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Enhancing Communication, Satisfaction, and Self Efficacy in High-Risk Prenatal Women Using 'Ask Me 3'

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ENHANCING COMMUNICATION, SATISFACTION, AND SELF EFFICACY
IN HIGH-RISK PRENATAL WOMEN USING 'ASK ME 3'

Cynthia Ann Betterly, BSN, RN

A Dissertation Submitted to the Faculty of
GRAND VALLEY STATE UNIVERSITY

In

Partial Fulfillment of the Requirements

For the Degree of

Doctor of Nursing Practice

Kirkhof College of Nursing

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Dedication

This scholarly project is dedicated to my husband, Tyler Betterly, and my daughter Harper Betterly. Tyler, I appreciate your patience, love, and understanding throughout this entire educational endeavor. Harper, you don't even know it yet, but you helped me keep this entire project in perspective. Both of you helped me to stay motivated to finish and gave me a reason to rest.

I would also like to dedicate this project to my parents Tim and Marlene Vander Moren. Without your constant encouragement that, yes, I really could do this, selfless gifts, and many prayers, I would not have finished so supported.

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Abstract

Despite the recent advances in health care related to the patient-centered medical home, meaningful use, and the Affordable Care Act, the health care system has failed the vast number of patients who do not understand basic health information providers or educational materials designed to communicate to them. For the purpose of this project, low health literacy is framed as a barrier to patient and provider communication. Unfortunately, low health literacy often leads to adverse outcomes. These poor outcomes make improving health literacy a priority by acknowledging and evaluating health literacy interventions.

The purpose of this project is to evaluate the effectiveness of implementation of The National Patient Safety Foundation's Ask Me 3 program in increasing high-risk prenatal patients' satisfaction and self-efficacy with communication experiences. By encouraging question-asking behavior of the high-risk prenatal participants, satisfaction and self-efficacy were hypothesized to improve. Using Donabedian's conceptual framework about quality of care and Bandura's Self-Efficacy Theory, the implementation and evaluation processes of this project were determined. Educational sessions with community health workers and medical residents and physicians were the first steps in implementing this quality improvement project. Participants were informed, educated about Ask Me 3, and then given time to practice using this approach at their office visits during the implementation period. With 11 pre-survey participants and 5 post-survey participants, there were no statistically significant findings after implementation for change in satisfaction or self-efficacy, yet strengths and limitations of this project contribute to the impetus to improve patient-provider communication. Health care

providers must be sensitive to patient's health literacy levels and encourage an environment in which patients are able to ask for clarification to enhance understanding. A doctorally-prepared advanced practice nurse can have a vital role in leading and encouraging initiatives related to improving patient-provider communication.

Table of Contents

List of Tables	9
List of Figures	10
List of Appendices	11
CHAPTER	
1 INTRODUCTION	12
Background and Significance	13
Consequences of Low Health Literacy	15
Maternal Health Literacy	16
Identifying and Working with Clients with Low Health Literacy	19
2 CONCEPTUAL MODEL	21
Donabedian's Framework	22
Theoretical Concepts	23
Theoretical Application to Prenatal Outcomes	24
Structure	25
Process	25
Self-Efficacy Theory	26
Outcomes	28
Summary	29
3 LITERATURE REVIEW	31
Defining Health Literacy	31
Search Methods	32
Patient and Provider Communication	33
Ask Me 3	34
Teach-Back	38
Patient Satisfaction	44
Self-Efficacy	50
Summary of Findings and Recommendations	56
4 METHODS	59
Community Needs Assessment	59
Organizational Characteristics	60
Target Population and Sample	61
Assessment Tools	62
Patient Satisfaction	62
Self-Efficacy	62
Implementation	63
Evaluation	64

5 RESULTS	66
Participants	67
Results	67
Patient Satisfaction	68
Self-Efficacy	70
Interview of Participants	72
Interview of Community Health Worker	73
6 DISCUSSION	74
Results	74
Theoretical Frameworks	74
Literature Review	75
Summary of Findings	76
Strengths and Limitations	76
Sustainability	78
Doctor of Nursing Practice Roles	78
Scholar	79
Leader	80
Innovator	80
Implications for Future Projects, Policy and Practice	81
Policy Implications	82
Practice Implications	82
REFERENCES	85
APPENDICES	93

Tables

Table 1 – Pre-Survey Patient Satisfaction Descriptive Statistics	68
Table 2 – Post-Survey Patient Satisfaction Descriptive Statistics	69
Table 3 – Patient Satisfaction Results	69
Table 4 – Pre-Survey Self-Efficacy Descriptive Statistics	70
Table 5 – Post-Survey Self-Efficacy Descriptive Statistics	71
Table 6 – Self-Efficacy Results	72

Figures

Figure 1 –Donabedian’s Model as it Applies to the Setting	29
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Appendices

Appendix A – Mercy Health IRB Approval Letter	93
Appendix B – GVSU IRB Approval Letter	94
Appendix C – Participant Letter	95
Appendix D – Self-Efficacy Survey	96
Appendix E – Patient Satisfaction Survey	97

CHAPTER 1

INTRODUCTION

According to the Institute of Medicine (IOM, 2004), health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. In her concept analysis of health literacy, Speros (2005) denoted that health literacy “empowers people to act appropriately in new and changing health related circumstances through the use of advanced cognitive and social skills” (p. 633). Not only is health literacy the ability to understand, but it can also empower people to follow through on the recommended advice as directed.

Studies have estimated that about 90 million Americans have low health literacy. In the health care sector, low health literacy translates to patients having difficulty reading prescription labels or observing a childhood immunization schedule, as well as many other issues (U.S. Department of Health and Human Services [USDHHS], 2008). Health literacy depends on the context and is not always relative to the patient’s educational level or employment. In other words, it is not a fixed individual characteristic, but rather a function of the patient’s disease processes and the expectations and demands of the health care system (Sudore & Schillinger, 2009). Low health literacy affects people of all ages and ethnicities, although is more common in patients with lower levels of education and among the elderly.

Literacy is defined “as a person’s ability to read, write, speak, and compute and solve problems at levels necessary to function on the job and in society, achieve one’s

goals, and develop one's knowledge and potential" (National Literacy Act of 1991, 1991, p. 7). While health literacy levels are not solely dependent on literacy levels, there have been several studies showing an association between low literacy and poor health outcomes (DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004; Pignone & DeWalt, 2006). These poor health outcomes as a result of low literacy included lack of knowledge and disease markers, elevated morbidity measures, poor general health status, and inappropriate use of health resources. Patients who had low literacy were up to 3 times more likely to experience a poor outcome (DeWalt et al., 2004). The low literacy experienced by these patients is often compounded by poor health literacy that keeps patients from successfully navigating the health care system, caring for themselves, and understanding risk associated with certain behaviors.

Health literacy depends on the individual's cultural, social, and interpersonal skills, but is also dependent on the manner in which the health information is communicated in health care settings (Nielsen-Bohlman, Panzer, & Kindig, 2004). To promote health literacy in the healthcare setting, the Agency for Healthcare Research and Quality (AHRQ) has identified four areas of change that include improving spoken communication, written communication, self-management and empowerment, and supportive systems. These change areas focus on the key areas of access, communication, and behaviors that can improve health outcomes (AHRQ, 2012). Patient and provider communication and its impact on self-care is the focus of this project.

Background and Significance

Improving health literacy skills of the individuals in the United States is an objective of Healthy People 2020 and more federal organizations are highlighting the

need for health literacy education and research (USDHHS, 2000). Health literacy has become an increasingly important health topic to consider, as two decades of research have shown that health information is not presented in a way that most people can understand. In fact, 9 out of 10 adults have difficulty with everyday health information that is available at health facilities, through media, and in communities (Nielsen-Bohlman, et al., 2004). The U.S. Department of Education stated that only 12% of English-speaking adults have proficient health literacy skills, while the negative impact of low health literacy affects racial and ethnic minorities the most (Kutner, Greenberg, Jin, & Paulsen, 2006). Populations who are more likely to experience low health literacy include adults over the age of 65; racial and ethnic groups other than White; recent refugees and immigrants; people with less than a high school diploma or GED; people with incomes at or below poverty level; and non-native speakers of English (USDHHS, 2008).

While it might seem that the individual's skills are the only component to consider when analyzing health literacy, it is not only about the individual. Health care systems, health professionals, and media outlets have failed to make health information understandable (USDHHS, 2008). For example, access to care has been found to be significantly impacted by the difficulties surrounding completing and understanding insurance applications (Wilson, 2003). The Institute of Medicine highlighted a component of health literacy that is often overlooked and encouraged more thorough organizational assessments that focused on health literacy. Their report noted that the requirements and assumptions of the health system are equally as important as the

individual's skills (Nielsen-Bohlman et al., 2004). Therefore, action to increase health literacy needs to occur on multiple fronts.

When compared to socioeconomic status, age, or ethnic background, health literacy has been shown to be a stronger predictor of health status among various populations (Lindau, et al., 2002; Schillinger, et al., 2002; Williams, Baker, Parker, & Nurss, 1998). In 2005, AHRQ and the IOM both reported that inadequate health literacy is negatively associated with self-reported health, management of chronic conditions, and preventative service use. Psychological effects of inadequate health literacy have also been documented. Often, low health literate patients experience a sense of shame and feel they have to hide their struggles with comprehension and reading (Parikh, Parker, Nurss, Baker, & Williams, 1996). Therefore, the issues of health literacy can often be undetectable to healthcare providers.

Consequences of Low Health Literacy

Research has shown that consequences of adequate literacy and health literacy include improved self-reported health status, lower health care costs, increased health knowledge, shorter hospitalizations, and less frequent use of health services (Baker, et al., 2002; Davis, Meldrum, Tippy, Weiss, & Williams, 1996; Lindau et.al., 2002; Marwick, 1997). Meanwhile, consequences of low health literacy include inadequate self-care, mortality, and higher health care costs. Health literacy directly affects a patient's ability to follow instructions from providers, take medications as directed, and understand disease-related information. In addition, patients with low health literacy are at risk for decreased access to care. Research has shown that poor health literacy can lead to increased chances of dying from chronic and communicable diseases.

The cost of poor health literacy related to poor adherence and high hospitalization rates equates to \$30 to \$73 billion per year (Wilson, 2003). This figure is similar to that of the annual cost of smoking. While this is a wide range for estimating costs, it is difficult to document exactly how many health care dollars are used to care for health issues related to low health literacy because the problem is sometimes undetected and complex. Significant complexities are due to inefficient use of health care, duplicate services and medical errors (Howard, Gazmararian, & Parker, 2005). Health literacy is becoming more of an identifiable risk factor as groups such as the Partnership for Clear Health Communication, the U.S. Department of Health and Human Services, the Institute of Medicine, and the National Patient Safety Foundation have made it a priority.

Maternal Health Literacy

Pregnant women, unfortunately, are also included in the 90 million Americans estimated to have low health literacy and are therefore at risk for similar consequences. Maternal health literacy is defined as “the cognitive and social skills which determine the motivation and ability of women to gain access to, and understand, and use information in ways that promote and maintain their health and that of their child” (Renkert & Nutbeam, 2001, p. 382). Women with low health literacy experience more problems learning new information and following directions. This is especially concerning since their pregnancies might be their first experiences with the health care system and because their health status is important not only to the women but also to their babies (Ferguson, 2008).

Women with reported low levels of health literacy may not use the prenatal education available in women’s health care sites, may wait to seek care until their first or

even second trimester, and/or may miss appointments. Studies have shown that communication with clinicians has an influence on pregnant women's use of prenatal care (Bennett, Switzer, Aguirre, Evans, & Barg, 2006). Inadequate prenatal care has been associated with increased risk of prematurity, stillbirth, early neonatal death, late neonatal death, and infant death (Partridge, Balayla, Holcroft, & Abenhaim, 2012).

In one study analyzing prenatal behaviors of diabetic women, those with low health literacy were compared to those with average health literacy. Women with low health literacy were less likely to have a high school education, had a lower socioeconomic status, experienced more unplanned pregnancies, and were less likely to discuss pregnancy with their physicians prior to becoming pregnant. Lower prenatal vitamin use was reported in the low health literacy group while they were also more likely to be hospitalized for prenatal and post-natal complications like preeclampsia, gestational diabetes, and low birth weight. This study showed the association between low literacy and poor maternal and fetal outcomes and highlighted disparities faced by low health literate pregnant women (Endres, Haney, Sharp, & Dooley, 2004). Low health literacy among pregnant women and poorly designed prenatal care and communication can seriously influence the health of pregnant women and their babies.

