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Care Delivery for Filipino Americans Using the Neuman Systems Model

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Abstract

Filipino Americans are at risk of coronary heart disease due to the presence of multiple cardiometabolic factors. Selecting a framework that addresses the factors leading to coronary heart disease is vital when providing care for this population. The Neuman systems model is a comprehensive and wholistic framework that offers an innovative method of viewing clients, their families, and the healthcare system across multiple dimensions. Using the Neuman systems model, advanced practice nurses can develop and implement interventions that will help reduce the potential cardiovascular problems of clients with multiple risk factors. The authors in this article provides insight into the cardiovascular health of Filipino Americans and has implications for nurses and other healthcare providers working with various Southeast Asian groups in the United States.

Keywords

Asians; conceptual framework; coronary heart disease; Filipino Americans; Neuman systems model

Selecting a framework that addresses multiple risk factors is crucial when providing nursing care for Filipino Americans at risk of coronary heart disease. Additionally, determining an applicable framework for this population has implications for developing and implementing interventions with other Southeast Asian groups residing in the United States (US).

Coronary heart disease (CHD) and its related risk factors strike hard in minority populations. Although the mortality rates for heart disease have declined among all Americans, the death rates within minority populations have not changed (American Heart Association, 2013; Graham, Guendelman, Leong, Hogan, & Dennison, 2006). Among those affected are the Filipino Americans, who most frequently die from CHD (American Heart Association, 2013; Graham et al., 2006). A growing body of research indicates Filipino Americans have

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increased rates of hypertension, diabetes, dyslipidemia, and abdominal obesity (Araneta et al., 2006; Dalusung-Angosta, 2010; Health Forum, 2003). However, there are no available data regarding the most useful framework to guide their care delivery. Nursing interventions focusing on factors that influence the cardiac health of Filipino Americans are critical in the prevention and reduction of CHD risk.

The aims of this paper are to (a) discuss the principles and concepts of the Neuman systems model as they relate to CHD risk among Filipino Americans, (b) discuss the use of the Neuman systems model as a guide for the delivery of care to Filipino Americans at risk for CHD, and (c) relate implications from the lessons learned in working with Filipino Americans to other Southeast Asian groups residing in the US.

Filipino Americans and CHD Risk

By definition, Filipino Americans are Americans of Filipino ancestry who reside in the US and are US citizens by birth or naturalization (Dela Cruz, McBride, Compas, Calixto, & Van Derveer, 2002). The total number of Filipino Americans in the U.S. has increased from 1.8 million in 2000 to 2.5 million in 2010, a 38.9% increase in 10 years, making them the second largest Asian American subgroup. Filipinos are also the fastest-growing portion of Asian immigrants in the U.S. (U.S. Census, 2010). The literature indicates that Filipino Americans are at risk for developing heart disease because many have multiple CHD risk factors. The risk factors prevalent among this group are hypertension, diabetes, dyslipidemia, abdominal obesity, and smoking (Araneta et al., 2006; Maxwell, Garcia, & Berman, 2007; Health Forum, 2003; Ye et al., 2009).

Basic Concepts of the Neuman Systems Model

The focus of the Neuman systems model (NSM) is to identify stressors, reactions to stressors, and their impact on the “client system.” The lines of defense protect the client system from the negative effects of stressors (Figure 1). Neuman and Fawcett (2002) stated that the major concern for nursing is to keep clients stable by accurately assessing the effects of environmental stressors, and by helping clients attain optimal wellness. Nursing interventions are aimed at strengthening the flexible line of defense (FLD) and preventing stress reactions or development of a disease. In the NSM, clients are approached through intervention strategies based on three levels of prevention: primary, secondary, and tertiary. *Primary prevention* consists of interventions that strengthen the FLD. Interventions at this level focus on protecting the normal line of defense (NLD) or the client system through careful assessment, health promotion, and education to prevent stress reactions. *Secondary prevention* strategies strengthen the lines of resistance (LR). Interventions at this level focus on protecting the basic core from stress reactions and preventing or reducing complications, including death. *Tertiary prevention* strategies support and educate clients so they can adapt and return to a healthy state. Completion of the process moves the client back to the primary prevention level. Neuman and Fawcett (2002) posited that one, or all three prevention modalities may be used simultaneously.

