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Evaluating the Role of Nurses in Educating Women During the Preconception Period

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Walden University

College of Health Sciences

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Oluwatoyin Ottun

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the review committee have been made.

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Walden University
2016

Abstract

Evaluating the Role of Nurses in Educating Women During the Preconception Period

By

Oluwatoyin Ottun

MS, Walden University, 2014

BS, Howard University, 2008

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2016

Abstract

Nurses play a crucial role in promoting educational programs aimed at informing women about their reproductive health. However, the role of nurses in providing the health related information is not well defined. Guided by the continuum model, this project evaluated nurses' perceived role in promoting the reproductive health of women during the preconception period. Twenty nurses from 2 outpatient offices wrote responses to an open-ended questionnaire. A summary of the responses indicated that 70% of the participants refer women to community-based programs to enhance awareness for preconception care. Twenty percent of the nurses indicated that they have an educational program for preconception at their practice sites. However, 70% of the participants responded that their organization does not have a standardized procedure for educating women on the preconception period. Ninety percent of the respondents clearly defined their role in educating women on preconception care and 80% reported offering preconception counseling at every clinic visit. In addition, 60% of the nurses ($n = 12$) were knowledgeable about reproductive health of women. Preconception care to women could be improved by increasing nurses' knowledge regarding important preconception topics and developing standardized educational materials to distribute to women in the preconception period. Organizational policies and procedures for providing preconception education into the standard of care may be developed. Enhancing nurses' roles in educating women during the preconception period may reduce the number of unplanned pregnancies, lower maternal deaths, and reduce maternal and infant mortality.

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Dedication

This project is dedicated to Almighty God for the successful completion of my doctor of nursing practice (DNP) degree. I would also like to dedicate this project to my dearest mother who has been there for me throughout my educational career.

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I would like to thank Almighty God for His grace over my life. I would like to thank Dr. Eileen Fowles, my chairperson for her guidance, support and dedication through my scholarly journey. I would also like to thank my doctoral project committee members, Dr. Joanne Minnick and Dr. Corinne Wheeler, for their guidance and support through my scholarly journey. I would also like to thank my family for their love and support through my scholarly journey.

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Section 1: Overview

Introduction

Educational programs on preconception health are needed to help women who are of reproductive age to control cases of unplanned pregnancies and support women's reproductive health. Indeed, such programs have shown to reduce the mortality rates for mothers and children during childhood (World Health Organization [WHO], 2013). The WHO estimates that approximately 830 women die each day worldwide because of complications emanating from pregnancy and childbirth that may be prevented by providing preconception education (WHO, 2013). Maternal death is one of the major challenges facing many developing nations. Improving preconception health education and care for women can improve the health outcomes and reduce the costs of providing medical services (Currie & Hyson, 1999).

The role of nurses has evolved recently to include providing education and intervention programs that seek to prevent the prevalence of certain common health concerns among women. Nurses recognize that preconception education among women can improve pregnancy-related outcomes when conducted appropriately (Currie & Hyson, 1999). The role of the nurses during the preconception period involves developing and delivering education programs that emphasize the individual responsibility of women during pregnancy, increase patient awareness, and understand the necessity for frequent visits for pregnancy checkup and interconception care. In communities such as Laurel, Maryland, African American women face challenges during the preconception period due to lack of access to health insurance and educational services and being unmarried, which can limit women's access to preconception education or ability to avoid unplanned pregnancies.

Preconception education should involve interventions and programs that are targeted towards both couples and individual women before they conceive a child. Nurses who are trained to provide preconception education services can contribute to the improvement in the health care outcomes for women and their babies before, during, and after a pregnancy. Focusing on women's health during the preconception period is vital to ensure the health of the mother but also the unborn child. By receiving proper health-related information before conceiving, women can improve the quality of health for both themselves and their child. Preconception education should cover risk factors and the cumulative protective measures, such as screening and treatment of sexually transmitted diseases, such as chlamydia and syphilis, for women and their unborn children before the child is conceived. The preconception education should also be directed at improving the mental, environmental, physical, and spiritual experiences of the mother before and after a pregnancy. Thus, nurses can play a role in enhancing the perinatal experience of women by providing educational services during the preconception period.

In this paper, I will discuss the provision of preconception educational services to African American women living in Laurel, Maryland. The first section is the background information of the Laurel community in terms of available educational services to women, characteristics of the African American population in the community, and the existing needs of women in this segment of society.

Background/Context

Laurel, Maryland, provides targeted health care services for women in their preconception and perinatal periods. Some of the services provided include educational programs targeting specific groups of women. For example, Laurel Pregnancy Center provides educational services to pregnant women who would like to learn more about their pregnancy, receive

information on how to deal with an unplanned pregnancy, and obtain advice on the types of treatment they can be given in the community (Department of Health and Mental Hygiene, 2015). The community health providers also offer educational services on child preparation. The education service targeting childbirth provides information on the labor and delivery process.

Subsequently, many women have verbalized that they have increased confidence after they have had the educational sessions, especially during the preconception period when anxiety about the process of giving birth is high. Furthermore, women receiving preconception education may learn about medical interventions, medications, role of partner in pregnancy, cesarean birth, and labor-coping techniques including relaxation, positioning, massage, and breathing. Registered nurses in Laurel are certified instructors who work to provide specialized services to African American women within this community.

Laurel, Maryland, has a sizeable population of African American residents (Shea, 2012). Numbering 12,270 in the 2015 census estimates in total, the African American women population is slightly higher than that of men. In 2015, approximately 2,000 women are of childbearing age compared with the overall population of African American women, which is 6,700 (U.S. Census Bureau, 2015). The University of Maryland's School of Public Health researchers have indicated that the prevalence of unplanned pregnancies could be reduced if nurses and other social workers have programs that are specifically designed to help groups where the prevalence of an unplanned pregnancy is high (Walker, 2007). In the United States, estimates indicate that 51% of 7 million pregnancies are unplanned (Guttmacher Institute, 2015). The institute report indicates that "The U.S. Department of Health and Human Services' *Healthy People 2020* campaign aims to reduce unintended pregnancy by 10%, from 49% of pregnancies to 44% of pregnancies, over the next 10 years" (Guttmacher website, 2015). There is

disproportionate rate of unplanned pregnancies among African American women in communities where they are a minority (Walker, 2007). Specifically, in Laurel, Maryland, 63% of pregnancies among African American women are considered unplanned (Walker, 2007).

The prevention of unplanned pregnancies is one of the public priorities for health care providers in Laurel, Maryland (Moos, 2004).). As noted by Melnyk and Fineout-Overholt (2011), “The fact that African American and Hispanic women have even higher rates of unintended pregnancy than Whites underscores the importance of tailoring multilevel interventions that address the underlying causes of the disparities” (p. 65) Multilevel community interventions and programs could be used to address the healthcare the disparities experienced by African American women in this community. The authority in charge of health in Laurel, Maryland, has developed targeted strategies to provide a high enrollment rate for women seeking preconception service (Quinn, Thomas, & Passmore, 2012). Among the strategies used in providing effective education, services to African American women are demonstrating personal respect for the client and cultural awareness of the women’s immediate needs. The medical and nursing community is sensitive to the cultural values held by the residents of this community and, therefore, strives to establish rapport with African American women. Nurses have made a habit of cultivating a strong relationship with their patients by maintaining a close, frequent, and consistent interaction with women who have already benefited from their services (Simon-Rusinowitz, Chen, & Hamilton, 2013). Finally, campaigns have encouraged the local community leaders to develop partnerships and engage in effective cooperation to achieve better educational and health care services to women in preconception period.

