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Conducting a Needs Assessment at Outpatient Medical Clinic

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Walden University

College of Health Sciences

This is to certify that the doctoral study by

Fidelia Ukah

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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2015

Abstract

Conducting a Needs Assessment at Outpatient Medical Clinic

by

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MS, Texas Woman's University, 2004

BS, Texas Woman's University, 2000

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

Walden University

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Abstract

Colorectal cancer is one of the most common cancers in the United States and confronting its challenges has remained a problem to the United States health sector, especially among outpatient clinics. Guided by health belief model, the purpose of this needs assessment was to identify patients age 50 and older in outpatient clinic located in a large metropolitan city in Texas who should receive information on the need for colorectal cancer screening based on their risk for developing colorectal cancer as outlined by American Cancer Society. A sample of 70 charts of patients age 50-75 years was randomly selected and audited using descriptive statistics. Among the patients aged 50-75 years attending the outpatient clinic, 25.7% were African Americans, 71.4% were Hispanic, and 2.9% were Caucasians; 42.9% were male and 57.1% were female. The rate of colorectal cancer screening was 12.9%, a rate that is lower than the rate for all Texans, which was 54.1% - 59.2%. CRC screening was ordered for 62.9% of all patients; 24.2% of clinic patients were identified as being at high risk for colorectal cancer. The low rate of screening may hamper early detection of colorectal cancer in outpatient clinics setting. It is recommended that the outpatient clinic develop intensive campaign to increase patient awareness about the need for and benefits of colorectal cancer screening, especially for those at high risk for developing colorectal cancer. The findings of this study may raise awareness on the chasm in quality of health care availability and provide insight on colorectal cancer and its prevention.

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Dedication

This research study is dedicated to the Almighty God the healer of the sick

and

To those who died or are battling with Colorectal Cancer and other kinds of Cancer

Acknowledgments

My research interest on this area of study grew out of my life experience in medical practice and without the assistance and intellectual wizardry of my Chairperson Dr. Eileen Fowles, my committee members Dr. Cheryl Reilly and Dr. Jonas; this research study would have been at its conceptual stage. Their robust knowledge especially in the area of research methodology gave this work the much needed standpoint to takeoff so I am deeply grateful. I have been lucky to be able to learn from many of my colleagues; quite a few thoughts that entered these pages are a result of their contribution. I am also richly blessed with an understanding family who had to endure and sometimes denied of my role as a mother and wife throughout the period of this study I appreciate the sacrifices my son Chukwuemeka had to make to see that mom finished this study and the emotional balance my husband Macey provided me with. I doff my cap to my parents Mr. & Mrs. Felix Anabiri who watered the ground for my academic and intellectual exploit four decades ago. I am grateful to the intellectual input of my younger brother Emmanuel, whose seasoned discussions helped in enriching the study. Finally, my ultimate appreciation goes to the Almighty God who has been gracious in all fonts especially seeing me through this study.

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Section 1: Nature of the Project

Introduction

Colorectal cancer (CRC) is the second most common form of cancer in the United States. In 2009, an estimated 150,000 people had colorectal cancer diagnosed and 50,000 died from the disease (Redwood et al., 2011). Colorectal cancer can develop from slow growing adenomatous polyps in the colon or rectum. The American cancer society estimated that there were 108,070 new cases of colon cancer and 40,740 new cases of rectal cancer and an estimated 49,960 deaths from colon to rectal cancer in 2008 (Patel et al., 2011). Bretthausen (2011) further argued that CRC develops from benign precursor lesions known as polyps, which takes about 10 years to develop into cancer. These polyps can be detected and removed before they turn into cancer through screening with fecal Occult Blood Test (FOBT), colonoscopy, or sigmoidoscopy. Screening for CRC allows the identification and removal of precancerous lesions and early detection of cancer.

The American Cancer Society, The Centers for Disease Control and Prevention (CDC), and the United States Preventative Task Force (USPSTF) recommended regular annual colorectal cancer screening beginning at age 50 using highly sensitive fecal occult blood testing, sigmoidoscopy, or colonoscopy. The highly sensitive fecal occult blood test checks for hidden blood in three stool samples (CDC, n.d.).

Fecal occult blood testing is effective in detecting colorectal cancer. Zhu et al. (2010) examined if immunochemical fecal occult blood test (iFOBT) could be used to detect advanced colorectal neoplasm. The results revealed that the immunochemical fecal occult blood test is superior to the guaiac fecal occult blood test in detecting advanced

colorectal neoplasm, and this test possesses a high degree of sensitivity and specificity.

Holme, Breatther, Frothier, Odgaard-Jensen, and Hoff (2013) compared the differences between colorectal cancer screening with flexible sigmoidoscopy and fecal occult blood testing. It was determined that there is high-quality evidence that both flexible sigmoidoscopy and fecal occult blood testing reduce colorectal cancer mortality when applied as screening tools. There is low-quality, indirect evidence that screening with either approach reduces colorectal cancer deaths more than the other

Problem Statement

CRC is the second most common form of cancer in the United States (Redwood et al, 2011). The American Cancer Society (n.d.) estimated that Americans have 5% lifetime risk of developing CRC. 136,830 people were diagnosed with CRC in 2014 in United States and about 50,310 people are expected to die from CRC. Bretthausen (2011) further argued that CRC develops from benign precursor lesions known as polyps, which takes about 10 years to develop into cancer. These polyps can be removed before they turn into cancer by screening.

Patients at the Outpatient Medical Clinic are currently screened with colonoscopy. The health care provider currently does not follow any guidelines on colorectal cancer screening and the rate of CRC at the clinic is unknown. The provider at the outpatient site who is a doctor of nursing practice (DNP) orders colonoscopy for patients age 50-75 years; but, there is no means to track if the patient had the colonoscopy done or not. A needs assessment should be conducted as the initial step to improve the quality of care clients receive at the clinic aimed at increasing the rate of CRC screening

Purpose Statement and Project Objectives

The purpose of this needs assessment was to identify the number of patients age 50 years and older who have been screened for CRC according to intervals outlined by The American Cancer Society, the CDC, and the USPSTF and identify the characteristics of the patients who should receive information about the need for CRC screening

Significance of the Project

Given the high mortality rate of colorectal cancer as outlined by the American Cancer Society which was 49,960 deaths out of 108,070 cases in 2008 and with 550,000 deaths noted annually from CRC as outlined by Bretthauer (2011), there is a need to increase CRC screening at the Outpatient Medical clinic located at urban city in Texas. Also, according to the CDC, between 2003 and 2007, about 66,000 Americans were diagnosed with CRC, and CRC screening saved 32,000 lives (CDC, n.d.).

