

Spring 5-16-2015

Perinatal Health Education Intervention for Adolescent and Young Adult Pregnant Homeless Women Living in Transitional Housing, and Best Practice Teaching Intervention Program for Staff Responsible for Care of the Mother-Baby Dyad

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By

Colleen Carrington, RN, MSN, CPNP, IBCLC

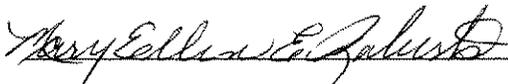
DNP Scholarly Project Committee

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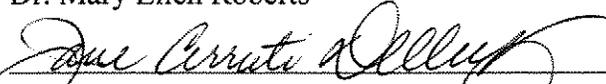
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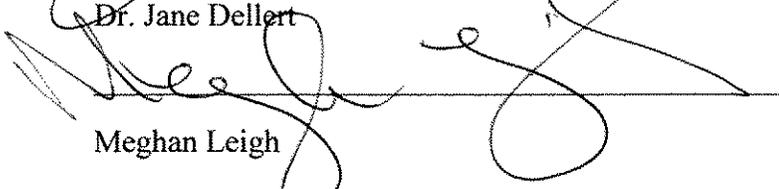
Dr. Mary Ellen Roberts

Date: 3/17/15



Dr. Jane Dellert

Date: 3/17/15



Meghan Leigh

Date: 3/17/15

Submitted in partial fulfillment of the Requirements for the degree of

Doctor of Nursing Practice

Seton Hall University

2015

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Acknowledgements

It is with the deepest love and gratitude that I mention my dear parents who gave unselfish devotion to my sisters and me. Joseph W. Byrne and Jean Egan Byrne I hope you can see this accomplishment that you are so much a part of.

To be blessed with a career that is inherent on healing and caring and that has been privileged to have crossed paths with countless souls is quite profound. A profession that has led to two careers and has rewarded and fulfilled in both is beyond all expectations. Nursing has guided my life and raised me to heights once not thought possible.

The women that have touched my life in Academia in recent years have inspired me and cheered me on to greater accomplishments. I am proud to walk among the amazing nurse leaders at Seton Hall University, College of Nursing. I especially wish to give praise and show gratitude to Dr. Mary Ellen Roberts, who will undoubtedly raise the DNP Program to the Gold Standard program, while guiding and supporting her students with great encouragement and pride. She tirelessly gives to her students support and devotion. I wish to acknowledge Dr. Jane Dellert, the most brilliant of scholars who offered her insight and expertise to this project. Meghan Leigh, Director of Covenant House New Jersey, mentored me and gave of her precious time, providing me a canvas to illustrate the characteristics inherent in a DNP Project. My friend Dr. Maureen Byrnes whom I call my spiritual advisor, shared her thoughts and suggestions and encouragement throughout the process. I would also like to thank Heidi Trotta who assisted me with putting together the Learning Modules. She gave a great deal of her time to this endeavor.

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Rose Stallmeyer, at Raphael's Life House, is always ready and willing to assist me, despite her extremely busy schedule.

I wish to mention the courageous women of Raphael's Life House. Despite having traveled a most difficult journey in this life thus far, continue to demonstrate optimism and hope. They have taught me about the meaning of inner strength.

This project will continue on with the intention of making a difference in the lives of these women and children.

Dedication

To my husband, Steven W. Carrington, who after 46 years sustains me with devotion and true love, to my children, Erin Kathleen Carrington Smith, and Michael Byrne Carrington, who are my life, and to my grandchildren, David Gabriel Carrington, and Sally Hannah Carrington Smith, who are my joy and my hope. I am blessed.

Education Intervention Program

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Executive Summary

Purpose: A population at great risk is pregnant homeless adolescents and young adult women. Research shows that about 20% of homeless young women become pregnant (Bender, & Thompson, 2007). These pregnant young women are at an increased risk for low birth weight infants and a high infant mortality due to inadequate health care, poor dietary habits, and a knowledge deficit related to maintaining good health during pregnancy and to care of the infant and growing child. A transitional shelter may offer many psychosocial services to assist the women in becoming independent; however, a significant gap exists regarding the medical care of this population. The purpose of this DNP Project was to develop an educational program in a transitional homeless shelter focused on the health care of the pregnant woman and the newborn infant in order to bring awareness of the special needs of this high risk population and to attempt to change unhealthy behaviors. This program was coupled with an In- Service Program for staff members related to Best Practices for the Mother- Infant Dyad.

Significance of the project: Knowledge can be empowering and save lives. Through months of interaction and time spent with new mothers in a transitional shelter, the enormous lack of evidence based practices in regards to infant and child care has become evident. This vulnerable population has the highest rate of infant mortality. Education can improve the health outcomes of these women and children. These mothers are eager to learn and want to give their children a chance for a healthy life. They are lacking the information to do so.

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Methods: The project was implemented in a transitional homeless shelter for women ages 18 to 23 based on a needs assessment. The project implementation contained two parts. Informal education sessions took place with pregnant women and women having recently given birth. There were both individual and group sessions. The topics included labor and delivery preparation, diet during pregnancy, care of the newborn, and safety issues related to sleep and feedings. As the infants have grown over the months the sessions have evolved to meet the needs of the growing infant and child. The second part of the project contains a series of learning modules comprising of four hours of narrated lectures and power point presentations developed for the staff.

Project Outcomes: The project initiatives were received by all involved wholeheartedly. The project brought to the shelter directors and staff members a new awareness of the crucial need for evidenced based practice in the care of the newborn and mother. Clinical observations have shown a readiness for several of the mothers to follow lessons learned. Significant changes in behaviors related to care of the infant have been observed. A level of trust has developed between the educator and the residents of the shelter. The educator has assumed the role of advocate and mentor.

Clinical Relevance: Women head up 90 percent of the families that use shelters. A third of the homeless are women and children, and the numbers are exploding. Through education, advocacy and developing a means of quality health care the lives of these women and children will be made better and healthier. A best practice model for care of the pregnant homeless women and her infant is needed.

SECTION I

Background

Raphael's Life House, located in Elizabeth, NJ is a transitional residence for women who are homeless and pregnant. It is part of the Covenant House New Jersey Program. The residence houses up to 12 women and their babies at any given time. This program offers women between the ages of 18 to 23 services related to career development, youth advocacy programs, medical services, pastoral services, addiction services, mental health services, and aftercare services. The mothers and children may stay in the home for 18 months after the infant is born.

The mission of Raphael's Life House includes a belief in the personal dignity of each individual, and a desire to teach their residents the basic skills needed to lead productive lives and be prepared for independent living.

The homeless population includes a growing number of young women and their children, with an over representation of racial and ethnic minorities (Rossi, 1990). Childbirth education can positively affect the pregnancy and birth experiences and improve maternal and infant health outcomes for women living in shelters (O'Connell, 1993).

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The transitional home offers many services to aid the homeless mother in working towards independence and self-reliance. The programs are many and varied and the numbers of volunteers grow continuously. Since visiting this home several years ago, the growth in resources and the quality of the homes environment has been transformed. The women receive preparation for job searches, guidance for high school completion, social services, Women, Infants and Children (WIC) support, Food Stamps, and a myriad of other services.

Based on qualitative observations from time spent in the shelter, it is apparent that significant gaps remain however. There exists a significant knowledge deficit among the young mothers and among the staff members regarding care of the newborn, related to evidenced based practice. There is a dearth in the knowledge needed to prepare the mothers to give birth. They have little information regarding the reality of pregnancy. They are weighed down with fears and misconceptions regarding labor and delivery. Those with potential complications are not followed adequately. Many of the infants are born small for gestational age or prematurely. Much of the information regarding caring for the newborn comes from outdated cultural practices. Some of the practices have the potential to be harmful. There is a tremendous urgency for an educational intervention for both staff and residents of the shelter. It is hoped that the knowledge gained will improve the health and well-being of the young mothers and their children. It will bar unhealthy practices and empower the women to take control of their health and the health of their children

There are unique challenges in preparing childbirth and parenting education for this population. This is a transient population, and the educator will encounter women at different stages of

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pregnancy, as well as varied ages of children, ranging from the newborn to the young toddler. The traditional childbirth education classes are not relevant for this population. The education will not be couple oriented. The pregnant women will not be focused on their health or the health of their babies. They are tending to basic needs on the hierarchy of needs scale, such as food and shelter. These are women that often resist participation in prenatal care and education (O'Connell, 1993). These pregnant young women encounter many barriers to obtaining prenatal care. The women often feel that the prenatal visits are a waste of time. They complain of long waiting times and problems with transportation. It is helpful if they understand what is done at the visits and the reasons behind the various tests for instance, that the fetal heart and fundal height will be evaluated. It is important that the women learn why these procedures are performed (O'Connell, 1993). It is a time when the educator can build a sense of confidence and pride in the mother, giving her the knowledge that she is providing good care for herself and her infant.

