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THE INFLUENCE OF PATIENT-PROVIDER INTERACTION, SELF-CONCEPT, AND THE SOCIO-PHYSICAL ENVIRONMENT ON PELVIC EXAM SEEKING BEHAVIOR, ANXIETY, AND THE HEALTH CARE EXPERIENCE

Julie Lasslo

University of Kentucky, Julie.Lasslo@uky.edu

Author ORCID Identifier:

 <https://orcid.org/0000-0002-2145-3645>

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Julie Lasslo, Student

Dr. Kristen P. Mark, Major Professor

Dr. Melinda Ickes, Director of Graduate Studies

THE INFLUENCE OF PATIENT-PROVIDER INTERACTION, SELF-CONCEPT,
AND THE SOCIO-PHYSICAL ENVIRONMENT ON PELVIC EXAM SEEKING
BEHAVIOR, ANXIETY, AND THE HEALTH CARE EXPERIENCE

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Education
at the University of Kentucky

By
Julie A. Lasslo
Lexington, Kentucky
Director: Dr. Kristen P. Mark, Professor of Health Promotion
Lexington, Kentucky
2019

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[<https://orcid.org/0000-0002-2145-3645>]

ABSTRACT OF DISSERTATION

THE INFLUENCE OF PATIENT-PROVIDER INTERACTION, SELF-CONCEPT, AND THE SOCIO-PHYSICAL ENVIRONMENT ON PELVIC EXAM SEEKING BEHAVIOR, ANXIETY, AND THE HEALTH CARE EXPERIENCE

Regular gynecological screenings are critical for women in promotion of health and preventing diseases like cervical cancer. Despite the importance of such examinations, many women fail to adhere to recommended screening protocols. As a result, women experience an increased disease risk. The current study examined the relationship between patient-provider communication quality, skill, and empathy on pelvic exam seeking behavior and exam-related anxiety and satisfaction. Additionally, negative self-concept, perceived poor genital self-image, and various elements of the socio-physical clinic environment were explored to better understand their impact on a women's care seeking behavior.

A total of 350 women 19 through 80 years of age completed a one time, 15-minute online survey regarding their gynecological care seeking behavior. Ordered logistic regression analysis revealed that when controlling for demographic variables and self-concept scores satisfaction was significantly impacted by the quality of provider communication. Specifically, higher quality of communication likely increases satisfaction by 12% (coef = .77; odds ratio= 1.19 at a $p < .01$). Avoidance was significantly associated with greater provider empathy indicating a 9% decrease in avoidance is likely as empathy scores go up (coef = -.19; odds ratio= 0.96 at a $p < .01$). When controlling for various demographic factors, self-concept scores and provider communication were not shown to be significantly associated with patient anxiety.

These findings suggest that enhancing provider communication quality and empathy may improve satisfaction and lessen patient avoidance. Results also indicate that women who have a more positive evaluation of their genital self-image were more likely to feel greater satisfaction concerning gynecological care. Thematic analysis of open-ended essay questions revealed several themes among 3 main areas: 1). Clinician Communication (active listening, explanation, empathic communication, & pace), 2). Social Environment (hospitality& being relational), and 3). Physical Environment (Privacy, Aesthetics, & Sensate Variables).

Detailed explanation, empathetic communication, and not rushing patients through procedures all emerged as important components that may guard against patient anxiety. Results suggest that distress related to gynecological care could be mitigated by easily modifiable improvements to the environment like increasing the temperature of the exam rooms, opting for less harsh lighting, providing a place to hang or set clothing, and more thoughtful placement of baby pictures. Results also suggest that improvements to modesty concerns within the exam room, like larger cloth draping and gowns, may significantly improve the patient experience.

KEYWORDS: Patient-provider communication, gynecological care, pelvic exam, anxiety, avoidance, satisfaction

Julie Ann Lasslo

(Name of Student)

[11/19/2019]

Date

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By
Julie A. Lasslo

Dr. Kristen P. Mark

Director of Dissertation

Dr. Melinda Ickes

Director of Graduate Studies

[11/19/2019]

Date

DEDICATION

For Ben - my constant companion and good gift

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My heart is full as I write this last small piece of a challenging but rewarding chapter in my life. I am keenly aware that nothing good that I have ever produced has come as a result of my own hands. I am surrounded by people who have invested deeply in my growth as a person and professional, and to whom I am joyfully indebted. There are not enough pages to begin to name every name or to adequately express the deep well of gratitude that I feel in this moment for those of you in my life who have walked shoulder to shoulder with me during this long journey. I would be remiss if I did not first profusely thank my dissertation committee: Dr. Ickes, Dr. Bennett, Dr. Gordon, and Dr. Mark. I'm reasonably sure that you may be the only people that read this document in its entirety, and I am relatively certain that you could have done far more interesting and enjoyable things with the time you gave to this process. Thank you! Dr. Kristen Mark, I have such great respect for you and the mentoring role that you've played in my life. Thank you for the coffee shop meetings, opportunities to research with you, and the freedom to ask advice concerning a myriad of decisions. I am grateful for your kindness to me.

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CHAPTER 1. INTRODUCTION

Statement of the Problem

Regular gynecological screenings are critical for women in promoting health and preventing diseases like cervical cancer. The American College of Obstetricians and Gynecologists (ACOG), the leading voice concerning health care for women, recommends that women see their ob-gyns at least once a year for a well-woman visit. These yearly appointments allow the physician to counsel patients about preventative care and provide or recommend services (ACOG, 2016). During this yearly visit providers should work with women to decide on appropriate laboratory and physical evaluations based on family history, personal history, and symptomatic complaints. ACOG provides a loose set of guidelines for women of varying ages suggesting that a pelvic exam be conducted at least once every three years; this may or may not include the need for a pap smear test depending on the patient (ACOG, 2016). These regular yearly appointments are crucial for detecting abnormalities that may lead to cancer, impact fertility, or complicate sexual health. However, despite the importance of such examinations, many women fail to adhere to recommended screening protocols. As a result, women may experience an increased disease risk. Data suggests that of those diagnosed with cervical cancer each year, 50% to 60% reported forgoing regular gynecological care screenings (CDC, 2017).

While studies indicate that increased knowledge of disease improves how patients navigate the healthcare system (Brashers, Hass, & Neidig, 1999), scholars have also revealed that improving information about preventative screening for disease, like gynecological exams, while helpful, has been shown to be insufficient to change a

woman's care-seeking behavior (Akerson, 2012). Because extensive research reveals that some patients have misunderstandings and lack trust concerning healthcare providers (Zill et al., 2014; Street et al., 2009), it is imperative to understand what other barriers concerning the patient-provider interaction may hinder patients seeking care. Research reveals that many women already have much trepidation concerning gynecological appointments from various barriers including low self-esteem, transportation barriers, race, and history of sexual assault (Ackerson, 2012; Amy, Aalborg, Lyons & Keranen, 2016). Additionally, Neilson & Jones (1998) indicate that many women fail to comply with clinical screening recommendations largely because of fear surrounding the test and an overwhelming negative perception of the experience. Similarly, Milburn & McAskill cite fear of embarrassment as a barrier to seeking necessary screenings (1994). However, little research has assessed the ways in which the communicative interface with providers during this specific medical encounter might deter women from seeking gynecological care in the future.