Unfortunately, barriers to health care for pregnant women with low health literacy are easy to find. Maternal health literacy barriers include access to care, inability to comprehend information, and cultural and language barriers (Ferguson, 2008). One major factor associated with access to care (in addition to transportation and location) is the lack of adequate time with a health care provider to promote understanding. Women with low health literacy need more time during a visit in order to promote and maintain

understanding (Hartsell, 2005). Evidence exists illustrating that forty to eighty percent of information patients receive is immediately forgotten, while nearly half of the retained information is remembered incorrectly (Kessels, 2003). In order to communicate correct information that women with low health literacy understand, measures need to be taken to assess and confirm that messages were comprehended.

Communication about complex health information is another struggle for women with low health literacy. Not only do they often have difficulty understanding the information, but they also have difficulty evaluating the appropriateness of health information (Zarcadoolas, Pleasant, & Greer, 2006). The amount of information required to ensure a healthy infant can be overwhelming to many pregnant women. Those with low health literacy are reported to have difficulty filling out forms, administering medication appropriately, and even installing an infant car seat (Ferguson, 2008). While health literacy is measured differently than reading ability or grade level, evaluations of written brochures for pregnant woman have given insight into the barriers that educational materials have. Approximately 20 percent of the American population reads at only a 5th grade level, and most of the population reads at an 8th grade level (Safeer & Keenan, 2005). Freda (2005) evaluated the readability of American Academy of Pediatrics patient education brochures and found that more than half of them were written at an 8th grade or higher reading level. These brochures would be useless for women with low health literacy and could frustrate the women further.

Cultural and language barriers complicate the encounters that patients experience with health care providers. Language barriers are simpler to detect than health literacy barriers. A patient who speaks a language different from that of the healthcare provider

requires a translator, but if this patient also has low health literacy these two barriers work against the patient and reduce the resources available to her. (Ferguson, 2008).

Access to care, the ability to comprehend information, and language and cultural barriers all impact the pregnant women's experiences with the health care system. To assist in meeting the needs of women, identifying their health literacy status and delivering care that they understand and are able to act upon is critical.

Identifying and Working with Clients with Low Health Literacy

Low health literacy is difficult to identify, although it is essential when encouraging health promotion and education. While completed grade level may be a factor, it is not always a determinant of low health literacy. In addition, reading level and self-reported reading and writing skills are not correlates of health literacy (Parikh, et al., 1996). Standardized assessment tools are available for providers who want to test health literacy of their patients. The two main assessment tools that have been commonly researched include the Rapid Estimate of Adult Literacy in Medicine (REALM) and the Test of Functional Health Literacy in Adults (TOFHLA) (Davis, et al., 1993; Parker, Baker, Williams, & Nurss, 1995). A more recent third tool, the Newest Vital Sign (NVS) has been introduced (Osborn, et al., 2007).

Despite the recent advances in health care related to the patient-centered medical home, meaningful use, and the Affordable Care Act, the health care system has failed to act on the vast number of patients who do not understand basic health information providers convey or educational materials designed to communicate the messages. As aforementioned, low health literacy leads to adverse outcomes. These poor outcomes make the priority of acknowledging and evaluating health literacy and interventions

related to improving health literacy even more important. When planning a community-based intervention several factors to consider include the prenatal population, health care providers in the community, birth outcomes, community resources, the location where the population receives care, and the presence of factors that contribute to healthy prenatal and postnatal outcomes.

In steps to address the needs of the population participating in this project, a health literacy coalition was formed in a Western Michigan lakeshore community. This community already had a program in place, the Pregnancy Pathways Program, to connect at-risk pregnant women to medical care and social resources to improve birth outcomes. In hopes of improving birth outcomes, the health of the mother is the priority of the Pregnancy Pathways Program. Community health workers (CHW) assess women referred by community organizations and help them overcome barriers to medical and personal care needs. A high risk prenatal population was identified by community health workers and health care providers who could benefit from an intervention regarding patient and provider communication with sensitivity to health literacy. The purpose of this project was to evaluate the effectiveness of The National Patient Safety Foundation's Ask Me 3 program as a supplement to services provided in the Pregnancy Pathways Program in enhancing patient satisfaction and self-efficacy with communication experiences.

CHAPTER 2

CONCEPTUAL MODEL

The conceptual framework developed by Donabedian (1988) is a useful model in understanding implementation and evaluation of change in healthcare organizations. While quality is an abstract term and differs for each individual, the concepts of structure, process, and outcome were found by Donabedian (1988) to be reliable indicators of health care quality and improvement in patient and population health. Disease prevention content is an integral part in of prenatal care (Vonderheid, Norr, & Handler, 2007). High rates of infant mortality, low birth weight, and racial disparities that continue to exist in the U.S. provide impetus for improving prenatal care nationwide (Hoyert, Mathews, Menacker, Strobino, & Guyer, 2004). Donabedian's model is a framework to guide the implementation of this project.

The model proposed by Donabedian (1988) paired with the concept of self-efficacy in Social Cognitive Theory (Bandura & Adams, 1977) provide the foundations for this dissertation. The purpose of this chapter is to give an overview of each framework for implementation of change while assimilating them in light of the practice problem. The following sections provide an overview of Donabedian's model and describe the theoretical concepts that link this model to health literacy in prenatal care. Following that, self-efficacy theory is described in relation to prenatal health seeking behaviors and behavior change. The roles of these two models are described and provide a framework for project development, implementation, and evaluation.

Donabedian's Framework

Donabedian developed a framework to assist in the evaluation of quality of care. In 1993, Donabedian described quality of care as one of the fundamental attributes of science and technology in care, and the ways science and technology are applied in care. He described it as “almost anything anyone wishes it to be, although it is, ordinarily, a reflection of values and goals current in the medical care system and in the larger society of which it is a part’ (Donabedian, 1988, p. 692). It is noteworthy that there is no single criterion with which to measure quality. Instead, Donabedian described three criteria that should be examined as a whole: structure, process, and outcomes. While outcomes may traditionally be the most studied indicator of quality of care, the structure and process included in the entire healthcare experience are also factors.

Donabedian (1993) highlighted the importance of the interpersonal relationship between patient and provider. Although vital, the interpersonal process and its relation to quality are often ignored. The interpersonal interaction between patients and providers is at the center of quality assessment because it is there that the processes and decisions most critical to quality occur (Donabedian, 1993). He noted, “...the management of the interpersonal process by the practitioner influences the implementation of care by and for the patient” (Donabedian, 1988, p. 1744). Therefore, if a crucial piece of the interpersonal relationship that the patient needs to begin or maintain a behavior is missing, this absence will influence his or her behavior. Donabedian (1988) concluded “clearly the interpersonal process is the vehicle by which technical care is implemented and on which its success depends” (p. 1744).

The interpersonal relationship is of interest when considering health literacy and patient and provider communication. Many patients with poor health literacy will not admit their difficulties in reading or ask for clarification because of shame or embarrassment. Unfortunately, this shame is an emotion that plays a role in the interaction between patient and health care provider. It may affect care, the patient's ability to follow through with direction, and the inability of the health care providers to completely assess the patient's needs (Parikh et al., 1996).

Theoretical Concepts

Assessment of the quality of care can be classified under Donabedian's three concepts: structure, process, and outcomes. Structure refers to characteristics of the setting in which care occurs. This includes material resources (money, equipment, facilities), human resources (physicians, nurse practitioners, medical assistants), and organizational structure (reimbursement methods, provider and staff evaluation). Process refers to the giving and receiving of care. From the patient's perspective it denotes the seeking of care and following through with recommendations. From the providers' perspective it denotes the information gathering, diagnosis, and recommendations of care. Outcome refers to the effects of the care on the patient's health status. This is a product of the structure and process and can be characterized by changes in the patient's knowledge and health behavior as well as patient satisfaction. Donabedian (1988) described patient satisfaction as the patient's judgment of care accounting for all three concepts, but it is primarily related to the interpersonal process.

The relationships between structure, process, and outcome must be determined before any one concept can be focused on and evaluated for quality. In other words, in

order to assess quality of care, the three concepts must be examined as a whole by evaluating how the structure and process contribute to the outcomes.

Theoretical Application to Prenatal Outcomes

The model Donabedian (1988) proposed has been a useful conceptual model to guide prenatal education research and outcomes and is effective in evaluating overall quality of an intervention (Kohen, 2002; Lee & Holroyd, 2009). It is well known that a systematic approach should be taken to integrate the best evidence into a model of informed decision making during prenatal care practice (Kirkham, Harris, & Grzybowski, 2005). In order to evaluate quality, the structure, process, and outcomes of prenatal care interventions must be analyzed. In addition, pregnant women should have full understanding of the testing, risks, programs, and screenings that are available and encouraged during prenatal care. Oftentimes, there are barriers such as mistrust of the healthcare system; cultural issues; educational; social, and economic disadvantages; inadequate communication and/or language barriers; and a lack of understanding about health insurance and available care. These barriers can all prevent patients from seeking care (Pilon, 2011). The purpose of this practice dissertation was to use Donabedian's (1988) model to implement and evaluate a health literacy intervention that is aimed at breaking down barriers associated with communication between patients and providers. Using a community based approach and engaging community health workers, self-efficacy and satisfaction of patients during the prenatal period was examined. (See Figure 1)

Structure

According to Donabedian (1988), structure refers to the material resources, care providers, patient factors, organizational characteristics, research and teaching capabilities, and financial details. These are all intertwined to make up the structure of the clinical setting in which a patient seeks care. In order to evaluate structure, the physical facility (a clinic in Western Michigan), the care providers (physicians, nurse practitioners, and obstetric and gynecologic residents), and patient factors (self-efficacy, pregnancy demographics) were identified. Furthermore, the Pregnancy Pathways program already initiated by the community will be described to further denote the characteristics of the prenatal care structure.

Process

The process of prenatal care involves what is done for the patient (Donabedian, 1992). This process includes diagnosis, treatment, preventative care, patient education, and the action that the patient takes on behalf of her own health. Donabedian (1988) used the term technical quality to refer to “best practice” or the knowledge and judgments the provider and patient put forth toward arriving at an assessment and diagnosis of a condition. Donabedian (1988) stated, “...the goodness of technical care is proportional to its expected ability to achieve those improvements in health status that the current science and technology have made possible” (p. 1743).

The second and arguably more vital component of the process is the interpersonal relationship. It is during this part of the process that information between provider and patient is communicated. Through this process, information is exchanged about the nature of the health situation and the management of it as well as patient preference and

expectations. “Clearly the interpersonal process is the vehicle by which technical care is implemented and on which its success depends” (Donabedian, 1988, p. 1744). Therefore, in order for technical care to be carried out, a successful interpersonal relationship must also develop. Unfortunately, the interpersonal process is often ignored when assessing quality of care (Donabedian, 1988). Both structure and process were informed by Donabedian’s model, while outcomes were addressed through both Donabedian’s model and Self-Efficacy Theory.

Self-Efficacy Theory

To focus on the interpersonal relationship and education and communication in the prenatal period, the concept of self-efficacy was used as the basis framing a communication-enhancing intervention for women who are at high-risk in the prenatal period. Self-efficacy is defined as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances. It is concerned not with the skills one has but with judgments of what one can do with whatever skills one possesses” (Bandura, 1986, p. 391). This definition indicates that self-efficacy is not general in nature, but instead related to specific situations. The influence of self-efficacy on participation in health behaviors is included in two other well-known theoretical frameworks. The Health Belief Model and the Health Promotion Model also include self-efficacy in their frameworks and attempt to explain participation in and commitment to health behavior change (Janz & Becker, 1984; Pender, Murdaugh, & Parsons, 2010). The situation this practice dissertation is concerned with is prenatal care and the self-efficacy of women with high risk pregnancies to communicate with their provider and participate in health-seeking behaviors.

Researchers Lenz and Shortridge-Baggett (2002) described the theory of self-efficacy in detail. They noted, “The basic premise underlying self-efficacy theory according to Bandura is that the expectations of personal mastery (efficacy expectations or self-efficacy) and success (outcome expectations) determine whether an individual will engage in a particular behavior” (p. 10). An efficacy expectation refers to the confidence in one’s ability to produce the recommended behavior, while an outcome expectation is the patient’s belief about the outcomes that will occur from a given behavior (Lenz & Shortridge-Baggett). According to Bandura (1986), outcome expectations are dependent on self-efficacy, so self-efficacy has been shown to predict performance better than outcome expectations.

The relationship between self-efficacy and self-care is well documented. It is reported in many studies that health outcomes are improved when self-efficacy is high. In studies involving patients with chronic obstructive pulmonary disease (COPD) a relationship was found between high self-efficacy and a lower incidence of COPD side effects of breathlessness and anxiety (Simpson & Jones, 2013). In addition, patients with type 2 diabetes who reported high self-efficacy scores when compared to patients with low self-efficacy scores indicated they followed an optimal diet, engaged in more weekly exercise, performed self-monitoring of blood sugars, and implemented better foot care (Sarkar, Fisher, & Schillinger, 2006). Many of the improved health outcomes in studies addressing self-efficacy are reported as being related to the patient’s improved self-care practices.