Problem Statement

Despite the improvements in health education programs directed at women, the number of unplanned pregnancies has been increasing. The U.S. Department of Health and Human Services' *Healthy People 2020* campaign aims to decrease pregnancies that are not intended by 5%, from 49% of pregnancies to 44% of pregnancies, within the next 10 years. In addition, such pregnancies can lead to increased morbidity and mortality among women associated with unplanned pregnancies (Martin & Bridgmon, 2012). Women who experience unplanned pregnancies are likely to experience poor health or give birth to children with health problems (Walker, 2007). However, providing educational programs to women who are in the preconception stages can lower incidences of unplanned pregnancies and improve the health experience of women when they become pregnant (Martin & Bridgmon, 2012). These programs have previously been offered by counselors and other professionals who are trained to educate women in impoverished communities to manage unplanned pregnancies (Mercer & Walker, 2006). However, these educational programs have not lead to the intended results as more women are reporting unplanned pregnancies, are conceiving babies even in clearly risky situations, fail to access relevant health care services, and engage in health care behaviors advised by the health educators.

Nurses are increasingly finding themselves in settings where they can provide educational services to young women who visit hospitals and other health institutions, such as physician offices and community health care clinics. Nurses are prepared to play a role in reducing the health risks associated with preconception conditions by educating women to engage in best health practices before they conceive (Pruessner, Baldwin, & Lupien, 2005). Nurses are encouraged to offer counseling and educational services targeting women in

preconception stages to assess the risk factors facing each woman faces during their pregnancy period. Increasing the availability of these services can reduce the mortality rate of children, improve the maternal health of women during their preconception period, and lead to reduced unplanned pregnancies.

Purpose Statement

The purpose of the project was to assess educational programs and identify strategies used by nurses in educating women during the preconception period. The overall goal of the project was to help African American women in Laurel, Maryland, to appropriately manage unplanned pregnancies and ultimately prevent recurrences of subsequent unplanned pregnancies.

Project Objectives

The objectives of the project included the following:

- Identify tools that nurses in Laurel, Maryland, are using to provide educational services about women health including unplanned pregnancies to women during the preconception period.
- Identify the challenges that nurses encounter to provide health educational services to African American women during the preconception period.
- Identify the role of nurses in preconception and prenatal education in assisting African American women in Laurel, Maryland.

Significance/Relevance to Practice

Most African American women in Laurel, Maryland, are being exposed to various modifiable health risks during preconception, pregnancy, and the post-delivery period because of the lack of appropriate information from the prenatal nurses and the preconception education programs (Wade, Herman, & McBeth-Snyder, 2012). Low birth weight babies, nutrient

deficiencies, malnourishment, and other issues are common when mothers have unplanned pregnancies. In Laurel, Maryland, instances of unplanned pregnancies often arise due to insufficient information that help prepare the woman for conception and pregnancy through dietary and clinical measures. The local nursing community also has not actively identified nursing practice strategies that could positively influence educational services to women in their preconception period. Women must be aware of several factors, such as self-awareness of personal HIV and AIDS status, before conceiving to ensure a safe pregnancy and effective postnatal care (De Weerd, 2003). Through delivering culturally appropriate education programs, nurses could empower the women to engage in behaviors that could reduce the incidences of unplanned pregnancies and improve overall maternal and neonatal health.

The concept of educating women before conception is a new strategy that would involve both women and men to foster healthy pregnancies and the delivery of healthy babies (Wade et al., 2012). Nurses in Laurel, Maryland, are involved in providing preconception health care (PHC) services, which enhance positive pregnancy outcomes among African American women in their preconception period and provide other education programs that engage preconception women (Wade et al., 2012). Preconception care aims to reduce the likelihood of adverse health effects among women, fetuses, and newborns, as well as the number of unplanned pregnancies by enhancing a woman's knowledge and optimizing health before conceiving (Wade et al., 2012). Women can achieve optimal health by adequately participating in healthcare education activities.

Some education programs that can be initiated to preconceiving women should focus on the consumption of iron and folic acid supplementation 1 month before conceiving and consuming the supplements during pregnancy where nurses and other health professionals are

involved (Limbo, 2004). Supplementation decreases the risks of the neonate developing defects related to the neural tube-like anencephaly and spina bifida. Other programs may include the glucose control, especially the mother with diabetes before and in the course of pregnancy (Connor, et al., 2014). These programs reduce the chances of maternal morbidity, fetal malformation, intrauterine fetal death, spontaneous abortion, and neonatal morbidity (Connor et al., 2014). Therefore, educating women on preconception health practice is important to reduce adverse health outcomes. The outcome is better if women during the preconception period understand age-based risks before conception.

Project Questions to Guide the Study

The following questions helped to guide the process of implementing the project:

1. What are the roles of nurses in providing preconception health information to African American women in Laurel, Maryland, during preconception period?
2. What are the health-related educational programs targeted to women during the preconception period?
3. What challenges have been encountered in implementing the already-existing health information educational services to women during the preconception period?

Evidence-Based Significance of the Project

The state of women's health is one of the indicators of the health of a community. Women who are healthier and well informed about the available health choices are likely to influence the positive development of their community (Evans & Lien, 2005). However, in Laurel, Maryland, the social determinants of women's health contribute to difficulties in accessing public health services. Many African American women are still unable to access preconception services and other services that can enable them to prevent unplanned

pregnancies. Despite their special health care needs, African American women do not have access to educational services specifically designed to address their needs.

African American women in Laurel, Maryland, have the greatest number of unplanned pregnancies and die during delivery when compared with white women (De Weerd, 2003). The rate of child mortality in Laurel, Maryland, is closely linked to the level of education and the ability of women to access educational services aimed to empower them. According to the WHO (2013), more than half of the decline in worldwide mortality among children younger than 5 years is associated with improved education among women of procreative age. This report observed that 16 million youths below 5 years died globally in 1970 compared with 7.8 million who died in 2009. From this report, 4.2 million fewer youths perished in 2009. This reduction is attributed largely to better and extensively available schooling for women. Although this report focuses on the general education as opposed to health education, the importance of health education cannot be realized without access to general schooling for women of procreative age. Mothers with more education tend to drive advances in global productive health. However, mothers and women with little education may have little control of their own reproductive health.

In the community assessed for this project, intervention programs are spearheaded by private health care providers who have not specifically targeted women's health during the preconception period. As such, African American women, who find themselves with an unplanned pregnancy, are unaware of services that can assist them (Thorne, Joachim, Paterson, & Canam, 2002). By highlighting the role of nurses in providing health information to women in the preconception period, this project could help reduce the number of unplanned pregnancies and maternal deaths during delivery and lower child mortality rates. Nurses can improve

women's health outcomes by implementing community-based programs and interventions. However, a clear description of nurses' roles in educating women during the preconception period in Laurel, Maryland, is lacking (Siegel & Schrimshaw, 2001). A clearer description of the state of preconception education and the nurses' roles in providing this education is needed to identify the unique areas where nurses, other community health care workers, and African American women can work together to enrich health interventions and programs designed to improve the health outcomes of women in the preconception period.