The childbirth educator will encounter women at a disadvantage educationally and this will affect their comprehension of the information. Innovative approaches are needed to assist them in understanding the information. It has been shown that these women enjoy sharing their experiences, and during these informal discussions, teaching can occur. Role playing can sensitize women in shelters to their rights and prepare them for problems they may encounter (O'Connell, 1993). Knowledge is empowering. The women should be encouraged to write their questions down, and be familiar with the name of the provider and what tests are being performed. Encouraging a mother of a small for gestational age infant to call the clinic and request to have the infant's weight checked in the next week rather than waiting an unacceptable

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two months for the next clinic visit is one way of demonstrating to these young women that they can take control of their health and the health of their children.

The educator will have to adjust to the special education needs of women in shelters. There will be days when some of the women will have difficulty concentrating in class for any extended period of time (O'Connell, 1993). Some women lack focus in a group setting. The same women may be more alert and attentive during a one on one encounter. It must be considered that many of these women are victims of substance abuse, battering, nutritional deficiencies, sexually transmitted diseases and general poor health. Some may have developed skills of manipulation. There will be days when although expected to meet with the educator, women will not show up. The case managers are very helpful in finding the women and encouraging them to come to the sessions. The educator must be on guard and maintain professional boundaries.

Childbirth classes in shelters will usually include women at different stages both prenatally and postpartum, unlike traditional classes. Each new week there often are new faces due to the transient nature of the population of the home (O'Connell, 1993). The educator must be flexible and prepared to cover issues that are current to the women present.

The unique and special relationship that potentially may develop between the educator and the sheltered women may help to perpetuate feelings of empowerment and confidence in the women. A growth in knowledge and positive feedback may build in these women a sense of "self-efficacy." According to Bandura (1997), "Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments."

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Perhaps the educator will find methods and means to motivate the women to make life style changes.

Prenatal nutrition must be a major focus for the childbirth educator in the shelter setting. It has been seen that a good number of the population is obese. Many do not take prenatal vitamins. It is helpful for the educator to use diagrams and videos showing the growing fetus demonstrating the reality of the growing fetus and the importance of good nutrition (O'Connell, 1993).

Parenting education must be incorporated into the education classes. It is apparent, through observation, that the infants and children are being raised on "old wives tales" and not on medical evidence. Some of the practices are unsafe. Safety, discipline, and an understanding of growth and development are essential components needed to raise healthy and stable children. Shelter managers report that many homeless women are rough with their children. The women are often observed being verbally or physically abusive. Mothers in shelters benefit from group discussions regarding discipline (O'Connell, 1993).

The mothers encountered have shown an interest in the growth and development of their infants and children. Misunderstanding the child's growth and development needs contributes to abuse and neglect (Clarke, 1987). It is important for the mothers to know age appropriate behaviors, and receive anticipatory guidance related to injury prevention and to promote optimal development.

An educator in a homeless shelter will encounter a great diversity in cultural practices. An example is an infant with an umbilical hernia. This is a condition that is common in African-American infants. Cultural practices include placing pressure on the hernia with a coin. This

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practice has the potential to cause harm. Feeding habits are also often based on culture. Large numbers of mothers begin putting cereal in formula bottles within the first two months of life. Mothers are obligated to use food that can be purchased with food stamps or that are given by the Women's, Infants, and Children (WIC) Program. These foods are often limited in supply or may lack nutritional value. Educators must be sensitive to this cultural diversity.

From personal observations, living in a group environment may pose health problems. Infants often share infant seats and beds. Knowledge about proper preparation of formula presents a problem. A significant knowledge deficit exists in the preparation and refrigeration of formula bottles. Educators need to be aware of the poor hygiene that exists in shelters (O'Connell, 1993).

There are also severe knowledge deficits with women in shelters regarding areas of sexuality and fertility (O'Connell, 1993). There is a need for the educator to enhance the women's understanding of their bodies, especially to create a heightened awareness of the ability to become pregnant again (O'Connell, 1993).

The childbirth educator in a homeless shelter has an expansive role; one that includes pregnancy, childbirth, nutrition, parenting, breastfeeding, and safety. The educator must be warm, accepting and non-judgmental. The role will be one of counselor and advocate. The goal of the educational encounters is to promote healthy outcomes for mother and child. In the process of informing, advocating, and caring it is hoped that a sense of self-esteem and self-efficacy will be achieved resulting in more independent and productive lives.

Definition of Terms

Transitional Housing: temporary accommodations for displaced individuals and families; consists of programs that support transition to permanent accommodations.

Perinatal Health: the health of women and babies before, during, and after birth.

Best Practices: a technique or methodology that through experience and research had been proven to reliably lead to desired results.

Self-Efficacy: subjective assessment of one's ability to cope with a given situation; sense of personal power.

Description of Project

The project implemented an educational intervention for residents living in a transitional homeless shelter for pregnant women and their infants. The second part of the project was the implementation of a Perinatal Health Education Series for educating the staff of the shelter. The staff includes several house managers, education teachers that help with career development, and many volunteers that help with babysitting and other services.

The project evolved following a needs assessment that was formal and informal and involved interactions with residents, staff members, and meetings with the Associate Director and volunteer coordinator of the shelter. Individual and group education sessions occurred on a weekly basis with the mothers of the shelter. The mothers understanding of pregnancy and competence with newborn care were observed during these sessions. From observation of staff and resident interactions, it became clear that a dearth in knowledge about medical issues concerning pregnant women and infants existed. A series of Learning Modules were developed to educate the staff and reinforce Best Practices in the care of mother and child.

Recipients of project outcomes

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Participants in the project included women at different stages of pregnancy and postpartum and infants at various ages, newborn to 18 months of age. In the early months there was no consistency with which mothers attended the sessions. More recently a group of mothers that were followed during pregnancy and following the birth have become regular attendees at the sessions. However, there is no certainty about who will be present for the sessions. New mothers come to the home regularly and others leave to attend jobs. Mothers are not permitted to stay in the shelter if rules are not adhered to. A relationship may have developed between the educator and mother only to find the woman is gone the following week. All mothers in the home are welcomed to join the weekly classes. The activity board announces the day and time they are held.

Members of the staff are presently viewing the Learning Modules. The director Meghan Leigh is responsible for arranging the schedule of administration of the modules. This will be an ongoing process.

Project Outcomes

Qualitative observations of the mothers have been used to measure the benefits of the educational interventions. The mothers and children have benefited from the knowledge gained. The mothers have become more empowered to take control of their own health and the health of their children. This is evident through more assertive behaviors in making appointments for sick children and in following up on health issues that have not been resolved. The mothers are requesting supplies to prepare more healthy foods for the children. The outcomes of the Learning Modules given to the staff are being measured through discussion with those completing the

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series, through evaluation of a pre and post- test and through qualitative observations of staff interactions with the residents. All in the shelter are learning new knowledge and are following the latest evidenced based practice in caring for the pregnant adolescent and young woman and the newborn and young child. Through confidence gained, a sense of self-efficacy in the ability to parent is evolving, leading to improved health outcomes for the mother and child.

Purpose of the Project

The aim of this project was to develop an educational program focused on pregnancy, child birth and care of the newborn. Major factors to be considered are the special needs relevant to a population of young (ages 18-23), underserved women, living in a sheltered home environment, in relation to education, follow up and measurable outcomes. The emphasis is on promoting the social and emotional health of the women and their infants as well as enhancing a sense of self efficacy and self- confidence in the parenting role.

The project goals and objectives

Develop an intervention program in a group setting that provides education related to healthy pregnancy, birth, and effective parenting for adolescent and young adult women living in a sheltered home setting.