Broadly, it is understood that better perceived physician communication equates to increased patient satisfaction (Zachariae et al., 2003; Roter et al., 1987). Further, improved patient-physician communication necessitates that adhering to recommended screenings should be a shared mission of the provider and the patient rather than the sole responsibility of either person (Donovan & Blake, 1992). The current study will assist in better explaining the role of patient-provider communication quality, skill, and empathy on behavioral intentions for seeking gynecological care and additionally will assess how the psychosocial aspects of a woman's self-concept, body image, and physical and social environment of the clinic may impact engagement with gynecological care.

Purpose

When considering the wealth of barriers women experience when deciding whether or not to seek gynecological care, patient-provider communication may play a key role in determining whether or not women will seek follow-up care in the future. Because of the importance of seeking gynecological care for women in preventing disease and maintaining overall health (ACOG, 2016), the perception of patient-provider communication among female patients may be crucial in determining whether or not they feel they can overcome their barriers and anxiety and whether or not they will pursue future pelvic examinations. Ineffective communication has consistently been linked with patients feeling misunderstood, insignificant, and rejected by their physician (Martin, Williams, Haskard, & DiMatteo, 2005). Despite the many perceived and documented barriers to obtaining gynecological care, patient-provider communication in the medical encounter may assist patients in overcoming barriers and embolden them to seek the necessary care (Street, 2013). Additionally, the purpose of the current study is to understand how self-concept and evaluation of the physical and social environment of the healthcare setting impact perceived patient satisfaction, anxiety, and avoidance when considering provider communication. Investigating the impact of provider communication, self-concept, and components of the clinic environment should help identify modifiable barriers that can be improved upon through provider, clinic staff, and patient education respectively. Identifying and removing these barriers may improve patient adherence to screening protocols and remove unnecessary anxiety.

Research Questions

Research questions/statements for each manuscript, chapters IV, V, & VI respectively, are listed below.

Research Questions for Manuscript 1, Chapter IV:

RQ1: After controlling for demographic factors, how do patient-provider interaction quality, general provider communication skills, and provider empathy function to predict patient satisfaction?

RQ2: After controlling for demographic factors, how do patient-provider interaction quality, general provider communication skills, and provider empathy function to predict pelvic exam related anxiety?

RQ3: After controlling for demographic factors, how do patient-provider interaction quality, general provider communication skills, and provider empathy function to predict pelvic exam-seeking behavior?

Research Questions for Manuscript 2, Chapter V:

RQ4: After controlling for various demographic factors, how do body image and female genital self-concept function to predict gynecological care satisfaction?

RQ5: After controlling for various demographic factors, how do body image and female genital self-concept function to predict pelvic exam related anxiety?

RQ6: After controlling for various demographic factors, how do body image and female genital self-concept function to predict pelvic exam-seeking behavior?

Research Questions for Manuscript 3, Chapter VI:

RQ7: In what ways does the social and physical environment of a gynecological care facility impact patient experience?

Significance of Study to Health Promotion

Researching potential barriers to routine gynecological care will offer clinically relevant information to healthcare in the realm of women's health. Implications for improving patient-care in this setting can likely be informed by the current study results; further, findings from the current study may also increase patient adherence to screening protocols, thereby increasing the potential effectiveness of secondary prevention efforts. Gaining a better understanding of factors influencing perceived patient satisfaction, anxiety, and avoidance in the gynecological care setting will inform educational approaches to women's health in the community, classroom, and clinic. The provision of the study findings can effectively enable key components of health promotion, including organizational mechanisms that prepare and ensure practitioners have better therapeutic and quality communication skill sets. Additionally, information gleaned from this study may aid in the design of educational interventions within communities and among women who are apprehensive about gynecological care.

Theoretical Framework

The current study is built upon the framework of the socioecological model (Bronfenbrenner, 1977), which describes behavioral health choices as influenced by layers of one's personal, community, and greater societal environment. Of specific importance to the current study are the layers concerning intrapersonal (knowledge, attitudes, and beliefs of an individual), interpersonal (the influence of one's social network), and organizational (e.g., clinical psychosocial environment.).

Couched within these layers of the socioecological model is the understanding, as espoused by Roter & Hall (1991), of reciprocity and social exchange within the medical

interaction through a health-centered view of the Social Exchange Theory (SET). Specifically, Roter & Hall's use of the SET (1991) aids in understanding the dynamic nature of the communicative interaction between patients and providers. Further, this theoretical framework enables scholars to elaborate and explore the construct of reciprocity in an interpersonal relationship, thereby helping to explain how provider behavior on a socioemotional level may encourage corresponding patient behavior. For example, scholars have revealed repeatedly that the skill and quality of a provider's verbal and non-verbal communication may account, in part, for patient compliance with recommended clinical actions including preventative screenings (Street et al., 2009; Little et al., 200; Zolnierek & DiMatteo, 2009). Hence, compliance with recommended screenings and treatment within the gynecological care experience must be viewed beyond the lens of intrapersonal knowledge and attitudes to the context of the patient-provider relationship (Donovan & Blake, 1992). Examining the communicative relationship between gynecological care providers (including clinic staff) and patients through the framework of the Social Exchange Theory nested within the socioecological model will allow the current study to investigate how the socio-physical experience within the care setting impacts patient anxiety, satisfaction, and ultimately avoidance or adherence to recommended screenings.

Delimitations

Study participants are included if they are over the age of 18 and have attended at least one gynecological care appointment.

Limitations

As with the majority of studies, the design of the current study is subject to some limitations. Primarily, the current study design is cross-sectional and therefore only provides a snapshot of the relationship between patient-provider communication and patient anxiety/avoidance regarding gynecological care. Additionally, generalizability of the findings of this study could potentially be problematic, depending on the sample demographics, as women in lower socio-economic groups may not have as much autonomy in accessing care given the insurance and possible transportation constraints imposed upon them (Gelberg, Browner, Lejano, & Arangua, 2004). Finally, geographical location was not accounted for when gathering participant data which may result in potentially important missing data concerning accessibility to preventative care and cultural norms specific to areas of the country. Future studies should seek to obtain a more diverse sample and seek to include geographical information, including identification of living in rural or urban areas.

Conclusion

Investigating the impact of provider communication through the constructs of reciprocity and social exchange within the socioecological model will identify modifiable barriers within the communicative realm that can be ameliorated through provider interactions, interactions with the clinic staff, and patient education respectively. Further, implications for streamlining clinic protocols in communicating with patients throughout a woman's care seeking experience will be discussed. Identifying and removing communicative and environmental barriers within the gynecological care setting may improve patient adherence to screening protocols, improve overall patient satisfaction,

and remove unnecessary perceptions of anxiety surrounding the gynecological care interaction.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Regular gynecological screenings are critical for women in promoting health and preventing disease. Despite the importance of such examinations, many women fail to adhere to recommended screening protocols. According to the American College of Obstetrics and Gynecology (ACOG), the leading voice of obstetrics and gynecological medicine, every woman should schedule an annual medical assessment appointment with her gynecologist (ACOG, 2016). This yearly health assessment, often referred to as the “annual exam,” is necessary in providing effective medical care to women. The annual exam enables providers to disseminate information about risk factors for disease and identify medical problems of the patient. Additionally, annual assessments provide an opportunity for providers to counsel patients about preventive care and provide reference for recommended services as needed (ACOG, 2016). Annual exams typically include general screenings for physical and mental health issues (BMI, Blood Pressure, depression etc.) and more specialized examination of the breast and genitals (ACOG, 2016). While screening for cervical cancer via Pap test is recommended every three years, or according to risk level, a pelvic exam (visual inspection of the vulva and digital exam if needed) and clinical breast exam to check for abnormalities is recommended each year (ACOG, 2016).