Implications for Social Change in Practice

The findings of this project may change nursing practice by adapting the way in which nurses interact with women during the preconception period. Many believe that nurses should deal with existing illnesses as caregivers and professional health providers. Most of the women during the preconception period are not suffering from any disease but still require health-related information to allow them to make better decisions about contraception options. Traditionally, this work is left to counselors, nutritionists, and other nonmedical professionals. The result has been an escalation in maternal deaths, child mortality, and poor health outcomes (Siegel & Schrimshaw, 2001). Nurses work only with the already-pregnant woman who comes for prenatal clinical check-ups. Before they become pregnant, typically interaction is limited between the childbearing-aged woman and the medical practitioners, such as nurses, to adequately inform women during the preconception period on the available choices and help with health-based decision making.

By identifying the specific roles and areas where nurses can act effectively, this project aims to streamline the work of health care providers working in communities with women in the preconception period. The project may also help to identify social determinants of health that

could be contributing to the persistent poor decision making for many women during the preconception period (Dumas, Nissley-Tsiopinis, & Moreland, 2007). The findings may influence the clinic administrators to align the training of nurses to the needs of women during the preconception period and specifically educate nurses about addressing the concerns that these women might have before becoming pregnant. Outcomes from the project may identify the social challenges that could be encountered when providing health information in communities where such services have not been in existence. For instance, if a woman trying to conceive is advised against it because of her poor health, problems will occur because such advice is likely to be seen as ignoring the maternal instinct of the woman and the cultural or traditional view of the woman's duty as it relates to marriage.

Definition of Terms

- *Child mortality*: The number of children of 1,000 births who die before reaching the age of 5 years. Child mortality is an indicator of the health of the mothers because children younger than 5 years depend highly on their mothers (WHO, 2013).
- *Maternal health*: Maternal health is the health of women during pregnancy, childbirth, and the postpartum period (WHO, 2016).
- *Preconception period*: The period when a woman who engages in a sexual relationship is likely to become pregnant. The term refers to both first and subsequent pregnancies (WHO, 2013).
- *Unplanned pregnancy*: Also called *unintended pregnancy*, this is a pregnancy for which the woman has no prior planning, timing, or preparation to carry its term. Unplanned pregnancy is either unwanted (i.e., the pregnancy occurred when no children, or no more

children, were desired) or mistimed (i.e., the pregnancy occurred earlier than desired) (Centers for Disease Control and Prevention [CDC], 2015).

Assumptions and Limitations

I assumed in the project that women only go to nurses when they are pregnant and therefore do not have an opportunity to benefit from nurses' advice before a pregnancy or during the period between pregnancies. I also assumed that the existing programs in the communities are targeted at women during prenatal stages so that mothers are advised only on how to take care of their children without providing them with information on how to plan for the next pregnancy.

The project was limited in that it focused only on the Laurel, Maryland, community, which is a small rural community. The generalizability of the findings to other larger and diversified communities may be challenging because the prevailing conditions are not the same. In addition, the small population of Laurel, Maryland, may have led to a low number of nurses who were willing to participate in the project and, therefore, did not represent the overall population of nurses who provide care to childbearing-aged African American women in the state.

Scope and Delimitations

Nurses in Laurel, Maryland are responsible for educating women during the preconception period about issues of unplanned pregnancies and other general and reproductive health concerns. Relevant parties must be included in developing programs targeting specific groups in society and the parties must give their full support. I chose to focus on the preconception period for African American women because of the high prevalence of cases of women who require educational services in their preconception period.

The participants in this project are nurses who provide health care services in Laurel, Maryland, and other surrounding neighborhoods. The nurses are trained as general practitioners and as specialized professionals providing health care services to African American women in their preconception period. The nurses will be interviewed on their strategies and practices aimed at providing education to African American women during their preconception period.

Summary

The African American women in the Laurel, Maryland, community do not have sufficient access to educational services during their preconception period. As a result, the prevalence of unplanned pregnancies, child mortality, and other health-related issues concerning women in this community is high. Nurses play a role in establishing systems that could help in enhancing the access to education for African American women in their preconception period with the aim to empower them to take care of their conditions. The nurses' roles in providing health care services are evolving, and nurses are finding themselves working outside health centers as had previously been the tradition. To this end, nurses are posed to play a significant role in educating women in their preconception period to reduce unplanned pregnancies, lower maternal deaths, and reduce child mortality. In the next section, I review scholarly articles on the role of nurses in educating communities. I deal specifically with reviewing educational programs and strategies used by nurses in educating women during the preconception period.

Section 2: Background and Context

Introduction

I assessed educational programs and strategies used by nurses in educating women during the preconception period. In this section, I provide both the specific literature and general literature. In the specific literature section, I focus on the findings of the studies that have been conducted on the topic of study. In the section on general literature, I will present information on the general status of women health. In addition, I discuss the study's conceptual model/framework, which was based on using Sandelowski and Barroso's (2002) continuum model. This model uses a three-pronged approach toward understanding phenomena where items on the far-right part indicate a lack of relationship between the study elements.

Literature Search Strategy

Conducting an extensive literature review was essential to form a basis for this study (Garrard, 2011). To achieve the objective, I used standard search strategies. The search involved querying online databases, namely MEDLINE, CINAHL, and the Cochrane Library. I used the following key terms: *nursing*, *nurse education*, *preconception period*, *child mortality*, *maternal health*, and *prenatal education*.

The publications included in the study were published within the past 10 years for the purpose of ensuring that the articles are current. However, articles that were found to have vital information and that were published after January 2000 were also included. I selected research articles for inclusion to establish what other scholars had found concerning this topic of study. However, I also used practice-related articles because of their helpfulness in understanding the practical situation regarding the role of nurses in educating women in the preconception period.

Review of the Literature

Specific Literature

Better services in preconception health can lead in improved health outcomes for women in their preconception period. While investigating the effect of preconception health information on the experience of women in preconception period, Bastani, Hashemi, Bastani, and Haghani (2010) used self-efficacy and a health locus of control as tools to measure the effect of health education on the reproductive health of women during their preconception period. This qualitative study used interviews to determine whether the existing health education programs affected the self-efficacy and locus of control to improve the health outcome of the women. The study involved women who were already pregnant and attending clinics but who had benefitted from reproductive health education before their pregnancies. According to Bastani et al. (2010), this study revealed that short-term educational interventions affect the psychological determinants of the health and lifestyle of women. In addition, the effect of short-term educational interventions on the health and lifestyle determinants of women was evidenced with the change in scores of the health locus of control in groups that had benefitted from premarital counseling education before they became pregnant.

The results of Bastani et al.'s (2010) study also indicated that health education intervention positively affected the psychological aspects that promote healthy behaviors among women during their preconception period. Moreover, Bastani, and colleagues (2010) findings supported other studies that posited that providing health educational services to women in their preconception period boosted health outcomes (Pruessner et al., 2005; Jack, Atrash, & Johnson, 2008). Bastani et al.'s findings also conformed to the theoretical foundation of self-efficacy, which posited that women who were exposed to educational programs about reproductive health

were likely to make better informed decisions about pregnancies and their health. Also found in the study by Bastani et al. was the effect of the socioeconomic status where some women during the preconception period were likely to embrace reproductive health education where their social and economic statuses supported those (Siegel & Schrimshaw, 2001). Thus, the effect of an intervention or educational program on women during the preconception period should consider the socioeconomic status of the women if better health outcomes are to be realized.