Encourage a sense of self-efficacy in sheltered pregnant women related to their abilities to care for and nurture themselves and their infants.

Provide for a reliable support system within the sheltered home setting that promotes health and self-efficacy in adolescent and young adult women living in a sheltered home setting

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Minimize adverse birth outcomes and maternal-infant relational problems through advocacy of health promotion behaviors during pregnancy and after birth.

Sustain continuity and standard of care through the development of a comprehensive model that integrates the complex needs of this population, and which can be reproduced in other similar settings through the development of a perinatal health promotion role for staff members.

Phases of Project Implementation

The project was implemented in five phases, extending over a period of one year. Phase I: identified a need or problem; Poor health outcomes in the vulnerable population of homeless pregnant women. Phase II: stakeholders were consulted through letters and in person; agreement that a need for the project exists. Phase III focused on weekly visits to the shelter where significant gaps in medical care were assessed. Phase IV focused on more formal education sessions with the residents of the home and the Learning Modules were implemented for the staff. Phase V: Pre and Post Tests and Evaluations by staff of the Learning Series were analyzed. Evaluation of the program process and impact included immediate feedback from participants, discussion with the director and volunteer coordinator about their personal opinions of the Learning Series as well as their observations of behavior changes in the employees, and personal observations of behavior changes in the mothers in regards to their personal care and the care of their children.

Significance of the project for nursing

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The United States has one of the highest rates of low infant weight and maternal mortality (USDHHS, 2000). Ineffective healthy behaviors resulting in poor nutrition, lack of prenatal care, and lack of knowledge regarding the importance of adequate care during pregnancy, as well as proper care of the infant and child are likely to result in acute and chronic negative health outcomes. Various studies incorporating nursing intervention activities designed to enhance the pregnant women's access to resources through visitation by nurses have been empirically linked to improved health outcomes, especially among high risk women, including pregnant and parenting adolescents (Kitzman, Olds, Henderson, Hanks, Cole, & Tatelbaum, 1997).

Community health nurses can help staff with role development by providing educational interventions that will enhance the level of care provided in the shelter. The majority of shelters do not employ full time nurses due to limited budgets. Advanced practice nurses can play a role providing health assessments and education on a part time basis. Community health nurses can act as consultants to help staff to work with this population through onsite support groups. The nurse can reinforce the training provided on an ongoing basis. Collaboration with nursing schools could provide a valuable resource in the utilization of student nurses to support the educational interventions.

Many of the needs and problems of this population could be alleviated through the skills of community health nursing services. It is recommended that the community health nurse play a larger role in resolving the paradox of access to health care by providing assessment, policy development, and assurance of health care to the homeless. This would involve a systematic appraisal of the homeless mother's and children's health conditions. The shelter staff generally does not have the knowledge or experience to determine the health needs of the residents. The

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assessment, including screening activities by the nurse would lead to increased case findings, such as hidden diseases such as hypertension, sexually transmitted disease, failure to thrive in the infants and tuberculosis could be identified and treated. Normally, the staff in homeless shelters concentrates their efforts on visible conditions that affect the entire institution, such as lice, chicken pox, or disturbing behaviors, and do not identify, “silent” conditions (Hatton, et.al, 2001).

It is recommended that the nurses advocate for the residents of the shelters at two levels, individual and system. The advocacy role of the nurse at the individual level would be to assist them in gaining access to health care through obtaining Medicaid or other health benefits. The nurse could act as a liaison between different agencies to facilitate health care access. This advocacy role would include teaching staff about health conditions related to conditions of the mothers and children.

In the role of advocate for systems change the nurse could arrange for transportation to clinics. Presently, the women in Raphael’s must travel by bus with their newborn infants exposing them to illness at a very vulnerable age. It would be helpful if services such as welfare, unemployment, Women’s, Infants, and Children Program, and the health clinic were within convenient distances. It is important that the community health nurse guarantees that necessary health services are provided including teaching basic hygiene, preventative care, nutrition, safe sex, family planning, and priority setting and assertive skills. It is clear that the community health nurse has a role in resolving the paradox of access to health care (Hatton, et al, 2001).The idea of a Medical Mobile Unit to visit the shelter is exciting and steps have been taken to investigate this possibility.

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It is likely that the staff in charge of guiding and supporting this population through the process of childbirth and parenting are not fully equipped with the knowledge, skills, and attitudes necessary to bring about positive changes in behavior. Nurses in the role of educator, and advocate, are in a position to bring about change through awareness of the problem. A nursing model based on the specific and unique needs of this population should empower these women in a holistic way. There is a tremendous need for the nursing community to recognize the valuable contribution they can provide to homeless pregnant women and their children.

A transitional shelter environment gives nurses an opportunity to change behaviors. Women who are socioeconomically disadvantaged or from racial and ethnic minority groups are at higher risk of experiencing behavioral risks such as smoking, having limited access to health care, and having an increased likelihood of having cardiovascular disease and cancer (King, Borelli, Black, Pinto, & Marcus, 1997; Ma, Goins, Pbert, & Ockene, 2005). Even in the dire circumstance of homelessness, women are often motivated to consider changing behaviors when pregnant. While in the shelter the women are available for regular and continual care by nurses. These opportunities must be seized and used as a time for teaching and change.

Section II

Review of the Literature

Theoretical Framework

The Theoretical Framework chosen to guide this scholarly project is Nola J. Pender's Health Promotion Model (HPM).. This is a middle range nursing theory which first appeared in the nursing literature in the early 1980's. Pender's background in nursing, human development and psychology led to the emergence of a holistic framework which integrates social psychology and learning theory as factors influencing health behaviors.

The HPM attempts to depict the multidimensional nature of people interacting with their interpersonal and physical environments as they pursue health. The HPM illustrates that each person is a multidimensional holistic individual who continually interacts with both interpersonal and physical environments and emphasizes the active role of the individual in the achievement of an improved healthy state (Wilson, 2005).

The HPM integrates several constructs. One construct is called the "Social Learning or Social Cognitive Theory" proposed by Albert Bandura, in the 1980's. In social cognitive theory, environmental events, personal factors, and behavior are interrelated. Major emphasis is placed on self-beliefs, self- attribution, self-evaluation, and perceptions of self-efficacy. *Self-efficacy is the central construct of the HPM.*

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Another construct that is integrated into the HPM, and is important to the model's development, is the Expectancy Value Model of Human Motivation described by Feather, (1982).

According to this model, behavior is rational and economical. Specifically, a person engages in a given action and persists in it, a) to the extent that the outcome of taking action is of positive personal value, and, b) to the degree that based on available information, taking this course of action is likely to bring about the desired outcome. In other words, people will not invest their efforts and personal resources in working toward goals that are of little or no value to them.

The HPM is similar in construction to the health belief model. Unlike the Health Belief Model, the HPM does not include "fear" or "threat" as a source of motivation for health behavior.

Avoidance-oriented models of health behavior are of limited usefulness in motivating overall healthy lifestyles.

Particularly children, adolescents, and young adults, often perceive themselves as invulnerable to illness. Therefore, since the HPM does not rely on personal threat as a source of motivation, it is a model that can potentially apply across the life span. The HPM is a competence or approach oriented model.

Bandura's Self-Efficacy and Social Cognitive Theory states that "environmental events, personal factors, and behavior act as reciprocal determinants of each other." The core determinants include knowledge of health risks, and benefits of reducing risks, perceived self-efficacy, or the belief that one has the ability to change one's health habits (Bandura, 1997, 2004). According to Bandura (1997), self-efficacy plays a central role in personal change and is the foundation of human motivation and action. Knowledge is a precondition for change.

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A person's self-efficacy expectations develop through mastery experiences or accomplishment, vicarious learning (models), verbal persuasion, and somatic responses to particular situations to build competencies and confidence (Pender, Murdaugh, & Parsons, 2011). The greater the perceived self-efficacy, the more vigorously and persistently individuals will engage in a behavior, even in the face of obstacles. "An important theoretical tenet holds that a person's belief in capabilities is more motivating than the objective truth of one's abilities" (Bandura, 1997). *"They are able who think they are able" Virgil*

The HPM classifies health behavior into three specific propositional groupings: a). individual characteristics and experiences, b). behavior specific cognitions and affects, and c). situational/interpersonal influences (Pender, Murdaugh, & Parsons, 2011).