This needs assessment becomes relevant for both practical and theoretical usage. Practically, the findings of the needs assessment may serve as a basis for developing a quality improvement project within the clinic designed for health care providers to consistently provide education and guidance about CRC and CRC screening. The results of this needs assessment could provide a policy framework for government, nongovernmental organizations, health care providers for robust control of colorectal cancer mortality, and more participative screening in outpatient medical clinics.

This needs assessment will serve as a thought provoking exercise on colorectal cancer screening and may contribute to the rich literature and body of knowledge on

colorectal cancer. Increasing the CRC screening rate aligns with national efforts to decrease the mortality rate of CRC through early detection (American Cancer Society, n.d).

Project Question

Will intervals of CRC screening at an outpatient medical clinic in an urban area of Texas align with recommendations outlined by The American Cancer Society, The Centers for Disease Control and Prevention and the United States Preventative Task Force?

Evidence-Based Significance of the Project

Needs assessment is a systematic collection of information to identify the need of a community in order to design and deliver effective health promotion program (Hodges & Videto, 2011). According to Hodges and Videto, needs assessment are also a necessary part of program planning and implementation. Currently, the rate of CRC screening at the outpatient medical clinic is unknown because the Medical clinic has no means of tracking the number of patients screened for colorectal cancer after colonoscopy is ordered. Conducting a needs assessments can provide the basis for developing a quality improvement project designed to increase the rate of CRC screening.

Maxwell et al. (2010) conducted a community-based study to develop a multi-component intervention that would increase CRC screening among the Asian American population. Maxwell et al. randomized 58 Filipino Americans who are non-adherent to CRC screening guideline into two intervention groups and a control group. The first intervention group received an education session on CRC screening and a free FOBT kit.

The second intervention group received an educational session on CRC screening but no free FOBT kit. The control group received information on the health benefits of regularly engaging in physical activity. The participants were followed up with after 6 months.

According to Maxwell et al. (2010), the self-reported CRC screening rates were 30%, 25%, and 9% for participants assigned to the intervention with the FOBT kits, the intervention without the kit, and the control group, respectively. Participants in the intervention group were more likely to report screening for CRC. Maxwell et al. concluded that multi-component intervention that includes an educational group session in a community setting can remarkably increase CRC screening among Filipino Americans, even when no free FOBT kits are distributed

Implications for Social Change

The implication for social change in practice is that the results of this needs assessment can be used to design effective interventions and CRC prevention projects that can make a significant impact on public health. The results of the needs assessment can raise awareness on the chasm in quality of health care availability, delivery, and accessibility (Simonds, 2013). The expected outcome from this needs assessment will be an increased rate of CRC screening among the patients receiving care at outpatient medical clinic. Early detection of colon cancer through increased screening of CRC could lead to a reduction in mortality rate from colon cancer.

Definition of Terms

CRC screening: CRC screening is the process of looking for cancer in people who have no symptoms of the disease (American Cancer Society, n.d.).

Fecal Occult Blood Testing: Testing for the presence of microscopic or invisible blood in the stool, or feces. Positive fecal occult blood can be a sign of a problem in the digestive system, such as a growth, or polyp, or cancer in the colon or rectum. (American Cancer Society, n.d.).

Assumptions

Assumptions for this study are as follows:

1. CRC is the second most common form of cancer in United States.
2. Death from CRC can be reduced by screening and removing polyps before they become cancer.
3. Clients at the outpatient medical clinic are not getting CRC screening at Intervals outlined by the American Cancer Society, The Centers for Disease Control and Prevention and the United States Preventative Task Force.
4. Educating the outpatient medical clinic patients on the importance of CRC Screening will help increase compliance to screening.
5. The health belief model assumed that people fear disease and that health actions were motivated in relation to the degree of the fear and benefits obtained.

Limitations

The limitation of this needs assessment is the absence of an electronic medical record (EMR) system at the outpatient medical clinic; therefore this needs assessment will necessitate a manual review of the clients medical (paper) records. Noncomputerized

patient charts may be inaccurate and incomplete. For example, a health care provider may not record that they counselled their client to get CRC screening or reports of CRC screening results may not be included in the record. Nevertheless, clients records selected to audit for this needs assessment will undergo a thorough review.

A computerized EMR system can provide decision making tools to support clinicians in all process of patient's care ranging from preventative care, diagnosis, treatment and follow-up (Soares et al. 2012). According to Soares et al., there are several computerized decision making tools (CDS) in use in healthcare settings. These tools are computerized alerts and reminders, clinical guidelines, order sets, patient data reports and dashboards, documentation templates, diagnostic support, and clinical workflow. The CDS helps in data collection to satisfy the meaningful use legislation and other regulatory requirements. It also helps to increase quality of care, reduce medication errors, prevent miss diagnosis, enhance health outcomes, and ensure that patient get the preventative care appropriate for age and disease process. CDS increases patient's satisfaction because patients are happy when their healthcare provider is committed to providing needed laboratory work, diagnostic test, preventative healthcare, treatment and follow-up. The absence of CDS at the outpatient medical clinic will make it difficult to comply with the screening intervals since the clinician and outpatient medical clinic staff have to go through numerous charts audit to identify patients who are due for CRC screening and other preventative health screening.

Summary

CRC is the second most common form of cancer in United States. In 2009, an

estimated 150,000 people had CRC diagnosed and 50,000 died from the disease (Redwood et al, 2011). Screening for CRC allows the identification and removal of precancerous lesions and early detection of cancer. Various screening modalities reduce colorectal cancer deaths. FOBT or colonoscopy every 10 years are the CRC screening test recommended by USPSTF. Zhu et al. (2010) examined if IFOBT could be used to detect advanced colorectal cancer neoplasm. Bretthauer (2011) further argued that CRC develops from benign precursor lesions known as polyps, which takes about 10 years to develop into cancer. These polyps can be detected and removed before they turn into cancer through a FOBT, colonoscopy or sigmoidoscopy.