Looking Through the Lens of the Neuman Systems Model at Clients with CHD Risk

Filipino Americans are at risk of CHD because of multiple cardiometabolic risk factors. Hypertension, diabetes, dyslipidemia, and abdominal obesity are the body's reaction to stressors following NLD invasion because they are not prevented or buffered by the FLD. When using the NSM as a guide in caring for this group, it is crucial to assess the status of their FLD, identify potential stressors, and develop strategies that will strengthen both their FLD and LR. Based on the literature, Filipino Americans face several stressors that are detrimental to their cardiac health and well-being. They are classified as: intrapersonal, interpersonal, and extrapersonal stressors.

Intrapersonal Stressors

The intrapersonal stressors identified among Filipino Americans include lack of knowledge about heart disease, presence of CHD risk factors, and lack of exercise. Their view of health and prevention is usually to ignore it and just "live life" (Health Forum, 2003). This ambivalence and lack of understanding of CHD and its risk factors may influence their decisions about heart disease prevention and control. According to Glanz and colleagues (2002) individuals who are not aware of their risk for developing a disease are less likely to adopt preventive behaviors.

Another intrapersonal stressor identified among Filipino Americans is maladaptive coping mechanisms. Many people cope with the strain of daily life by turning to unhealthy lifestyles, such as eating comfort foods that are fatty and high in sodium. Some turn to smoking and alcohol to relieve job-related stress (Cunradi, Greiner, Ragland, & Fisher, 2005; Health Forum, 2003). Other intrapersonal stressors include cultural beliefs and genetic predisposition to illness. Many Filipinos believe in shame and personal pride (Leake, Bermudo, Jacob, J., Jacob, M., & Inouye, 2011) and have a deep concern for social acceptance (Babor, 2007). To avoid shame and maintain personal pride, they resort to *amor propio*, concern for self-image. *Amor propio* can add to personal or peer pressure already existing among them. It may also lead to a psychological and physiological vulnerability to stress and illness (Leake et al. 2011). Genetics may play a role in the development of CHD risk factors among Filipinos. Marvelle, Lange, Qin, Adair, and Mohlke (2008) found that many Filipinos have the FTO gene, a genetic trait that is correlated with obesity.

Interpersonal Stressors

Interpersonal stressors identified among Filipino Americans include the family support system, stressful family events, and roles and relationships among the family and society at large (Community Health Needs & Resource Assessment, 2007; Health Forum, 2003). The presence of a support system, such as family, may be beneficial or harmful. Filipino Americans value relationships, including immediate friends, distant family members, and acquaintances (Becker, 2003; Kataoka-Yahiro, 2010). The family unit is expanded to include the extended family such as cousins and other relatives. Family members are a Filipino's main support system (Kataoka-Yahiro, 2010). A supportive family is helpful in decreasing cardiac risk, a positive stressor that can help strengthen the FLD. However, it is not

uncommon to have older parents or extended family members living in the same house, especially among first generation Filipino Americans. Older children with small kids rely on their parents for child care. Conversely, older parents rely on their adult children for housing support, transportation, and even health care decisions. It is the Filipino tradition that children must give back and take care of their elderly parents. This is a tradition many Filipinos still value and practice (Kataoka-Yahiro, 2010). They do not believe in convalescent services, but in providing direct home care to sick or aging family members. This can become an important negative interpersonal stressor (Kataoka-Yahiro, 2010). For example, balancing the daily demands of work, care-giving, and maintaining a household can also put the adult daughter or son at risk for health problems. Additionally, the presence of a role conflict (for example, who is in charge of the household) can make the situation worse. This conflict could lead to stress among family members and influence everyone's overall health (Agbayani-Siewert & Jones, 1997).

Extrapersonal Stressors

Extrapersonal stressors identified among Filipino Americans include social factors related to workplace discrimination, geographic isolation from other family members, financial issues, employment status, and lack of health insurance or a health care provider (Community Health Needs & Resource Assessment, 2007; De Castro, Gee, & Takeuchi, 2008a, b; Dela Cruz, et al., 2002). Racial and workplace discrimination are common problems for many Filipino Americans. De Castro and colleagues found that Filipinos who perceived they were being discriminated against in the workplace had multiple chronic health conditions (De Castro et al., 2008a).