The individual characteristics and experiences are innate factors such as gender, age, genetics, and experience factors that influence future behaviors. These factors cannot be modified. The behavior-specific cognitions and affect category includes perceived benefits-barriers to behavior, perceived self-efficacy, and affect cues to behavior. The situational and interpersonal influences are social and environmental factors that influence health behavior. They are: Prior related behavior, Personal Factors, such as biological, psychosocial, socio-cultural, Perceived Benefits of Action, Perceived Barriers to Action, Perceived Self-Efficacy, Activity Related Affect, Interpersonal Influences, Situational Influences, Commitment to a Plan of Action, Immediate Competing Demands and Preferences, and Health-Promoting Behavior (Pender, Murdaugh, & parsons, 2011).

Meg Wilson (2005), in her study on health promoting behaviors of homeless women, conceptualizes homelessness through the perspective of individual and structural influences.

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Individual characteristics that may contribute to the vulnerability of this population are psychosocial issues such as adverse early childhood experiences, mental/emotional illness and health, substance abuse, domestic violence, and socio-demographic factors including age, gender, level of education and ethnicity. Societal factors that may contribute to homelessness are: conditions of poverty, unemployment, and lack of affordable housing, gender-related problems, insufficient income, inadequate social services and health care, and an increase of female-headed families.

Lower health literacy has been shown to be associated with less knowledge seeking and lower self-efficacy (von Wagner, Semmler, Good, & Wardle, 2009). It is imperative that those developing an educational program to promote better health to vulnerable populations address the health literacy of the individuals.

When addressing a health promotion and prevention program for vulnerable populations it is imperative to consider the values, attitudes, culture, and life circumstances of the individuals who are poor, socially marginal, or culturally different from the traditional mainstream of society.

Empirical Literature

There has been an increase in homelessness among single mothers and their children which has led to an increasing need for the provision of clinical and social work services in homeless shelters (Goldberg, Joan, 1999). The pregnancy rate among homeless women is estimated to be 1 in 5, almost twice that of the general population, with the highest rate among those ages 16 to 19 (Gelberg, et.al, 2001).). Homeless pregnant women are at risk for inadequate prenatal care,

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pregnancy complications, and adverse postnatal outcomes and for adverse pregnancy outcomes related to economic, social and medical problems. (Stein, Lu, & Gelberg, 2000).

Women who are pregnant and homeless typically are younger; have experienced more frequent family disruptions, suffer from more acute and chronic health problems, and report more cigarette, drug and alcohol use (Metraux & Culhane, 1999). Homeless pregnant women are at a higher risk for inadequate nutrition, inadequate weight gain, anemia, bleeding problems, preterm delivery, fetal distress, and having an infant with a low birth weight than are woman with homes (Hamm & Holden, 1999). All of these factors contribute to a significantly increased mortality rate.

Homeless pregnant women often lack comprehensive, consistent prenatal care. A study was conducted by Bloom, Bednarzyk, Devitt, Renault, Teaman, and Van Loock (2004), to explore and describe barriers to prenatal care for homeless pregnant women. Those responding to the survey averaged age 25, were single and African American, with less than a high school education and unemployed. The majority of the respondents reported barriers to prenatal care as site related factors such as wait time, distance and lack of transportation. The study also found that the provider-client relationship, which includes issues related to perceived concern and interest on the part of the provider and consistency of provider, was another large barrier. In this survey only half of the women received prenatal care. Evidence supports the conclusion that access to care is not assured simply by making prenatal care services available through funding (Beckmann, Buford, Witt, 2000). Access is more a matter of how services are obtained (i.e., the ease with which one gets connected to care) and factors such as clinic hours, transportation, child care, and provider attitudes (Bloom, Bednarzyk, Devitt, Renault, Teaman, Van Loock (2004).

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There needs to be better communication between the homeless women and the clinicians as to what the impediments are within the system and within the women's own life that set up the barriers to prenatal care.

More studies are needed about the experiences of homeless pregnant women. A study conducted by Barge and Norr (1991), identified an estimated number of homeless women in childbearing years that were served by 43 shelters in Chicago. The majority were African American (64%).

The directors of the shelters surveyed were aware that gynecological care and prenatal care was greatly needed, but that obtaining it was a low priority for the homeless (Barge, & Norr, 1991).

There is a higher infant mortality rate among African American women in the general population. Even when the level of prenatal care is the same, the infant mortality rate for blacks is double that of whites and the gap has widened (Hughes, Johnson, Rosenbaum, & Joseph, 1989).

Nurses are in a strategic role to provide direct care or develop a health care model to insure care to this population of vulnerable women of reproductive age, who are homeless. A nursing model proposed by Berne, Dato, Mason, and Rafferty (1990) describes a holistic way of assisting the homeless to become empowered. It is based on the Pesznecker Adaptation Model of Poverty which takes into consideration the health damaging effects of the stress of poverty. Berne et al. (1990) challenge the nursing community to recognize the connections between the health of homeless women and children and the broader social, economic, and political issues of our times.

Homeless families have more problems accessing health care than even families who are poor.

Research has demonstrated that some health professionals may be reluctant to provide care to

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impoverished and homeless clients, making access even more difficult (Komaromy, Lurie, & Blindman, 1995). Homeless women and their children have little health promotion and health maintenance. Much of their care takes place in Emergency Rooms, since they often wait until the health problems are more serious. It has become apparent from personal observations that the care being provided for the homeless infants and children living in this shelter is inadequate. The follow up of high risk infants is lacking. Education including anticipatory guidance of infants that are small for gestation, infants with a history of meconium aspiration, and infants that are jaundiced was non-existent. These patients were told to come back to the clinic in two months, where more conscientious follow up was warranted.

A qualitative study conducted by Hatton, Kleffel, Bennet, and Gaffrey, (2001), looked at the way shelter staff manage health problems among their residents and how they assist them in accessing health services. The study also looked at identifying clinical strategies for community health nurses working with this population. The staff members working in homeless shelters are usually volunteers, or workers experienced with the homeless population, or they are trained in non-health disciplines. They are doing their best in attempting to obtain adequate health services for their residents, but they lack education and support. The Committee for the Study of the Future of Public Health of the Institute of Medicine (1988) stated that “No citizen from any community, no matter how small or remote should be without identifiable and realistic access to the benefits of public health protection” (pp. 144-145).

It is necessary and a goal of this project to assess the educational needs of the staff working in the shelter. When signs of illness in the infant or behavior that may put the infant at risk for serious illness are not recognized due to lack of knowledge the resulting problems could be very

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serious. It is important to empower the staff to recognize and manage what is normal versus abnormal newborn behavior. A study conducted by Jeanne Burke, MSN (2005), assessed the educational needs of the staff working at an urban homeless shelter for women and children, in terms of their knowledge about mental illness. Educational sessions were developed based on the needs assessment. The tools implemented and the observed outcomes are analogous to this project's goal. The increased knowledge and skill level of the staff in caring for the pregnant women and newborn has had a positive impact.

Maslow's Hierarchy of Needs Theory (1987) guided Burke in considering the needs assessment of this population. Employees working at homeless shelters are familiar with meeting basic needs of the shelter residents, but may not be aware of the importance of the higher level needs or that they may be instrumental in helping a person achieve gratification of the less tangible emotional needs (Burke, 2001).

In Burke's (2001) project the focus was on identifying the staff's lack of knowledge and skills in regards to mental illness. The needs assessment tools of observation of staff interacting with the residents and a survey to determine the staff's knowledge and attitudes toward caring for pregnant women and infants was useful in this project. Although mental illness exists among the residents of most homeless shelters, Raphael's Shelter exercises strict controls over admission. Residents must conform to behavior standards while in the shelter. This is a shelter that requires an interview as part of the screening process for admission. Considering Maslow's Theory and realizing that often despite education there is not always compliance, it is understandable that learning new skills is often not a priority for these women. Changing practices, building self-esteem and self- efficacy, will take time and patience and reinforcement from an educated staff.