Engaging in regular gynecological exams is the prevention strategy for combating the most common sexually transmitted infection, the Human Papillomavirus (HPV), which can lead to cervical cancer (CDC, 2017). According to the most recent numbers

from 2016, nearly 13,000 women in the United States were diagnosed with cervical cancer (CDC, 2019). Although engaging in regular gynecological exams can effectively prevent cervical cancer through identification of cervical precancerous cell growth resulting from HPV, the American Cancer Society (ACS) estimates that in 2018 nearly 13,240 new case of invasive cervical cancer will be diagnosed (2018). Additionally, it is estimated that approximately 4,170 women will die from this type of cancer (ACS, 2018). Yet, even with greater diffusion of knowledge surrounding cervical cancer, many women continue to forgo regular screenings (Amy et al., 2006). In fact, of those diagnosed each year, nearly 50-60% of cases are among women who rarely or never participate in annual screenings (CDC, 2017). Cervical cancer, when caught early, is one of the most successfully treated cancers (ACS, 2018). In order to take advantage of this life saving prevention, it is imperative to increase regular gynecological exam adherence.

Risk Factors

Women who develop cervical cancer are largely in the age range of 35 to 44 (ACS, 2018), and they were likely exposed to risk factors, including HPV, at a younger age. Risk-specific cervical cancer includes having multiple partners, HIV, and smoking (CDC, 2017). Having multiple partners increases the probability of exposure to HPV, the leading cause of cervical cancer (CDC, 2017). However, DeMaria, Hollub, and Herbenick (2011) identified having multiple sexual partners as being associated with more frequent interaction with gynecological care and thus may serve as a protective factor. Adherence to gynecological screening protocols is a complex behavior to understand as a myriad of factors impact a women's decision to attend a pelvic exam or pap test. Hence, in addition to understanding the biological risks associated with cervical

cancer and STIs, it is imperative to also understand the risk factors that may prevent a woman from receiving general gynecological care screenings.

For example, research suggests that women are more likely to avoid gynecological screenings if they are obese or overweight (Aldrich & Hackley, 2010). Wee and colleagues (2005) demonstrate that women with higher BMIs are less likely to engage in preventative gynecological screenings as they can be painful, uncomfortable, and perceptually embarrassing. Additionally, Amy et al. (2006) indicate that being obese is a key barrier to cancer screenings.

In a national sample, a high number of women reported that not only do they utilize gynecological providers for women's specific health care needs, but they also indicated that they use their gynecologist for primary health care needs as well (Scholle & Kelleher, 2003). Matched with this dual need, women's health care clinics are also tasked with providing screenings for a myriad of complex and dynamic health concerns ranging from physical abuse to depression, eating disorders, substance abuse, and those more pathological concerns found with physical examination (Poleshuck & Woods, 2014). The intimate nature of gynecological care lends well to these types of evaluation; however, Poleshuck and Woods (2014) reveal that the demands may be difficult to attain given large patient loads and various psychosocial variables that impact a woman's self-efficacy and anxiety surrounding the clinic experience.

Therefore, when assessing any health concern, practitioners must view the given issue through the lens of the socioecological perspective and not merely through the lens of the medicalized approach; the socioecological lens will ensure that the patient and her concerns are understood from a holistic perspective that encompasses interpersonal,

intrapersonal, community, organizational, and policy influences. Addressing health issues should not only encompass a medicalized perspective but also that of health promotion to address upstream predisposing, reinforcing, and enabling factors that impact a given health issue. Investigating upstream factors allows for better engagement in the primary prevention process, which yields a greater return on investment than secondary and tertiary levels of prevention. Considering many women to forgo primary and secondary prevention screenings concerning gynecological care (CDC, 2017) it is vital to investigate various contributing personal and sociocultural factors that may impact a woman's decision to engage in life-saving gynecological screenings.

Hence, the following section will review factors that contribute to avoidance, anxiety, and general lack of adherence concerning gynecological exams, including: a history of sexual abuse (Cadman, Waller, Ashdown-Barr, Szarewski, 2012; Kelly, Hunter, Daily, & Ramaswamy, 2016), race and ethnicity (Golden, 2014), self-concept (Amy, Aalborg, Lyons, and Keranen, 2006; DeMaria, Hollub, and Herbenick, 2012), and logistic barriers like lack of transportation and lack of insurance will be discussed (Allen et al., 2008). Additionally, the effect of health literacy (DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004) and poor patient-provider communication (Ha & Longnecker, 2010; Street, 2003) on anxiety and avoidance of care are reviewed.

History of Sexual Abuse

Patients with a history of sexual abuse and/or trauma are far less likely to engage in gynecological care seeking behavior (Cadman, Waller, Ashdown-Barr, & Szarewski, 2012). Additionally, sexual trauma may prevent women from seeking follow-up gynecological care in the future (Kelly, Hunter, Daily, & Ramaswamy, 2016). For many

victims of sexual assault, physical examinations engender much anxiety in the medical encounter (Watson-Johnson, Townsend, Basile, & Richardson, 2012), and patients with a history of sexual assault often report a far greater negative experience than other patients (Robohm, & Buttenheim, 1997). Recent numbers suggest that as many as 1 in 16 women, an estimated 3.3 million in the U.S., report their first sexual encounter as rape (National Survey of Family Growth, CDC, 2019). This national survey further reveals that the average age of rape for women reporting was 15 years, a full 3 to 6 years before many women consider seeking gynecological care (ACOG). While research is clear on the way sexual abuse can severely impact a person's physical, emotional, and social health, it seems to still be uncovering the scope of the problem. And though a history of sexual abuse greatly impacts the care experience, Flicker and colleagues (2012) found that the majority of providers are not always aware of their patients' experience with abuse (Flicker, Cerullo, Swogger, Cort, & Talbot). When interpersonal barriers exist to the extent that key health events are missing from the patient-provider interaction, complete care cannot be given and disparities in care continue to exist.

Acknowledging the unique attributes of a gynecological examination is of particular importance regarding women with a history of sexual assault because the bodily areas being examined are those that were the objective of previous abuse (Cadman, Waller et al., 2012; Roberts, Reardon & Rosenfiled, 1999). Distress related to the examination among all women, and especially among sexual assault survivors, can be triggered by a myriad of variables. In fact, social constructs can be as powerful as physical interaction in preventing or promoting distress and anxiety among women receiving care (Pederson & Cohen, 2010). Aaron & Colleagues found that the innate

power imbalance in the medical setting is relative to the power imbalance of previous or ongoing interpersonal violence (Aaron, Crinite, Bonacquisti & Geller, 2013).

Additionally, the routine vernacular used by providers such as being told to lay back and relax, elevate their feet etc. can be triggering for many women (Russell et al., 2005).

Akerson (2012) reported that women in her qualitative study referenced themes of re-traumatization and feeling “on-edge” from feeling rushed and even forced to comply with simple commands. Similarly, in their study of the impact of PTSD on gynecological screening, Pederson & Cohen (2010), articulate that some of the distress and anxiety women feel is related to an interpersonal environment deficient in communicative space to openly discuss fear and anxiety. The authors suggest that by creating a space that is comfortable and that fosters a safe space for patients to honestly discuss concerns may decrease distress especially among women with PTSD related to sexual abuse (Pederson & Cohen, 2010).