Isolation from family members is another extrapersonal stressor. Because Filipinos value relationships, living alone or in isolation from family members may create stress and influence their overall health (Becker, 2003). Unemployment, lack of health insurance, and financial problems are also factors that could contribute to CHD risk. In contrast to unemployment, many Filipinos face stressors in their workplace. De Castro and colleagues (2008b) also found that Filipinos who experienced stress at their workplace also had a chronic illness. This was especially prevalent in those who recently migrated to the US and were having difficulties adjusting to American jobs and culture (De Castro et al., 2008b). The lack of a healthcare provider, or having a provider who is not culturally-sensitive, is a common concern in this group (Appel, Huang, Ai, & Lin, 2011). Healthcare providers who are not culturally-sensitive may unintentionally pose a health risk to their clients and contribute to non-compliance.

Lines of Defense

Based on the NSM, Filipino Americans' lines of defense are threatened by multiple stressors. Lack of knowledge about heart disease, cultural health beliefs, and maladaptive coping mechanisms contribute to unhealthy lifestyle choices, such as poor diet, smoking, and alcohol use. Time constraints due to family obligations and work schedules contribute to a lack of exercise. Sociocultural factors including role and relationship conflicts, discrimination, geographic isolation from family members, financial issues, and job-related issues contribute to stress and chronic illness. In the presence of stressors the FLD is

neglected, putting Filipino Americans at risk for a stress reaction. Their ability to return to a normal, stable state depends in part on their physiological and psychosocial status. If they are able to cope with the stress, their NLD can eventually return to wellness. If the NLD is compromised, however, they can develop hypertension, diabetes, dyslipidemia, or abdominal obesity as a reaction to stressors. When this occurs, the LR is activated. The LR assists the client to return to wellness. However, when the LR is ineffective (for example, no available resources or treatment) then a core response occurs. Without appropriate interventions, CHD and even death may occur.

Prevention through Intervention

Primary Prevention

Early identification of those at risk for CHD is the focus of primary prevention. Assessments should be comprehensive and aim at identifying risk factors, coping mechanisms, support systems, and the availability of resources (Neuman & Fawcett, 2002). Advanced practice nurses and other healthcare providers must sharpen their assessment and diagnostic skills in order to provide appropriate care for Filipino American clients at risk for CHD. Further, nurses can create and implement heart disease prevention programs in the community. These programs might include education about heart disease and the importance of exercise and preventative health screening. Filipinos may not participate in health screening practices or exercise activities due to a lack of knowledge. Though the workplace may have its own stressors, many Filipinos consider work activities as exercise (Ceria-Ulep, Serafica, & Tse, 2011). Additionally, they may not participate in an exercise program due to time constraints or financial issues (Ceria-Ulep et al., 2011; Dalusung-Angosta, 2010). Implementing programs that are fun, flexible, and sustainable may increase the number of Filipinos participating in regular exercise.

Secondary Prevention

The focus of secondary prevention is to treat the symptoms of disease and prevent its progress. Aggressive measures are crucial at this point to prevent CHD risk factors from damaging the central core. Screening for CHD and recommending regular examinations to those with known hypertension, diabetes, dyslipidemia, or abdominal obesity will help detect and prevent complications. For example, a client with unstable hypertension should take medications to help stabilize their blood pressure, visit their primary healthcare provider regularly, and obtain a cardiac workup. Education regarding unhealthy lifestyles should emphasize diet and exercise, smoking cessation, and how these factors influence cardiovascular health. Moreover, education about the potential negative impact of Filipino culture on health, such as *amor propio*, should be addressed.

Tertiary Prevention

In tertiary prevention, interventions are designed to help clients maintain wellness once they have regained stability through secondary prevention. Interventions at this level include assessment of potential problems, community and family support, encouragement, and education to prevent symptoms and complications. Coordinating follow-up visits with health

care providers, social services, and other health professionals are crucial in monitoring the clients' progress.

Implications for Nursing

The risk factors for CHD are stressors that have a tremendous impact on the health and wellness of Filipino Americans. The authors here reveal that several stressors threaten the lines of defense protecting Filipino Americans. Their FLD and NLD have been disrupted by the CHD risk factors of hypertension, diabetes, dyslipidemia, obesity, lack of exercise, and smoking. As outlined previously, advanced practice nurses and other health care providers should identify stressors specific to this population and focus on measures to promote healthy lifestyles and help clients regain their health. Encouraging clients to exercise and stop smoking, referring them to smoking cessation specialists, and helping them to adopt a healthy diet may prevent the progression of disease. Advanced practice nurses must also be knowledgeable about CHD and its risk factors. Additionally, they should be culturally aware and sensitive when caring for Filipino Americans. This healthcare approach may help clients regain stability and promote compliance.