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Bourgois and Auerswald (2010) have found through interviews and participant observation of young homeless women that despite significant obstacles, almost all were convinced of their personal capacity to change their lives. Pregnancy in some cases acted as a catalyst for transformation according to this study. This study confirmed that most of the participants yearned to find evidence of their capacity to be good parents. Just like all mothers these mothers love their children and want the best for them. With knowledge, support, and a feeling of being valued, it is hoped these young mothers will rise out of a dire situation to a level of self-confidence and independence.

SECTION III

METHODOLOGY

The experiences of a long career as a clinician have assured the attainment of skills centered on the newborn and new mother, the ill newborn, and the pediatric patient. In designing a DNP project, the utilization of these skills was imperative. Consideration of a population in the most need of an evidenced based intervention to improve health outcomes revealed a women's shelter for pregnant adolescent and young women. It is known that women and children residing in shelters experience many health related problems.

After the formation of a DNP committee, the process of seeking approval for the project was initiated. The Assistant Site Director of Covenant House and Raphael's Life House, Meghan Leigh, was contacted through mail and an interview was scheduled. It was at this point during the interview that the needs assessment began. The Director shared gaps of significance in the medical knowledge of the residents of the shelter related to breastfeeding and stages of labor and delivery. The aims of the scholarly project were further discussed with the Director of Raphael's Life House, and Meghan Leigh consented to serve on the Scholarly Project committee.

The Director of the Shelter introduced me to the volunteer coordinator, Rose Stallmeyer, who is in the shelter four days a week. There was a warm welcome by the staff that includes three house managers and volunteers assisting with babysitting and various social events.

The project was implemented in Raphael's Life House, a transitional shelter for homeless pregnant women, ages 18 to 23. The women and their children are permitted to stay in the shelter

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for 18 months after the birth of the baby. They must abide by rules and show progress in moving towards independence.

IRB approval was not needed and signed informed consent was not required since there was no risk for physical or psychological harm and identifying information was not released.

Confidentiality rules as applied by the Health Insurance Portability and Accountability Act were followed regarding privacy, access and disclosure of information.

The project was divided into two parts. The first part included informal individual and group learning sessions provided on a weekly basis for the mothers of the shelter.

The subjects taking part in the educational process were based on those residents present in the shelter at the time of the visit. Those mothers that were present in the home at the time of the visit were notified that the educator was there. Some were waiting for the educator when she arrived at the shelter. The majority of mothers was either due to deliver their baby within a few months or had just very recently delivered. Therefore the focus of the educational sessions was pregnancy, labor and delivery, and postpartum care of the mother and newborn. Over the months the education fluctuated according to the growing children's needs and stages of development.

The outcome of these interventions with the residents of the shelter were measured through qualitative observations only.

The second part of the project involved developing a series of education modules to be viewed by the staff. The ultimate goal of the series was to bring awareness of the need for improvements in the health care of the residents and increase knowledge of evidence based practice so to improve the health outcomes.

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The intention of the Learning Modules was for the staff to view them independently. Learning objectives for the Education Series were developed (Appendix A). The Modules consist of four hours of narrated lectures and power point presentations. Those who participated first were the home managers who directly supervise the mothers.

In order to measure the effectiveness of the educational series, a pre-test and post-test was administered to the staff of Raphael's Life House. (Appendix B and C) These tests are a means of measuring educational gains. The tests showed the general level of knowledge of those working directly with the residents of the home before viewing the Modules and progress made in acquiring new knowledge at completion of the Module series.

The evaluation process of the Learning Modules was given to the staff only and involved feedback from the participants, discussion with the director and volunteer coordinator about their observations of changes in behavior of the staff, and a written evaluation completed by the staff member directly after completion of the learning experience. This is an ongoing process and is expected to take time due to the time constraints of the employees.

Implementation of the project occurred in five phases. Phase I centered on organizing a framework that concentrated on the purpose of the project and the outcome goals. The project proposal and objectives were developed. The needs assessment process was begun in this phase as well. Phase II involved obtaining approval for the project from the Assistant Site Director of Covenant House, and from Seton Hall University Faculty. Visitation to the home began at this time. The plans and aspirations for the project were discussed with committee members from the University. Phase III included weekly visitations to Raphael's Life House to meet with mothers

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and infants. Informal teaching sessions occurred. Tremendous gaps in the health care of the mothers and infants became apparent. Preparation of Learning Modules took place. Phase IV involved the completion of the preparation and taping of the Learning Modules. Implementation of the Perinatal Health Education Series to the staff at Raphael's Life House occurred (Appendix D). Weekly interactions with residents of the shelter continued. Phase V led to reflection and evaluation of the project and the great needs that still must be addressed in regards to the health and well-being of the mothers and children of this shelter and others like it.

Phase I

The title of the project and the objectives were established. Based on the unmet health care needs of this population, Nola J Pender's Health Promotion Model was chosen as the theoretical framework to guide this work. This is a model that is useful in helping nurses to understand what factors determine healthy behaviors. It incorporates components from nursing, psychology, and public health. It is a valuable model in helping to set up nursing protocols and interventions. One of the constructs of the HPM is Bandura's Social Learning Theory. In social learning theory, environmental events, personal factors, and behavior are interrelated. Bandura's theory states that people learn from one another, through observation, imitation, and modeling (Bandura, 1997). Self-efficacy is a major construct of Bandura's Social Learning Theory and the Health Promotion Model of Nola J. Pender. Self-efficacy is the most important precondition to behavioral change (Bandura, 1977).

Through growth in knowledge and development of new mothering skills, and through observation of proper techniques in child care and mentoring from staff and nurse, self-

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confidence has improved for both the new mothers and the staff devoted to them. With positive feedback for changed behaviors, self-efficacy in the ability to be an effective parent is growing.

Phase II

A DNP committee was established and included Dr. Mary Ellen Roberts acting as chairperson, and Dr. Jane Dellert both from Seton Hall University, College of Nursing, and Meghan Leigh, Assistant Site Director of Covenant House, in Newark, NJ. Project approval was obtained from the University and from Covenant House. During the first meeting with the Director, gaps in the health care of the women and children with the possibility of interventions were expanded upon. At this stage the thought was that an educational intervention to teach the pregnant mothers about the stages of labor would alleviate observed anxiety in the mothers related to labor. Breastfeeding was a subject that the women were afraid to initiate due to lack of knowledge and support.

During this phase weekly sessions conducted by myself began with informal discussions about pregnancy, prenatal care, and nutrition during pregnancy. Meetings with mothers and their children occurred individually to discuss concerns they had about their children. Through observations of mother and child interactions, healthy bonding and caring behaviors were observed. It appeared that positive relationships existed between the staff and the residents of the shelter. For the most part an environment of optimism prevailed.

Through time spent in the shelter interacting with the mothers, enormous gaps in evidenced based care quickly became apparent. Infants were being overfed to the point of excessive vomiting. Formula preparation lacked proper sterilization and cleaning methods. Often an infant

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would drink from the same bottle all day long. Infants were sleeping in cribs filled with toys and blankets. Infants were not sleeping on their backs. Some were sleeping in the cluttered bed with the mother. Cereal was being placed in the formula bottles as early as 1 to 2 months of age. Infants as old as nine months were receiving solid foods in the bottle and refusing to eat with a spoon. Mothers were making attempts to pump breast milk but without sufficient knowledge regarding sufficient intake were underfeeding the infant. Infants were being taken out in buses as young as two weeks of age so that the mother could go to work or school. Pressure with coins was being placed on two infants with umbilical hernias.

The majority of the infants born were small for gestational age. One infant was born at twenty nine weeks. These very high risk infants were not receiving the conscientious follow up care they require. One infant at five months has not received immunizations due to Medicaid having not been processed yet. This same infant had suffered a bout of severe coughing which appeared to resemble bronchiolitis according to the mother's description. This child has a strong family history of asthma. Mothers seldom attended the postpartum six week check- up.

There is a dearth of knowledge regarding care of the newborn, safety issues, immunizations, and nutrition. It became clear that the first priority was to bring awareness of the problem to those in the management and support positions. The staff was in need of information on evidenced based practices to promote healthier environments and better medical compliance.

The project objectives were expanded to meet these needs. A Literature Review suggested and supported an evidenced based need for the project. The need for an educational intervention program for the staff was validated.