Beyond the distress that and unfamiliar environment can cause (Muzik et al., 2013), are a myriad of social variables that may add to or protect against patient anxiety. In a synthesis of literature on trauma informed gynecological care, Reeves (2015) suggests that building trust with patients, minimizing distress, and maximizing patient autonomy are essential components of caring for patients in this setting with a history of trauma. Explanation of what sensations may occur during various exam components (Muzik et al., 2013), foregoing unnecessary procedures (Robets et al., 1999), and building an environment of trust with patients (Battaglia, Finley, & Liebschutz, 2003; Aaron et al., 2003) that also provides adequate privacy for open communication and disclosure (Van Loo et al., 2008) are all shown to improve patient experience and

comfort. Consistently assessing patient distress throughout the procedure not merely at the beginning is also suggested to mitigate patient fear (Pederson & Cohen, 2010; Reeves, 2015).

Race and Ethnicity

Race may also prove to be a barrier for seeking gynecological care (DeMaria, Hollub, & Hebernich, 2014). Nolan et al. (2014) articulate that African American patients are less likely than Caucasian women to schedule and attend annual exams because of cultural fears and misunderstandings of the medical community. Additionally, Golden (2014) claims that African Americans may also feel that such services are more invasive and compromise their privacy. In terms of ethnicity, Vu, Azmat, Radejko, and Padela (2016) report that Muslim American women are more likely to delay or avoid pelvic examinations altogether when wanting to maintain a certain sense of modesty or when a female doctor is unable to treat them.

In 2000, a study of patients from racial and ethnic minority groups who were asked to assess their interaction with health care providers were found to have a significantly more negative perception of physicians than their white counterparts (Doescher, Barry, Saver, Franks, & Fiscella). This study particularly cited lack of trust, and though results were based on perception, Doescher et, al. argue that the results point to the need for further physician training on patient-centered care to eliminate racial and ethnic disparities concerning medical care treatment (2000).

Self-concept

Women delay or avoid preventative screenings and gynecological care for a myriad of reasons, including fear of the invasiveness of the procedure and the discomfort

that often accompanies a pelvic exam (Anandan, Kirby, Lykins, & Graham, 2014). However, self-concept may also serve as a barrier for women seeking gynecological care. For example, Amy, Aalborg, Lyons, and Keranen (2006) revealed that women with higher BMIs (>30) were more likely to delay seeking pelvic examinations because of their weight. The scholars claimed that this is particularly problematic because obese patients already experience a higher risk for various kinds of cancer, and delaying screenings only exacerbates this problem.

DeMaria, Hollub, and Herbenick (2012) discuss that because such exams require the patient to expose her body to her provider, fear of embarrassment and a negative self-concept also act as a barrier to care. The scholars argue that some women may not seek gynecological exams because of their own perceived low self- image of their body. Smith & Smith (1999) sought to determine whether or not women experienced less anxiety during the medical encounter when given a cloth drape to wear verses a paper drape. Results reflected that women who receive the experimental modest gown reported significantly less distress than women in the control group who received the traditional, less modest paper drape (Smith & Smith, 1999). When allowed to wear more clothing during an exam (Roberts et al., 1999) and/or when afforded more modest draping during procedures (Pederson & Cohen, 2010) women report feeling less anxious during medical encounters.

Negative evaluation of appearance, whether in a general or specific sense, is linked to a variety of negative health outcomes including depression, anxiety, and social withdrawal (Davision & McCAbе, 2005; Syzmanski & Henning, 2007). Schick & colleagues (2010) describe how the subjective visual scrutiny of women continually

reinforces the pressure that women feel regarding shame of their own physical appearance. Repetitious observation of the scrutiny of women's bodies, according to Fredrickson & Roberts objectification theory, may lead women to adopt perceived observer perceptions of their bodies and begin to regard their physical person as a collection of parts (1997). This feedback loop of objectification, from others to self and back, can lead to negative psychological and physical outcomes that impact quality of life, relationships, sexual health, and overall health outcomes (Schick, Calabrese, Rima, & Zucker, 2010). The conflation of the perception of the physical form as a collection of parts and not a whole (Fredrickson & Roberts, 1997; Syzmanski & Henning, 2007) conflated with the pressure to appear a certain way based on observed objectification of other women, indicates that self-concept of women in a health care setting should be considered as an integral component of addressing overall health.

Logistical barriers

In a qualitative study of low-income women and screening and treatment for breast related illness, Allen & colleagues (2008) reported several key themes that negatively contributed to avoidance of follow-up care and consequent screenings. Women who delayed or avoided care expressed that long wait times, inconvenient appointment times, lack of childcare, lack of transportation or difficulty obtaining transportation, and general unfamiliar location greatly affected their attitude and intention to seek future care (Allen et al., 2008). Additionally, participants expressed that the interaction with the clinic staff and physician were poor regarding explanation of the procedures and diagnosis as well as a perception of feeling disrespected and unimportant to those providing the health care service (Allen et al., 2008). In a qualitative study of

homeless women and health seeking behavior, Gelberg & colleagues found that transportation and scheduling were particularly burdensome for participants (2004).

Health Literacy

Health literacy is defined by the world health organization as “the cognitive and social skills and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health” (WHOc, 1998). Health literacy is often described as socio-ecological in nature and not merely a product of personal knowledge. To that end, the IOM explains that health literacy results from the interaction of individuals with the social and information demands of the health contexts in their environment, including their health care context (Nielsen-Bohlman, Panzer, Kindig, 2004). Having a proficient level of health literacy is an important component to maintaining health as an individual and as a community. Unfortunately, low health literacy is commonplace, with an estimated 9 out of 10 people in the developed nations that possess less than proficient health literacy (DHHS, n.d.). This lack of proficiency is closely linked with poor health outcomes, poor disease management, increased hospitalizations, and overall diminished quality in patient health (DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004). The link between health and health literacy is so strong in fact that the American Medical Association (AMA) found that health literacy level is a stronger indicator of mortality risk than education level, socioeconomic status, race, or employment status (Weiss, 2007). The IOM explains that older adults, minorities, people with low education levels, and the poor are more likely to have low-literacy levels and subsequent health management struggles that impact every level of medical care and health management (Nielsen-Bohlman et., al. 2004).

Health literacy is not only an issue for those receiving health information but also for those disseminating health information. Rudd (2010) describes poor health literacy as a systemic issue. It is a shared burden between patients and providers and suggests that much of the burden sides with the provider to adequately and accurately ensure patient understanding (VanGeest, 2015). A large part of ensuring understanding of health information is tailoring messages to fit the patient's cultural context. Cultural context shapes the way a person interacts with health information; this includes belief systems which affect how people communicate, understand, and respond to health information (IHS).

Improving health literacy must involve building trust between the patient and health professional, the encouragement of ownership over one's health, and empowering people to take control over factors that influence their health (Mefalopulos, 2005). It is imperative that practitioners be mindful of the health literacy challenges of their patients in order that they may adapt their approach during the medical interaction (Learning CC, 2007; Kreps & Neuhauser, 2010). Additionally, practitioners are encouraged to avoid technical jargon and uncommon acronyms. The use of pictures and other media is encouraged to help patient learning as these tools often convey instructions better than words (HHS).