Since Filipino Americans value close family ties (Kataoka-Yahiro, 2010), advanced practice nurses should take advantage of the family and community support and engage family members as health liaisons between them and their clients. Once clients have regained their stability through secondary prevention, treatment designed to maintain wellness (as indicated in the tertiary level) should be instituted. For example, clients can regain wellness by having the family encourage regular follow-up visits to a primary care provider. The family can help promote the maintenance of blood pressure, blood glucose, and lipid levels for those with existing hypertension, diabetes, or dyslipidemia. And lastly, they can support lifestyle modifications that may help their family member regain a functional level of wellness. Engagement of families and groups to support the individual's use of all levels of prevention when caring for Filipino American clients can improve their overall cardiovascular health.

Implications for Other Groups from Southeast Asia

There are many cultural differences among the ethnic groups of Southeast Asia, and even within generations of a group. Based on lessons learned from working with Filipino Americans, the authors propose some caveats for nurses, advanced practice nurses, and other healthcare providers working with other Southeast Asian populations in the US. However, some of these are generalizations about Asian Americans that could be construed as biased and not representative of the experiences of all individuals.

Many people from Southeast Asia are hospitable (Bush, Williams, Bradby, Anderson, & Lean, 1998) and welcome visitors as their guests. If the nurse forms a "partnership" with the client's reference group, it will lessen the appearance of the "cold" professional. It might also create an honest dialogue and reduce the shame and embarrassment associated with an unhealthy lifestyle. There is also a respect for elders that is commonly held by many of these groups (Kataoka-Yahiro, 2010). Grandparents may have a strong influence on the family.

Health interventions are often run by the elders and the individual takes action if there is agreement with the elders. To provide accurate information to the group, the advanced practice nurse can ask the client to bring important family members with them to their appointment. This will encourage a trusting relationship between the family group and the institution.

In light of the cultural respect for elders, the authors recommend that the advance practice nurse understand the family's expectations of the nurse's role, as the nurse may be younger than the family elders. Consideration should be given to the family's expectations about the gender of the nurse as well.

Many Southeast Asian groups have close family ties (Kataoka-Yahiro, 2010). The authors recommend that advanced practice nurses assess which individuals are most important to the client. These individuals may also help the client design a plan for a healthy lifestyle. Some individuals within this ethnic group may have a fatalistic outlook on life (Liu & Mencken, 2010). The advanced practice nurse may help individuals and their families to develop simple, progressive plans to attain a healthier lifestyle. Using an encouraging approach, where individuals are recognized for small achievements, will promote pride and show individuals that they can influence on own their well-being. Nurses should also collaborate with individuals to ascertain their priorities and the priorities of those significant to them. With this understanding, a partnership can be formed between the nurse and the client, where the client can take the lead to take action on the health issues that are significant to them with the advanced practice nurse's support and consultation.

Conclusions

The authors in this paper illustrates that the NSM could be used as a guide in the care of clients at risk for CHD. This model identifies environmental stressors, the client's reaction to them, and the overall effect of stressors on the client system. Nursing interventions are prevention strategies to strengthen the FLD and stabilize the client, eventually helping them to attain optimal wellness. Because of its comprehensive approach, the NSM is a good conceptual fit for incorporating complex problems, such as CHD and its risk factors. To date, the NSM has not been used as a guide for the care of Filipino Americans with multiple cardiac risk factors. The authors of this article are the first to use the NSM to examine the prevalence of these risk factors among Filipino Americans.

Filipino Americans are at high risk of developing CHD. Early identification of stressors contributing to CHD is crucial to its management. The authors have examined cardiovascular risk factors in the Filipino American population and ways to reduce their effects. It also considered the possibility of healthcare providers using this same approach with other Southeast Asian groups living in the US. The open-system characteristics of the NSM may accommodate the complexity of health challenges encountered by Filipino Americans and other Southeast Asian populations residing in the US.

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Figure 1.
The Neuman Systems Model (Original diagram copyright 1970 by Betty Neuman).

Figure 2.

Application of the Neuman Systems Model.

FA = Filipino-Americans, FLD = Flexible Line of Defense, NLD = Normal Line of Defense, LR = Lines of Resistance.