In another study, Levi, Simmonds, and Taylor (2009) focused on the preparedness of clinical nurses to provide education services to women in the preconception period. Although most of the clinical nurses interviewed were conversant with educational programs designed to enhance the health outcome of women, they did not differentiate much between a woman in preconception period and any other woman seeking reproductive health information (Simmonds & Likis, 2005). In a related study, Behrman and Butler (2007) observed that clinical nurses also approach the issue of educating women about sex in a hands-off manner that indicates hesitation when the patient or the client sought deeper understanding of some of the medications they were given in hospitals. According to Simmonds and Likis (2005), clinical nurses were indifferent to the effects of the educational programs because they assumed that reproductive health was too personal of a topic to discuss in groups of young women in their preconception period.

Clinical nurses have provided education and information to women when they come for clinical check-up during pregnancy (Moos, 2004). However, there has been little effort to introduce the same programs to a woman who come seeking a normal medical attention for other illnesses, such as bronchitis. Furthermore, Levi et al. (2009) found that nurse-midwifery programs and nurse professional training did not prepare clinical nurses to participate in implementing education program targeting women in the preconception period. Rather, clinical

nurses were prepared to educate only women who were pregnant or had delivered a child (Wallerstedt, Lilley, & Baldwin, 2003). Educating women in the preconception period by clinical nurses was hampered by a lack of qualified clinical nurses with skills and knowledge about the reproductive needs of women in the preconception period. The lack of qualified clinical nurses have been augmented by the fear of anti-choice backlash and a lack of didactic materials to aid in disseminating information to women in preconception period (Mercer & Walker, 2006).

De Weerd (2003) examined educational information related to nutrition and lifestyle. This author noted that health care providers who did not provide women in the preconception period with sufficient information about their lifestyle and nutrition but provided only counseling when there was a problem, negatively affected the women's health outcome. De Weerd studied a lack of collaboration between women during the preconception period and health care education service providers were also noted. Naylor's (2003) research concurred with this lack of collaboration in the preconception period health education by arguing that it can derails focus on reproductive health education.

Reproductive health education forms an important part of the life of a woman during the preconception period. De Weerd (2003) also noted in the study that a lack of sufficient training of clinical nurses hinders the process of providing education to women during the preconception period. When the clinical nurses are insufficiently equipped to provide health education, they will tend to avoid answering questions on the preconception period or refer the patients to other medical personnel. Unfortunately, some of the women may not be free to discuss such issues on reproductive and preconception health with other medical staff, particularly if they are of a different sex (Naylor, 2003). In addition, the aspect of fear of embarrassment and stigmatization may deter the women from engaging the clinical nurses once they appear uninformed on the

issues being raised. De Weerd concluded that partnered programs between health care providers and the beneficiaries of health services could improve the experience of women in the preconception period. The U.S. Department of Health and Human Services (2010) concurred with De Weerd's conclusion by asserting that such partnered preconception health programs will enhance the environmental factors that promote learning and teaching from clinical nurses. Clinical nurses can collaborate with reproductive health promotion nongovernment organizations to inform and educate women about their reproductive health. As such, clinical nurses will benefit from the networks already established by these reproductive health promotion organizations to reach more women in preconception period.

Summary

The previous literature review reveals that current educational programs are not focused on preventing unplanned pregnancies during the preconception period. Educational programs for women are mostly focused on maternal health during and immediately after pregnancy and childbirth (Walker, 2007). The focus on maternal health during pregnancy and immediately after childbirth means that the women who are trying to conceive or are not pregnant, cannot benefit from the currently provided educational health services. These women in the childbearing age and are not yet pregnant are normally not included in the development of educational programs.

General Literature

Educational health programs targeting women during the preconception period are relatively new strategies that governments and health practitioners have initiated (Melnyk & Fineout-Overholt, 2011). Previously, the focus was on improving the health of the mother during pregnancy and the child after birth. Women were required, as a matter of policy, to visit several times during their pregnancy (Coffey & Shorten, 2014). However, they were not required to visit

nurses of health care practitioner whenever they felt that they wanted to become pregnant. Moreover, the birth control measures implemented in communities spearheaded by government agencies and health organizations did not focus on providing educational health information to women who reported that they were not currently planning to get pregnant (Hobbins, 2001), often resulting in an unplanned pregnancy and subsequent adverse birth outcomes for the mother and the infant (Connor et al., 2014).

Educational-based programs and interventions to women in their preconception period seek to prepare women to carry the pregnancy, successfully deliver the child, and later nurse the child beyond the age of 5 years (Romano-Zelekha, Hirsh & Blieden, 2001). The introduction of health educational programs spearheaded by trained professionals has resulted in improved reproductive health outcomes (Romano-Zelekha, Hirsh & Blieden, 2001). Health educational programs have also reduced the costs associated with preconception health as many women accessing the services sought for health care services before they became pregnant (Dally et al., 2002). Most preconception educational programs in developed countries like the United States and Canada are designed to promote the health of women in their preconception period and therefore improve pregnancy-related outcomes after they become pregnant (Moos, 2003). Preconception programs are thus intended to ensure that women are put at the center of their reproductive health, that awareness of the available service is higher, and prevent numerous hospital visits by pregnant women (Hobbins, 2001). The programs also help develop interventions for identified risks, provide inter-conception care services, implement pre-pregnancy check-up, develop insurance cover for women with low economic status, develop public health strategies and programs, and finally improve monitoring of the emerging cases in preconception period (U.S. Department of Health and Human Services, 2010). These services

can only be offered where medical health practitioners, such as nurses are prepared to provide the education as opposed to cases where pregnancy related education is given by counselors and paraprofessional medical practitioners.

Nurses can play a role in enhancing reproductive health for women in preconception period. The overall lack of comprehensive sex education, even in developed countries like the United States and Canada, can hamper the progress of education to women during the preconception period. Nurses must also address the issue of lack of information among women during the preconception period (Levi, Simmonds & Taylor, 2009). As such, there is a need to provide services that explicitly outline the risks of pregnancy and the strategies involved in actively planning for a pregnancy. The impact of services outlining the risks of pregnancy has included lowered maternal deaths as well as child mortality since women who conceive will be well informed about their reproductive health (Moos, 1994). Nurses can lead the process of increasing awareness and overcoming the cultural unease associated with pregnancy and which had been perpetuated by health professionals in the past.

For instance, most counselors would only discuss sex with a woman when they report a problem or are already pregnant. Such kind of educational approach to the needs of women is usually conducted within a short period of time whereby the woman was not provided with the opportunity to learn about the available options to improve their reproductive health before becoming pregnant (De Weerd, 2003). Nurses can also promote a coordinated system to define clinical guidelines and strategies to handle the problems that emerge during and after the pregnancy where they were teaching the woman about reproductive health in their preconception period (Moos, 2004). Nurses have the potential to contribute to the realization of the national health goals and policies through education to the communities where they serve (Bastani et al.,

2010). Nurses can lead the effort to normalize use of contraceptives, enhance the role of nursing in advancing competencies in preconception education, and finally encourage and support preconception education advocacy within the communities where they work.