This needs assessment is intended to ascertain if clients at the outpatient medical clinic in an urban area of Texas are being screened for colorectal cancer according to guideline outlined by The American Cancer Society, The CDC and the USPF and to identify the patients that will benefit from receiving educational material on CRC and CRC screening. Increasing CRC screening aligns with national efforts to decrease the mortality rate of CRC through early detection. The needs assessment could also identify a gap in CRC screening and led to increase CRC screening at the outpatient medical clinic and reduction in CRC mortality.

Section 2: Review of Literature

Introduction

This project reviewed patients charts to determine if intervals of CRC screening at an outpatient medical clinic in an urban area of Texas align with recommendations outlined by The American Cancer society, the CDC and the USPSTF. The review of literature for this needs assessment is geared towards unearthing the literature on colorectal cancer screening. Topics included understanding CRC, causes of CRC, colorectal cancer interventions, and barriers of colorectal cancer screening.

The search for literature was conducted electronically from 2009 to 2014 from the following databases: CINAHL, Medline, PubMed, and Cochrane library. Terms used for the search were *colorectal cancer*, *colorectal cancer screening*, *increasing colorectal cancer screening*, *health belief*, and *colorectal cancer screening knowledge*. Peer-reviewed publications were searched.

Understanding Colorectal Cancer

Colorectal Cancer is a term for cancer that starts in either the colon or the rectum. However, to understand CRC, it is expedient to understand what parts of the body are affected and how they work. The colon is a 6-foot long muscular tube connecting the small intestine to the rectum (American Cancer Society,n.d) The colon, which along with the rectum is called the large intestine, is a highly specialized organ that is responsible for processing waste so that emptying the bowels is easy and convenient (American Cancer Society, n.d). The colon removes water from the stool, and stores the solid stool (American Cancer Society, n.d). Once or twice a day it empties its contents

into the rectum to begin the process of elimination (American Cancer Society, n.d).

The rectum is an 8-inch chamber that connects the colon to the anus. It is the rectum's job to receive stool from the colon, letting the body know that there is stool to be evacuated, and to hold the stool until evacuation happens. (Derrer, 2014) .Cancer that begins in the colon is called colon cancer, and cancer that begins in the rectum is called rectal cancer. Cancers affecting either of these organs also may be called colorectal cancer. Colorectal cancer occurs when some of the cells that line the colon or the rectum become abnormal and grow out of control. The abnormal growing cells create a tumor, which is the cancer.

Causes of Colorectal Cancer

Scholars and medics have argued profusely on what constitutes a precise cause of colorectal cancer .While a universal agreement have not been reached on the precise cause of colorectal cancer, Brouquet et al. (2010) argued that colorectal cancer is caused by many factors which includes dietary factors and non-dietary factors. Brouquet et al indicated that when populations move from a low-risk area (e.g. Japan) to a high-risk area (e.g. the USA), the incidence of CRC increases rapidly within the first generation of migrants. Diet is the most important exogenous factor identified currently in the etiology of colorectal cancer. Recently, the World Cancer Research Fund and the American Institute for Cancer Research in their extensive report on diet, physical activity and prevention of cancer have concluded that colorectal cancer is mostly preventable by appropriate diet and associated factors. Established nondietary factors of colon cancer

include smoking tobacco, chronic use of non-steroidal anti-inflammatory drugs (NSAIDs), other medical conditions, and genetic predispositions.

According to Brouguet, et al (2010) genetic vulnerability to colon cancer has been attributed to either polyposis or non-polyposis syndromes. The main syndrome of the first group is the familial adenomatous polyposis (FAP), which is associated with mutation or loss of FAP (also called the adenomatous polyposis coli—APC) gene. Hereditary nonpolyposis colorectal cancer (HNPCC) syndrome is associated with germ-line mutations in six DNA mismatch repair genes. The cumulative incidence of HNPCC-related cancers was determined in gene carriers in the Finnish Cancer Registry: by age 70 years, the percentage developing colorectal cancers was 82%.

Colorectal Cancer Interventions

Moralez, Rao, Livandais and Thompson (2012) have demonstrated the effectiveness of educational intervention in increasing CRC screening rates. Moralez, Rao, Livandais, and Thompson addressed barriers to CRC screening by using Promotora and home-based educational interventions to improve knowledge of cancer and screening for CRC among Hispanic individuals in Yakima Valley, Washington. In total, 252 participants were recruited from migrant worker community meetings to participate in CRC prevention home-based parties. Promotoras presented the interactive group educational session using flip charts, presentation slides, and visual aids, including stimulated colon segments. The following were addressed in the educational sessions: the definition of cancer; the definition of CRC; the identification of who is at risk; defining how risk can be reduced; the definition of FOBT, sigmoidoscopy, and colonoscopy; and

what sorts of treatments are available for CRC. Participants were encouraged to ask questions and discuss concerns with Promotoras and the other participants. According to Moralez et al. (2012), the intervention resulted in an increase in knowledge of cancer and participation in CRC screening and concluded that Promotoras facilitated home-based interventions offer culturally appropriate ways to reach Hispanics in rural and other underserved communities to reduce barriers and improve access to CRC and other cancer screening (Moralez et al., 2012).

Spruce and Sanford (2012) conducted a study to increase colorectal cancer screening in the state of Nevada. According to Spruce and Sanford, the Nevada Colon Cancer Partnership in collaboration with the American Cancer Society, created a web-based toolkit for providers to use for colorectal cancer screening and other cancer screening. This toolkit can help to apply colorectal cancer screening by reducing disparity and implementing a screening guideline in all clinical settings (Spruce & Sanford, 2012). Spruce and Sanford concluded that colorectal cancer screening involves a team approach and web-based toolkit designed to improve preventative care can assist increasing colorectal cancer screening.

Barriers of Colorectal Cancer Screening

Robinson et al. (2011) conducted a study to assess barriers to CRC screening among urban, publicly insured women and to evaluate how barriers among under screened urban women have changed between 2001 and 2007-2008 by recruiting 842 women from Medicaid-managed care organization (MMCO) records. MMCO outreach staff interviewed women by phone between October 2007 and February 2008 and

assessed their barriers to CRC screening. Robinson et al. identified that lack of information, no clinician recommendation, misconception, and worry were the barriers to CRC screening in the under screened urban population and recommended increased clinician and patient education about stool-based as well as endoscopic screening methods as palliative measures to improve the knowledge of CRC screening. To improve, the screening exercise, there is a need to raise the consciousness through massive information dissemination by healthcare providers, governmental and non-governmental organizations so that the Medical clinic patients can be enriched with the necessary information so as to reduce the fear, bias and barriers associated with CRC screening.