According to Bandura and Adams (1977), self-efficacy “affects people’s choice of activity and behavioral settings, how much effort they expend, and how long they will

persist in the face of obstacles, and aversive experiences” (p. 288). A person with a strong perceived self-efficacy partakes in more action-oriented coping activities. Therefore, those who persevere through threatening encounters or settings will eventually reduce their inhibitions through practice and success of their coping behaviors. In the current project, the participants could perceive office visits with their providers as threatening or encounters in which they do not feel confident (Bandura & Adams). To assist in changing patient and health care provider communication, self-efficacy could be affected, and inhibitions related to following prenatal advice could be thwarted. By evaluating a patient’s self-efficacy before a health literacy communication intervention and then again after the intervention, this practice implementation assessed for an improvement in the quality of communication.

Outcomes

Outcomes, while frequently evaluated for quality, only permit an inference about the structure and process that have come before them (Donabedian, 1992). In other words, just because an outcome may be favorable, it does not mean that the structure and process preceding the outcome were of high quality. Short term outcomes can be measured at the patient level, and in this case refer to participation in the health literacy intervention and improved patient satisfaction and self-efficacy scores. At the same time, outcomes on the provider level can be evaluated based on the use of the intervention and the satisfaction regarding it. Improved self-efficacy and improved communication overall may be long-term outcomes and could be predictive of improved prenatal care including improved communication with health care providers, and adherence to recommended health promotion and disease prevention behaviors.

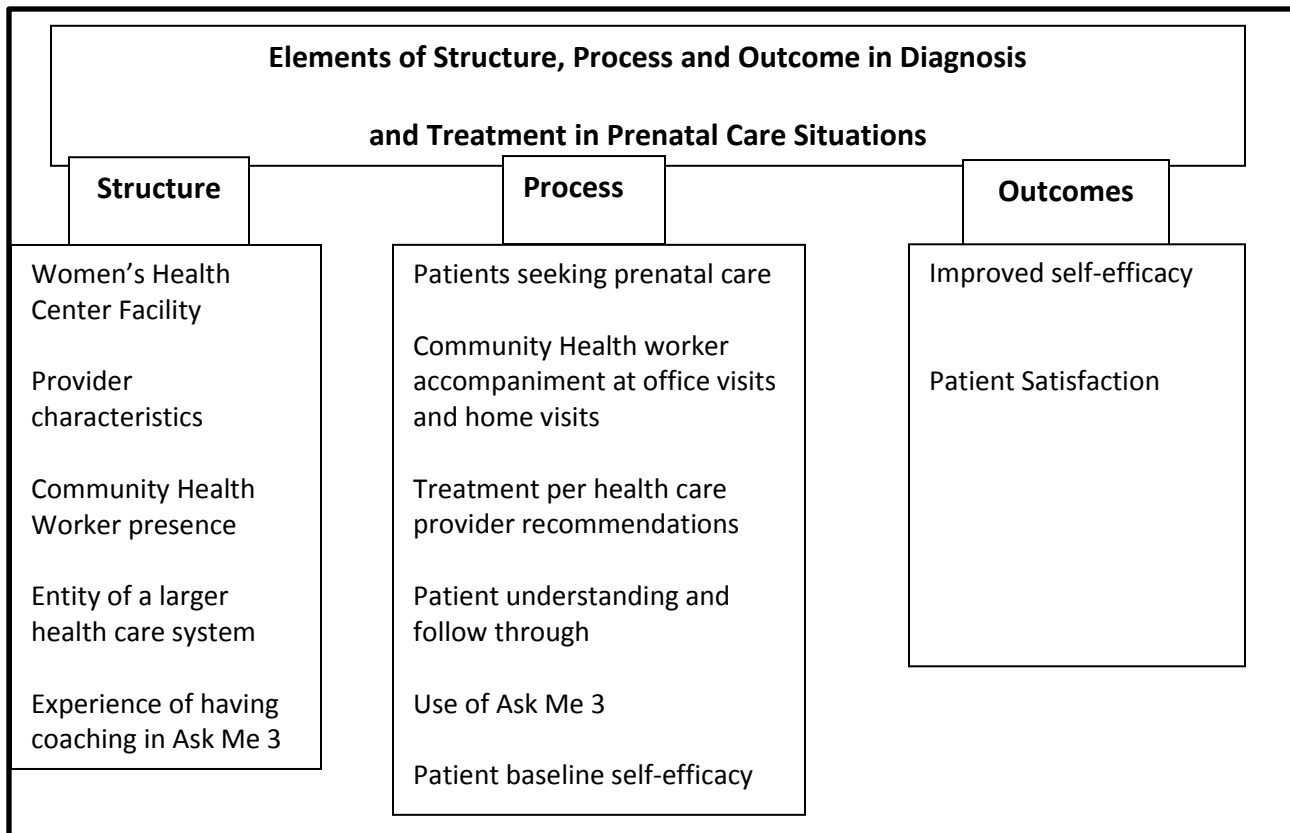


Figure 1: Adapted from Donabedian (1992)

Summary

According to the Donabedian (1988) model, evaluation of this intervention implementation will include evaluation of the structure (the organizational setting- community health workers and providers), the process of care delivery (the health literacy intervention by patients and providers, interpersonal communication), and the outcome (self-efficacy and patient satisfaction). In addition to the process, educational interventions occurred to teach community health workers and providers about the health literacy intervention. This aided in identification of barriers or areas of strength that will contribute to implementation of Ask Me 3 education and practice in this project.

Self-efficacy evaluation will be part of short-term evaluation of this health literacy intervention since self-efficacy is a major factor in behavior adoption and change (Schwarzer & Fuchs, 1995). As recommended by Koehn (2002), the Donabedian model is a useful framework in prenatal program evaluations. This model, in addition to Bandura's Self-Efficacy theory, provided a framework for examining structures, processes, and outcomes in light of interpersonal and situation-specific behaviors.

CHAPTER 3

LITERATURE REVIEW

The question guiding this project is whether encouraging patients to ask questions of their health care providers during their prenatal appointments has an effect on patient satisfaction and self-efficacy in completing prenatal recommendations. The purpose of this chapter is to review current studies concerned with physician and patient face-to-face communication addressing health literacy and comprehension. These studies also address the relationship between health literacy, self-efficacy, and patient satisfaction.

Defining Health Literacy

For the purposes of this literature review, health literacy is defined as “reading and numeracy skills, comprehension, capacity to use the information in decision making, and successful functioning as a healthcare consumer” (Speros, 2005, p. 633). In addition, it is dependent on antecedents such as literacy, or the ability to read and comprehend written words, and health related experiences and exposures. Currently there are several tools to measure health literacy in patients, the Test of Functional Health Literacy (TOFHLA) (Parker, et al., 1995), the Short Test of Functional Health Literacy (S-TOFHLA) (Baker, et al., 1999), the Rapid Estimate of Adult Literacy in Medicine (REALM) (Baker, 2006), and the Newest Vital Sign (NVS) (Weiss et al., 2005). These tools make assessing health literacy a possibility so patients and providers are more aware of their communication strategies and possible barriers to effective communication and health care.

Literacy, in general, can contribute to some of a person's health literacy skills, but other skills necessary to understand and act upon a decision are not always related to literacy. These skills are tied to social, cultural and individual factors. Attitude, beliefs, emotional state, physical limitations, and social skills also may contribute to patients' health literacy levels and whether or not they will act upon a health care decision (Nielsen-Bohlman, et al., 2004). Health information comes from a variety of different sources that may provide individuals with conflicting information. Among these are media outlets, personal experiences, health educators, product pamphlets, and safety warnings. Health literacy levels and the conflicting misleading directions can shape an individual's health behaviors. Therefore, sifting through information and using that information to care for oneself is a challenge.

Search Methods

A literature review was conducted using the Cumulative Index of Nursing and Allied Health Literature, PubMed, and the Cochrane Library with the search terms "health literacy interventions," "patient-provider communication," "health outcomes," "Ask Me 3," "teach-back," "self-efficacy," "patient satisfaction," and "prenatal care." These searches yielded 50 articles relevant to these topics. Inclusion criteria for health literacy interventions review included practice interventions, an adult population, and studies no older than 20 years old. Exclusion criteria included health literacy intervention studies that utilized media, group education, and environmental assessments. This resulted in 9 health literacy intervention studies for review and focused on patient-provider communication.

Using the search terms, self-efficacy, health literacy, and self-care 47 studies were found. A search using the terms satisfaction, health literacy, and self-care yielded 30 results. Inclusion criteria for each of these searches were studies that had an adult population, used health literacy as a concept of interest, and had self-care or health status as a variable. Studies that were older than 10 years old were excluded in the self-efficacy and patient satisfaction review sections. For the purposes of this review, 4 self-efficacy studies are reviewed and 3 patient satisfaction studies are reviewed.

Patient and Provider Communication

Communication at the patient-provider level is often overwhelming to the patient. Mistakes that providers make include using too much medical jargon, relying only on words and diagrams, and failing to assess patient understanding (Castro, Wilson, Wang, & Schillinger, 2007; Schillinger, Bindman, Wang, Stewart, & Piette, 2004). To combat these mistakes, several interventions focused on communication and patient comprehension have been implemented in a variety of settings with several different population samples.

Interventions focused on verbal communication include lessening the use of medical jargon, attempting to match provider vocabulary with the patient, and prioritizing and limiting the number of key points discussed (Sudore & Schillinger, 2009). Two health literacy interventions, Ask Me 3 and the teach-back method, have been studied as implementation options to improve patient comprehension and satisfaction. These 2 implementation strategies are endorsed by the Agency for Health Care Research and Quality (AHRQ, 2012).

Encourage Questions-“Ask Me 3”

A critical part of achieving and maintaining good health outcomes is helping patients understand their roles in their own health care and taking ownership of their lifestyles and health-related decisions (AHRQ, 2012). A program designed by the National Patient Safety Foundation, titled Ask Me 3, is a program that encourages patients to know three things before leaving the encounter: *What is my main problem, what do I need to do; and why is it important for me to do this?* This approach can encourage patients to become more involved in their care. In addition it may assist a practice in decreasing the number of questions a patient may call with after he or she leaves, increase patient satisfaction, and increase patient safety (National Patient Safety Foundation, 2013).

Three studies used Ask Me 3 as a health literacy intervention. Ask Me 3 has been used to evaluate patients' question-asking behavior during primary care visits. The purpose of a study sponsored by the American Academy of Family Physicians was to evaluate improved question asking behavior and, in turn, improved medication adherence and lifestyle recommendations using the Ask Me 3 approach. Twenty primary care practices were assigned randomly to either the intervention group, using Ask Me 3, or the control group. A total of 834 eligible patients were enrolled across the 20 sites. Researchers put Ask Me 3 brochures in waiting rooms and exam rooms and trained front office staff to hand out Ask Me 3 educational pamphlets. In addition, medical assistants who roomed patients reminded the patients to ask the providers their three questions. Interactions with patients and providers were audio recorded and then researchers interviewed the patients one to 3 weeks after the visit to assess adherence to the

recommendations. The providers and staff interacting with the control group were informed a study was being implemented about provider and patient communication but were advised not to change their current communication patterns (Galliher et al., 2010).

Patients in the intervention group were no more likely than patients in the control group to ask any of the Ask Me 3 questions. In addition, adherence outcomes were not better in the intervention group. Although the results were not statistically significant, and showed no significant differences in treatment recommendations based on the intervention or control group, the limitations and recommendations of this study provide insight into future studies. The researchers noted several limitations. The population may not have been an appropriate target since baseline health literacy levels were already quite high, and there was a lack of baseline measurement of question-asking behavior in either group. Interestingly, the researchers noted the possibility of a Hawthorne effect, evidenced by both groups who were advised that this was a study about communication between patients and providers (Galliher et al., 2010). The questions asked to assess health literacy were the participants' perception of their health literacy, rather than standard measures.

This study provided merit for future studies that employed Ask Me 3 as a communication strategy between patients and providers in patients with lower baseline health literacy. A longer intervention period and working with a population with lower baseline rates of question-asking behaviors and poorer medication adherence were recommended for further evaluation. The value of this tool was studied in another study related to the patient and provider relationship.

Researchers used Ask Me 3 to evaluate if implementing this health literacy intervention made a difference in patients' perceptions of provider cultural competency and patient satisfaction. This study was conducted with African American adult patients (n = 64) who were outpatients at a medical clinic in eastern Michigan. The sample was predominantly female with low income, low education, and very few had private insurance. Half of the sample participated in the intervention group and received Ask Me 3 pamphlets prior to their visit with their provider. The control group did not receive this pamphlet. All participants were asked to complete the Perceived Cultural Competency Measure after the visit, and the intervention group was also interviewed about the Ask Me 3 pamphlet and communication with the physician to assess satisfaction with the visit (Michalapoulou, Falzarano, Arfken, & Rosenberg, 2010).