Conceptual Model

The current project makes use of the continuum model developed by Sandelowski and Barroso (2002). The model uses a three-pronged approach to understanding a phenomenon. The items located in the far-right part of the continuum indicate that there is no finding or relationship between the elements under study. For the purposes of this project, items in the far right end of the continuum will indicate that nurses do not have a role in providing education to women in preconception period (Moos, 2004). For this reason, nurses may just be medical practitioners who treat illnesses but who do not participate in preventing them by tackling the causes of the illnesses. The middle category of the continuum model includes items that have no impact on the subject of investigation (Sandelowski & Barroso, 2002). For instance, infectious reproductive health caused by irresponsible sexual behaviors of couples during the preconception period may not influence whether nurses are going to provide reproductive education or not (Evans & Lien, 2005). These are independent issues that each woman in preconception period must approach differently when it comes to issues of conceiving a baby.

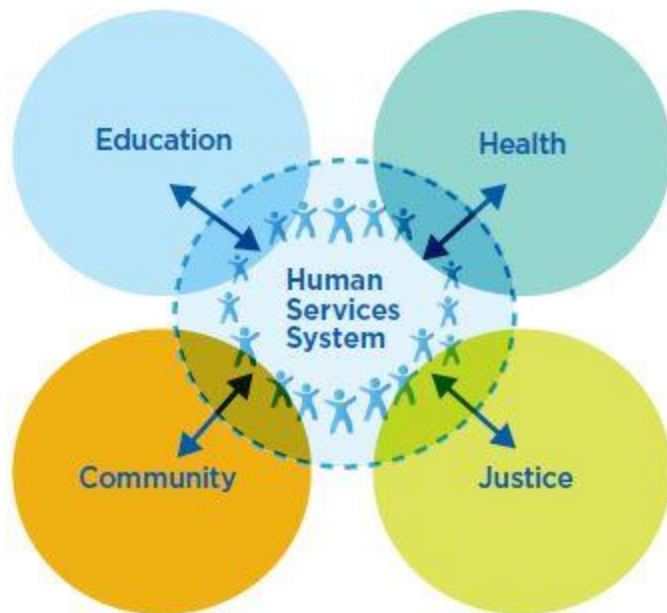


Figure 1. Continuum Model (Sandelowski&Barroso, 2002).

In addition, some nurses and participants may not even realize that nurses have a role in educating women in preconception period about better choices during the provision of reproductive health information. The information should also be different from what is given to mothers who have delivered children and are not contemplating having another child (Behrman & Butler, 2007).

The group on far-left has items that contract directly with the connection of the subject of survey and include interpretive explanation, thematic surveys, and theoretical description. The analysis of these items will reveal the roles that nurses should play in implementing the educational programs and reproductive health to women in preconception period (Jack et al., 2008). The choice of the continuum model was based on the fact that the project requires description of items as well as uses a qualitative approach to collect data. This means that any kind of data will be collected from participants and hence the model will help in selecting the relevant data while leaving out those that are not applicable in this case (Dumas et al., 2007). The

model is also chosen because it will help cluster the roles that nurses can play in enhancing the health outcome of educational programs directed at women in the preconception period.

Background and Context

Public health education is essential to small communities, such as Laurel, Maryland, because of the special needs and challenges that residents face in meeting their special health needs. For African American women in the age of childbearing, nursing education in their preconception period is something that has been lacking even as demand for the services increases. The stakeholders in the health sector, including government departments, have formulated regulatory frameworks, governance strategies, and formulated blueprints to help in delivering effective health care services to residents in their communities. However, in Laurel Maryland, these structures have not been beneficial as most residents still require these services but they cannot access them.

As a DNP student, I feel obligated to initiate an educational program for nurses that targets African American women in preconception period to help them prevent and/or manage cases of unplanned pregnancies. I was involved in collecting the data from nurses about the pre-conceptual education that they provide to African American women in the community. Thus, information could provide the foundational knowledge needed to develop and initiate programs and policies specifically targeting childbearing aged African American women during the preconception period.

Summary and Conclusion

The literature review points to attempts by health care providers to initiate educational programs that target a certain segment of the population. Much of the information in the education programs have focused on lifestyle and nutrition to women. These could not be exhaustive for women in preconception period who are grappling with not only unplanned pregnancy but also poorly designed health care systems and policies. The literature also points to a lack of preparation on the part of the nurses to deal with cases of women who require specific information in their preconception period. Health education intervention positively affected the psychological aspects that promote healthy behaviors among women during their preconception period. The reviewed literature further revealed that short-term educational interventions have proved to affect the psychological determinants of the health and lifestyle of women in their preconception period. The literature review however does not reveal the direct role of nurses in enhancing.

The present project allows the nursing profession to identify the health determinant factors that could improve the access to health care services for African American women in Laurel community. The project could identify specific factors applicable to African American women in the Laurel community and be used to improve services during preconception. As an aspiring nurse, this project will help to empower myself in future to take up challenging health systems targeting women in preconception period and help to access better services.

Section 3: Collection and Analysis of Evidence

Introduction

In this section, I describe the preferred approach for this project, a qualitative approach, the data analysis approach, and timeline for completing the project.

Project Design/Methods

The methodology selected for implementing a project is important in making the final conclusions. For this project, I followed a qualitative approach using open-ended questions. I instructed the participants write down responses to the open-ended questions. I sought to investigate the roles of nurses in educating women in preconception period. The methodology was also preferred because of its flexibility in data collection tools where open-ended questions can be used to collect information (Sandelowski & Barroso, 2002).

Population and Sampling

The population for the project included registered nurses working in an outpatient setting (e.g., in doctor offices and outpatient clinics). The sample involved a convenience sample of 20 registered nurses serving maternity patient in the community. The target number included in this project was 20 nurses due to the small size of the community. I recruited participants by placing flyers in the doctor offices with my contact information.

Open-Ended Questions to Guide the Study

Using open-ended questionnaires, I developed a survey in the form of open-ended questionnaires. The open-ended questionnaires and a self-addressed envelope were placed at the clinic where the nurses work. The participants were then instructed to write down responses to the open-ended questions without using their names or tape recorder. After filling the forms, the participants were instructed to return the questionnaires to me in a self-addressed envelope

provided. The open-ended questionnaires were designed to test the knowledge of nurses about health education programs targeting women in their preconception period. Open-ended questionnaires allowed an unlimited number of answers, detailed and clarified responses, discovery of findings that were initially not expected, and other benefits (Major & Savin-Baden, 2012).

I used the following open-ended questions this project:

1. What average number of women in their preconception period does the practice see in a week?
2. What educational program does the practice use for pre-conceptual health education?
3. Is pre-conceptual health education part of the organization policies and procedures in educating women in the preconception period?
4. Do nurses play a major role in educating women in the preconception period?
5. What are the roles of nurses in educating women in the preconception period?
6. What is the practice guideline in educating women in the preconception period?
7. What areas/ topics do nurses include in educating women in the preconception period?
8. What areas/topics are very important to include in educating women in the preconception period?
9. Based on your experience as a registered nurse, do you think pre-conceptual health education positively affecting women in the preconception period?
10. What are your recommendations for nurses in educating women in the preconception period?

Data Collection and Protection of Human Subjects

I collected data using open-ended questions based on the responses of the participants. Because the project dealt with human subjects as the respondents, approval for conducting this project had to be obtained from Walden University's institutional review board (IRB) (IRB protocol number 06-09-16-0395222). The participants were asked not to identify their names or the organization that they work for in the open-ended questions form. Nonetheless, the participants had to write their responses down on the open-ended questions form and return the questionnaires to me in a self-addressed envelope provided. I also asked them not to reveal any patient information that could breach patient confidentiality.