Griffith, Passmore, Smith, and Wenzel (2011), in their qualitative research, examined barriers and facilitators of colorectal cancer screening and investigated suggestions for improving screening among African-Americans with first-degree relatives with CRC. They recruited 14 African-American men and women aged 40 years and assigned them to four focus groups. The participants were asked to identify the following: what influenced their decisions to screen for CRC, comprehension of the experiences or beliefs of others regarding CRC and CRC screening, and their experiences in CRC screening. Griffith et al. established that fear of serious illness, mistrust of the medical establishment, potential screening discomfort, lack of information on CRC risk factors, lack of healthcare access, absence of symptoms, no knowledge of CRC screening benefits, community reticence about cancer, and CRC myths and concludes that cancer risk and screening education, coupled with screening opportunities in the community, may yield increased screening rates. Promoting screening across generations, developing

and disseminating culturally appropriate educational materials within the community, and encouraging older individuals to screen to take care of their family may be appropriate interventions.

Cai, Zhang, Zhu, and Zheng (2009) conducted a population-based case-control study to investigate barriers to CRC screening in Hang-Zhou City of China. Ninety-four participants who underwent both FOBT and a colonoscopy in a previous CRC screening program were invited to attend a free CRC screening. A two-step screening method was utilized in the screening. Immunochemical FOBT and a questionnaire of high-risk factors such as history of polyp, a family history of colorectal cancer, chronic coprostitis, and chronic diarrhea, mucous-filled bloody feces, stressful life events, and chronic appendicitis was identified. The high-risk population identified by the questionnaire was excluded from the study. All participants were asked to complete a questionnaire by in-person interview by fixed interviewers who were well trained in advance. All data were recorded numerically. The result revealed that raising public awareness of CRC and its screening, integrating CRC screening into the health-care system, and using a painless colonoscopy would increase CRC screening rate.

Guerra et al. (2007) conducted a study to explore the barriers to and facilitators of physicians recommending CRC screening. The study participants were recruited from the University of Pennsylvania Health System (UPHS) Network of Primary Care Physicians. The UPHS is made up of 212 primary care physicians practicing in 17 counties across southern Pennsylvania. Guerra et al. used purposive sampling to recruit participants, which is a nonprobability sample technique that selects subjects based on specific

characteristics. Physicians who participated in the study were mailed letters to participate and the intent of the study was not disclosed. The study participants were asked to pull the charts of the first 10 most recent patients seen in the clinic. On the day of the interview, the participants were asked to discuss their CRC screening pattern. The interview comprised global CRC screening questions and chart stimulation recall. The interview instrument was designed using the Walsh and McPhee System model of clinical preventative care, whose framework proposes that a primary care physician's approach to performing a preventative activity is determined by patient, physician, system factors, preventative activity factors, and situational cues to action.

Guerra et al. (2007) also used unstructured probes to obtain in-depth information. They transcribed the interview as well as two focus groups for information. The transcribed interviews were imported into NVivo 2.0, read, and coded by two investigators. The interviews were further analyzed using grounded theory analysis. Barriers to CRC screenings, facilitators of CRC screening, chart-stimulated recall, and information from focus groups were coded (Guerra et al., 2007). The result of the study revealed that all the physicians who participated in the study were aware of CRC screening recommendation, and most favored screening with colonoscopy. The following were identified as barriers to physician recommendation of CRC: patient with other medical conditions, patient who had previously refused screening, lack of physician recommendation of screening, frequent acute care visits, lack of time, lack of reminder systems, and lack of test-tracking systems. Guerra et al. also identified facilitators of CRC screening: patient requesting screening; patient age; positive physician attitude

about CRC screening; and physician prioritization of CRC screening by devoting visits to preventative health, reminding patients to screen, and offering incentives for screening.

Conceptual Models, theoretical frameworks

Health belief model

The health belief model was developed during the 1950s as an intellectual construct to explain and predict health-related behaviors, particularly in regard to the uptake of health services. This is done by focusing on the attitudes and beliefs of individuals. Exponents of the health belief model such as Rosenstock, Hochbaum, Kegels and Leventhal argued that the health belief model suggests that people's beliefs about health problems, perceived benefits of action and barriers to action, and self-efficacy explain engagement (or lack of engagement) in health-promoting behavior. HBM has remained a viable tool for a better understanding of the widespread failure of screening program for tuberculosis. (Glanz, Rimer, & Lewis, 2001, National Cancer Institute NCI, 2003). The HBM has been applied to predict a wide variety of health-related behaviors such as being screened for the early detection of asymptomatic diseases and receiving immunizations. More recently, the model has been applied to understand patients' responses to symptoms of disease, compliance with medical regimens, lifestyle behaviors (e.g., sexual risk behaviors), and behaviors related to chronic illnesses, which may require long-term behavior maintenance in addition to initial behavior change. Amendments to the model were made as late as 1988 to incorporate emerging evidence within the field of psychology about the role of self-efficacy decision-making and

behavior. The Health Belief Model has been applied to a broad range of health behaviors and subject populations.

Three broad areas can be identified (Conner & Norman, 1996) as (a) preventive health behaviors, which include health-promoting (e.g. diet, exercise) and health-risk (e.g. smoking) behaviors as well as vaccination and contraceptive practices; (b) sick role behaviors, which refer to compliance with recommended medical regimens, usually following professional diagnosis of illness; and (c) clinic use, which includes physician visits for a variety of reasons. The underlying concept of the original HBM is that health behavior is determined by personal beliefs or perceptions about a disease and the strategies available to decrease its occurrence (Hochbaum, 1958) Accordingly, the HBM have four major constructs which include perceived seriousness, perceived susceptibility, perceived beliefs, and perceived barriers (Turner, Hunt, Dibrezzo & Jones, 2004) .Each of these perceptions, individually or in combination, can be used to explain behavior such as the behavior of the outpatient medical clinic patients on CRC screening.