Phase III

The preparation of a series of Educational Learning Modules for the staff of Raphael's Life House commenced. These modules included Pregnancy and Prenatal Care, Newborn Care, including safety issues, immunizations, bathing, sleeping, breastfeeding, formula feeding, crying and colic, Sudden Infant Death Syndrome and safe sleeping, Growth and Development, and Nutrition for the Infant and Growing Child. This was a time consuming effort. The Modules consist of four hours of narrated power point presentations. Time was spent learning the Echo 360 program used for the narration portion of the modules and having the modules copied onto CD disks with assistance from the Instructional Design staff at Seton Hall University.

Learning objectives were developed for the Modules. A Pre-test was developed to measure the general knowledge level of the staff working with the residents. A Post-test was implemented to measure the effectiveness of the educational program so that changes could be made if needed. Test-retest reliability can be estimated when the same test is administered to the same sample on two different occasions. It is assumed that there is no major change in the constructs being measured (Trochim, 2006). The Pre-test was administered prior to the review of the Learning Series of Modules. The students have some knowledge of the material being covered. The Post-test was given directly after completion of the course. The questions for each test were written for each course learning objective to more easily measure the course material (Boston University Medical Campus).

An Evaluation Tool to be completed by the staff was developed (Appendix E) The Evaluation Questionnaire was divided into 3 sections. The first section focuses on the demographics of the

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staff participants in order to determine the background of the staff members related to educational background, experience with working with the homeless population, and length of time working in this shelter. The second section focuses on the Design of the Perinatal Health Education Learning Modules. The third section focuses on the Learning Outcomes of the staff participants. A five point Likert scale was used to measure the design of the modules and the learning outcomes. Lastly, a job description was developed for the role of perinatal educator.

Phase IV

During this phase the Modules were completed and implemented in the shelter. The Modules consist of a series of four sessions each one hour long, including Pregnancy, the Importance of Prenatal Care, The Newborn, Growth and Development, and Nutrition for the Growing Child, broken down into ten to twenty minute chapters. These Modules were used only with the staff members of the shelter. It was planned that the Director would assume the role of manager for the administration of the modules to the staff.

The more informal one on one or small group sessions with the mothers of the shelter occur on a weekly basis. The sessions are geared to the needs of the mothers present. A more consistent group of women are coming each week. A series of twenty posters pertaining to the education needs of the mothers were prepared by students in the Obstetric Clinical Setting for the spring semester of 2015. Each week two new posters are presented at the shelter. The posters have stimulated relevant discussion.

Phase V

The project was divided into two parts. Weekly informal teaching sessions related to the age of the infant and anticipatory guidance occur with mothers and infants. During the interaction with mother and infant, an assessment of the mother infant relationship and the overall health and well-being of the mother and child takes place.

The second part of the project is the implementation of a series of Perinatal Education Learning Modules intended for the members of the staff. Staff members who participated in the project were all women. At the time of this writing 3 staff members have begun the process of reviewing the modules. It is intended that all staff involved with direct care of the mother and infant will be expected to complete the competency course. This will be an ongoing process, and data will continue to be assessed. The evaluation process will include the staff members' background with working with this population, the practicality of the series and the material learned. Suggestions for improvement will be welcomed.

Data Collection

Staff members in the position of Home managers are in their mid –forties to early fifties and African American women. Other staff includes the Social Worker and Volunteer Coordinator, college interns, education teachers that help with preparing for the GED, housekeepers, and various volunteers. All of these staff members will be included in the education program. There are 2 case managers and 2 overnight staff. A third case manager is currently being hired. The length of stay for employees is about 7-8 years.

The responsibilities of the case managers include: providing direct, concrete, supportive and

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individualized care in a positive and holistic way to residents of Raphael's Life House. They assist residents with the development and implementation of their goals, case plans and daily schedules. They participate in case management staff meetings and attend required training.

The case managers accurately and comprehensively document case records with information regarding interactions and case plan updates.

Other tasks include:

Facilitating and monitoring life skills groups to help young women learn independent living skills

Providing support with shopping and meal preparation, recreation and other scheduled activities

Modeling parenting skills that are in alignment with Covenant House New Jersey (CHNJ) philosophy.

Monitoring resident's activities within the building to ensure a safe and healthy living environment.

Performing tasks needed to maintain a clean work environment.

Working with residents individually as needed, including escorting clients to required activities.

Activities include vocational, educational, and planned activities, obtaining identifications, grocery shopping, etc.

Managing and administering shift petty cash.

Any other duties assigned by management staff.

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A new component to the tasks of the Case managers will reflect the knowledge gained through this Education Intervention Program. Managers will have the information to mentor and role model healthy behaviors. They will realize the importance of complying with doctors' visits for mother and child.

The Perinatal Education Learning Modules were brought to the shelter and presented to the Volunteer Coordinator. The initiation of a program such as this requires direct instruction for administration from the Associate Director.

Quantitative data

Prior to reviewing the series of modules staff members took a Pre-test which measured the general knowledge of those working with the residents. Upon completion of the learning series a Post-test was completed which measured new knowledge gained. The effectiveness of the educational program was measured through evaluation of the results of these tests. An Evaluation Tool collected demographic information and the overall effect and acceptance of the program. Evaluation of the program involved feedback from the participants, a written evaluation, and discussion with the Associate Director about changes observed in the staff related to promotion of healthier behaviors. Upon review of the pre and post-tests taken by the staff, it can be concluded that the students improved in their knowledge of the care of the mother and infant. The evaluation tool showed a positive acceptance of the Learning Series by those completing it.

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Qualitative Analysis

The project initiatives were received by all involved wholeheartedly. The project brought to the shelter directors and staff members a new awareness of the crucial need for evidenced based practice in the care of the newborn and mother. Clinical observations have shown a readiness for several of the mothers to follow lessons learned. Significant changes in behaviors related to care of the infant have been observed. A level of trust has developed between the educator and the residents of the shelter.

Changes in behavior related to infant feeding have demonstrated an acceptance of the teaching sessions and a will to do what is best for the child. One of the mothers said, she stopped putting cereal in the bottle because she was told to do so by the educator. The posters related to infant feeding made by Seton Hall nursing students have initiated questions and discussions by the mothers. During one session with three mothers, two were comparing how long they had given pumped breast milk to their infants. This was truly a large step in the right direction. When a group of three mothers were asked what they would like from money collected from a bake sale given by Seton Hall nursing students, they requested a Baby Bullitt used for making baby food. These are wonderful breakthroughs.

Several of the mothers appear eager to meet each week, whereas in the past it was difficult to get a group together. When asking the mothers how they feel about the weekly sessions and what would they like from them, they like the way we are meeting now. They have several very formal lessons and instructions and they like the informal nature of our meetings and the freedom to speak up and express themselves.

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Several of the mothers have moved on. After forming a close relationship with one young mother who was beginning to be responsive to the teaching, she was gone the following week. On occasion others are asked to leave if they are not abiding by the house rules, eliminating the chance to continue a potentially therapeutic relationship.

Some of the young women hold back and build barriers so as not to get close and may come to the sessions only because they are asked to. Having a group of three or four mothers that come willingly each week and are friendly and open, is a tremendous triumph.

Summary

A lifetime of learning experiences in a cherished profession have afforded the knowledge, skills, and beliefs that has culminated in the most useful and gratifying experience of a career. Having been able to take this previous experience of caring for young mothers, infants and children and sharing it with a most vulnerable population; the homeless pregnant adolescent and young woman living in a transitional shelter has led to a new passion to make positive change.

The essence of the DNP project is to improve health care outcomes by evaluating evidenced based practices, through the delivery of care, through the delivery of new healthcare policy, by leading and managing clinical care, and by reducing disparities in health care (Chism, 2013).

The purpose of this DNP Project was to develop an educational program in a transitional homeless shelter focused on the health care of the pregnant woman and the newborn infant in order to bring awareness of the special needs of this high risk population and to attempt to change unhealthy behaviors. This program was coupled with an In- Service Program made up of learning modules for staff members related to Best Practices for the Mother- Infant Dyad.

Developing a relationship of trust and understanding with these special people has taught the meaning of hope and inner strength. A readiness of the mothers to follow lessons learned has been witnessed. Significant changes in behaviors related to care of the infant and a desire to improve nutrition have been seen.

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The positive acknowledgement from the staff regarding the Learning Modules has exceeded all expectations. The staff have enthusiastically embraced the project and willingly participated.