The results of this study showed no statistically significant differences in patient satisfaction or perceived cultural competency between the groups. Almost all of the intervention group participants reported finding the pamphlet helpful, and everyone who actually asked all 3 questions found the questions to be helpful. About 90% of the intervention group reported knowing more about their condition after their visit (Michalapoulou et al., 2010).

There were several limitations to this study. Only half of the patients in either group saw their regular provider. This possibly played a larger role in patient satisfaction than expected. In addition, the sample size was small and from only one clinic setting. The patients were not randomly assigned to either group and there was no independent verification of the patient's report in actual utilization of the pamphlet and question-asking (Michalapoulou, et al., 2010).

Although patient satisfaction and cultural competence improvement were not statistically significant, this study showed the feasibility of using Ask Me 3 and patient satisfaction with this tool, specifically in primary care practice serving clients of low socioeconomic status. In addition, patient empowerment through improved communication techniques was highlighted.

To encourage question-asking behavior in a pediatric outpatient office and study patient satisfaction, researchers implemented Ask Me 3 in a walk-in clinic in Texas. More than 80% of the patients were Hispanic, with one-third being Spanish speaking only. The researchers conducted Ask Me 3 orientation sessions to educate providers and staff about the use of these questions during office visits. Ask Me 3 posters and brochures in the clinic to raise patient awareness about the opportunities for question-asking during their office visits. Brochures were available in patient rooms as well as in the waiting room. For analysis, there were three groups of participants. The first group consisted of 100 parents who were interviewed before Ask Me 3 implementation to assess the current level of satisfaction with the office. The second group was interviewed 6 months after implementation and their satisfaction and use of Ask Me 3 was assessed. The third group was a focus group of 8 parents, 6 of whom reported using Ask Me 3 and 2 who did not use it (Mika, Wood, Weiss, & Trevino, 2007).

The first group of participants reported that none had heard of Ask Me 3 before implementation and had a satisfaction score of 4.74 out of 5. In the second group, 41.5% had heard of Ask Me 3, of those, 50.2% used Ask Me 3 during a visit, and all of those who used it felt the provider responded more completely and the patient felt better about the condition with more information. Satisfaction change was not statistically significant

(4.8/5.0). The focus group reported improved recall about the questions they needed answers to during the visit and felt the providers were more responsive to their questions (Mika et al., 2007).

The limitations to this study provide impetus for future work. The population was homogenous and primarily Hispanic. In addition, there was no independent verification that Ask Me 3 was actually being used by the participants. The most significant limitation is that baseline satisfaction scores could have given this study a ceiling effect since satisfaction was already 4.7 out of 5 before project implementation. While this study did not provide statistically significant results, the parents noticed the provider responding more thoroughly and they reported feeling more confident about health condition management after use of Ask Me 3 (Mika et al., 2007). This simple tool can be used in many different settings and populations. It has the potential to be a good starting point in which the next intervention, teach-back, could also be implemented.

Teach-Back

The teach-back method is endorsed by the Agency for Healthcare Research and Quality (AHRQ) as a means to ensure patients understand what they need to know and do by teaching back the directions communicated during their visit with their healthcare provider. This method helps the provider ensure understanding while giving the patient confidence to carry out the directions. In addition, explanations and communication strategies most helpful to patients can be identified (AHRQ, 2012). The teach-back method is noted as an effective way to evaluate understanding of health teaching (Schillinger et al., 2003; Villaire & Mayer, 2007). Examples of the teach-back method in action include providers asking “Tell me how you are going to take this new medication,”

“What would you tell your friend you are supposed to do about your baby’s vaccine schedule,” and “Explain in your own words what I just taught you about the ultrasound we ordered.”

The teach-back method has been used in several different populations to study knowledge retention and adherence. There were 6 studies that used teach-back as the primary intervention. White, Garbez, Carroll, Brinker, and Howie-Esquivel (2013) studied the utility of teach-back in heart failure patients with a prospective cohort study design. The purpose of their study was to determine if heart failure patients educated with the teach-back method retained self-care educational information and whether its use was associated with fewer hospital admissions. The sample included 276 heart failure patients 65 years and older who had been hospitalized in the last 13 months. The entire sample participated in the intervention group and were educated and evaluated with the teach-back method as hospital inpatients. Then, researchers evaluated recall via phone interviews 7 days after discharge. Readmissions were assessed and confirmed through follow up phone calls and chart review. Patients correctly answered 75% of the self-care teach-back questions 84% of the time while the patient was still hospitalized and 77% of the time during follow up telephone calls. A greater time spent doing teach-back with the patients was associated with more correctly answered questions ($p < .001$). There was an insignificant reduction in 30 day readmission rates for patients who correctly answered teach-back questions during hospitalization and the follow-up call ($p = .609$). However, the number of readmissions did decrease (White, et al., 2013).

While this study did not show a statistically significant reduction in readmission rates due to teach-back, future randomized studies would be useful to compare teach-

back use to usual care, then evaluating knowledge and readmissions. This study did show that a greater time spent educating patients and evaluating understanding gave patients more knowledge at follow up (White, et al., 2013). Assessing understanding through teach-back can be possible with several different populations and in many different settings.

Teach-back has also been studied in patients with diabetes. In one study, researchers explored the impact of teach-back strategies on diabetes knowledge, medication adherence, and diet in patients with type 2 diabetes. One hundred twenty-seven diabetic patients with low health literacy were studied in an outpatient clinic in Iran. The 2 intervention groups participated in 3 twenty minute educational sessions consisting of either teach back or education with pictures, while the control group had usual care with education and a take-home brochure. Diabetes knowledge and diet adherence were assessed with semi-structured questionnaires and medication adherence was assessed with the Morisky Medication Adherence Scale. All three variables, knowledge, medication adherence, and diet adherence improved in each group ($p < .001$) (Negarandeh, Mahmoodi, Noktehdan, Heshmat, & Shakibazadeh, 2013).

The authors warn about generalizing the results, but the utility of teach-back and tailoring strategies to the patients' needs is highlighted in this study (Negarandeh et al., 2013). While teach-back was not the only intervention that improved the variables of interest, it is a simple and non-expensive strategy to improve communication practices. The long term effects of teach-back have the potential to stimulate the use of this intervention at different interactions with providers.

Pregnant women in Jamaica were educated with the teach-back method about the BCG and hepatitis B vaccines. The ability of the women to communicate benefits, risks, and the safety of these vaccines after being educated with the teach-back method was of interest to these researchers. Thirty-four pregnant women at an antenatal clinic were given education pamphlets about each vaccine, then the researcher implemented teach-back after reviewing the pamphlets with the patients. These implementation sessions were audio recorded. The pamphlets were written at about a fourth grade reading level. The Rapid Estimates of Adult Literacy in Medicine (REALM) was used to assess baseline health literacy level in these women. After implementation, the REALM was moderately positively correlated with correct responses. In other words, women with correct responses had higher REALM scores (Wilson, Mayeta-Peart, Parada-Webster, & Nordstrom, 2012).

Although the teach-back method may have been valuable in the women's ability to communicate benefits, risks, and safety of these vaccines, there was a modest gain for women with lower health literacy. Asking these mothers to identify their preferred way to learn and spending more time utilizing methods like teach-back could contribute to improved vaccine knowledge before birth (Wilson, et al., 2012). The amount of information new mothers are expected to learn before they give birth is overwhelming and can be confusing, so ensuring understanding is important and could put the woman at ease.

In a study conducted by many of the same authors as the previously discussed study, the relationship between maternal health literacy and her ability to comprehend and communicate information about immunizations was evaluated. Researchers recruited

15 women who had one child already, and 15 women who had more than one child. They conducted the research in an urban walk-in immunization clinic and used audio-taped interviews to assess comprehension. The researchers gave the women a vaccine information sheet (VIS) and reviewed it with verbal instructions, then each mother was asked to repeat back, in her own words, the risks, benefits, and safety of the vaccines. The REALM was used to assess health literacy and responses were quantified based on teach-back answers from the audio recording. The results showed that in this population, mothers with higher levels of health literacy provided more correct responses. While this study was similar to the study these researchers conducted in Jamaica, their limitations of a small sample size meant they were unable to generalize the results (Wilson, Baker, Nordstrom, & Legwand, 2008). Nevertheless, the utility of the study showed that health literacy levels and teach-back ability are related therefore capitalizing on the importance of assessment and follow through on each of these variables.

Researchers in Georgia recruited patients with coronary heart disease who were already participating in a larger randomized controlled trial. Utilizing teach-back during the informed consent procedure and HIPAA paperwork was of interest to the researchers. Participants were given an overview by the researchers of both pieces of paperwork; the researchers encouraged questions from the participants, and then used the teach-back technique to evaluate understanding. Health literacy was assessed using the REALM while comprehension was assessed by asking the participants to explain the purpose of the study, timeline of the informed consent procedure, and potential risks and benefits (Kripalani, Bengtzen, Henderson, & Jacobson, 2008).

In unadjusted descriptive statistics and odds ratios, age, African American race, years of education, Mini-Mental Status Exam results, and health literacy level were significantly associated with informed consent and HIPAA comprehension. Interestingly, participants who could read at a fourth to eighth grade level had four times the odds of comprehension when compared to participants with a reading level less than fourth grade (Kripalani et al., 2008).

There are several limitations in this study that encourage future research. The researchers were only able to assess comprehension in real-time. A follow up conversation may have aided in studying teach-back effects. In addition, the participants were recruited from a single outpatient center and were primarily African American. Unfortunately, in this study, the consent and HIPAA documents were already written at the eighth grade level (Kripalani et al., 2008). The merit of this study could aid in testing feasibility of a teach-back program in demographically diverse communities

Knowledge retention in patients with type 2 diabetes was of interest to researchers who used a multi-media education program paired with teach-back. One hundred thirteen participants were recruited to watch a multi-media diabetes education program and then answered knowledge questions about diabetes after going through a teach-back intervention with the researchers. Two weeks after the multi-media program, participants were asked follow up questions, and researchers found that adding teach-back after the intervention did not improve knowledge retention. The limitations of this study included a lack of a control group, small sample size, and limited generalizability (Kandula, Mali, Zei, Larsen, & Baker, 2011). While health literacy appropriate materials are necessary for each population, teaching strategies also need to be sensitive to patient needs.

Both Ask Me 3 and the Teach-Back technique are contained in AHRQ's Health Literacy Universal Precautions Toolkit (2012). While there is not overwhelming evidence for Ask Me 3, the results of the 3 studies included in this review spur future research. In addition, the studies highlighted the empowerment patients experienced and the improved confidence in performing self-care after using Ask Me 3. Teach-back is a well-documented intervention in the aforementioned studies that, like Ask Me 3, has been valuable in improving patient and healthcare provider communication. All 9 studies reported that more research was necessary. These studies provide rationale for improving health care provider sensitivity to a patient's learning style, understanding, and ability to follow through on recommendations. Ask Me 3 may be the first step in facilitating improved communication between healthcare providers and the high-risk prenatal population in this project.

Patient Satisfaction

Patient satisfaction has been identified as a vital outcome in healthcare related contacts with providers and medical staff. "Patients who are satisfied with their healthcare provider's communication skills are more likely to adhere to recommendations" (Ong, de Haes, Hoos, & Lammes, 1995 as cited in Jensen, King, Guntzviller, & Davis, 2010, p. 30). This variable is of interest to investigators as provider communication and patient follow-through are highlighted in health literacy research. Three studies regarding patient satisfaction with provider communication are evaluated as part of this literature review.

The first study assessed whether health literacy factors and optimism are related to satisfaction with healthcare providers' communication skills. One hundred thirty-one

low-income adults were recruited and participated in surveys and interviews to assess satisfaction with communication skills. Communication satisfaction was measured by 4 questions on a 4-point Likert scale. The questions focused on how well patients felt they were listened to, how well things were explained to them, how respectful the providers were, and if enough time was spent with them. Other variables of interest included visitation history, literacy, numeracy, and optimism. Visitation history was evaluated over a 12 month period. Literacy was measured with the word-recognition test, the Rapid Estimate of Adult Literacy in Medicine (REALM). Numeracy was measured with 4 items from the Test of Functional Health Literacy (TOFHLA) that had previously been studied to measure numeracy. Optimism was measured with the Life Orientation Test- Revised (LOT-R), a six item questionnaire. The results of this study suggested that while communication satisfaction overall could be adequate, there were tensions between health care providers and patients. Young, Caucasian, functionally illiterate, and pessimistic adults were found to be the most critical of their interactions with health care providers. One in 5 participants did not feel listened to or respected, while one in 7 felt their health care provider failed to explain something in a way they could understand. Additionally, about half of the participants were frustrated with the little amount of time they felt their health care provider spent with them. Patient activism, that is patient assertiveness during health care encounters, was found to be negatively associated with satisfaction. Prior research has supported that patients who are satisfied with their care are more assertive in interactions with health care providers, but this study suggests that low-income adults may have the opposite finding. This finding was reiterated in follow up interviews (Jensen, King, Guntzviller, & Davis, 2010).