The perceived seriousness construct explains the individuals belief about the seriousness or the severity of the CRC based on medical information and knowledge, difficulties CRC would create or the effect it would have on their life generally. The Susceptibility perception explains the personal risk or susceptibility of CRC which prompts the individuals to adopt healthier behaviors such as taking active participation in CRC screening. Thus, the greater the perceived risk, the greater the likelihood of engaging in behaviors to decrease the risk. More so, the individuals perceives the belief and usefulness of a new behavior which is participating in CRC screening thereby

helping to reduce the mortality rate of CRC disease. Turner et al. (2004) argued that “people tend to adopt healthier behaviors when they believe that the new behavior will decrease their chances of developing a disease. Finally, the individuals also perceives the barriers to CRC screening since change is not something that comes easily , these barriers can be inadequate knowledge of CRC screening, lack of awareness of the need for screening or fear of screening among potential patients, and cost and capacity issues are some of the contending issues of colorectal cancer screening. Janz and Baker (1984) maintained that of all the constructs in HBM, perceived barriers are the most significant in determining behavior change.

Summary

This section was a review of peer-reviewed publication on understanding CRC. Knowledge on CRC screening is inconclusive. CRC is defined as cancer that occurs when some of the cells that line the colon or the rectum become abnormal and grow out of control. The abnormal growing cells create a tumor, which is the cancer. CRC screening was also conceptualized as the processes of identifying the growth that causes the cancer. Different factors were also x-rayed as the possible causes of colorectal cancer which includes, genetic factors, dietary and non-dietary factors. More than that, emphasis was made on CRC educational interventions and issues like Nurse-led telephone psycho education, web-based tool kit and Promotora and home-based education interventions were discussed. The barriers to CRC screening were discussed and were argued to have resulted to a low participation in CRC screening and have defiled effort to control the mortality rate.

Among the barriers in extant literatures, the study identified, lack of healthcare provider recommendations of CRC screening, lack of awareness about CRC and CRC screening, invasiveness and discomfort associated with screening procedures, lack of resources to pay for screening and treatment of CRC, and mistrust of health care providers, lack of information, no clinician recommendation, misconception, and worry are the barriers to CRC screening in the under screened urban population, fear of serious illness, mistrust of the medical establishment, potential screening discomfort, lack of information on CRC risk factors, lack of healthcare access, absence of symptoms, no knowledge of CRC screening benefits, community reticence about cancer, and CRC myths. The research also recommended developing and disseminating culturally appropriate educational materials within the community, and encouraging older individuals to screen to take care of their family may be appropriate interventions and improved CRC screening which includes respite shelter, rooms for colonoscopy prepping, patient navigators to help navigate the health system and accompany patients to and from the procedure, counseling at all clinical encounters and tailored patient education to address misconception as palliative measures to address CRC. This needs assessment to increase CRC screening at the outpatient medical clinic will align with the national efforts to decrease mortality rate of CRC through early detection.

Section 3: Methodology

Introduction

This needs assessment was designed to determine intervals of CRC screening at an outpatient medical clinic in an urban area of Texas align with recommendations outlined by The American Cancer Society, the CDC and the USPSTF .The needs assessment is the initial step in the development of a quality improvement project at the outpatient medical clinic designed to increase CRC screening and to ascertain if identifying patients who will benefit from informational on CRC will help increase CRC screening at the outpatient Medical clinic. This section will discuss, sampling, setting, data collection and data analysis.

Sampling

I adopted the random sampling technique of medical records from eligible patients. A random sample of seventy charts of patients' age 50-75 years receiving care at the outpatient medical clinic was selected for audit. According to American Cancer Society and the Bureau of Primary Health Care (BPHC) a sample of seventy charts and two visits during the year is mandated for quality improvement chart audit (American Cancer Society, n.d). Records were excluded for audit if the patient is currently receiving treatment for colorectal cancer or did not meet the age requirements

Setting

The setting for the needs assessment was an outpatient medical clinic located in a large urban city in Texas. A family nurse practitioner provides comprehensive care at this clinic. The most common ailments seen in the clinic include hypertension, diabetes, asthma, and fungal foot infections. The clinic is open 5 days per week and about 3000

patients are seen in a year.

Data Collection and Instrumentation

Seventy charts of patients aged 50-75 years receiving care at the outpatient medical clinic were audited. Office staff identified the medical records of patients who met the inclusion criteria. A table of random numbers was used to select seventy medical records for audit. Audits were completed by the DNP student in a separate room in the clinic.

The following information was obtained: age, gender, if patient was seen two times within the last year, personal history of colorectal cancer, family history of CRC, colorectal cancer screening method, colonoscopy or Fecal Immochemical/fecal occult blood testing, test result, and frequency of testing (Appendix A.)

Protection of Human Subjects

The needs assessment was approved by Walden University's Institution Review Board, as well as outpatient medical clinic. A letter of cooperation and data use agreement was obtained from the Outpatient Medical clinic prior to data collection (Appendices B & C). The medical clinic representative was given information regarding the needs assessment and included the reason for the needs assessment, potential risks and potential benefits include increased CRC screening.

Confidentiality was maintained by the use of code numbers for each medical record. Only the author of the needs assessment and the clinician at the outpatient medical clinic have access to the study materials.

Data Analysis

Descriptive statistic was used to describe and summarize the demographic data, such as age and gender. Descriptive statistic was also used to determine the rate of CRC screening. Nominal and interval statistics were used to describe the data. The nominal level data (gender) was described, using frequencies and percentages. The interval data (age) was reported using the mean as the measure of central tendency.

Summary

This needs assessment was designed to determine intervals of CRC screening at an outpatient medical clinic in an urban area of Texas align with recommendations outlined by The American Cancer Society, the CDC and the USPSTF. The needs assessment is the initial step in the development of a quality improvement project at the outpatient medical clinic designed to increase CRC screening and to ascertain if identifying patients who will benefit from informational on CRC will help increase CRC screening at the outpatient Medical clinic

Specific and general literature on the subject matter of CRC has profusely demonstrated the richness of information on the preventive method of CRC, and most of these are strong, empirical studies with high impact factor. Maxwell et al. (2010); Moralez, Rao, Livandais, and Thompson (2012); Cai, Zhang, Zhu, and Zheng (2009); Robinson et al. (2011); Spruce and Sanford (2012); and Griffith et al. (2011) focus on CRC screening, barriers, and prevention. The health belief model was adopted as the theoretical framework because of its viability in health-care studies, according to social psychologists; the model helps to change unhealthy behaviors to healthy behaviors. The needs assessment adopted a chart audit, and proposes procedures to protect human

subjects such as obtaining consent from outpatient medical clinic representative prior to starting the needs assessment and maintenance of confidentiality.