They have demonstrated an excitement and eagerness to learn. They have affirmed the presumption that learning builds confidence and self-efficacy. They are eager to reinforce their new knowledge with those in their care. When asked what they liked most about the Learning Intervention, the style of the presentation (being a narrated power-point), it was felt enhanced a variety of learning styles. The visual learner and the audio learner could benefit.

This is just the beginning. A project that began as a means of obtaining a doctorate in nursing has become a lifelong endeavor. The concept of the Servant Leader, as advocated and sanctioned by Seton Hall University must be embraced.

Raphael's Life House is the only shelter for mothers and infants in the country that is affiliated with Covenant House. Most shelters do not have a health care professional on staff. It is a challenge for health care providers to find methods to decrease health disparities that are seen in this vulnerable population. Healthy People 2020 have a focus on the health of all Americans, including vulnerable and underserved populations. Improved access to care is one critical method to address these disparities, but increased understanding of the nature and extent of health disparities that exist among vulnerable populations must be targeted so effectual program and policy development can occur directed toward those at the greatest risk for adverse health outcomes (Wilson, 2005).

Shelter staff and services can have both positive and negative effects on the practice of health behaviors. An adequate knowledge base of the importance of health promoting behaviors and

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recognition of its value can have positive influences on homeless residents to practice healthy behaviors. In addition, if participation in health-promoting behaviors is rewarded, residents may also value these behaviors and recognize them as benefits to action as depicted in the HPM (Wilson, 2005). This was the basis for the development of an educational intervention for the staff. It has been suggested that mothers who attend well child visits and obtain immunizations for the child should be rewarded in some way. Pender showed that situational influences were critical to motivate healthy behaviors. If opportunities to engage in health-promoting behaviors are not readily available (knowledge about nutrition, educational offerings), it is unlikely that homeless women will participate (Wilson, 2005).

The process of changing behaviors is a slow and assiduous one. Young women who are homeless and pregnant often lack education which interferes with obtaining a good job. Many of them have a history of mental illness or of coming from abusive dysfunctional families. Many suffer from a severe depressive disorder, or post-traumatic stress disorder. The adolescent stage of development of many of these young women affects their cognitive, psychosocial and physical maturity. Added to this is the state of homelessness. An understanding of where these young women have come from and the culture they have experienced is necessary in order to reach them.

Project Sustainability

This project has been developed so as to be reproducible and sustainable. The Perinatal Education Learning Modules consist of four hours of material broken down into four relevant topics. The Series lectures consist of narrated power points. Each topic is divided into ten to

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twenty minute chapters. The Modules may be accessed by staff independently. They may be started and resumed at the convenience of the participant. The Modules will be a permanent instrument for learning at the shelter. All staff present and new will be expected to complete the competency program. The Modules can be implemented in other similar settings.

This project is just a small part of the expansive potential for change that is needed. A nursing model designed to promote evidenced based practices in relation to the health of homeless young pregnant women and their infants is awaiting its architect. This is an ongoing project that will grow from these humble beginnings. The weekly sessions with the mothers will continue at the request of the Director and research and evidence will come from these interactions. Patience and small steps are necessary. Collaboration with other healthcare providers will be explored to find methods of bringing more consistent health care to the shelter. Working with the staff and other lay coalitions to develop and implement plans for better utilization of health care resources will be a priority.

Recommendations and Plans for the Future

There is a high incidence of homeless women among the African American population. This is a public health concern since the rates of infant mortality are higher in this group. There needs to be aggressive efforts to remove the barriers to prenatal care (Curry, 1987). It seems that even when the level of prenatal care is the same, the infant mortality rate for blacks are double that of whites (Hughes, Johnson, Rosenbaum, and Joseph, 1989). Studies are needed to explore the health care needs of homeless women of reproductive age. It is the call of the nurse to develop a

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healthcare model that promotes healthy behaviors and better health care outcomes for this vulnerable population.

A nursing model proposed by Berne, Dato, Mason and Rafferty (1990), gives a holistic approach to empowering the homeless. It is based on the Presznecker Adaptational Model of Poverty which considers the damaging effect of poverty and environment. It is recommended that the nursing community recognize their potential to utilize skills to bring improved health to the homeless pregnant women and their children through the use of models such as this.

Nurses can be advocates for the homeless both locally and nationally. Nurses are in a position to bring attention of the true needs of these families to the policy makers and program designers. The support for these mothers must continue after leaving the shelters and securing permanent housing. Follow up programs should be developed to provide support and guidance around issues that involve housing and finance status. Research is needed to focus on the outcomes of formerly homeless women and children.

Interventions such as this one should be implemented in similar shelter settings. The positive response from this project validates the need for education of this nature in other shelters housing pregnant women and children.

Again it is the community health nurses that can play a pivotal role in working with the residents and staff members of the shelters. Community health nurses can act as consultants, mentors, educators and role models to reinforce the information given and allow for adaptation to the specific issues of the population and staff of the shelters. Student nurses can be valuable resources in supporting and reinforcing the interventions of the community health nurse.

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Future research can lead to social change through an understanding of the health issues of homeless. Collaborative partnerships with other health care providers are of vital importance to design and implement effective interventions and programs to enhance the health and well-being of the pregnant homeless women. Outreach services and community sites such as food banks, churches, and community centers, would be of great benefit.

Resources in shelters for homeless pregnant women and children need to provide more than just housing, food, safety and the facilitating and monitoring of life skills. Interventions that seize the opportunity to teach and support health promoting behaviors must be developed and made available. Culturally appropriate interventions and programs that develop resiliency and strengthening of personal resources are needed to positively impact the health of this unique at risk group (Wilson, 2005).

Considerations for the Future

There is an immense urgency to advance the health care that the infants and children receive while living in the shelter environment. It is difficult for mothers to attend follow up and well child clinic visits due to lack of transportation and other existing barriers. The possibility of having a Mobile Medical Unit visit the shelter on a monthly basis is presently being looked into. There is a Mobile Unit connected with Rutgers School of Nursing. This would resolve a multitude of problems, including follow up of the high risk population of infants and children, compliance with immunizations, and emergency situations, alleviating over use of emergency departments.

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If participation in health-promoting behaviors is rewarded, residents may also value these behaviors and recognize them as benefits to action as depicted in the HPM (Wilson, 2005).

Those mothers who are conscientious with keeping appointments for the children should be rewarded. The mothers should be given a check list of responsibilities required of them to be kept on a bulletin board in their rooms. This could include a calendar for appointments. An immunization schedule could be included.

The mothers should have closer supervision related to infant care. Perhaps there could be inspection of cribs for safety and feeding methods. Personal hygiene and maintenance of an organized and clean room could be rewarded.

There is a need for volunteers that could drive mothers to the clinic visits or to work. Child care is needed when the mothers go to work.

Consideration should be given to methods to prevent pregnancy while living in the shelter, since adolescent and young mothers who delay subsequent pregnancy have better outcomes. The women are permitted to have only one child living with them in the shelter. If they become pregnant one child must be placed in foster care. Availability and cost barriers to birth control services must be reduced, and effective service linkages should be developed among providers of birth control services.

Parenting classes must address the problem of potential abuse. Basic parenting classes should cover self-esteem; ages and stages of development, coping with stress and anger, discipline, and the effects of domestic violence on children.

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Child care on site in the shelter for working mothers would be very beneficial. At present working mothers must find child care outside the shelter, often requiring multiple buses to reach the sitter and work.

Future research could include full term pregnancy rates, completion of GED, or school enrollment, birth outcomes, delay of repeat pregnancy, maternal-infant bonding and attachment, use of community resources, infant growth and development, and parenting self- efficacy.

There is so much work to be done to improve the lives and health of this homeless population. The intent was to bring awareness of the needs and the multiple gaps in care for the pregnant homeless adolescent and young woman and her child. It is now apparent that the perspective of the nurse or health care provider is needed to educate and influence so that opportunities for change in health practices are not lost in this setting.