The implications of this study necessitate discernment when analyzing communication scores. The authors noted that past research has shown that low-income adults have poor satisfaction with health care provider communication. The authors pointed out limitations that could contribute to differing results. First, they noted their sample may not be representative of the entire United States adult population. Second, the analyses cannot be used to make claims about causality due to the correlational nature of the analyses. Finally, self-report was used to evaluate communication satisfaction, which could be swayed by perception or memory bias (Jensen, et al., 2010).

Although it has some conflicting results with past studies, this study gives insight into how important the interpersonal relationship is between patients and providers. During the interview at the end of the study, comments from 3 women reiterated how important communication patterns are between health care providers and patients. Each of the three of the women voiced frustration with her doctor. They were frustrated that they felt like they had to pry the doctor for information, that they were “just a number,” and that the doctor was never really listening to them (Jensen, et al., 2010). Communication satisfaction, as noted earlier, can contribute to patient activation. So, to encourage preventative care and successful follow up, communication practices need to be considered.

Researchers interested in patient-centered communication and patient satisfaction recruited 195 patients and parents of pediatric patients to assess communication practices of physicians, nurses, and hospital staff. Patient-centered communication (PCC) behaviors that were of interest in this study included introductions, clarity, empathy, immediacy, listening, and humor. Immediacy, for purposes of this study, was defined as

participation in behaviors that reduced psychological and physical space between the two communicators. In other words, immediacy is a perception of the provider being fully present, including smiling, eye contact, and interacting at closer distances. Patient perception of PCC was assessed with a 13 item, 5 point Likert scale ranging from 5 (very often) to 1 (never). Four non-verbal items, 2 introduction items, 1 humor item, 1 clarity item, 1 listening item, and 4 empathy items were included in the scale. Satisfaction with communication was assessed with a 6 item Likert scale that ranged from strongly agree to strongly disagree. Two items in this scale assessed satisfaction with care during the stay at the hospital. Participants were also asked to describe the reasons for their hospital visit, sex, age, length of stay. Participants were categorized as more or less healthy depending on the reported length of stay (Wazner, Booth-Butterfield, & Gruber, 2009).

The results of this study supported the hypothesis that patient perceptions of PCC correlated positively with communication satisfaction. Additionally, the hypothesis that PCC would have a positive correlation with medical care satisfaction was supported. Physician immediacy, listening, and empathy were all statistically significant predictors of satisfaction with communication. During analysis of PCC behaviors of nurses empathy was the only statistically significant predictor of communication satisfaction. Immediacy and clarity were significant predictors of communication satisfaction with hospital staff members. When considering satisfaction with physician's medical care, clarity and listening were statistically significant, while introductions and listening were statistically significant predictors of care satisfaction of nurses. An additional finding characterized parents of healthier patients reporting greater medical care satisfaction than patients of sicker patients, although this finding was not statistically significant. PCC behaviors

enacted by physicians, nurses, and hospital staff were overall positively related to satisfaction with both communication and care. Friendliness and reducing uncertainty for the participants were associated with satisfaction. These findings support the significance of reducing anxiety for patients in medical settings which can be done by all personnel who come in contact with the patient (Wazner et al., 2009).

The authors did not include limitations to their study. Limitations apparent during this analysis included a relatively small sample size and the assumption that patients with longer lengths of stay were classified as being less healthy. There are important implications regarding the results of this study. The most apparent implication is enacting PCC training for all healthcare personnel in a hospital or clinic setting. The authors recommended training that includes role-playing and active exercises to allow the personnel to practice communication skills that are patient-centered. Integrating these behaviors at every level of a healthcare system has the potential to affect satisfaction for patients and families (Wazner et al., 2009). These positive correlations of PCC behaviors and satisfaction encourage implementation of health literacy interventions that improve healthcare provider and patient communication.

Patient satisfaction was the main variable of interest in a study based in California. The two aims of the study were satisfaction with a consultation planning intervention, and satisfaction with the other variables of interest that described location, provider, and recipient of the consultation planning intervention. Consultation planning (CP) was developed to reduce communication barriers between patients and physicians. Through development and testing it was found to be more effective in promoting communication than active listening. By employing CP, patients are trained to create an

agenda for an upcoming office visit that helps patients form questions and remember their concerns. The CP form has a structure that encourages situational questions, options to consider, goals, social support, and evaluating the diagnostic plan (Belkora et al., 2006).

The study was a retrospective descriptive study that took place at 3 community-based centers that provide supportive services, but not medical care. These centers were located in medically underserved counties with a strong representation of ethnic minorities. After the 3 centers sent representatives to a training day, CP was implemented and provided free of charge to clients. Fifty-eight CP sessions were included in this analysis. Patient satisfaction was measured with the Satisfaction with Visit Preparation (SVP) scale, a 5-item Likert scale survey. The majority of patients included in this analysis were White females with a breast cancer diagnosis (Belkora et al., 2006).

The results specified a high level of patient satisfaction with a mean SVP of 8.67 (range 5-10). This result correlated with the first aim of this study. The results for the second aim of the study which evaluated predictors of CP satisfaction based on location, provider, and recipient of CP were statistically insignificant except for the interaction when a CP provider was a breast cancer survivor and a CP patient had a breast cancer diagnosis ($p = 0.005$) (Belkora et al., 2006).

The limitations should be considered before interpreting or generalizing the results. First, the design was retrospective which limited the scope of research aims or questions the researchers could address. Second, there was only a 67 percent response rate. This response rate may obscure the validity of the results. Third, during thorough examination of the SVP responses, several of the participants' responses were logically

inconsistent, thereby posing a threat to internal consistency. Finally, the authors noted that patient satisfaction is not equivalent to healthcare quality or safety, and thereby not a comprehensive measure of healthcare effectiveness (Belkora et al., 2006).

This study, even in the midst of these limitations, supported a novel way to encourage office visit preparation at the community level. The authors noted that the study was implemented in a federally designated underserved medical community by 8 laypeople and 2 former nurses with very little technical support. CP was found to be a satisfying part of office visit preparation, so these results provide impetus to research the importance of a therapeutic alliance between patient and provider (Belkora, et al., 2006). Practice implications include implementing similar studies in other populations and with other resources, encouraging patients to have a list of questions prepared before seeing their healthcare provider, and exploring the use of lay people to implement similar studies should be an option to consider.

Each of these studies highlights the importance of a therapeutic relationship between patients and healthcare providers. While different variables affect patient satisfaction, these studies support development of interventions that improve patient satisfaction with healthcare interactions. Reducing anxiety and preparing patients for healthcare interactions are supported techniques for improving patient satisfaction.

Self-Efficacy

Self-efficacy has been shown to be a determining factor in the adoption of healthy behaviors and the rejection of unhealthy behaviors. In addition, self-efficacy has been shown to influence the initiation and maintenance of a behavior not only in the decision-making process surrounding that behavior, but also in the actions involved with that

behavior (Schwarzer & Fuchs, 1996). The successful management of prenatal care and prenatal health, along with disorders such as gestational diabetes, is dependent on self-care which is ultimately dependent on self-efficacy (Cardwell, 2013). Self-efficacy has been hypothesized to be a mediating variable between health literacy and outcome variables such as engagement in self-care, comprehending health information, and health status.

Three hundred thirty three patients with a diagnosis of hypertension were recruited from 3 clinics. In-person interviews were conducted at the clinics and the variables of interest measured were health literacy, hypertension knowledge, self-efficacy, self-care behavior, and health status. Health literacy was assessed using the Short Test of Functional Health Literacy in Adults (S-TOFHLA). Hypertension knowledge was assessed through questions regarding symptoms and characteristics of hypertension. Self-efficacy was measured by asking participants how confident they were in doing everything they needed to do to control their blood pressure, monitoring changes in their blood pressure, and doing different activities to manage their blood pressure. Physical activity was the self-care behavior that was assessed and it was measured through reported frequency and duration of physical activity over the previous 4 weeks. Patients reported their health status from on a scale from 1 which meant poor health to 5 which meant excellent health (Osborn, Paasche-Orlow, Bailey, & Wolf, 2011).

Fewer years of education, African American race, and older age were significantly associated with lower health literacy scores. The results supported the hypotheses that “health literacy was directly related to knowledge, self-efficacy was directly related to self-care behavior, and self-care behavior was directly related to health

status” (Osborn et al., 2011, p. 124), thereby linking health literacy to health status through self-efficacy. Further results suggested that knowledge was the only significant predictor of self-efficacy. The researchers note that this finding allows health literacy to be indirectly related to self-efficacy through knowledge (Osborn et al., 2011).

The limitations of this study allow for further investigation into the linkages between health literacy, self-efficacy, and self-care behaviors. The first limitation is that much of the data was self-reported. In addition, two of the variables, self-care behavior and health status, were single-item analyses which could contribute to a bias and incomprehensive analysis. The second limitation concerned the conclusions drawn from the results. The results proposed causal relationships between several variables, but the cross-sectional design does not support causation, but instead indicates association. So, the authors mentioned the results were heavily interpreted by theory and prior research. The third limitation is regarding the inability to generalize the results. And, finally, the authors noted that while the relationship between the variables was statistically significant, the magnitude was modest (Osborn et al., 2011).

Even through recognition of the limitations, the results of this study are one of the first to show an indirect pathway from health literacy to health status. The proposed pathway includes knowledge, self-efficacy, and self-care behavior. The results of this study provide impetus to continue studying the pathways and clarify the relationships between health literacy and health outcomes. Furthermore, these variables provide many opportunities for interventions aimed at fostering better self-care practices and education.

In a study done with 150 patients with type 2 diabetes, health literacy status, self-efficacy, and self-care behaviors were evaluated. The questionnaires used to evaluate

these variables included: the S-TOFHLA, the Diabetes Management Self-Efficacy Scale (DMSES), and the Summary of Diabetes Self-Care Activities (SDSCA). The study results showed that participants' scores on the S-TOFHLA resulted in 114 with adequate health literacy, 26 having marginal health literacy, and 10 having inadequate health literacy. The mean score of the DMSES showed that the participants had a high level of self-efficacy, with the least amount of confidence in managing hypo- or hyper- glycaemic episodes. The scores of the SDSCA indicated that most participants performed self-care activities (foot care, specific diet, exercise, and blood sugar testing) 4 days a week (Bohanny, et al., 2013).

The researchers found that health literacy was positively associated with self-efficacy in performing diabetes related self-care ($p < .01$). In addition to health literacy, diabetes education and employment status were important predictors of the participants' self-efficacy. Self-care behaviors were also positively associated with strong self-efficacy ($p < .001$). The researchers explained how their results supported health literacy as an antecedent to self-efficacy and that the influence of health literacy on self-care behaviors may be facilitated by self-efficacy (Bohanny et al., 2013).

The limitations of this study included the use of a convenience sample, a cross-sectional design, and the use of 25 data collectors. Due to these limitations, the researchers noted this study cannot be generalized to other diabetic populations. In addition, the researchers noted that many of their participants were younger and more educated than participants from similar studies. Therefore, the recommendations may not be applicable among all ages and education levels (Bohanny et al., 2013). Even among these limitations, the merit of this study is shown in the recognition of the relationships

among the three main variables of interest, health literacy, self-efficacy, and self-care. While considering the effect of each on the other, interventions to improve self-efficacy of patients should be a priority to enhance participation in self-care.

Donovan-Kickert, Mackert, Guinn, Tollison, and Breckinridge (2012) conducted a study to test a proposed model of the relationships between health literacy and self-efficacy and the influence on patients' comprehension of informed consent information. Two hundred fifty-four patients were recruited to participate. The researchers hypothesized that self-efficacy would be a mediator between health literacy and comprehension of informed consent documentation. After reading the consents, the participants were interviewed to assess adequacy of consent document, overall confusion, and accurate translation of medical terminology using the Newest Vital Sign (NVS). The study results supported self-efficacy as a mediator for several adequacy outcomes, confusion degree, feeling informed about risks and feeling prepared. This study did not display evidence that supported self-efficacy as a mediator between health literacy and accurate translation of medical terminology. Interestingly, the results suggested that lower health literacy was a predictor of lower self-efficacy, which could have an effect on the aforementioned variables. While health literacy has been hypothesized to play a significant role in informed consent practices, self-efficacy also plays a large role in patient assessment of informed consent documentation and complements health literacy levels (Donovan-Kicken et al., 2012).

The limitations of this study mostly centered on the use of single-item measures. The researchers noted that the brevity of the questionnaires may not have taken into account the multidimensionality of health literacy, understanding, adequacy, and

confusion. The researchers also noted that the scale used to assess health literacy may not encompass every aspect of health literacy that could influence a participant. The authors recommend future research that assists in further conceptualizing health literacy and utilizing other communication strategies. The interpersonal communication practices of the participants and providers involved in this study was not a priority, but the researchers noted that assessing communication could be part of the foundation for studying patient understanding (Donovan-Kicken et al., 2012).