Section 4: Findings, Discussion, and Implications

Introduction

This needs assessment was designed to compare rates of CRC screening at an outpatient medical clinic in an urban area of Texas and to ascertain if screening interval are in line with recommendations outlined by The American Cancer Society, the CDC and the USPSTF. The needs assessment was the initial phase in a quality improvement project at the outpatient medical clinic designed to increase CRC screening and to determine if identifying patients who could benefit from information on CRC will increase the CRC screening rate at the outpatient Medical clinic. This section is an explanation of the findings and evaluation of findings, implications for practice, project strengths and limitations, recommendations, summary and conclusions.

Findings and Evaluation of Findings

Seventy charts of patients aged 50-75 years attending clinic at an outpatient clinic located in urban city in Texas were audited. The mean age of people who were screened for CRC was 62.9. African American were 25.7% ($n=18$), Hispanic were 71.4% ($n=50$) while Caucasian were 2.9% ($n=2$) and 42.9% were male ($n=30$) while 57.1% were women ($n= 40$).

The following information about colorectal screening was obtained from the chart audits:

1. The method of CRC screening was colonoscopy
2. The rate of screening was 12.9%
3. The percentage of CRC screening test ordered was 62.9%

4. . The percentage of patients who are at high risk of CRC was 24.3%

Discussion of Findings in the Context of Literature and Framework

The patients at the outpatient medical clinic in an urban area of Texas had a markedly lower CRC screening rate compared to the rest of Texas. According to American Cancer Society in 2008 about 59% of people age 50 years or older reported having been screened for CRC according to recommended guideline. According to Centers for Disease Control and Prevention in 2010 CRC screening rate for Texas was 54.1 to 59.2%. Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Rhode Island, Vermont, and Washington had the highest screening rate of 69 to 75%. The low rate of CRC screening found in this study may be related to lack of knowledge about CRC and CRC screening. Educating patients on the importance CRC screening will help increase screening.

The underlying concept of HBM is that health behavior is determined by personal beliefs or perceptions about a disease and the strategies available to decrease its occurrence (Hochbaum, 1958) The HBM have four major constructs which include perceived seriousness, perceived susceptibility, perceived beliefs, and perceived barriers (Turner, Hunt, Dibrezzo & Jones, 2004). Each of these perceptions, individually or in combination, can be used to explain behavior such as the behavior of the outpatient medical clinic patients on CRC screening. The more beneficial the patients at the outpatient medical clinic perceived CRC screening and the more the perceived barriers are eliminated by educating patients on CRC screening the more the rate of screening.

Implication for Social Change in Practice

The implication for social change in practice is that the results of this needs assessment can be used to design effective interventions and CRC prevention projects that can make a significant impact on public health. The results of the needs assessment can raise awareness on the chasm in quality of health care availability, delivery, and accessibility (Simonds, 2013). The expected outcome from this needs assessment will be an increased rate of CRC screening among the patients receiving care at outpatient medical clinic. The clinic staff should increase their efforts to educate patients on CRC and the importance of CRC screening. Patients could be offered a fecal occult blood test as an alternative to colonoscopy as CRC screening method. Early detection of colon cancer through increased screening of CRC could lead to a reduction in mortality rate from colon cancer.

Project Strengths

The strength of the project is that there was no contact with the patients and this detached approach prevented bias and ensured objectivity. The clinic sees a large number of patients each month which ensured an adequate sample size. The findings of this study identified a major problem at the outpatient medical clinic with patients not completing CRC screening as ordered.

Limitations.

The limitation of this needs assessment is the absence of an electronic medical record (EMR) system at the outpatient medical clinic; therefore this needs assessment was done by a manual review of the clients medical (paper) records. Noncomputerized patient charts may be inaccurate and incomplete. For example, a health care provider may not record that they counselled their client to get CRC screening or reports of CRC screening results may not be included in the record. Nevertheless, client's records selected to audit for this needs assessment was thoroughly reviewed. The generalizability of the findings is also a limitation as data for this needs assessment was collected from only one site.

A computerized EMR system can provide decision making tools to support clinicians in all process of patient's care ranging from preventative care, diagnosis, treatment and follow-up (Soares et al. 2012). According to Soares et al., there are several clinical decision support tools (CDS) in use in healthcare settings. These tools are: computerized alerts and reminders, clinical guidelines, order sets, patient data reports and dashboards, documentation templates, and diagnostic support. The use of CDS satisfies some of the meaningful use criteria and other regulatory requirements. It also helps to increase quality of care, reduce medication errors, prevent miss diagnosis, enhance health outcomes, and ensure that patient get the preventative care appropriate for age and disease process (Soares et al., 2012). CDS increases patient's satisfaction because patients are happy when their healthcare provider is committed to providing needed laboratory work, diagnostic test, preventative healthcare, treatment and follow-up (Soares et al. 2012). The absence of CDS at the outpatient medical clinic will make it difficult to

comply with the screening intervals since the clinician and outpatient medical clinic staff have to go through numerous charts audit to identify patients who are due for CRC screening and other preventative health screening.

Recommendations

The following recommendations were made to the clinic staff;

1. Include fecal occult blood testing as one of the CRC screening method so that patient will have alternative method of screening
2. Educate patients on the importance of CRC screening by handing out CRC screening information at each visit.
3. Explore barriers to CRC screening with each patient and offer assistance if possible.
4. Devise methods of obtaining colonoscopy result from the gastroenterologist.
5. If possible, utilize one gastroenterologist for all patients and coordinate care as needed.
6. Clinician could conduct follow-up telephone calls with patients to determine whether or not they completed the CRC screening as ordered.

Analysis of Self

According to Zaccagnini and White (2012) DNP education is intended to help scholars become a better leader, educator and practice specialist. The DNP program, practicum and DNP project experience, has helped me to become a leader, educator and practice specialist capable of influencing changes in the healthcare system. I am cable of

implementing change in practice and practice environment. I am proud to say that I have a new approach to clinical problems that can help resolve most of the practice problems.