Patient-Provider Communication

Patient-provider communication plays an enormous role in a patient's path to healing, disease prevention, and overall health. Effective patient-provider communication enables physicians to better "facilitate accurate diagnosis, counsel appropriately, give therapeutic instructions, and establish caring relationships with patients" (Ha &

Longnecker, 2010 p.38). Street (2003) articulates that improved patient-provider relationships often result in immediate improvements in health (i.e., reduce anxiety over medical concerns) and ultimately improved psychological and physiological health for patients, even if mediated through other variables.

Barry and Edgman-Levitan (2012) describe that a major shift within the field of medicine has occurred toward patient-centered care. According to the Institutes of Medicine (IOM) (2001), patient-centered care is defined as care that is respectful of and responsive to individual patient preferences, needs, and values and care in which patients perceive their values to be of the utmost importance in clinical decision-making. A patient-centered approach is an individualized care delivery process that privileges a strong interpersonal physician-patient relationship. Providers must both elicit and understand the perspectives of their patients and be understanding and accepting of the psychosocial and cultural contexts from which their patients come. Physicians should also strive to understand patients' illness narratives and experiences (Harter & Bochner, 2009). More recently, Hesse and Rauscher (2018) have described the importance of "affectionate communication," or communication that reveals care for the patient from the provider, improves patients' perceptions of the trustworthiness of their provider and the overall strength of the relationship with their provider.

The necessity of patient-centered care cannot be overstated. Providers striving to practice patient-centered medicine who exhibit effective communication skills are perceived to deliver a higher quality of care than providers who do not (Street et al., 2009). Further, patients' perceptions of a strong interpersonal relationship with their provider may increase their ability to cope with health issues, reduce their illness

symptoms, and lower overall referral rates to specialized health care providers (Little et al., 2000). Patients have also reported feeling more engaged in the decision-making process, more satisfied with their care (Fallowfield, 2010), and more likely to adhere to recommended medical treatment when receiving patient-centered care (Zolnierek & DiMatteo, 2009). A patient-centered approach has been linked to a higher psychological quality of life and reduced symptoms of depression and anxiety (Rosenberg, Peele, Keyser, McAnallan, & Holder, 2012). Finally, a strong physician-patient relationship positively shapes the patients' evaluations of their treatment (Levinson, Roter, Mullooly, Dull, & Frankel, 1997).

However, care that is not patient-centered may severely impede care. Poor patient-provider communication practices may strain physician-patient relationships and hinder patient care. According to Martin and colleagues (2005), ineffective communication has been linked to patients feeling misunderstood, insignificant, and rejected by their physician. Patients have also reported increased uncertainty and anxiety surrounding the diagnosis and nature of their condition when they perceived communication from their providers to be ineffective (Agha et al., 2009). Poor patient-physician communication has been found to potentially reduce patients' adherence to recommended treatment regimens by as much as 40% (Martin et al., 2005). Additionally, primary care doctors who do not engage in patient-centered care are more likely to increase patients' utilization of unnecessary health care services and medical expenses (Bertakis & Azari, 2011).

Shared Decision-Making

Shared-decision-making is a critical component in providing patient-centered care. Charles, Gani, and Whelan (1997) define shared decision-making as an interactive process between physicians and patients, where both parties exchange health information, discuss treatment options, and reach an agreement on a treatment plan. In this decision-making model, physicians relinquish their “paternalistic authority” over patients (Charles et al., 1997). Instead, patients are encouraged to take an active role in their care, and they are given greater autonomy over their treatment decisions. Physicians provide patients with the risks and benefits of available treatment options and assist patients in making their decisions (Lin & Fagerlin, 2014). To achieve desired health outcomes, patients and providers work together to make health care decisions that incorporate patients’ needs, values, and preferences (Makoul & Clayman, 2006).

In their systematic review, Chewning et al. (2012) reveal that patients reported that they preferred engaging in shared decision-making with their providers. Additionally, patients have reported gaining a greater knowledge of their illnesses, understanding more fully the risks and benefits of treatment options, and feeling more empowered to make more accurate treatment decisions as a result of shared-decision making interactions (Stacy et al., 2011). Incorporating patients in the decision-making process has been shown to reduce patients’ decisional conflict and increase perceived satisfaction with their healthcare experiences (Edwards et al., 2004). Additionally, patients that participate in their own care are far more likely adhere to a treatment regimen they co-constructed with their providers (Joosten et al., 2008). Alternatively, patients who assume a passive role in their healthcare have indicated reduced health

outcomes and significantly lowered quality of life (Hack, Degner, Watson, & Sinha, 2006).

Cegala (2006) reveals that some patients, particularly minority or non-white patients, may be reticent to engage with their providers due to long-standing distrust of the medical community and sometimes low levels of health literacy. Yet, communication training with patients has been shown to be fruitful in increasing patient-participation in the medical encounter even among disparate populations. For instance, Cegala, Chisolm, and Nwomeh (2013) revealed that communication training with parents of pediatric surgery patients resulted in the parents asking more questions and expressing more assertive statements to their physicians. Additionally, Cegala, Marinelli, and Post (2000) revealed that communication training with patients resulted in higher levels of interaction with their providers in diagnostic medical interviews. And not only are patients affected by this patient communication training, but providers tend to respond favorably as well. Additionally, Cegala & colleagues revealed that physicians tended to provide more information to patients' questions and concerns when patients had been trained to communicate more effectively with their providers (2012).

Communication skills training is not only limited to patients. While shared decision-making is considered the standard in patient-centered care, many providers struggle involving patients in the decision-making process. For instance, Braddock et al. (1999) revealed out of a total of 1057 consultations between physicians and patients in which over 3500 clinical decisions were made, only 9.0% of met the standard for informed decision-making. However, training has been shown to improve physicians' ability to use shared decision-making skills when interacting with patients effectively.

Bieber et al. (2009) conducted two four-hour training sessions to teach physicians shared decision-making skills. After completing the training modules, providers reported greater confidence in their ability to interact with patients, recognize their attitudes, and explore their illness beliefs. Training was especially effective for physicians who indicated lacking interpersonal skills, like being overly domineering or hostile to challenges from patients. Also, patients have reported increased satisfaction with physicians trained in shared decision-making techniques. Subsequently, patients are more likely to feel engaged in the treatment process, supported, and accepted by their physicians (Bieber et al., 2006; Elwyn, Edwards, Wensing, Hood, Atwell, & Grol, 2003). Additionally, shared decision-making training has also been shown to improve physician-patient relationships. According to Bieber et al., (2006) physicians who receive training are more likely to display empathy toward their patients and are more willing to involve them in their own care.

Finally, Bylund, Peterson, and Cameron (2012) discuss the role of interpersonal communication theories in better facilitating improved outcomes in the medical encounter. In their Patient Education and Counseling article, the scholars argue that communication theory can help providers better understand how to enhance their communicative interaction goals with while also improving relationships with patients. Clearly, emphasizing the role of patient-provider communication and relationship building is essential for improving patient outcomes.

Based on a wealth of communication research and because of the sensitive nature of an annual gynecological exam, ACOG advocates that shared decision-making strategies be employed during the medical encounter. Shared decision-making strategies

can address concerns related to the internal pelvic examination and the clinical breast exam; such strategies are also helpful when physicians are attempting to explain the exam and obtain consent from the patient before performing these procedures (ACOG, 2016). Although many patients may give consent for the examination, there may remain a significant number of women who experience anxiety and distress related to this medical encounter. This distress can negatively affect a woman's behavioral intention to seek gynecological care. Anxiety levels, however, as previously detailed, can be modified through a provider's communicative approach.

