Communications and New Media at the Faculty of Arts and Social Sciences, NUS.

CARE is driven by the core principle that communities know best the solutions that are relevant to the problems that they identify as critical. CARE works closely with community organizations, policymakers, program planners and evaluators in developing culturally-centered solutions that are envisioned by community members in the grassroots in response to

the problems conceptualized by them.

CARE seeks to: (a) create a strategic research core for the social scientific study of health communication issues in Asia driven by the cultural worldviews of local communities, (b) develop health communication interventions and policies that are culturally-centered via the participatory capacity of local communities to create culturally meaningful and locally responsive health solutions, (c) disseminate the core principles and lessons learned from the culture-centered projects within Asia and across other sectors of the globe, and (d) build health communication research capacity in Asia by creating a training hub for the next generation of health communication theorists, researchers, practitioners, and policymakers across Asia.

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Women's Heart Health in Singapore: A Culture-Centered Framework

Sarah K. Comer & Mohan J. Dutta

CARDIOVASCULAR DISEASE (CVD) is the leading cause of death globally (Bonow, Smaha, Smith, Mensah, & Lenfant, 2002; Bonow, Smaha, Smith, Mensah, & Lenfant, 2011; Howson, Reddy, Ryan, & Bale, 1998; Mathers, Boerma, & Ma Fat, 2009; McKay, & Mensah, 2004; Michaud, Murray, & Bloom, 2001; Murray & Lopez, 1997; National Institutes of Health [NIH], 2012; World Health Organization [WHO], 2012). It is a non-infectious, non-transmissible disease that can be prevented by protective behaviors such as exercise (Goldstein et. al, 2001; Lee, Sesso, Oguma, & Paffenbarger, 2003;

Stampfer, Hu, Manson, Rimm, & Willett, 2000), diet (Heidemann et. al, 2008; Odegaard, Koh, Gross, Yuan, & Pereira, 2011; Rankin & Bhopal, 2001), and smoking cessation (Bhalla, Fong, Chew, & Satku, 2006; Cutter, Tan, & Chew, 2001; Doll, Peto, Boreham, & Sutherland, 2004; Woodward et al., 2005; Yusuf et al., 2004; Yusuf, Reddy, Ôunpuu, & Anand, 2001). However, cultural values affect conceptualizations of health, and in effect, engagement in preventative behaviors. We argue that the presentation of health promotion materials will lead to decreases in unhealthy behavior

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only when the culture of the target public is centralized in the development of intervention programs.

It is critical to develop culturally appropriate health interventions that are rooted in the cultural logics of local communities (Dutta, 2008, 2011; Dutta-Bergman, 2004a, 2004b) to effectively identify and address the barriers to health behavior. Additionally, the structural loci of factors causing heart disease, such as stress, access to healthy food, access to spaces for exercising, and access to preventive heart health care, suggest the relevance of heart health advocacy directed at promoting heart healthy social and community structures (Dutta, 2008; Fuster & Kelly, 2010; Melkote, 2000; Yusuf, Reddy, Öunpuu, & Anand, 2001). CVD is especially important to women, being the largest single cause of mortality among women worldwide (Jacobs & Eckel, 2005; Mikhail, 2005; Society for Cardiovascular Angiography and Interventions [SCAI], 2012; Soroptimist, 2007; WHO, 2004a; Women's Heart Foundation, 2006). CVD causes 8.5 million deaths among women annually, accounting for one-third of all deaths in women around the globe (American Heart Association [AHA], 2004; Odegaard et al., 2011; WHO, 2004b; World Heart Federation, 2013). Furthermore, there does not seem to be an end in sight with researchers projecting CVD to remain

one of the top three causes of death worldwide through year 2030 (Mathers & Loncar, 2006; WHO, 2012).

GLOBAL RESPONSE TO WOMEN'S HEART HEALTH

In response to CVD rates among women, a wide variety of heart health interventions have been developed globally (e.g., Mosca et al., 2007; Rosamond et al., 2000; Wilcox, Parra-Medina, Thompson-Robinson, & Will, 2001; Yusuf et al., 2004). Previous interventions have shared two common focuses: (a) maximizing intervention effect through targeting a broader population to increase efficiency at minimal cost (Bovet & Paccaud, 2012; Murray et al., 2003; Pearson et al., 2003; Yusuf et al., 2004), or (b) targeting the individual in promoting healthy preventative behaviors (Dehghan et al., 2012; Odegaard, et al., 2011; Rossouw et al., 1993; Tian et al., 1995).

Major global initiatives such as the INTERHEART project (Yusuf et al., 2004) focused on specific risk factors for CVD as a necessary precursor to intervention development. This project (a) illuminated the need for more non-Eurocentric studies for CVD; (b) pointed out that it would be a mistake to assume that all CVD interventions are applicable everywhere; and (c) suggested the need

for accounting for non-European voices in heart disease prevention. Entities like the American Heart Association (AHA) have developed community guidelines for heart health promotion to provide a framework for community leaders, policy makers, and healthcare practitioners to effectively promote CVD prevention through strategies including education via mass media and environmental change (Montoya et al., 2011; Pearson, et al., 2003).