As a scholar, I am capable of using critical thinking to appraise existing literature, and use the information obtained to resolve clinical problems. The needs assessment of the medical clinic has demonstrated my ability to function as a leader in improving the quality of care given to patients in a medical clinic and the same approach can also be used to improve healthcare and healthcare environment. I encountered many challenges during the development of my DNP project. Despite the challenges, I am a dedicated practitioner interested in identifying gaps in practice and being a partner in redesigning healthcare in United States

Summary and Conclusion

This needs assessment was designed to ascertain if intervals of CRC screening at an outpatient medical clinic in an urban area of Texas supports recommendations outlined by The American Cancer Society, The Centers for Disease Control and Prevention and the United States Preventative Task Force (USPSTF). This needs assessment was the first step in the development of a quality improvement project at the outpatient medical clinic designed to increase CRC screening. Also this needs assessment identified patients who may benefit from information on CRC to increase the rate of CRC screening at the outpatient Medical clinic. Seventy charts of patients aged 50-75 years attending clinic at an outpatient clinic located in urban city in Texas were audited. Colonoscopy is the only CRC screening method utilized at the clinic and the rate of screening was 12.9%, which was lower than screening rate reported in the overall Texas and US population.

The strength of the project was lack of contact with the patients and this detached approach prevented bias and ensured objectivity, the clinic sees a lot of patients making it easy to obtain sample size, and the findings of this study identified a major issue with screening.

The limitation of the project was lack of electronic medical record. The generalizability of the findings is also a limitation as the needs assessment was from one site. The study recommended that the clinician and clinic staff; Include fecal occult blood testing as one of the CRC screening method so that patient will have alternative method of screening, educate patients on the importance of CRC screening by handing out CRC screening information at each visit , explore barriers to CRC screening with each patient and offer assistance if possible, device methods of obtaining colonoscopy result from the gastroenterologist, Clinician should follow-up on orders written but not carried out, and if possible utilize one gastroenterologist for all patients and coordinate care as needed.

This needs assessment to increase CRC screening at the outpatient medical clinic is aligned with the national efforts to decrease mortality rate of CRC through early detection. This needs assessment will also help to improve the quality of care clients receive at the clinic aimed at increasing the rate of CRC screening.

Section 5: Scholarly Product

Dissemination is the transmission of clinical, research, and theoretical findings for the purpose of transforming new knowledge into practice. Without dissemination practice change will not occur (White & Dudley-Brown, 2012). White and Dudley-Brown (2012) discussed three P's of dissemination as follows; posters, presentation, and paper. This author will disseminate the DNP project utilizing poster to the stakeholders of the outpatient clinic and PowerPoint presentation to peers at the professional organization meeting.

Background, Purpose, and Nature of Project

Colorectal cancer (CRC) is the second most common form of cancer in the United States. In 2009, an estimated 150,000 people had colorectal cancer diagnosed and 50,000 died from the disease (Redwood et al, 2011). Colorectal cancer can develop from slow growing adenomatous polyps in the colon or rectum. These polyps can be detected and removed before they turn into cancer through screening with fecal Occult Blood Test (FOBT), colonoscopy, or sigmoidoscopy The American cancer society estimated that there were 108,070 new cases of colon cancer and 40,740 new cases of rectal cancer and an estimated 49,960 deaths from colon to rectal cancer in 2008(Patel et al, 2011).

Problem statement.

- A. Patients at the outpatient medical clinic are currently screened with colonoscopy
- B. The rate of screening at the clinic is unknown.
- C. There is no means to track if the patient had the colonoscopy done once

ordered.

- D. A needs assessment should be conducted as an initial step to improve the quality of care clients receive at the clinic aimed at increasing the rate of CRC screening.

Purpose statement and project objectives

The purpose of this needs assessment was to identify the number of patients age 50 years and older who have been screened for CRC according to intervals outlined by The American Cancer Society, The Centers for Disease Control and Prevention and the United States Preventative Task Force (USPSTF) and identify the characteristics of the patients who should receive information about the need for CRC screening

Sample size

A random sample of seventy charts of patients aged 50-75 years receiving care at the outpatient medical clinic were audited.

Setting

The setting for the needs assessment was an outpatient medical clinic located in a large urban city in Texas. A family nurse practitioner provides comprehensive care at this clinic and about 3000 patients are seen in a year.

Protection of Human Subjects

The needs assessment was approved by Walden University's Institution Review Board, as well as outpatient medical clinic (see appendix D). A letter of cooperation and data use agreement was obtained from the Outpatient Medical clinic prior to data collection. The medical clinic representative was given information regarding the Needs

Assessment and included the reason for the Needs Assessment, potential risks and potential benefits include increased CRC screening.

Presentation of Results

Upon approval of the DNP proposal, the DNP student with the help of the clinic staff identified 200 patients who met the inclusive criteria. A table of random numbers was used to select seventy medical records for audit. Audits were completed by the DNP student in a separate room in the clinic. The following result was obtained;

The mean age of people who were screened for CRC was 62.9. 25.7% were African American (n=18), 71.4% were Hispanic (n=50) while 2.9% were Caucasian (n=2), 42.9% were male (n=30) while 57.1% were women (n=40). The primary method of CRC screening was colonoscopy .The rate of screening was 12.9 %(n=9), the percentage of CRC screening test ordered was 62.9% and the percentage of patients who are at high risk of CRC was 24.2% . The patients at the outpatient medical clinic in an urban area of Texas had decrease CRC screening compared to the rest of Texas.

The study recommended that the clinic staff and the clinician should; Include fecal occult blood testing as one of the CRC screening method so that patient will have alternative method of screening. Educate patients on the importance of CRC screening by handing out CRC screening information at each visit. Explore barriers to CRC screening with each patient and offer assistance if possible. Devise methods of obtaining colonoscopy result from the gastroenterologist. Utilize one gastroenterologist for all patients and coordinate care as needed. And recommended that clinician should follow-

up on orders written but not carried out.

Implications for social change

The results of this needs assessment can be used to plan effective CRC prevention projects that can help reduce CRC epidemic in United States. The results of the needs assessment can raise awareness on the quality of health care availability, delivery, and accessibility at the outpatient clinic (Simonds, 2013). Also, the expected outcome from this needs assessment was to increased rate of CRC screening among the patients receiving care at outpatient medical clinic. Early detection of colon cancer through increased screening of CRC could lead to a reduction in mortality rate from colon cancer.