Data Analysis

I summarized participant responses to each of the interview questions, and I identified major themes and common responses to gauge their understanding of nurses' roles in educating women during the preconception period (Major & Savin-Baden, 2012). Participant responses were also compared with programs that had been implemented in other communities for the purpose of educating women during the preconception period. I then compared the responses from nurses regarding their role in the preconception period to the findings in literature.

Using best practices from the field of study, as well as reports and research findings, I analyzed the challenges that the respondents identified regarding the implementation of the health information education services. Notes and comments from respondents were to be used for clarifying conflicting responses on other sources of data (Sandelowski & Barroso, 2007).

Project Evaluation Plan

I recruited participants, distributed the open-ended question forms, and collected the open-ended question forms. I then analyzed data and compared the results with the findings in

literature. I made conclusions and recommendations on the role of nurses in implementing education programs targeting women during the preconception period.

Summary

In this section, I presented the data analysis approach for implementing the project. I highlighted the rationale for using the qualitative approach, convenient sample method, and selection procedures, as well as the criteria used to select the participants, data collection and analysis, and the ethical considerations and the project evaluation plan used to implement the entire process. I identified that the size of the sample was important to achieving the set objectives. For that reason, I selected a small sample size. The interview process is also important because it helps to gather the data for analysis. Without this data, there cannot be an inferences and links between the study phenomena. Resource and time constraints meant that implementing the project was more controlled than it would be been if there were no constraints.

Section 4: Discussion and Implications

Introduction

In this section, I summarize and evaluate the findings of the research. I discuss the findings in the context of literature and frameworks. In addition, I examine the implications of the project for nursing practice, future research, and social change. Furthermore, I outline the project strengths and its limitations, and I provide recommendations. In the last portion of this section, I analyze myself as a scholar, practitioner, professional, and project developer.

Summary and Evaluation of Findings

Twenty survey questionnaires were distributed among 20 nurses from two outpatient doctor offices. Eighteen of the 20 participants responded to the questionnaires. The nurses who were issued with the questionnaires were basically Africans, African Americans and Caucasians. The youngest nurse surveyed was 25 years old while the oldest nurse surveyed was 52 years old. Apart from the youngest nurse, who noted that she had worked with preconception-aged women for three years, the other nurses said that they had worked with preconception-aged women for an average of 9 years. From the results of the various literatures reviewed and data analyzed, many women still experience pregnancy-related implications due to lack of preconception care. The result of the study showed, however, that nurses are increasingly developing preconception programs to help bridge the gap of lack of preconception care. The following are the responses of the participants to each of the questions:

Question 1: Analysis showed that 60% of the participants indicated that they see an average of 10 women in their preconception period.

Question 2: Of the 20 participants, two nurses responded that they are not aware of any preconception programs. Regarding the question on the preconception educational program, 57%

of the participants responded that they incorporate preconception education into the curriculum for high school and college students. Seventy percent of the participants responded that they use community-based programs to reach out to women and to create awareness for preconception care. Only 20% of the nurses responded that they have an elaborate educational program for preconception program. Among the 80% of the participants who acknowledged the awareness of such program, 60% responded that they offer preconception education to women as part of their duty and responsibility.

Question 3: The survey also showed that providing preconception education to women during the preconception period is not a standard and expected part of the organization policies and procedures. Of the 20 participants, only two responded that it is their organization policy to offer preconception education to women. Seventy percent of the participants responded that their organization has no laid out procedure in educating women in preconception period. Fifteen of the 18 nurses, however, responded that their organizations are currently developing policies and procedures that will be followed in carrying out preconception education.

Question 4: The survey also showed that nurses play a major role in educating women in the preconception period. Of the 20 participants, 18 responded that it is their role to educate women on preconception care. Of the 18 participants, 10 participants responded that they have always offered preconception counseling to their patients on their every visit. The report shows that nurses understand their role in preconception education. Ninety percent of the participants could clearly define their role in preconception education.

Question 5: The survey shows that nurses are responsible to create public awareness on the importance of preconception care; nurses develop materials used for preconception education; nurses offer advice and report to clinic managers on challenges and progress made in

educating women during preconception period; nurses offer counseling and advice to patients on preconception care as well as providing relevant information to women of child-bearing age on pregnancy matters; and nurses are responsible for resource mobilization and capacity building.

Question 6: According to the survey, the practice guideline in educating women include risk assessment, which entails physical examination; patient history evaluation; health promotion programs; and education on lifestyle and nutrition.

Question 7: According to the findings, nurses include the following topics in their preconception programs. The first topic is nutrition assessment and nutrition education, which involve assessing the effect of nutritional program and possible effect during pregnancy. Another topic involves pharmacologic history. Pharmacologic history involves any preconception or medications that a client is taking to determine possible implications in case of pregnancy. Family history was also observed during the survey. Most participants responded that they consider the family history of their clients to determine any genetic disorder that might have been inherited that can affect pregnancy. Pregnancy history is also another topic that was included in preconception education. Other areas include psychosocial assessment, environmental exposures, lifestyle behavior, gynecological history, medical history, employment history, and contraceptive history.

Question 8: From the analysis, the following topics were considered very important to include in educating women in preconception period: Pharmacologic history deals with the prescription and medication history of women; Gynecological history provides information on menstrual history and determine any irregularities and possible impact to pregnancy; genetic history or family history is also important as it determines any genetic disorder and its possible impact on pregnancy; lifestyle behavior is also another important area as it determines how

behavioral factors such as smoking, eating habits and exercise can impact pregnancy; finally, nutrition assessment which deals with diet and its implications to pregnancy.

Question 9: From my analysis, most participants considered preconception health education as having positive impact on women. Many of the participants noted that through preconception education, many complications during pregnancy have been avoided. Just like I also do, they observed that preconception education helps women to engage in positive lifestyle behavior like good eating habits and adequate exercise, which in turn leads to better health during pregnancy and delivery. There was also a belief that knowledge on gynecology can help women to understand the best time to get pregnant. In addition, some participants believed that genetic history helps women to understand and prepare for any disorder that might be passed on to their offspring. Finally, it was observed that preconception education is helpful in order to understand the general challenges that women face during pregnancy thereby this makes it possible to develop policies and better health practices for future generation. The findings are also supported by a study done by Center for disease control for women between the age 18 and 44 which indicated that 84% of the women had a health care visit during the year before their pregnancy and around 54 % of the women had a preconception care visits (CDC, 2006).

Question 10: Data analyses indicate a trend in increased access to preconception care. More women are increasingly seeking preconception care and attending various preconception educational programs. The study shows that 65% of women who attend preconception programs experience no difficulties during conception period. Statistical analysis also shows that more centers are being set up that provide preconception care. I recommend that the nurses should incorporate preconception educational programs into curriculum for both high school and college

students. In addition, preconception educational programs should include public awareness programs on the importance of preconception care and education.

Discussion of the Findings

The results of this study show that still majority of women have no access to preconception educational programs. From the study, only 12 nurses, representing 60% of nurses surveyed in the study, offered pre-pregnancy educational program and preconception services. Notably, 8 and 4 nurses were from the two clinics respectively. The outcome shows that nurses from the clinics were on average knowledgeable about preconception education and services. It is noteworthy that more nurses are increasingly providing preconception care programs.