Gaps in Current Literature

As reviewed above, an abundance of information concerning personal sexual history, race, and previous sexual abuse has been explored in research regarding a women's health care behavior. Likewise, a significant amount of research in communication has addressed a wealth of variables inherent in the realm of patient-provider interaction and its effect on a patient's health behavior and overall health outcomes (Zolnierek et al., 2009; Street, 2009). However there remains a scarcity of information concerning the specific ways in which provider communication specifically impacts women's anxiety, satisfaction, and exam seeking behavior in the often-sensitive environment of gynecological care. DeMaria and colleagues (2011; 2012) have been instrumental in identifying the relationship between body self-concept and exam seeking behavior but suggest that further investigation is warranted to include interpersonal variables like provider communication interaction skill and quality. Investigating the impact of provider communication in this area may help to identify modifiable barriers within the communicative realm that can be improved upon through provider and patient

education respectively. Identifying and removing these barriers may improve patient adherence to screening protocols and remove unnecessary anxiety.

Summary

Practitioners who are to be successful in reducing anxiety and improving patient adherence in this field must understand the multifaceted aspects of patient anxiety influenced by culture, self-concept, personal history, and procedural knowledge. Additionally, healthcare providers need to be more well-skilled in effective patient-provider communication. The better the patient-provider communication, the more likely that shared meaning will be obtained within the interaction and thus yield better patient outcomes. As suggested by the literature, evidenced-based interventions uniquely aimed at improving gynecological provider communication skills and the modification of stressful physical environment components can lessen a significant amount of anxiety and trepidation associated with seeking medical care. These same principles can be tailored to the often more vulnerable interaction between patients and gynecological care providers, thus, decreasing gynecological care related anxiety and ultimately improving pelvic exam protocol adherence and satisfaction.

CHAPTER 3

DISSERTATION METHODS

Research Design

The current study recruited 350 women over the age of 18 who have attended at least one gynecological health care appointment at any point in their life to complete a one-time 15-minute online survey investigating communicative, self-concept, and psychosocial factors related to pelvic exam seeking behavior, subsequent anxiety, and satisfaction with the experience. Survey questions included demographic information, psychological instruments, and a myriad of communicative and self-evaluative instruments. A combination of validated scales and open-ended questions within the survey instrument are detailed below. The convenience sample of participants were recruited through social media, email, and snowball sampling through the authors professional network. As an incentive, participants were able to enter into a drawing for one of several 20-dollar gift cards upon completion of the survey with a 1 in 10 chance of winning. Data analysis incorporated ordered logistic regression of composite scale scores and demographic control variables with satisfaction, anxiety and avoidance scores. Additionally, thematic analysis was utilized to examine open-ended responses encompassed within the data collection instrument.

Study Population

Inclusion Criteria

The current study collected demographic information, self-reported data concerning body satisfaction and self-concept, self-reported data regarding communication and perception of gynecological care providers, as well as data

concerning the overall health care experience. To participate in the current study, individuals had to be over the age of 18 and have had participated in at least one gynecological care appointment at any point in their life. Qualifying individuals were required to complete a one-time online survey lasting approximately 15 minutes. The survey was disseminated through the authors professional network to colleagues throughout the U.S and Canada and were asked to share the survey link with an IRB approved recruitment message via social media until saturation was met.

Current Sample

In total, 359 participants age 18 and over voluntarily participated in the study. Due to significant incomplete data, 9 participants were excluded. Thus, the final analytical sample size was 350. As reflected in Table 3.1, participants ranged in age from 19 to 80 (mean 31.2; SD 9.36). Participants self-identified race as Caucasian/White (91.1%), African-American (3.9%), Hispanic/White (2.1%), Hispanic/Black (0.3%), Asian/Pacific Islander (1.5%), and other (1.2%).

Measures

Demographic information including education, income, age, type of gynecological care provider (e.g., midwife, ob-gyn, general family practitioner), and sex of care provider were collected. In addition to demographic information, a variety of measures were employed to assess the impact of provider communication, self-concept, and various socio-physical environment factors pertaining to the care seeking experience.

Patient-Provider Communication Quality

In measuring effective patient-provider communication, a modified version the Bieber, Muller, Nicolai, Hartmann, and Eich (2010) Questionnaire on the Quality of

Patient-Provider Interaction (QQPPI) was utilized. Additionally, A General Physician Communication scale (Tabler, Scammon, Kim, Farrell, & Tomoia-Costisel, 2014), and the Physician Empathy Scale portion of a model by Kim, Kaplowitz, & Johnston (2004) that test the relationship between perceived physician empathy and its effect on patient satisfaction and compliance were employed to better understand how physician communication impacts the patient experience.

Quality of patient-provider interaction (QQPPI). The QQPPI serves to directly assess the quality of the patient-provider interaction. Bieber et. al. (2010) explain that the questionnaire places emphasis on the physician-patient relationship including how information is exchanged, patient comfort, patient satisfaction, and shared decision making. The unidimensional instrument has been employed in several studies assessing the quality of patient-provider interaction among patients with hypertension (Hickman, Clochesy, & Marym, 2016) and breast cancer patients (Reniscow et al., 2014). The instrument consists of 14 items rated on a 5-point Likert-type scale ranging from ‘I do not agree’ to ‘I fully agree’ (Bieber et. al., 2010). The instrument includes questions to evaluate the patients’ overall experience with physician interaction i.e., “The physician seemed to be genuinely interested in my problems,” “The physician’s explanations were easy to understand,” and “The physician did all he/she could to put me at ease.” The QQPPI has a high internal reliability ($\alpha = 0.95$). See Appendix 1 for scale items.

General physician communication. As part of a larger instrument assessing patient experience and relationship with providers, this general physician communication scale used by Tabler et al., (2014) captures a patient’s perception of a provider’s general ability to communicate during clinical interactions. The scale consists of five questions

rated on a five-point Likert scale. Higher scores indicate more positive assessment of the provider's communication. The scale has a high internal reliability ($\alpha = 0.91$). See Appendix 2 for scale items.

Physician empathy. Perceived provider empathy was assessed via this 10-item empathy assessment section of a model by Kim, Kaplowitz, & Johnston (2004). Scale items test how the relationship between perceived physician empathy impacts patient satisfaction and compliance. Answers are based on a five-point Likert scale questions ranging from 'strongly agree' to 'strongly disagree' with lower scores indicating better-perceived provider empathy skills. The internal reliability according to the study by Kim et al., 2004, is ($\alpha = 0.70$). See Appendix 3 for scale items.

Self-Concept

To assess body image and self-concept relevant to the current study, DeMaria, Hollub, and Herbenick's (2012) Female Genitalia Self Concept Scale (FGSC) and the revised Body Parts Satisfaction Scale (BPSS-R) (Berscheid, Walster, & Bohrnstedt, 1997) were utilized.