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Appendix A

Objectives of the Perinatal Health Education Series

At the completion of this Learning Series you will:

1. Have an understanding of what to expect during the three trimesters of pregnancy. This will include the physiologic changes that occur in the fetus as the pregnancy progresses. The importance of prenatal care at various stages of pregnancy will be stressed, including a healthy diet and nutrition.
2. Gain insight into the process of Labor, including the stages of labor, and Delivery.
3. Grow in knowledge of some of the Complications of Pregnancy
4. Learn about the characteristics of the Newborn that make them unique.
5. Develop an understanding of basic care of the newborn, including sleep, feedings, bathing, crying, and various safety issues.
6. Learn stages of development of the infant and young child
7. Be introduced to Erikson's Stages of Personality Development of the child.
8. Become aware of the importance of good Nutrition beginning in infancy and including to four years of age.

Appendix B

Pre-Test

Perinatal Health Education Series

1. Many physiologic changes occur in the first 12 weeks of pregnancy including intolerance to odors and certain foods. The breasts become tender and swollen and it is common to feel tired. These changes are caused by:
 - a.) the 46 chromosomes
 - b.) hormonal changes, including the hormones estrogen and progesterone
 - c.) weight gain
 - d.) anxiety

2. The difference between true labor contractions and Braxton Hicks (false labor) contractions is:
 - a.) Braxton Hicks contractions are not regular and do not cause the cervix to dilate, whereas true labor contractions are regular and do dilate the cervix
 - b.) there is no difference, a contraction is a contraction
 - c.) Braxton Hicks contractions are longer in duration than true labor contractions
 - d.) True labor contractions will subside with rest.

3. During the Active Phase of labor:
 - a.) the mother is comfortable and may rest or take a shower
 - b.) the cervix dilates from 4 to 7 cms., with stronger contractions coming every 3 to 4 minutes and lasting 60 seconds
 - c.) the baby is delivered
 - d.) the cervix opens from 7 to 10 cms.

4. Breastfed infants eat more often than formula fed infants because:
 - a.) breast milk is easier to digest than formula and the stomach empties faster
 - b.) Breastfed infants are poor sleepers
 - c.) breastfed infants are not getting the nutrition that they need
 - d.) formula fed infants are happier

5. SIDS (Sudden Infant Death Syndrome) can be prevented by:
 - a.) having the baby sleep on the belly
 - b.) keeping the baby in a car seat or swing to sleep
 - c.) placing the baby on the back to sleep

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- d.) allowing the baby to sleep with the head elevated
-
- 6. What are signs of illness in an infant?
 - a.) breastfeeding more often
 - b.) fever > 100.4, unusual irritability, diarrhea, not eating
 - c.) fever of 99.2
 - d.) refusing to take a nap

 - 7. What are some of the developmental milestones of the 4 month old infant?
 - a.) understands a few words, creeps
 - b.) pulls to stand
 - c.) stranger anxiety
 - d.) babbles, laughs aloud, rolls over from front to back

 - 8. What is the best way for an infant to develop basic trust?
 - a.) being allowed to do things for themselves
 - b.) having a consistent and loving mother, who responds to needs
 - c.) exploring the world with all the senses
 - d.) learning to talk

 - 9. When should babies be given solid foods for the first time?
 - a.) preferably at 6 months, or between 4 to 6 months
 - b.) at 2 months by adding cereal to the formula bottle
 - c.) anytime if they seem hungry
 - d.) hold off for as long as 9 months if possible

 - 10. At 12 months the child should be given what kind of milk?
 - a.) 1% low fat milk
 - b.) skim milk
 - c.) 2% low fat milk
 - d.) whole milk

Appendix C

Post-Test

Perinatal Health Education Series

1. Many physiologic changes occur in the first 12 weeks of pregnancy including intolerance to odors and certain foods. The breasts become tender and swollen and it is common to feel tired. These changes are caused by:
 - a.)the 46 chromosomes
 - b.)anxiety
 - c.)weight gain
 - d.) hormonal changes, including the hormones estrogen and progesterone

2. During the Active Phase of labor:
 - a.) cervix opens from 7 to 10 cms.
 - b.) the mother is comfortable and may rest or take a shower
 - c.) the cervix dilates from 4 to 7 cms. with stronger contractions coming every 3 to 4 minutes and lasting 60 seconds the
 - d.) baby is delivered

3. The difference between true labor contractions and Braxton Hicks (false labor) contractions is:
 - a.)Braxton Hicks contractions are not regular and do not cause the cervix to dilate, whereas true labor contractions are regular and do dilate the cervix
 - b.)there is no difference, a contraction is a contraction
 - c.)Braxton Hicks contractions are longer in duration than true labor contractions
 - d.)True labor contractions will subside with rest.

4. Breastfed infants eat more often than formula fed infants because:
 - a.)Breastfed infants are poor sleepers
 - b.)formula fed infants are happier
 - c.)breast milk is easier to digest than formula and the stomach empties faster
 - d.)breastfed infants are not getting the nutrition that they need

5. SIDS (Sudden Infant Death Syndrome) can be prevented by:

- a.)having the baby sleep on the belly
- b.)keeping the baby in a car seat or swing to sleep
- c.)allowing the baby to sleep with the head elevated
- d.)placing the baby on the back to sleep

6. What are signs of illness in an infant?

- a.) fever >100.4 , unusual irritability, diarrhea, not eating
- b.) breastfeeding more often fever
- c.) fever of 99.2
- d.) refusing to take a nap

7. What are some of the developmental milestones of the 4 month old infant?

- a.) babbles, laughs aloud, and rolls over from front to back
- b.) understands a few words, creeps
- c.) pulls to stand
- d.) stranger anxiety

8. When should babies be given solid foods for the first time?

- a.)preferably at 6 months, or between 4 to 6 months
- b.)at 2 months by adding cereal to the formula bottle
- c.)anytime if they seem hungry
- d.)hold off for as long as 9 months if possible

9. At 12 months the child should be given what kind of milk?

- a.)1% low fat milk
- b.)skim milk
- c.)2% low fat milk
- d.)whole milk

10. What is the best way for an infant to develop basic trust?

- a.)being allowed to do things for themselves
- b.)having a consistent and loving mother, who responds to needs
- c.)exploring the world with all the senses
- d.)learning to talk

Appendix D

Introduction to the Perinatal Health Education Program

Welcome to the Perinatal Health Education Program. This program consists of Learning Modules related to the care of pregnant women and their children. The purpose of this series is to enlighten and inform you as to the Best Practices and most recent evidenced based information.

We are privileged to have an opportunity to impact the health outcomes of this very vulnerable population through inspiration and example. Thank you for your time, dedication and wiliness to improve the health and lives of these special people.

Instructions for Use of the Modules:

This one CD disk is divided into four topics. The topics include Pregnancy and Prenatal Care, The Newborn, Growth and Development, and Nutrition. Each of the four sections in divided into chapters, ranging from 10 to 20 minutes each. The Modules can be viewed in sections at your convenience. There is a Table of Contents to guide you.

Prior to viewing the Modules, please take a few minutes to answer the 10 questions on the Pre-Test. Following the completion of the *entire* CD, (all four topics), you will be asked to answer the 10 questions on the Post-Test. You will also find an Evaluation Form giving you an opportunity to express your opinions of the learning series.

When using a computer to view the Modules be sure to have the sound on in order to hear the narration.

Thank you,

Colleen Carrington, RN, MSN, CPNP, IBCLC

Appendix E

Evaluation Tool

The Evaluation Questionnaire will be divided into 3 sections. The first section will focus on the demographics of the participants. The second section will focus on the Design of the Perinatal Health Education Learning Modules. The third section will focus on the Learning Outcomes of the participants.

Demographic Questions will include:

1. How long have you worked in this shelter?
2. Do you have previous experience working with the homeless?
3. Do you have previous experience working with pregnant teens or pregnant young adults?
4. Do you have previous experience working with newborn infants and/or young children < 3 years of age?

Perinatal Health Education Learning Modules Design

1. Were the Learning Modules effective learning tools, and appropriate for the population intended?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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2. Do you find that the format of these Learning Modules (broken down into 10 to 20 minute chapters), was practical and conducive to learning?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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3. Please mention and specific problems with the Learning Modules that need attention.

Learning Outcomes

1. Do you feel that you gained new knowledge after viewing these Learning Modules?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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2. Do you feel more confident working with and supporting new mothers and their infants and children?

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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3. What specific new knowledge have you gained? How can this program be improved?