The intricate relationships between the variables described in this study build on the knowledge of self-efficacy and health literacy in patients who need to give informed consent. The roles self-efficacy played in the informed consent processes used in this study support enhanced assessment and follow up techniques to ensure patient understanding and confidence.

The purpose of the next study was to investigate the mediating effects of self-efficacy between health literacy and health status in Korean adults. A cross-sectional study design was used to collect data on adults 60 years old and older who had no communication or cognitive deficiencies. Health literacy was measured with the Korean Test of Functional Health Literacy in Adults (K-TOFHLA). Self-efficacy was measured using the General Self-Efficacy Scale (GSE). Health status was measured with the Physical Component Summary (PCS-12) and the Mental Component Summary (MCS-12). The researchers used a path analysis to study the relationships among the variables of interest and hypothesized that self-efficacy was a mediator between health literacy and health status in this population. The results supported this hypothesis and the researchers noted that health literacy significantly predicted physical health ($p = 0.02$) and mental

health ($p = 0.01$). In addition, the researchers noted that health literacy significantly predicted self-efficacy ($p = 0.001$). After controlling health literacy, self-efficacy did not significantly predict physical or mental health, thereby supporting an indirect effect of health literacy on health status via self-efficacy ($p = 0.048$) (Kim & Yu, 2010).

The limitations for this study include its cross-sectional design and the generality of the GSE instead of a behavior-specific efficacy survey. In addition, the simplified measure of health literacy that did not account for accession of health information or the ability to make decisions, thus possibly measuring educational level more closely than health literacy level (Kim & Yu, 2010). Similar to the aforementioned studies, this study highlighted the importance of self-efficacy assessment as well as the development of health literate appropriate health materials especially in older adult populations.

Three of the 4 studies supported the initial hypothesis that self-efficacy was a mediating variable between health literacy and self-care. The positive associations between health literacy, self-efficacy, and participation in self-care were evident in patients with chronic diseases such as hypertension and diabetes, and in elderly patients. These positive results provided impetus for using self-efficacy as a variable of interest in the proposed project. While self-efficacy in high-risk prenatal women is not well-documented in the current literature, the mediating effect of self-efficacy on health outcomes supported in the aforementioned studies is encouraging.

Summary of Findings and Recommendations

The teach-back technique and encouraging questions through Ask Me 3 are regarded interventions to ensure patient understanding. These two interventions are generally low cost, and research has shown that Ask Me 3 does not increase the time

patients spend in the providers' offices (A clear health communication intervention, 2007). Ask Me 3 and teach-back are focused on reinforcement of patient understanding and patient empowerment.

Several studies have supported the hypothesis that self-efficacy is a mediating variable between health literacy and health outcome variables. Outcome variables in these studies are varied, but encompass patient actions that promote health behaviors by encouraging patients to ask questions, clarify expectations, and follow through on recommendations.

In addition to self-efficacy, patient satisfaction with healthcare provider communication has been influential in health outcomes. The communication skills of healthcare providers and medical personnel affect the patients' adherence to recommendations, and their overall satisfaction with the care they receive. Through more patient-centered communication, recommendations are more likely to be acted upon by patients, thereby enhancing self-care behaviors and improving health status.

As the issues of health literacy spread nationwide, having plans in place to assist in meeting goals is a necessity. One way this project addressed health literacy goals is by teaching community health workers (CHWs) and providers at a women's health center about Ask Me 3. In turn, CHWs assisted their clients to ask these questions at their visits. CHWs create processes that allow for community-based initiatives to be culturally sensitive. These outcomes have given patients more confidence in health decisions and behaviors and knowledge. As trained CHWs, they are able to be leaders through experience and can reach their culture in ways that healthcare systems may not be able to do (Sabo, et.al. 2013). Ask Me 3 is a newer health literacy intervention, and, while the

research is sparse, it does provide beginning evidence to support its feasibility and usefulness in developing, implementing, and maintaining better patient communication.

CHAPTER 4

METHODS

As part of a larger women's health initiative pilot project, the focus of this project is to work in collaboration with a women's health center and community health organization in a rural Midwestern community. The purpose of this project is to evaluate the effectiveness of Ask Me 3 in enhancing satisfaction and self-efficacy of high risk pregnant women. The community health organization already has a program in place to identify high risk pregnant women at this particular center. Prenatal-specific community health workers (CHW) intervene with these high risk pregnant women based on the woman's needs. The Women's Health Center is staffed by physicians and residents who provide care to all of the identified high risk women. The proposed project targets 10 to 15 pregnant women who are at high risk for poor birth outcomes or poor self-care.

While the objective of this project was to implement the Ask Me 3 health literacy strategy and to evaluate improvement in patient satisfaction and patient self-efficacy, the ultimate goal was to make improved patient and provider communication sustainable through use of a simple health literacy intervention. Long term effects of this project could positively impact pregnancy and birth outcomes.

Community Needs Assessment

A community needs assessment was completed by area coalitions and hospital entities in 2009 and the results were reviewed prior to development of this project. This assessment was done by local community coalitions and hospitals as part of the requirements of the Affordable Care Act to conduct a community health needs

assessment once every three years if a hospital system wants to maintain its non-profit status and 501(c)(3) eligibility (New requirements for 501(c)(3) hospitals, 2013).

This assessment discovered and prioritized the health needs in this community. While gleaning information, health disparities related to ethnicity, language, financial status, and health status became apparent. There were high teen pregnancy rates and poor access to health care. Due to these disparities, infants were at risk for poor prenatal care, poor immunization rates, and low birth weight. A March of Dimes grant was received by this health system in 2011 with the intention of providing risk education and services to low-income pregnant women in the community. The grant funded the Pathways to a Healthy Pregnancy Program and allowed community health workers to provide pre- and post-natal care to high-risk women. Pregnant women were deemed high-risk through assessments of health and social determinants such as education, poverty, young age, substance abuse, environmental hazards, race or ethnicity. After the costs and benefits of this program were analyzed, foundational funds were used to fund this program for several more years. It is through the women's health focus of the community needs assessment and the Pathways to a Health Pregnancy Program that this project was envisioned.

Organizational Characteristics

The Women's Health Center is part of a larger health network located in a west Michigan lakeshore community. Uninsured patients as well as patients with Medicaid are treated at this center. The health center is staffed by three physicians, obstetrics and gynecology residents, a nurse practitioner, a registered nurse, and medical assistants. The nurse practitioner does a majority of the initial prenatal visits and then patients are

encouraged to see a physician for subsequent visits. While continuity of care is recommended to the women, the women are not always able to see the same provider at their visits. Prenatal care for high risk women is given in this clinic including the treatment of women with gestational diabetes, preeclampsia, multiple pregnancies and other complications.

The Pathways to a Healthy Pregnancy Program is part of a larger community empowerment program that is in place to improve birth outcomes by helping the pregnant women overcome barriers to their prenatal care. This particular Pathways program is staffed by three CHWs who specialize in relationships with pregnant women. These CHWs have their own clients and interact with them during home visits, telephone calls, and appointments with their health care providers.

Target Population and Sample

The target population for this project was the high risk pregnant women who were patients at the local women's health center and the CHWs who work with them. The CHWs work with the pregnant women to reduce physical and social risks to pregnancy, including smoking reduction/cessation, nutrition, and housing. The needs of the pregnant women are assessed by the CHW, barriers to meeting those needs are identified, and a plan is made to help the women overcome the barriers. About 10 to 15 of the women who work with the CHWs were asked to participate in this project. After the initial meeting, education, and pre-survey, Ask Me 3 use was encouraged for a time period of approximately six weeks. This allowed for baseline data collection and post-implementation data collection to measure the effect of Ask Me 3 on care satisfaction and self-efficacy.

Assessment Tools

Patient Satisfaction

Patient satisfaction is of interest in this population as patient and provider communication was prioritized as a need in this community. Patient satisfaction has been shown to be associated with characteristics of self-care (Jensen, King, Guntzviller, Davis, 2010). Through Ask Me 3 implementation, patient participation may be encouraged and self-efficacy and communication may be enhanced. The patient satisfaction survey used in this project is taken from the Health Resources and Services Administration (HRSA) website. (See Appendix D.) It was chosen based on its ease of administration, reading level and specificity toward health care provider interaction.

Self-Efficacy

According to Bandura (1977), self-efficacy has three dimensions: magnitude, strength and generality. Magnitude is considered to be how difficult an individual finds it to implement a certain behavior. Strength refers to how sure a person is that he or she can complete the task, and, generality is how positively the self-efficacy beliefs are related to the behavior or across time (Lenz & Shortridge-Baggett, 2002). “Perceived efficacy plays a key role in human functioning because it affects behavior not only directly, but by its impact on other determinants such as goals and aspirations, outcome expectations, affective proclivities, and perception of impediments and opportunities in the social environment” (Bandura, 2006, p. 309). To assess self-efficacy accurately, the behaviors surveyed must be those in which an individual is able to exercise control.

According to Bandura (2006), “scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest” (p. 308). Therefore, a

4-point scale was constructed based on situational circumstances of the care of high risk pregnant women and communication with health care providers in a particular women's health center. The 6-item self-efficacy scale used in this project was written based on conversations with CHWs about perceived barriers patients encountered during prenatal care. The items on the self-efficacy survey reflected magnitude (items 1 and 2), strength (items 4 and 5), and generality (items 3 and 6). While formal procedures to establish reliability or validity did not occur, the survey was given to the CHWs to review prior to participant enrollment. Perceived self-efficacy was measured based on the patient's perceived confidence that she will complete the task, not intention or skill to complete the task. Both surveys were translated into Spanish by a language company that specializes in health care. The surveys were reviewed by the Spanish speaking CHW for accuracy.

Implementation

In discussions with CHWs involved in this project, they all mentioned a need for improved communication between patients and providers. They stated that following their appointments, the high-risk pregnant women often had follow up questions that the community health workers did not always feel comfortable answering. Intervening during their provider appointment and empowering the women to ask questions and improve satisfaction with communication and self-efficacy was the goal of this project. The first step in Ask Me 3 implementation was education of the CHWs. This occurred during one of their weekly team meetings. It consisted of a general overview of the gaps in patient and provider communication, the results of the 2012 Community Health Needs Assessment, and the Ask Me 3 implementation outline. The expectations for the CHWs included making the patient aware of Ask Me 3 and encouraging its use at all of the

patients' prenatal appointments. The expectations for this project facilitator included: enrolling participants, facilitating pre- and post-survey, assessment of Ask Me 3 use in the office, and conducting interviews with the women after the project was completed. Ask Me 3 posters and brochures were made available in the waiting room. Even though 10 to 15 high risk pregnant women were the target population, these materials were available for all patients.

Data collection occurred at the beginning of the enrollment period with the accompaniment of the community health worker. After explaining the project to the patient, she was asked to complete the patient satisfaction and self-efficacy pre-surveys. Both surveys were translated into Spanish. Each woman asked for the survey to be read to her. No Spanish speaking patients were available for participation during this time. If the participant did not want to complete the survey at the time of the appointment, there was a folder available in which the participant could return the survey at a later time, but every woman returned her survey immediately after it was read to her.

Evaluation

After five weeks of Ask Me 3 use, the patient satisfaction and self-efficacy surveys were administered to assess if any change had occurred. Five of the original women who participated in the pre-surveys were available for post-survey. Several women had delivered their babies in the time that Ask Me 3 use was encouraged. During the last week of implementation, Ask Me 3 use was assessed to see how it was being used in the women's health center setting. This was done through guided interviews with a portion of the women after they completed the post-intervention surveys. All five of the women who participated in the post-surveys were interviewed after Ask Me 3

implementation. The purpose of the guided questions was to understand the women's experiences with Ask Me 3 and if their communication with their physician was influenced. CHW feedback was also of interest as they were the primary educators for the patients. Their feedback was assessed during a focus group at the end of this project, addressing their perception of the Ask Me 3 education, their comfort and confidence in encouraging Ask Me 3, and their satisfaction with Ask Me 3 as a way to improve patient and provider communication.

CHAPTER 5

RESULTS

The purpose of this scholarly project was to evaluate the effectiveness of The National Patient Safety Foundation's Ask Me 3 program in eliciting patient's satisfaction with communication experiences with their health care provider, and perceived self-efficacy to carry out recommendations. The purpose of this chapter is to present the results of the pre-survey/post-survey implementation with patient satisfaction and self-efficacy as outcomes of this quality improvement project. Pre-survey results are compared to post-survey results and analyzed to see if there is a difference after Ask Me 3 implementation. In addition, findings from the interviews with the participants and the CHWs are presented.