Female genital self-concept. In an effort to better understand the potential influence of genital self-concept on seeking preventative care, DeMaria et al., (2012) developed the Female Genital Self-Image Scale (FGSIS). In terms of its psychometric properties, the scale is multi-dimensional with two factors. The scale has a high internal reliability and a Cronbach alpha of .89. Additionally, each of the factors of the scale also yielded high reliabilities, with factor one revealing a reliability of .86 and factor two yielding a reliability of .82. Even among non-western college students, Pakpour, Zeidi, Ziaeiha, and Burri, (2014) revealed that the instrument maintained excellent

psychometric properties, and it accounted for over one-third of the variance in explaining the reasons that women are unwilling to seek gynecological care. The FGSIS is comprised of 7 Likert-type scale questions with answers ranging from ‘strongly disagree’ to ‘strongly agree.’ Questions include “I am not embarrassed about my genitals” and “I feel comfortable letting a healthcare provider examine my genitals.” More positive genital self-image has been shown to be correlated with greater gynecological care seeking behavior. See Appendix 4 for scale items.

Body parts satisfaction. To measure satisfaction with one’s body, the use of the revised Body Parts Satisfaction Scale (Berscheid, Walster, & Bohrnstedt, 1973) was employed. The scale consists of 12 items measured on a 6-point Likert scale (1= ‘extremely dissatisfied’; 6 = ‘Extremely satisfied’) to quantify satisfaction with areas of one’s body (hips, upper thighs, stomach etc.). The higher the mean score, the higher the overall body satisfaction. In terms of psychometric properties, the scale is considered valid and reliable (Petrie, Tripp, & Harvey, 2002). In a study by DeMaria et al., (2011) this scale demonstrated very good internal consistency ($\alpha = 0.86$). See Appendix 5 for scale items.

Social and Physical Environment

The psychosocial impact of the social and physical environment of the gynecological care setting was assessed through a series of open-ended questions to elicit emic data from participants. Questions sought to extract data concerning the way in which the overall environment (hospitality, lighting, privacy etc.) impacted a woman’s health seeking experience. Additionally, these open-ended questions served to provide women an avenue to express the ways in which the experience was made to be more

positive and negative beyond the confines of Likert-scale questions that may miss key pieces of data. See Appendix 6 for open-ended survey questions.

Dependent Variables

Outcome measures concerning avoidance of routine gynecological care, anxiety surrounding receiving routine gynecological care, and satisfaction with they care experience will be assessed similarly using a five-point Likert type scale. Though sometimes considered psychometrically suspect, single item-Likert measures have been found to be as effective or more effective in assessing outcomes than multi-item outcome measures (Hoepfner, Kelly, Urbanoski, & Slaymaker, 2011). In fact, single item measures have been found to protect against participant survey fatigue and reduces the chance of common method variance (Gardner, Cummings, Dunham, & Pierce, 1998; Hoepfner et al., 2011). For these reasons, the current study included the following single-item Likert measures to assess avoidance, anxiety, and satisfaction.

Patient avoidance. Avoidance of routine gynecological care screenings was assessed by the following question: “I avoid scheduling routine and recommended gynecological exams”. Responses were recorded on a five-point Likert scale ranging from 1= ‘strongly agree’ to 5= ‘strongly disagree’.

Patient anxiety. Anxiety concerning routine gynecological care screenings was assessed by the following question: “Routine gynecological exams cause me anxiety/distress”. Responses were recorded on a five-point Likert scale ranging from 1= ‘strongly agree’ to 5= ‘strongly disagree’.

Patient satisfaction. Satisfaction concerning routine gynecological care screenings was assessed by the following question: “On a scale from 1(poor) to 5

(excellent), please rate your overall satisfaction with your gynecological care experience.” Responses were recorded on a five-point Likert scale.

Data Collection Procedures

The survey instrument and various recruitment materials used in the current study were approved by the University of Kentucky Institutional Review Board (IRB) on April 1, 2019 after minor revisions to the recruitment materials to include appropriate branding.

Survey Creation and Security

The current study was administered as an online survey during a 6-week period in the summer and fall of 2019. Qualtrics Labs, Inc. software, Version 12,018 of the Qualtrics Research Suite, 2009 was utilized for survey dissemination. Qualtrics is a secure survey system that allows researchers high levels of control and protection of data in the collection process. Participants completing the survey were assigned a specific number for confidentiality purposes. This survey software system utilized each participants’ de-identified number to generate a user specific link to complete the online survey. Once participants completed the survey, all data was stored in a password secured location available only to the primary investigator. Survey data was solely managed and analyzed by the primary investigator.

Subject Recruitment

The current study sought to recruit 300 women 18 years and older who have attended at least one gynecological health care appointment to complete a one-time 15-minute online survey investigating communicative and psychosocial factors related to pelvic exam seeking behavior, subsequent anxiety, and satisfaction with the experience. A convenience sample of participants was gathered by posting the study survey link to

various social media websites over the course of six weeks until the sample size needed for statistical power was obtained. In addition to social media posting via Twitter and Facebook, the IRB approved study announcement was sent via email to colleagues in the author's professional network asking them to share recruitment information and the survey link with women in their social networks. Upon completion of the survey, participants were afforded the opportunity to enter a drawing for one of several 20-dollar gift cards with a 1 in 10 chance of winning.

Prior to entering the first section of the online survey, a page detailing the survey aims and potential risk (i.e., not anything greater than would be met by normal life events) were provided to participants. At which point, interested individuals could click forward to begin a set of demographic questions or leave the survey. Demographic questions provided a way for the primary investigator to eliminate or include participants who did not identify as cis-female by asking a follow up question concerning if the individual had reproductive organs necessitating a gynecological care provider. Those who indicated yes to this clarifying question were moved back into the survey while those who indicated they did not were sent to a survey exit screen.

Data Analysis

Data Cleaning

After the data collection process was complete and the survey link was disabled the data set was transferred from Qualtrics online software program into STATA 15.1 statistical software data set on the primary investigator's password protected computer. The data set was first examined for duplicate responses and missing data. No duplicate responses were found, however there were several instances of missing data throughout

participant entries. In all, 9 participants were removed for significant incomplete data leaving a total of 350 total participants. As expected with a large survey containing several scales, there were some missing data points. Of the remaining participants, 49.71% had at least 1 data point missing in the total survey. In order to examine whether the pattern of missing data is introducing bias, a logistic regression was performed by combining the missing cases and including that indicator alongside all other included covariates (Little & Rubin, 2002). Results showed no significance between the missing cases and covariates, suggesting that the data are missing at random (MAR). Therefore, in order to retain cases and maximize statistical power, multiple imputation methods (MNV) were used to assign values for cases with missing data. This process performs a series of univariate regression analyses to impute missing data on a case-by-case basis drawing information from all available variables in the data set (Royston et al., 2010). All analysis for the current study outcomes were conducted with imputed and non-imputed data for comparison of outcomes and revealed no difference in model significance. Therefore, so that pseudo R^2 values (Long & Freese, 2005) could be reported, the researcher used the non-imputed data set for coefficient and regression testing.