Overall, scholars have suggested that heart health initiatives created for a Western audience may not be suited for other non-Western target populations, such as Singaporean women. Noting the worldwide variance in CVD risk factors (both behavioral and biological), Yusuf et al. (2004) observed that:

... researchers are unsure to what extent [...] findings apply worldwide. Some data suggest that risk factors for coronary heart disease vary between populations – e.g., lipids are not associated with this disorder in South Asians, and increases in blood pressure might be more important in Chinese people. (p. 937)

Similarly, Fuster & Kelly (2010) recognized the need to have localized knowledge of a population and its heart health situation. The scholars recommended a more comprehensive approach to heart health interventions focusing on

needs and capacity assessments, community-based programs, and population-based approaches. In other words, culturally-centered data that is specific to the local population is required to develop appropriate and effective heart health interventions.

WOMEN'S HEART HEALTH INFORMATION IN SINGAPORE

Singapore is a nation dealing with chronically high CVD mortality rates. CVD has remained the major causes of mortality for Singaporeans (Registry of Births and Deaths, 2004, Registry of Births and Deaths, September 2012), especially women. In 2008, CVD was responsible for the deaths of 2,500 women in Singapore, almost a third of all female deaths for the year (Robless, 2012; Singapore Heart Foundation [SHF], 2010).

However, amidst the high rates of CVD in Singaporean women, research focusing on Asian women with CVD in Singapore is “sorely lacking” (National University Heart Centre Singapore [NUHCS], 2009, para. 3). Few up-to-date nationwide reports on the state of CVD among women exist. The most recent report was published by SHF in 2010. There is also an alarming lack of literature on the experiences of women which contribute to their risk of CVD,

calling into question how past efforts to improve the heart health of Singaporean women were developed.

PREVIOUS NATIONAL EFFORTS TO IMPROVE HEART HEALTH AMONG SINGAPOREAN WOMEN

In addition to the paucity of localized CVD information, past health campaigns aimed at improving the heart health of Singaporean women appear to have had little effect on awareness, knowledge, and behavior of the target population. In 2009, SHF randomly polled 1,030 Singaporean women in 2009 to evaluate their 2007 national health campaign. The campaign consisted of a series of community-based educational events and nationwide messaging strategies. SHF (2010) found that less than 10% of the women thought that CVD was a significant health problem facing Singaporean women. Similarly, knowledge levels of CVD was also reported to be low – 42% of the women did not associate chest pains with heart attacks (SHF, 2010). Rankin and Bhopal (2001) also reported that 35% of the participants in their study said they did not understand the meaning of the term “heart disease.”

Past Singapore campaigns aimed at encouraging heart healthy behaviors include the National Healthy Lifestyle

Programme. Implemented in 1992, the National Healthy Lifestyle Programme was a nation-wide initiative to improve the overall health of Singaporeans and prevent disease. The campaign engaged a multitude of stakeholders, such as government ministries, health organizations, employers, schools, and mass media to encourage healthy living among Singaporeans. However, a follow-up evaluation to the program found that the prevalence of CVD risk factors such as hypertension, obesity, high blood cholesterol levels, and smoking among women had increased in the six years following the program's inception (Cutter, Tan, & Chew, 2001).

The large-scale heart health interventional research in Singapore (see Singapore London, 2011; Cutter, Tan, & Chew, 2001; GoRed Campaign, 2011) also call into questions the methodology and metrics used for evaluation, issues which will be elaborated on in the following section. Overall, past CVD interventions in Singapore have had limited success in improving the CVD situation among women, especially in terms of raising awareness and knowledge levels of the problem, and encouraging preventative health behaviors. This limited success can be attributed to the absence of an approach which foregrounds the culture of these women in the development of CVD interventions from the bottom-up.

CULTURE-CENTERED HEART HEALTH PROMOTION

CVD might be a global issue, but there is not one all-encompassing global solution. Instead, a more localized, culture-centered view of the issue with attention given to the voices of the target population would provide a solid foundation for effective and meaningful health promotion for CVD that is grounded in localized, lived experiences. The culture-centered approach (CCA) foregrounds the importance of acknowledging the disparate burden of heart disease that is experienced by women as a result of culturally and structurally rooted gendered values and beliefs, and suggests the need for developing culturally-driven policies and programs by foregrounding the voices of women living in Singapore as entry points to the development of health policies and health programs (Dutta, 2008).

CCA notes the importance of fostering spaces for listening to the voices of the women most affected by CVD in Singapore and who represent the target population under study. Working toward improving heart health is deeply intertwined with the experiences of Singaporean women. Hence, there is a need to foreground the experiences of women as narrators of stories as a framework for developing heart-healthy policies and programs.