Prior to inviting the patients to participate in the project, education about Ask Me 3 and strategies for its use was conducted with the CHW. In addition, medical residents were informed of the project. The first set of surveys was distributed to the participants prior to being introduced to Ask Me 3 at their prenatal appointment with their health care provider. Education was done with the accompaniment of the CHW in the exam room after the patient was called in for her appointment. The welcome letter for participation was read to each participant and verbal agreement to participate was confirmed. The surveys were read to each participant, and after the surveys were completed, Ask Me 3 education was done with the support of the community health worker who was also present in the exam room. The participant was given a brochure and a summary of the project, the use and goals of Ask Me 3, and an opportunity to ask questions. The timeline

for implementation was explained and the community health worker reinforced to the patient that she was also available to help with follow up questions and practice with the Ask Me 3 approach.

After 5 weeks of Ask Me 3 implementation, post-surveys were distributed. Women who had agreed to participate in the project were then given post-surveys identical to the pre-surveys to evaluate if there was a difference in satisfaction or self-efficacy after being taught and encouraged to use Ask Me 3.

Participants

Of the 11 women approached to participate in this project, all of them agreed to participate and complete the pre-surveys. One item on the patient satisfaction survey was left blank by one participant on the pre-survey. The participants were in a variety of trimesters of their pregnancies with some potentially delivering during the implementation period. After the implementation period which included both practice sessions with the CHW and interactions with the health care provider, five of the 11 original participants were available in the clinic during the time allotted for post-survey. Each of these women completed the post-survey. The first item on the patient satisfaction survey was left blank by two of the participants in this group.

Results

The question that needs to be answered in this project is whether encouraging patients to ask questions of their health care providers during their prenatal appointments has an effect on patient satisfaction and self-efficacy in completing the recommendations. Data analysis was performed using SPSS version 20 with the Wilcoxon Rank Sum Test. Since the surveys did not include identifiers, the pre-survey cohort was compared to the

post-survey cohort as a way to analyze the centers of distribution. Neither of the variables, patient satisfaction or self-efficacy, had a statistically significant change when comparing the pre-survey cohort to the post-survey cohort.

Patient Satisfaction

When comparing the participants’ responses prior to Ask Me 3 implementation to those after implementation, there were no significant differences in any of the items (Table 3). The participants rated each item on a 5-point scale from “Great” to “Poor.” 75% of the pre-survey participants reported their satisfaction as being “Great.” No one reported it as being anything less than OK. The satisfaction scores of the participants were already high prior to implementation with a mean score of 4.66 out of 5, which caused a ceiling effect to occur as their satisfaction could not be scored higher post-implementation.

Table 1

Pre-Survey Patient Satisfaction Descriptive Statistics

Pre-Survey Patient Satisfaction Item	Minimum	Maximum	Mean
My doctor listens to me.	3	5	4.7
My doctor takes enough time with me.	3	5	4.7
My doctor explains what I want to know	4	5	4.7
My doctor gives me good advice and treatment	4	5	4.6
My doctor is friendly and helpful to me	3	5	4.7
My doctor answers my questions	3	5	4.7

Table 2

Post-Survey Patient Satisfaction Descriptive Statistics

Post-Survey Patient Satisfaction Item	Minimum	Maximum	Mean
My doctor listens to me.	5	5	5
My doctor takes enough time with me.	4	5	4.6
My doctor explains what I want to know	4	5	4.8
My doctor gives me good advice and treatment	4	5	4.8
My doctor is friendly and helpful to me	4	5	4.8
My doctor answers my questions	4	5	4.8

Table 3

Patient Satisfaction Scale Results

Patient Satisfaction Item	p-value
My doctor listens to me.	0.420
My doctor takes enough time with me.	0.454
My doctor explains what I want to know	0.526
My doctor gives me good advice and treatment	0.526
My doctor is friendly and helpful to me	1.0
My doctor answers my questions	1.0

Self-Efficacy

There were 6 items on the self-efficacy scale that were used to assess how confident the participants were in completing certain tasks during their prenatal care. Participants circled numbers 1 through 4 on a Likert scale with 1 being “I can certainly do this” and 4 being “I cannot do this.” As seen in Table 6, there was not a statistically significant change in any item on the self-efficacy scale after Ask Me 3 implementation. The item with the lowest p-value was “I can ask my doctor questions” ($p = 0.225$) and is of interest since Ask Me 3 was implemented to encourage question-asking behavior. This was the first item on the survey and prepared the participant for the remaining 5 items that all addressed communication at the office visit. The lack of statistical significance is primarily associated with the ceiling effect as many patients rated their self-efficacy high prior to implementation, with a mean of 3.7 out of 4 (Table 4), and post-implementation mean 3.6 out of 4 (Table 5).

Table 4

Pre-Survey Self-Efficacy Descriptive Statistics

Pre-Survey Self-Efficacy Item	Minimum	Maximum	Mean
I can ask my doctor questions	3	4	3.7
I can ask for help from my doctor with my prescriptions	3	4	3.8
I can leave my doctor’s appointments with questions answered.	2	4	3.5
I can tell my doctor when I don’t understand something.	3	4	3.8

(table continues)

Pre-Survey Self-Efficacy Item	Minimum	Maximum	Mean
I can ask my doctor to keep explaining something to me until I understand.	2	4	3.7
I can use my doctor's advice to have a healthy pregnancy.	3	4	3.9

Table 5

Post-Survey Self-Efficacy Descriptive Statistics

Post-Survey Self-Efficacy Item	Minimum	Maximum	Mean
I can ask my doctor questions	3	4	3.4
I can ask for help from my doctor with my prescriptions	3	4	3.8
I can leave my doctor's appointments with questions answered.	3	4	3.4
I can tell my doctor when I don't understand something.	3	4	3.4
I can ask my doctor to keep explaining something to me until I understand.	3	4	3.8
I can use my doctor's advice to have a healthy pregnancy.	4	4	4

Table 6

Self-Efficacy Scale Results

Self-Efficacy Item	p-value
I can ask my doctor questions.	0.225
I can ask for help from my doctor with my prescriptions.	0.933
I can leave my doctor’s appointment with my questions answered.	1.0
I can tell my doctor when I don’t understand something	0.933
I can ask my doctor to keep explaining something to me until I understand	0.454
I can use my doctor’s advice to have a healthy pregnancy	0.500

Interview of Participants

Although neither patient satisfaction nor self-efficacy were statistically significant, implications for practice are evident as revealed in the interviews with the participants. The 5 women who completed the post-survey reported that they all used Ask Me 3 in the weeks since the pre-survey was completed. When one participant was asked what she thought about it, she said the providers were receptive to her questions and reported “All of the doctors here are really nice.” Another respondent pointed out the poster hung up in the room and mentioned that it had reminded her of Ask Me 3 during a previous appointment. One participant was hospitalized for several weeks during the implementation, and although she reported using Ask Me 3, it occurred in a setting different than the Women’s Health Center.

Interview of Community Health Worker

CHW input was important prior to implementation, during implementation, and throughout project evaluation. The CHWs who work closely with this population have an understanding of their needs and priorities. The CHW who had the most interaction with the participants voiced support for the sustainability of the Ask Me 3 program with the women with whom she works. She was able to enhance Ask Me 3 education during home visits and at follow up visits in the Women's Health Center. She felt comfortable and confident in encouraging Ask Me 3 use and was an advocate for continued use. Other CHWs working in the Pathways Program expressed an interest in using Ask Me 3 in their populations and this CHW was influential in education and encouragement of the use of this approach with different client populations served by the community health organization that employs them.

CHAPTER 6

DISCUSSION

The purpose of this chapter is to discuss the findings of this scholarly project in light of the theoretical frameworks and literature review. The results of the surveys are discussed and will assist in describing the outcomes of this project. In addition, the strengths and limitations are identified, along with opportunities for sustainability of the Ask Me 3 initiative in this practice. Finally, several of the roles of the advanced practice nurse, educated in a Doctor of Nursing Practice program, were actualized with the initiation, maintenance, and completion of this project.

Results

Theoretical Frameworks

Donabedian's (1988) model was used to highlight the importance of the interpersonal relationship between patient and provider and its contribution to satisfaction with quality of care. Using a systematic approach to integrate evidence-based practice into prenatal care is necessary to evaluate the quality of an intervention (Kirkham, Harris, & Grzybowski, 2005). The criteria Donabedian used to measure quality were structure, process, and outcomes. These criteria were considered throughout the planning, implementation, and evaluation of this scholarly project. While considering the structure, analysis of the barriers prenatal patients experienced in this setting provided insight into the cultural, educational, and social barriers these patients had been encountering while attempting to communicate with their health care providers. In addition, structural assessments were made considering the physical facility, the care providers, the

Pregnancy Pathways program, and other patient factors that affect care. The process of prenatal care involves the details of what is done for and with the patient during her receipt of care. It is during this process that the interpersonal relationship is formed and fostered. As Donabedian (1988) noted, the interpersonal process is often ignored. Therefore, this project focused on the process and measured the outcomes of patient-health care provider communication, an important part in development of interpersonal relationships. Outcomes provide an inference of the structure and process that preceded them (Donabedian, 1992). The outcomes of interest in this project were measured at the patient level through a pre-survey and post-survey method.

Patient satisfaction with communication with her health care provider addressed the quality of the interpersonal process as described by Donabedian (1988). Self-efficacy, that is confidence that one can carry out health care providers' recommendations, was one of the outcome variables of interest. Self-efficacy, explained by Bandura (1986), is of interest due to the relationship of self-efficacy to self-care. Bandura's model of self-efficacy was useful in that it explained how high self-efficacy often translates into action-oriented activities which could improve self-care and, in turn, provide a healthier environment for mother and baby.

Literature Review

The literature review was helpful in finding current studies that highlighted patient and provider communication, the problems surrounding this communication, and techniques implemented to improve it. Ask Me 3 and Teach-Back were the two techniques used most often in studies focused on health literacy to improve communication and patient care through understanding. Ask Me 3 was the chosen

implementation technique as it was a simple, user-friendly technique that could be easily integrated into care processes and encouraged by CHWs outside of the healthcare provider's office. Every participant who completed the post-survey reported using Ask Me 3 during the implementation period. Several commented that the health care providers were receptive to their questions and the participants mentioned that they intended to use it at future appointments.

In the time since the initial literature review was conducted, no other studies were published that used Ask Me 3, but there were several studies published regarding the Teach-Back technique. These studies focused on health promotion, medication adherence, and chronic disease self-care such as COPD (Dantica, 2014; Hyde & Kautz, 2014; Negarandeh, Mahmoodi, Noktehdan, Hesmat, & Shakibazadeh, 2013). Each article described how the Teach-Back strategy was effective in promoting or maintaining health. Therefore, the problem of patient-provider communication continues to be a challenge.

Summary of Findings

Patient satisfaction and self-efficacy were the variables of interest in this project. While there were no statistically significant findings, lessons can be learned from the strengths and limitations of this scholarly project. Insight regarding future work and patient and provider communications are the most important implications of this project.

Strengths and Limitations

A strong aspect of this project design was the pretest-posttest approach which provided opportunity for comparison between the cohort prior to the implementation and after the initiation and practice with Ask Me 3. Of 11 women approached during the pretest portion of this project, all agreed to participate. Another strong aspect of this project

was the community-based setting in which it occurred. With the help of CHWs in the Pregnancy Pathways program, women were able to be connected with resources and support while having Ask Me 3 reinforced and encouraged. Some of the women had home visits during the implementation period to be enrolled in the Pregnancy Pathways Program or to have a follow up visit to discuss needs in their home and Ask Me 3 was reinforced by the assigned CHW during that time. Posters were displayed in the exam rooms and the restroom at the Women's Health Center. Brochures and notepads were distributed to educate and encourage participation. Ask Me 3 was an inexpensive tool to encourage question-asking behavior that could be encouraged inside and outside the office.

There are several limitations in this project. First, the sample size is small, and the post-survey respondents represented half of the original 11 participants. Second, the ceiling effect is a limitation of this project and other studies that also evaluated patient satisfaction. In the article by Mika et al. (2007) a similar ceiling effect was noted in a patient satisfaction survey. In that survey the satisfaction was already rated at a 4.7 out of 5, so there was so statistically significant change in satisfaction in those results either. The third limitation of this project is that Ask Me 3 education occurred in the exam room instead of different area because there was no other private area on the Women's Center that was available. If a separate space was available or if the survey and education occurred during a home visit, more rapport could have been established and more time could have been allowed for questions and role playing. Third, the implementation timeline allowed for 2 to 3 visits with a health care provider, which limited the number of times Ask Me 3 could have been used in this setting, and therefore could have affected

the satisfaction and self-efficacy outcomes. Finally, due to the schedules both of the high-risk specialty providers and the patients' follow up appointments, some women were not able to be included in the post-survey period.