From the findings, the following can be deduced. First, women still have limited awareness of preconception educational programs and care services. Secondly, most nurses do not have adequate training on preconception education and they are not fully equipped with appropriate training materials to offer preconception education and counseling to women. Third, most nurses lack clear guidelines and procedures for delivering pre-pregnancy educational programs. Some nurses still lack awareness of the importance and benefit of preconception educational program. This is due to lack of prevailing culture of preparing for pregnancy (Tuomainen et al., 2013). Fourth, the level of education has direct impact on the possibility of attending preconception programs. Educated women could be more knowledgeable about their health, therefore, consider it important to seek health information from caregivers. Fifth, many organizations still have not enacted policies that govern nurses in practice. Finally, culture and economic factors also was seen to play major roles in influencing access and delivery of preconception programs. For example, some nurses cite their culture as a reason why they do not engage in pre-pregnancy care services while others simply cited lack of financial resources as

deterrence to accessing and delivery of preconception care services. Specifically, African nurses from West Africa were the ones who did not believe in planning preconception education due to their culture. In this context, the culture of disbelief in the use of contraceptive methods has hindered preconception education (Ajaegbu, 2013). In West Africa, the women do not readily talk about their use of contraceptive, and this has affected the view of West African nurses' view on preconception education (Gazali, Muktar & Mahamoud, 2012). Islam and Catholic countries in West Africa and around the world have condemned the use of contraceptives because of the perception that they have been used for birth control, and the women from such countries have been influenced by their cultures and religion (Marchie, 2012). As a consequence, some of the women have even forbidden the use of family planning services. This has impacted significantly on preconception education provided by the nurses from such cultural and religious backgrounds.

Implications of the Findings

This study highlights some of the challenges and opportunities that nurses face in providing preconception educational programs. The study shows that there is increase in awareness of preconception educational programs. The study further clearly outlines challenges and bottlenecks that nurses face in delivering preconception programs. Additionally, from the study, nurses can understand better how to develop and implement preconception programs in order to achieve maximum outcome. This section will discuss the implications of the study for practicing nurses, for future research and for social change.

Implications on Practice/Action

This study has implications on the way nurses will deliver their preconception education programs. The study not only highlights challenges that nurses need to overcome in delivering preconception education programs but also provides opportunities for nurses to improve their preconception programs. The study clearly outlines various factors that influence access to preconception education programs. The study provides in depth analysis of preconception programs and strategies that nurses use to deliver preconception care. Through the study, nurses can point out strengths and weaknesses of their approaches in delivering preconception educational program. Nurses are able to understand how the different factors such as culture economic and racism influence how women access preconception programs. Women without sources of income lack funds to pay for contraception or for transportation to the clinics where preconception education is offered. Therefore, economic empowerment needs to be considered for the women to be financially independent to buy contraceptives and to attend preconception education clinics (Del Pino, Soriano & Higginbottom, 2013). There are also the nurses from racial groups who have displayed racial preferences when providing preconception education, and this needs to change (Del Pino et al., 2013). Nurses can therefore develop programs, strategies and approaches that take into consideration such influence in order to deliver better preconception care. Furthermore, preconception risk assessment should be performed by nurses and preconception care to be provided to women at every primary visit to healthcare provider. Nurses should incorporate preconception programs in curriculum and nurses should change their focus from prenatal care to preconception care (Wade et al., 2012). Similarly, in the curriculum, information regarding family planning and birth control should be incorporated. The curriculum could be organized in a way that its contents on family planning methods helps to dispel the

wrong perception perpetuated by some of the religious groups and the advantages of using family planning methods. Discussions on birth control may focus on the various methods and their appropriateness for the different types of women.

Implications for Future Research

Similarly, the study has implications for future research on preconception educational programs. The study outlines some of the areas that still require adequate research in order to provide proper understanding on dynamics, such as women behaviors, that surround preconception educational program delivery and access. The study opens more areas for future research such as unplanned pregnancy preconception care, cultural influence on preconception care, demographic analysis of access to preconception education program, and age factor of preconception care. More research studies are needed to clearly show the impact of preconception education programs on diabetes patients and HIV/AIDS patients. Additionally, there is inadequate research on behavioral characteristics of women and its influence on preconception care. Furthermore, the study opens door for more research on effectiveness of different approaches to delivering preconception programs.

Implications on Social Change

Finally, according to the findings of the study, social change is necessary in order to deliver better preconception educational programs and to enable more nurses to deliver pre-pregnancy care. The study shows that a social factor such as culture has direct influence on preconception care delivery. For example, it can be deduced that some nurses do not offer preconception care since their culture consider it a taboo for women to attend preconception care as it will cast bad spell on the baby after conception. Therefore, to promote access to

preconception educational programs, nurses must design approaches and strategies that will overcome the cultural bottlenecks. Breaking cultural barrier will be necessary by creating awareness and providing scientific evidence for benefits that preconception education will offer to women. The findings of this study will therefore provide the necessary need for social change by clearly showing the importance of preconception education programs.

Project Strengths and Limitations

Project Strengths

The study benefits from first-hand information from twenty registered nurses. Data were collected directly from registered nurses by use of questionnaire thereby providing credible data for analysis. The project included data from different communities and race thereby providing comparative data for deeper analysis. The availability of different research studies on preconception education programs were available thereby enabling wider research on the subject. Furthermore, the participants were not allowed to mention their names therefore, they were able without fear of discrimination or vilification to express their views.

Moreover, the use of qualitative approach offers several strengths to the project. Qualitative research method makes it possible to generate a tentative explanatory theory about the subject. Qualitative approach determines how the participants can interpret constructs thus limit misunderstandings setting (OCCUPYTHEORY, 2014). Additionally, with qualitative research method, direction and framework of the research can be easily revised to incorporate new findings. Furthermore, data can be gathered from a few individuals and the findings can be easily transferred to another setting (OCCUPYTHEORY, 2014). The data was collected from experienced participants; nurses with many years of practice thereby making the findings credible and trustworthy.

Project Limitations

The size of the sample was considerably small as the population was limited only to twenty registered nurses. The small size limited the ability to cover different kinds of groups thereby making it difficult to draw satisfactory analysis from the data. In research the larger, the data set the more accurate the research finding. Therefore, the use of small data set negatively affected the quality of the research. Furthermore, the small size of participants limited the use of research methodology to qualitative approach only.

The period of the research is also a limitation of the project. The time limited period for the project made it difficult to sufficiently conduct the research study on the subject. Data collection is a time consuming process therefore the data could not be sufficiently collected due to time constraints. In addition, there was limited time to conduct adequate literature review and to compare findings from other research work on the same subject. Moreover, because of limited time the research could not cover diverse groups of nurses and women in the study this negatively affected the quality of the research.

Another limitation of the project is lack of adequate research work and literature on preconception programs. Preconception education program is a new research area and therefore few studies have been conducted in this area. Thus, it was difficult to conduct sufficient literature review on preconception education programs. Furthermore, few nurses are acquainted with the concept therefore; there was a lot of irrelevancy in data collection.

The use of questionnaire as the only data collection method was also a limitation. Quality of research is based on the method of data collection and the more the methods of data collection used the more accurate the data. Other methods of data collection such as observation,

interviews, and case studies were not used and would have made the data collection more credible and reliable. Questionnaire method does not allow for follow up questions and provides fixed number of questions to be answered.

