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Environmental Contexts of Vulnerable Populations: Implications for Nursing Practice, Research, and Education

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Abstract

Health disparities research has been identified as a priority by the National Institute of Nursing Research (NINR). Training nurse scholars in Vulnerable Populations (VP) research has been one strategy to address this issue. Involvement of university sponsored pre- and postdoctoral nurse fellows in group-developed projects are coordinated to advance the science of VP. A group of pre- and postdoctoral nurse fellows report on research that illustrates environmentally-induced barriers to health care experienced by VP. Topics cover health disparities, VP research, and culturally appropriate approaches to enhance access and acceptability of quality health care. Five studies are presented that illustrate the interplay of biologic, social, economic, behavioral, environmental, and cultural influences in the health and healthcare of individuals, populations, and sub-groups. These studies have common factors as well as unique barriers requiring exploration for better understanding and culturally appropriate intervention. The studies drew upon the VP Conceptualization Framework (VPCF) to describe the unique barriers encountered. These barriers are of significant concern and have implications for nursing practice, research, and education. Key recommendations to address these barriers are provided.

Keywords: Health Disparities, Barriers, Environment, Vulnerable populations, Health Behavior, Beliefs.

Introduction

It is now widely recognized that health outcomes depend far more on social, cultural, and physical environments than on medical care services (Marmot & Wilkinson, 2006). The interplay of biologic, social, economic, behavioral, environmental, and cultural aspects are important influences on the health of individuals, populations, and sub-groups. The environmental context of a group can significantly contribute to the underlying causes of health, wellness, and illness and may further perpetuate health disparities, particularly among vulnerable populations (VPs). Nurses face many barriers when caring for VPs, such as rural residence, poverty, and isolation. Barriers rooted in the environment create unique challenges that require attention. An environmental perspective in nursing practice, research, and education can result in a broader understanding of determinants of health and improved access to high-quality health services.

One of the major research priorities of the National Institute of Nursing Research (NINR, 2000) is to reduce health disparities. Research and training is a major thrust of the NINR. Since 1994, the NINR has supported a Ruth Kirschstein Pre- and Postdoctoral T-32 Fellowship training program at the University of California's (UCLA) School of Nursing. Nursing faculty, specializing in areas of healthcare and disparities among VPs, mentor the fellows. The program's goal is to develop nursing science in health-related problems of VPs through the conduct of research, theory development, education and skill building in methods and measures, and clinical practice. The two-year program offers specialized training to six fellows a year in areas of investigative methodology, health disparities, VPs research,

and culturally appropriate approaches and policies to enhance access and acceptability of quality health care services. Involvement in group-developed projects to advance the science of VPs (symposia, journal issues, review of the science, etc.) is supported through involvement in podium and poster presentations at National meetings. In 2015, a group of UCLA fellows presented their research at the annual Western Institute for Nursing conference in Albuquerque, New Mexico. A nurse scholar presented her research among low-income populations with latent tuberculosis infection that identified complex social-cultural barriers such as personal illness beliefs to accepting and completing treatment. A research project among American Indians at high risk for type 2 diabetes identified both rural isolation, communication styles, and fatalistic attitudes and beliefs that inhibit access to care. A post-doctoral fellow presented the problem of uranium and heavy metal contamination on an American Indian reservation characterized with unequal access to information, screening and healthcare surveillance. A pre-doctoral study examined cardiovascular symptoms among Latinos that identified social network characteristics aligned with poor healthcare. The fifth study reported on the risk factors associated with pain among elder Blacks age 50+ illuminating the need for sufficient health care providers (HCPs) attention to assess the complexity of poverty, race, predictors of pain, and access to care.

Following the group presentation, the fellows re-grouped to consider the environmental context of a host of barriers influencing nursing practice, research, and education. This commentary highlights the components of the fellows' research among that addressed the role of the environment in healthcare equity and access among VPs, defined as ethnic/racial minorities, people living in poverty, and marginalized (Dixon et al, 2007) and/or stigmatized persons who experience differential patterns of morbidity and mortality and life expectancy (Flaskerud & Winslow, 1998).

Theoretical Framework

The Vulnerable Populations Conceptualization Framework (Flaskerud & Winslow, 1998) posits that three main constructs: resource availability, relative risk, and health status are interrelated and complex. Resource availability or lack thereof can increase one's risk factors. Risk factors can raise morbidity and mortality rates. Health status can feed back into resource depletion. Community interventions applied at any stage of the model may include prevention at the primary, secondary, and tertiary levels. The group of fellows highlighted the barriers they encountered associated with each of the three main constructs of the theoretical model. Recommendations to address these main barriers are provided.