Methodological Biases

Within populations, there remain differences in access, participation, and understanding. For instance, several researchers note that the South Asian sample is a difficult population to access (Rankin, & Bhopal, 2001; Yusuf et al., 2004). Much research has resorted to using methods like cross-sectional surveys of South Asian immigrants in other non-Asian countries (e.g., Rankin, & Bhopal, 2001), retrospective cohort studies, or utilizing Western evaluative measures for CVD research. Western measures become particularly problematic for studying the burden of heart disease in Singapore because as Xie et al. (2011) suggest, the identifiable risk factors for young women in Asia can be different from women in Western populations. Focusing on a monolithic Singaporean culture does not meaningfully articulate the lived experiences of the various sub-cultures in Singapore.

Yet another methodological gap is the absence of qualitative data on heart health in general, and specifically on women's heart health in Singapore. The absence of in-depth qualitative data therefore suggests the absence of contextual and culturally-rooted information on meanings and interpretations of heart disease. Similarly, an overview of research studies on heart health in Singapore evidences the absence of the

voices of communities that are affected by heart disease. Rankin and Bhopal (2001) report that accurate understanding of a population's knowledge about a disease "is a prerequisite for individuals and communities to take action to control these health problems" (p. 253). Also, instead of merely assessing the health needs of a population through descriptive statistics, we propose exploring why Singaporean women are not engaging in the protective lifestyle behaviors through qualitative assessment.

Women experience disparity in obtaining CVD care in Singapore due to lack of access and comprehension of CVD information. According to Chou et al. (2007): "Studies have shown that women with cardiovascular disease (CVD) are screened and treated less aggressively than men and are less likely to undergo cardiac procedures" (p. 1). Understanding the contextual and cultural environments would offer in-depth insights into the nature of the heart health disparities as experienced by women. Dialogically engaging the experiences of the women suffering from CVD is essential to understanding their health behaviors and their localized meanings of heart health.

Engaging Decision-making Structures

The Ministry of Health (MOH) plays a key role in shaping the policy

landscape on health. The Singapore Health Promotion Board (HPB) formed a Women's Health Advisory Council with the following mission: "The aim is to tap a diverse pool of health experts and experienced advocates in order to develop national initiatives that will equip women with health knowledge" (HPB, 2012, para. 5). While expertise is important in developing health solutions, neglecting of the voices of the target population can be counter-productive. Expert input needs to be dialogically engaged with the heart health experiences of women and their everyday experiences with the disparities in care in order to avoid a strictly top-down approach to intervention. By engaging the women in Singapore in dialogue, their experiences may offer entry points toward developing solutions that are meaningful to the women and their lived realities.

Engaging the Economics of Heart Health Promotion

The WHO suggests that CVD can contribute to household poverty (see also Fuster & Kelly, 2010) due to the high costs of hospitalizations and treatment often borne by the patient (Bloom et al., 2000). Noting the structural contexts of heart health disparities, CCA suggests the importance of addressing the financial aspects of care. Attending to the economic contexts of heart health,

health communication research needs to understand the needs of the community with the goals of minimizing hospitalizations and prevalence of CVD, which will hopefully lower costs for at-risk populations. The CCA foregrounds the structural contexts of health, noting the importance of addressing health problems as being situated within the larger socially driven structures.

RECOMMENDATIONS

CVD rates for women in Singapore are high and awareness of risk and the engagement in preventative behaviors are low (SHF, 2010). The existing disparities in heart health outcomes for women suggest the importance of dialogically engaging women in conversations to not only get a better idea of the actual lived experiences of CVD in Singapore, but also to help inform stakeholder decision-making. Furthermore, CCA notes that placing the power of decision-making in the hands of women, where they conceptualize the problems and develop solutions, offers a meaningful framework for addressing the issue of heart disease among women. The formative stages of health intervention planning can all be guided by creating dialogic spaces for women to voice their barriers to heart health. This process of bringing the women's voices to the fore will provide new grassroots insights that were previ-

ously not involved in intervention development and thus could provide better outcomes for intervention efforts.

The advantages of employing CCA in developing heart health promotion programs are as follows:

- CCA proposes a progressive method in hopes of bridging the gaps in current intervention methodology and conceptualizations of health campaigns for women in Singapore.
- CCA aims to engage women in open dialogue about their experiences with CVD to help us understand their meaning-making process pertaining to health.
- CCA engages localized understandings of gender, geography, ethnic background, and socioeconomic status as entry points to developing localized health promotion methods.
- CCA co-constructs meanings of cardiovascular disease prevention in conversations with women in Singapore to create a meaningful health intervention framework.
- CCA attends to the voices of women, and in doing so, offers a solid foundation for effective and meaningful health promotion for cardiovascular disease.

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