Sustainability

Ask Me 3 in this setting and in this population has the potential to be sustainable. The CHWs have the greatest impact on the sustainability of Ask Me 3 in this setting and with this population. Since Ask Me 3 is a patient-driven program, the community health worker can help the patient be prepared for her office visit, encourage her to write her questions down, and reinforce its use even outside the office and with other healthcare providers. In order to make it sustainable in this specific setting, physicians need to continue to be receptive to the program and patients need to continue to be empowered to use it. The costs of using this program were minimal, and now that posters, notecards, and brochures have been distributed to the office and the CHWs, recurring expenses should be minimal.

Doctor of Nursing Practice Roles

A doctorally-prepared nurse practitioner has many roles and responsibilities. Every phase of this scholarly project allowed for enactment of several of the Doctor of Nursing Practice roles, informed by the *Essentials of Doctoral Education for Advanced Nursing Practice* (American Association of Colleges of Nursing [AACN], 2006) The *Essentials* were developed to guide curricula in schools and colleges of nursing, planning to prepare doctorally-educated practitioners. While not every DNP role was highlighted during the completion of this project, the roles employed included: scholar, leader, and innovator (AACN, 2006). The knowledge and skills included in the *Essentials* helped to

guide this project through each phase of preparation, implementation, and evaluation.

Key *Essentials* that were addressed included: Scientific Underpinnings for Practice; Organizational and Systems Leadership for Quality Improvement and Systems Thinking; Clinical Scholarship and Analytical Methods for Evidence-Based Practice; Health Care Policy for Advocacy in Health Care; and Interprofessional Collaboration for Improving Patient and Population Health Outcomes.

Scholar

This project originated from an initial interest in the concept of health literacy. As a clinician, previous experiences with patients with low health literacy were often hurried without questions asked and understanding ensured. This often led to confused patients and frustrated health care providers. Through many literature reviews done to learn about the impact of low health literacy, the necessity of a project related to patient and provider communication came to the forefront. The inquiry progressed through a thorough literature review of patient and provider communication techniques that help to break down healthcare barriers and influence self-care. Theoretical frameworks were examined to further explain project implementation and outcome identification and evaluation. Tool development was influenced through research methods that centered on satisfaction and self-efficacy. As a scholar, the challenge was to narrow down a manageable project that would be possible to evaluate in the population of interest and to synthesize the evidence. Taking on the role of scholar was guided by the *Essential*, Clinical Scholarship and Analytical Methods for Evidence-Based Practice. Through investigation and synthesis, meaning was given to issues related to low health literacy and patient and health care provider communication, thereby influencing application in practice.

Leader

The role of leader was practiced during the initiation and networking phases of this project as well as during implementation and evaluation. As a student with interest in health literacy, meetings were attended in the community to get to know key players involved in health literacy who would be open to an implementation project. Through collaboration with organizations associated with the Women's Health Center, introduction to and communication about the project occurred with the CHWs and health care providers. Education began with CHWs when this project was in development stages. Educating them about Ask Me 3 and garnering their input and experience was crucial pre-implementation. Next, health care providers were taught about Ask Me 3 and this project. Advising them about this project helped to prepare the setting for the participants. Finally, the participants were educated about Ask Me 3, how to participate, and the project timeline. A quality improvement initiative at the organizational level required skills in balancing productivity, quality of care, and emerging practice problems. With the guidance of the knowledge and skills included in the *Essentials* document that describe Organizational and Systems Leadership for Quality Improvement and Systems Thinking; Clinical Scholarship and Analytical Methods for Evidence-Based Practice; and Interprofessional Collaboration for Improving Patient and Population Health Outcomes, leadership was practiced in every phase of this project.

Innovator

The role of innovator was guided by the *Essentials*, Organizational and Systems Leadership for Quality Improvement and Systems Thinking and Clinical Scholarship and Analytical Methods for Evidence-Based Practice. This project required innovation during

planning, implementation and evaluation. Entering this practice was an endeavor as it took quite some time to gain entrée and implement the project. Innovation was required in the way the surveys were drafted, in the communications with the patients, and in the collaboration with the CHWs. The established patient schedule was instrumental in allowing me to see the cohort of patients I was surveying and the ability of the CHWs to help me gain rapport was crucial. This project required innovation in the planning stages so as to not make the survey too complicated, to address one of the many needs, and to hone in on the priorities that were assessed by the CHWs. Tailoring this quality improvement strategy in conjunction with the evidence regarding communication and sustainable changes at the organization aided in the practice of innovation.

Implications for Future Projects, Policy, and Practice

Although the results of this project are not generalizable to all high-risk pregnant women, this project does provide several implications for future projects. While the results of this project were not statistically significant, expanding the sample to all pregnant women, not only high-risk women, could provide interesting insight about prenatal care communication. Including the health care providers in the intervention could make this project even more sustainable. For example, in this project, health care providers knew Ask Me 3 was being implemented, but they did not have a responsibility to ensure that it happened. If communication behavior could be improved from the perspective of the health care provider as well as the patient, the results could support further Ask Me 3 use. Building on the community health component and enhancing parts of the Pregnancy Pathways Program could also be an implication if a similar project were to occur in this same population. For example, the women enrolled in the Pregnancy

Pathways program have regular home visits and communications with the CHW assigned to them, but rarely do the CHWs communicate with the health care providers. CHWs voiced a concern over what details they should discuss with the health care provider related to the patient's home life, financial status, relationship status, etc. that may be ultimately affecting the patient's care. For example, a woman enrolled in the program requested assistance with finding housing because her current home was infested with mice. It is doubtful that the provider was also aware of this, but if the three participants in the clinical encounter (patient, CHW, and provider) could discuss and prioritize needs, patients may experience more quality health care.

Policy Implications

The relationship between health outcomes and patient and provider communication is well-documented, and policy implications related to this project revolve around that communication. This project focused on the question-asking behavior of prenatal patients, but has potential to be useful in any health care setting. Linking communication and health outcomes will be the most influential way to make a case for future policy implications. Evaluation of this project highlighted the necessity of addressing the *Essential*, Health Care Policy for Advocacy in Health Care. There are several policy implications that were discovered based on the implementation and evaluation processes of this scholarly project. First, CHWs could be used and supported to work with many different populations and in many different settings. Advocating for CHW-led programs could enhance high-risk prenatal programs already in place or in a variety of other health care initiatives, especially those that involve complex, high-risk and/or marginalized populations. CHWs provide a link for patients, their health care, and

the community in which they live. Secondly, financial support for care transitions and the patient and provider communication that must occur during those transitions need to be priorities. Making care coordination and care transitions seamless is necessary during interactions among providers, but it is just as important when communicating with patients. Advocating for funding and more time for providers to communicate with patients during these vulnerable times is necessary. Finally, policy change at the educational level is another idea that stemmed from this project. Incorporating therapeutic communication or active listening techniques into all health professional schools and advanced nursing practice curricula could prepare future health care providers to communicate with their patients in a manner that encourages self-care and empowerment.

Practice Implications

The main practice implication evident from this scholarly project is the importance of a therapeutic environment for the prenatal patient in which she can feel comfortable to ask questions. The environment and experience for the patient begin in the waiting room at check-in. For a program like Ask Me 3 to be sustainable and supported, the front desk staff could start the conversation and encourage patient preparation for the upcoming office visit. Fostering health care provider development of patient communication techniques, or even having the provider encourage Ask Me 3 use during appointments could enhance the therapeutic environment and relationship. Interpersonal relationships that contribute to quality health care are necessary in settings like this, especially if the patients are high-risk and need significant guidance and support throughout a pregnancy.

In addition to creating a therapeutic environment, establishing continuity of care is important. Many of the patients see a different health care provider every time they come to the Women's Health Center. Due to the fact that this office has medical residents, the providers vary depending on the day. Establishing continuity of care either by ensuring a patient sees the same provider or at least one continuous staff member, or developing a continuity of care record enhances the development of the interpersonal relationship. This could be an influential way to assist patients to confirm questions are answered and to convey that patients and health care providers have similar expectations regarding communication. While there may be system barriers to re-align providers and patients, innovative leaders can work to find solutions. As a future health care provider, through this experience, one can see possibilities when looking through the lens of a doctorally-prepared advanced practice nurse.

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NOTICE OF CLINICAL QUALITY IMPROVEMENT MEASUREMENT DESIGNATION

To: Cynthia Betterly, BSN, RN, DNP(c)
4603 Morningside Drive, SE
Kentwood, MI 49512

Re: IRB# 14-0506-01
Quality Improvement Project - Ask Me 3

Date: May 6, 2014

This is to inform you that Mercy Health Institutional Review Board (IRB) has reviewed your proposed research project entitled "Quality Improvement Project - Ask Me 3. The IRB has determined that your proposed project is not considered human subjects research. The purpose and objective of the proposed project meets the definition of a clinical quality improvement measurement. All publications referring to the proposed project should include the following statement:

"This project was undertaken as a Clinical Quality Improvement Initiative at Mercy Health and, as such, was not formally supervised by the Mercy Health Institutional Review Board per their policies."

The IRB requests careful consideration of all future activities using the data that has been proposed to be collected and used "in order to assess quality and outcomes of care for patients being seen as a part of the ."

The IRB requests resubmission of the proposed project if there is a change in the current clinical quality improvement measurement design that includes testing hypothesis, asking a research question, following a research design or involves overriding standard clinical decision making and care.

Please feel free to contact me if you have any questions regarding this matter.

A handwritten signature in cursive script that reads "Brenda Hoffman".

Brenda Hoffman
IRB Chairperson

Appendix B GVSU IRB Approval Letter



15 May, 2014

Ms. Cynthia Betterly
4603 Morningside Dr SE
Kentwood, Michigan 49512-5336

Dear Ms. Betterly,

As discussed in the proposal defense meeting on April 25, 2014, the aims and description of the project you are completing for your dissertation entitled, *Quality Improvement Project – Ask Me 3*, does not fit the U.S. Dept. of Health & Human Services' definition of research. This definition states that research is, "...a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge..." (Code of Federal Regulations, Subpart A, Section 46.102 (d), 2005, 2009).

The determination of this project as **not being research** is because of its purpose of improving quality at your immersion site through discernment of issues that impact provider-client interactions during visits. **Because it is not research, submission to GVSU's Human Research Review Committee (HRRC) is not necessary.** You may proceed with this project.

As you move forward, you are cautioned that your project should not be referred to as research when you discuss it with others. Should you change the aims and activities of your project such that it would then meet the definition of research as quoted above, please cease any contacts with potential human subjects until such time as you submit the project protocol to the HRRC and receive the committee's approval to proceed.

Good luck with your project.

Cordially,

A handwritten signature in cursive script that reads 'Cynthia P. Coviak'.

Cynthia P. Coviak, PhD, RN, CNE
Professor & Associate Dean, Nursing Research & Faculty Development

Appendix C Participant Letter

Dear Women's Health Center Client,

I am a nurse going to graduate school at Grand Valley. I am interested in learning about how we can make communication between you and your doctor better.

There are 2 short surveys I am asking you to do now, and again in about 4-6 weeks. You do not need to put your name on the papers and your answers will be kept private.

If you want to do the survey at some other time there is a box at the front desk where you can put your survey.

Between now and then, your health worker and you will find ways to use 'Ask Me 3' at your visits with your doctor. I have already talked to the doctors at this office about this project and the health workers are ready to help you use 'Ask Me 3'.

At the end of the 4 to 6 weeks, I may also ask you a few questions about what you thought about 'Ask Me 3.'

Thank you for your time,

Cindy Betterly

Appendix D Patient Satisfaction Survey

Patient Satisfaction Survey

Date: _____

Please circle the number for each item:

My doctor...

	GREAT	GOOD	OK	FAIR	POOR
Listens to me	5	4	3	2	1
Takes enough time with me	5	4	3	2	1
Explains what I want to know	5	4	3	2	1
Gives me good advice and treatment	5	4	3	2	1
Is friendly and helpful to me	5	4	3	2	2
Answers my questions	5	4	3	2	1

<http://bphc.hrsa.gov/policiesregulations/performanceasures/patientsurvey/surveyform.html>

Appendix E Self-Efficacy Survey

Self-Efficacy Scale **Date:** _____

This is a list of different activities about your care at this doctor’s office.

Using the numbers 1 through 4, circle the number that shows how confident you are that you can do them right now.

I am confident that...

	1 I cannot do this	2 I can sometimes do this	3 I most likely can do this	4 I can certainly do this
I can ask my doctor questions.	1	2	3	4
I can ask for help from my doctor with my prescriptions.	1	2	3	4
I can leave my doctor’s appointment with my questions answered.	1	2	3	4
I can tell my doctor when I don’t understand something.	1	2	3	4
I can ask my doctor to keep explaining something for me until I understand.	1	2	3	4
I can use my doctor’s advice to have a healthy pregnancy.	1	2	3	4