The qualitative research method used also has several limitations. Qualitative research approach has several weaknesses which include: one, it takes more time to collect data in qualitative method as compared to quantitative method; secondly, the conclusion of the findings cannot be generalized but is unique to the people included on the research.; third, analysis of data is often time consuming with this type of research method; fourth, the outcome can be easily influenced by the researcher's personal interests and prejudices since it is dependent on the skills of the researcher (OCCUPYTHEORY, 2014); fifth, qualitative method makes it difficult to draw quantitative predictions and finally, problems with confidentiality and anonymity make it more difficult in presentation of the study.

Recommendations for Remediation of Limitations

This study recommends various ways in which the project limitations can be remedied. First, the project should use more than one method of data collection. Other methods of data collection such as observation, interviews, and case studies would increase the reliability and credibility of the data. Second, the data set should be increased as the small data set can easily amount to biasness. Third, the period for the project should be extended taking into consideration the complexity of the data analysis. Moreover, adequate time will allow for exhaustive use of available research materials and literature. Finally, the project should incorporate hybrid research method that is a combination of qualitative and quantitative research method.

On the other hand, this study also provides recommendations to improve both educational programs and strategies used by nurses in educating women during preconception period. The

following recommendations can be made: one, the nurses should incorporate preconception educational programs into curriculum for both high school and college students. Second, preconception educational programs should include public awareness programs on the importance of preconception care and education. Third, nurses should undergo preconception care training in order to understand how to overcome various challenges in delivering preconception care and education. Fourth, professional guidelines and standards of delivering preconception care and education for women should be developed and adhered to by nurses and health practitioner. In addition, elements of preconception education should be incorporated into primary care visits. The preconception education curriculum during such visits could focus on study areas such as family planning, birth control, use of contraceptives, economic empowerment, and a need for culture change. Furthermore, improving preconception education requires social change especially public attitude and cultural breakthrough. Moreover, the number of centers providing preconception educational programs should be increased especially in regions that have more African Americans. Finally, to improve access of educational programs by women, the need to provide health insurance that cover preconception care for low-income women is essential.

Analysis of Self

Analysis of educational programs and strategies used by nurses in educating women during the preconception period shows that more work is needed to improve the quality of preconception programs and to increase the number of women accessing preconception programs.

As Scholar

My analysis as a scholar shows that currently the programs used by nurses to educate women have a lot of limitations. The programs do not take into consideration divergent cultures of women. The programs used also do not incorporate different methods of presentations to cover various groups of women including physically challenged women. For example, use of visual representation is still limited and hearing aid for the deaf. In addition, nurses should take advantage of social media to reach a larger audience. Educational programs need to focus more on creating public awareness on the importance of preconception care. Furthermore, strategies to promote community-based awareness are very important in advancing need for preconception education.

As Practitioner

As a health practitioner, my analysis indicates that registered nurses lack enough resources to deliver quality preconception education for women. In order to adequately prepare materials and programs for educating women during preconception period nurses need more funding. The budget allocated for health services normally do not include preconception programs. Therefore, nurses require more donors funding in order to provide quality preconception care. My analysis as a project developer is that the quality of preconception educational programs is vital in providing education for women. In order to provide such quality preconception education more funding is necessary. Furthermore, preconception educational projects should be located in areas with high number of stillbirths and pregnancy related deaths.

As Project Developer

This project assesses educational programs and strategies used by registered nurses in educating women during preconception period. This project therefore provides in depth knowledge that will help nurses to develop their skills in preconception care. This project

provides information that is helpful for professional practice for nurses. The project offers an insight on challenges and weaknesses of various approaches and strategies that health providers use in educating women during preconception period. The health professionals can use the recommendations made in the project to develop more appropriate programs that will promote access to preconception care. The project also acts as a knowledge pool for research scientists and nurses to develop their profession.

Summary and Conclusions

The assessment of educational programs and strategies used by nurses in educating women during preconception period show that more need to be done in order to promote access to preconception education programs. Preconception education is important in order to reduce pregnancy related deaths and unplanned pregnancy. Nurses can develop programs, strategies and approaches that take into consideration social and economic influences in order to deliver better preconception care. Social change is inevitable in order to deliver better preconception educational programs and to enable more women to access preconception programs.

Some of the recommendations include nurses should incorporate preconception educational programs into curriculum for both high school and college students, preconception educational programs should include public awareness programs on the importance of preconception care and education and nurses should undergo preconception care training in order to understand how to overcome various challenges in delivering preconception care and education.

The project poses various implications on research, practice and social change. The project has implications on the way nurses will deliver preconception education by outlining some of the guidelines and practices that nurses should follow. Finally, future research is

required in areas such as unplanned pregnancy preconception care, cultural influence on preconception care, demographic analysis of access to preconception education program, and age factor of preconception care.

Section 5: Scholarly Product for Dissemination

The goal of the project was to help African American women in Laurel, Maryland, to appropriately manage an unplanned pregnancy and ultimately prevent a recurrence of a subsequent unplanned pregnancy. Therefore, I proposed to disseminate the research findings of the project, sampling data, and recommendations of the study and future research work in preconception educational programs. The target audience for this report was the practicing nurses.

Target Audiences

This project primarily targeted registered nurses.

Benefits to End Users

This project offers several benefits to the targeted audiences. The project is a source of information for scholars and researchers who are interested in preconception programs. The project provides preconception information and knowledge for nursing students and registered nurses. The project also provides future research areas in preconception educational programs, thereby making it easier for students and researchers to identify area of research for their project. I provide recommendations that can be used by registered nurses, doctors, women, and government agencies to improve preconception education and awareness.

Dissemination Methods

The products of the project, such as work of the project, sampling data, findings, recommendations, and areas for future research are to be disseminated based on the target audiences. The result of the project will be shared with the nurse managers and clinic administrators to improve preconception health education in their practices. The method of

dissemination will be through newsletters, manuscript publication, publications in health journals, workshops, and conferences. In addition, the project will be published on research websites for health and will be available on my personal blog.

The findings of the project are supposed to be promoted through conducting seminars, workshops, and conferences on health care. Many nurses, doctors, medical students, and scholars often attend various workshops, seminars, and conferences to discuss new findings and research on health care. Thus, presenting my work in seminars, workshops, and conferences will enable me to reach wider audiences. The result of the findings will enable me to be published in journals, electronic journals, and magazines, and my study will be available as a manuscript. The project is available on scholars archive to reach many students and scholars.

The findings of the project were also to be promoted through journal publications. The manuscript will be published in various journals to reach the large community of nurses and scholars. The project will be published in the following journals: reproductive health journal, maternal and child journal, journal of nursing scholarship, SAGE journals, journal of midwifery and reproductive health, journal of women's health. In addition, press releases, whitepapers, health department websites, and presentations will be used to disseminate the findings of the project to health professionals, scholars, research institutions, and professional organization such as the American Nurses Association website.

In addition, the work of the project will be disseminated through media interviews and my personal blog. The work will appear on various media channels to reach different types of audiences. The project will be published on nurses' websites such as the America Nurses Association website, women reproductive health website, preconception education websites, and the CDC website. Finally, the work will be mailed to various health professionals, peers,

practicing nurses, scholars, community-based organization leaders, and secretariats of government agencies.

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