Health Disparities

Health disparities related to social, physical, and behavioral resources have been widely described in community samples. Previous studies (Colman & Ataullahjan, 2010; O'Hara & Caswell, 2013) have evidenced that racial and ethnic minorities have less access to health services and receive poorer quality services when they are available. The threat of environmental contamination further complicates health disparities as it goes beyond access and quality of services, and addresses an aspect of environmental health that influences minority communities and leads to health disparities.

Providing healthcare services that focuses on attributes of the individual's environment is likely to uncover substantial factors that would improve health outcomes. These services would require financial and social resources, which can be gained by partnering with local community providers and organizations. The results of the studies reported by the fellows showed a range of environmental barriers for various ethnic groups. However, the group recommended targeting certain health behaviors for a greater impact.

Unequal Access to Information

Language barriers and literacy levels negatively affect the reception and use of health information. In the studies presented by the fellows, unequal access to information was identified as a barrier among VPs. The fellows reported a general lack of educational health

information that is attributed to several reasons. All too often, the language in which the information is presented to VPs is a barrier. For example, translation from English to another language has its own difficulties, but to extend the translation into medical, scientific or environmental words or concepts compounded the barrier. Aside from translation issues, educational health and research information should provide culturally sensitive information for acceptance and relatability. Research methodology and measures can be used to test reliability and validity. Educational information, when available in multiple formats (written, visual, audio, etc.), increases readability and comprehension. The internet supports various public information and announcement forums, however, access may be limited due to isolated geography, lack of communication infrastructure, cost restraints, and low computer literacy and skills. Translation services, placement of information such as at community events and health care sponsored events, and in community forums are alternative avenues that augment accessibility.

To address the general lack of environmental information flow it is vital to enlist the assistance and support of local community members, use "common" language and appropriate jargon, and use visual aids that reflect the culture and image of the targeted community. Utilizing local working groups to screen general research information and educational materials is recommended. Further yet, local translators or liaisons can be invaluable in their knowledge of the geography, language, customs, community sentiment and other important aspects of community interaction. Enlisting local expertise not only builds capacity and trust, but also engenders group pride and empowerment.

Healthcare Access and Collaboration

Health care access was a major barrier for the majority of studies. Often a lack of modern roads, lack of transportation, inclement weather, lack of communication, infrastructure (cell phones, internet access, etc.), and the high residential mobility or seasonal movements of some community members are additional environment barriers that can hamper accessibility. Healthcare monitoring and surveillance of populations becomes difficult and complex due to the rural, isolated or unsafe nature of the geographical environment.

Collaboration with local programs can enhance the exchange of information between clinicians, researchers, and educators to share resources, collaborate, and exchange information. Researchers and HCPs are in a unique position to better document health care risk that can augment surveillance. Screening for substance abuse, seatbelt use, and domestic violence are common for routine physical exams (PEs) but monitoring for other risks (environmental contaminants) is often absent. Similarly, occupational PEs may focus on the immediate job associated risk but may not screen for other untoward environmental exposures that populations may be susceptible to in or near their home or communities. Measures should be operationalized so that medical monitoring data can be integrated with the local health care facilities to improve access to important health information and resources.

The fellows recommended that researchers and HCPs establish strong working relationships with surveillance agencies within the community (e.g., tribal, state or national) to support screening and treatment programs. Sharing of resources and health information are vital and access to the information should be seamless. Utilizing sophisticated comprehensive data tracking systems can address issues of attrition (missing appointments or those lost to follow-up). Healthcare screenings, routine and occupational PEs completed within healthcare systems should be more vigilant in assessing and documenting complete environmental health risks.

Ethical Issues

Adhering to ethical principles is essential in clinical and research scenarios. VP communities have had negative experiences with clinicians and researchers in the past. Obtaining Institutional Review Board approvals coupled with building and maintaining community trust is important. A considerable amount of time is

needed before, during, and after healthcare, educational and research projects are put in place. Collaborating with communities to determine how the research will benefit the community, returning to the community to provide study findings, and providing feasible recommendations are a few examples of building trust in a community.

Conclusion

Environmental contributions to health and healthcare equity-access among VPs are great. Key findings in these projects point to better understanding of environmental contexts of health and environmental barriers to nursing practice, research, and education. An environmental lens in nursing research will add to the veracity of VPs research in complex equity and access issues. The training, mentoring, and research experiences lead to knowledgeable and skilled fellows as well as valuable experiences with the long-term goal to improve the healthcare of VPs across the US and beyond. Without the support of the VP center, fellows may not be able to engage in this work and this experience may not be realized which is so important considering the high rates of poverty in the US.

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