Evaluation

After the planning, implementation, and evaluation of the needs assessment in the medical clinic the DNP student presented the outcome of the needs assessment to the clinician and clinic staff of the medical clinic. The clinic staff were motivated to learn about the outcome of the project. The clinic staff were also willing to implement the project recommendations. The clinician will discuss the outcome of the project with the Director of clinic to ascertain how best to implement the recommendations.

Conclusion

Medical clinic staff must be equipped with the materials and knowledge of current evidence-based practices in providing effective colorectal cancer prevention. This DNP project has made some recommendations that can be implemented by medical office clinic staff to improve the quality of care delivered to patients at the clinic. A follow-up

with the medical office clinician will continue to promote implementation and assistance as necessary.

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Appendix B: Letter of Cooperation

Community Research Partner Name Airline Medical Clinic

Contact Information Dr. Tonya Kane

Date

Dear Researcher Name, Fidelia Ukah

Based on my review of your needs Assessment proposal, I give permission for you to conduct the needs assessment on colorectal cancer screening within the Airline Medical Clinic. As part of this assessment, I authorize you to perform chart audits related to Colorectal Cancer Screening from the records of patients aged 50-75 year who have had two visits within the last year.

We understand that our organization's responsibilities include: Provision of room for the chart audit and assistance from the clinician in locating the charts. We reserve the right to terminate the needs assessment at any time if our circumstances change.

I confirm that I am authorized to approve needs assessment in this setting and that this plan complies with the organization's policies. I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Authorization Official and Contact Information

Appendix C: Data Use Agreement

This Data Use Agreement (“Agreement”), effective as of 5/11/2015, is entered into by and between Fidelia Ukah (“Data Recipient”) and Airline Medical clinic (“Data Provider”). The purpose of this Agreement is to provide Data Recipient with access to a Limited Data Set (“LDS”) for use in research **in accord with laws and regulations of the governing bodies associated with the Data Provider, Data Recipient, and Data Recipient’s educational program.** In the case of a discrepancy among laws, the agreement shall follow whichever law is stricter.

Definitions. Due to the study’s affiliation with Laureate, a USA-based company, unless otherwise specified in this Agreement, all capitalized terms used in this Agreement not otherwise defined have the meaning established for purposes of the USA “HIPAA Regulations” and/or “FERPA Regulations” codified in the United States Code of Federal Regulations, as amended from time to time.

Preparation of the LDS. Data Provider shall prepare and furnish to Data Recipient a LDS in accord with any applicable laws and regulations of the governing bodies associated with the Data Provider, Data Recipient, and Data Recipient’s educational program.

Data Fields in the LDS. **No direct identifiers such as names may be included in the Limited Data Set (LDS).** In preparing the LDS, Data Provider shall include the **data fields specified as follows**, which are the minimum necessary to accomplish the research: data from patients’ age 50-75 years.

Responsibilities of Data Recipient. Data Recipient agrees to:

Use or disclose the LDS only as permitted by this Agreement or as required by law;

Use appropriate safeguards to prevent use or disclosure of the LDS other than as permitted by this Agreement or required by law;

Report to Data Provider any use or disclosure of the LDS of which it becomes aware that is not permitted by this Agreement or required by law;

Require any of its subcontractors or agents that receive or have access to the LDS to agree to the same restrictions and conditions on the use and/or disclosure of the LDS that apply to Data Recipient under this Agreement; and

Not use the information in the LDS to identify or contact the individuals who are data subjects.

Permitted Uses and Disclosures of the LDS. Data Recipient may use and/or disclose the LDS **for its Research activities only.**

Term and Termination.

Term. The term of this Agreement shall commence as of the Effective Date and shall continue for so long as Data Recipient retains the LDS, unless sooner terminated as set forth in this Agreement.

Termination by Data Recipient. Data Recipient may terminate this agreement at any time by notifying the Data Provider and returning or destroying the LDS.

Termination by Data Provider. Data Provider may terminate this agreement at any time by providing thirty (30) days prior written notice to Data Recipient.

For Breach. Data Provider shall provide written notice to Data Recipient within ten (10) days of any determination that Data Recipient has breached a material term of this Agreement. Data Provider shall afford Data Recipient an opportunity to cure said alleged material breach upon mutually agreeable terms. Failure to agree on mutually agreeable terms for cure within thirty (30) days shall be grounds for the immediate termination of this Agreement by Data Provider.

Effect of Termination. Sections 1, 4, 5, 6(e) and 7 of this Agreement shall survive any termination of this Agreement under subsections c or d.

Miscellaneous.

Change in Law. The parties agree to negotiate in good faith to amend this Agreement to comport with changes in federal law that materially alter either or both parties' obligations under this Agreement. Provided however, that if the parties are unable to agree to mutually acceptable amendment(s) by the compliance date of the change in applicable law or regulations, either Party may terminate this Agreement as provided in section 6.

Construction of Terms. The terms of this Agreement shall be construed to give effect to applicable federal interpretative guidance regarding the HIPAA Regulations.

No Third Party Beneficiaries. Nothing in this Agreement shall confer upon any person other than the parties and their respective successors or assigns, any rights, remedies, obligations, or liabilities whatsoever. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Headings. The headings and other captions in this Agreement are for convenience and reference only and shall not be used in interpreting, construing or enforcing any of the provisions of this Agreement.

IN WITNESS WHEREOF, each of the undersigned has caused this Agreement to be duly executed in its name and on its behalf.

DATA PROVIDER

DATA RECIPIENT

Print name:-----Signed:

Print Title:-----

Print name:-----Signed

Print Title:-----

Appendix D: IRB Approval

Dear Ms. Ukah,

This email is to serve as your notification that Walden University has approved BOTH your doctoral study proposal and your application to the Institutional Review Board. As such, you are approved by Walden University to conduct research.

Please contact the Office of Student Research Administration at dnp@waldenu.edu if you have any questions.

Congratulations!

Libby Munson
Research Ethics Support Specialist, Office of Research Ethics and Compliance

Leilani Endicott
IRB Chair, Walden University

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link: <http://academicguides.waldenu.edu/researchcenter/orec>