Recoding

Items as part of the instrument measuring physician empathy were reverse coded to reflect cohesiveness with scoring among independent variable (e.g. higher score to reflect positive evaluation). Additionally, several demographic variables were recoded. Literature supports that age, socioeconomic status (SES), race, relationship status, and provider type are often significantly associated with satisfaction, anxiety, and avoidance

of gynecological care. In an effort to control for this influence, a series of binary variables were created. To account for SES, the options for reporting estimated household income were maintained with <20,000, 20-49,999, and >50,000. To account for race in this non-diverse sample, dummy variables were constructed to indicate whether a participant was Caucasian/White (91.3%), African-American/Black (3.7%), Hispanic (2.3%), Asian/Pacific Islander (1%), or Other (1.3%) assigning non-Caucasian/White participants as the contrast group. Likewise, self-identified relationship status with 9 available categories was dummy coded to denote non-married as the contrast group of those who indicated being married (55.3%). Finally, to capture the impact of the type of care provider on outcome variables, the report of having a Midwife (7.4%) was contrasted with a group labeled “MD” consisting of Family Care Physicians (12.8%) and OB-GYNs (69.9%). Nurse practitioner (5.4%), Physician Assistant (3.3%), Campus Clinic Staff (.3%), and Other (0.9%) were grouped in a variable named “Other Gyn” and set as a contrast to the “MD” group.

Next, composite mean scores for each survey instrument with multiple questions were created. Overall the responses from five scales, Quality of Communication, General Communication, Physician Empathy, Female Genital Self-concept, and the revised Body Part Satisfaction Survey were independently combined to produce summative scores for each scale. Mean scores, Standard Deviation, Minimum scores, and Maximum scores for each summative scale, are reflected in Table 3.2. Alpha scores for each of the 5 scale were all above .90 and are also reflected in the table.

Qualitative open-ended essay responses were copied from the data set into a word document under the heading of each question respectively for organizational purposes helpful for analysis of themes.

Assumptions Testing

One of the assumptions underlying ordered logistic regression is that relationship between each outcome group is the same. This is called the proportional odds assumption or the parallel regression assumption. To assess proportional odds assumption the Brant test was employed, which analyzes the relationship between categories in the response variables (Brant, 1990). No variables were significant indicating that there are no violations of the proportional odds assumption (Brant, 1990; Long & Freese, 2006).

Further, prior to modeling the data, variable VIF (variance inflation factor) scores and correlations were examined. Though there is no standard value to determine the presence of multicollinearity, VIF scores greater than 10 have been suggested to warrant further attention. A review of the variance inflation factor (VIF) values indicate no scores approach the threshold of 10, suggesting that collinearity is not present in the data.

Multivariate Analyses

To answer research questions 1 through 6 a series of ordered logistic regression analyses were conducted. Independent variables consisting of composite scores from provider communication scales (QQPPI, General Physician Communication, and Physician Empathy) along with self-concept scales (FGSC and BPSS-R) were utilized. Additionally, demographic controls consisting of age and recoded demographic information (SES, race, relationship status, and type of care provider) were included. Outcome variables used in regression analysis included self-reported satisfaction,

anxiety, and avoidance scores as indicated via a one-item Likert scale question respectively. After controlling for the various demographic variables, separate ordered logistic regression analysis was conducted for each outcome variable of satisfaction, anxiety, and avoidance.

The impact on each outcome variable was assessed by building a series of models that introduced the impact of demographic variables in model 1, the impact of self-concept variables when added to demographic variables in model 2, the impact of communication variables when added to demographic variables in model 3, and the full model of all variable interaction in model 4. This modeling process was conducted for each of the 3 outcome variables. STATA 15.1 statistical software was employed to run these tests.

Thematic Analysis

The final research question, RQ7, is qualitative in nature and was assessed through a myriad of open-ended essay questions. The researcher employed the use of thematic analysis beginning first with in vivo coding, or first initial/open coding, to capture key phrases (Charmaz 2006; Glaser & Strauss, 1967). In line with the constant comparative method (Charmaz, 2006), emerging concepts guided focused second-level codes that served as primary reporting for the analysis and discussion of the open-ended questions encompassed within RQ7. Participant example quotes are located in Table 3.6.

Table 3.1 Participant Demographics

Characteristics	<i>n (%)</i>	Mean (SD)
Age		31.12 (9.36)
Current Undergrad?		
Yes	36 (10.7%)	
No	301 (89.3%)	
Household Income		
<20,000	17 (5.1%)	
20 – 49,999	72 (21.4%)	
>50,000	247 (73.5%)	
Race/Ethnicity		
Caucasian/White	307 (91.1%)	
African-American/Black	13 (3.9%)	
Hispanic/White	7 (2.1%)	
Hispanic/Black	1 (0.3%)	
Asian/Pacific Island	5 (1.5%)	
Other	4 (1.2%)	
Relationship Status		
Single	74 (22%)	
Casually Dating	17 (5.7%)	
Seriously Dating	33 (9.8%)	
Engaged	7 (2.1%)	
Married	195 (58%)	
Separated	1 (.3%)	
Divorced	4 (1.2%)	
Widowed	2 (.6%)	
Other	3 (.9%)	
Sexual Orientation		
Asexual	0 (0%)	
Bisexual/Pansexual	9 (2.7%)	
Heterosexual	287 (96.4%)	
Homosexual	2 (0.6%)	
Questioning	1 (.3%)	
Other	0 (0%)	
Care Provider		
Family Care (MD)	43 (12.8%)	
OB-GYN	235 (69.9%)	
Midwife	25 (7.4%)	
Nurse Practitioner	18 (5.4%)	
Physician Assistant	11 (3.3%)	
Campus Clinic Staff	1 (.3%)	
Other	3 (0.9%)	
Gender of Provider		
Male	60 (18%)	
Female	255 (76.6%)	
No Regular Provider	18 (5.4%)	

Table 3.2. Sample Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Max	Alpha
Satisfaction	4.11	0.92	1	5	
Anxiety	2.63	1.03	1	5	
Avoidance	2.56	1.16	1	5	
Age	31.12	9.36	19	80	
SES ^a	2.67	0.58	1	3	
White ^b	0.91	0.29	0	1	
Married ^c	0.58	0.50	0	1	
MD ^d	0.83	0.38	0	1	
Midwife ^e	0.07	0.26	0	1	
OtherGYN ^f	0.10	0.30	0	1	
FGSC	24.39	8.03	0	35	0.905
BPSS-R	44.67	10.43	14	72	0.916
Quality	43.48	11.22	6	55	0.97
GenCom	20.54	4.62	5	25	0.95
Empathy	28.28	10.61	10	50	0.95

a SES in 3 categories (1=<20,000, 2= 20,000-49,999, 3=> 50,000)

b denotes Non-White as Contrast Group 1 = white, 0= non-white

c denotes Non-Married as Contrast Group 1= married, 2= non-married

d Family Care Physician (MD) and OB-GYN (MD)

e denotes MD as contrast group

f Nurse Practitioner, Physician Assistant, Campus Clinic Staff

Table 3.3. Demographics, physician communication, and predicting satisfaction

Variable List	Model 1		Model 2	
	OR	S.E.	OR	S.E.
Demographics				
Age	1.03	0.014*	1.019	0.019
SES	0.611	0.124*	0.821	0.232
White ^a	1.192	0.44	1.33	0.667
Married ^b	2.66	0.687*	1.33	0.497
Midwife ^c	2.83	1.261*	1.527	1.015
Other Gyn ^c	1.07	0.387	0.713	0.385
Communication				
Quality			1.18	0.039**
Gen Com			1.16	0.088*
Empathy			1.02	0.016
cons				
R2	0.055		0.385	
N	326		233	

Note: ** <.01, * <.05,

a denotes Non-White as Contrast Group

b denotes Non-Married as Contrast Group

c denotes MD as Contrast Group

Table 3.4. Demographics, physician communication, and predicting anxiety

Variable List	Model 1		Model 2	
	OR	S.E.	OR	S.E.
Demographics				
Age	0.987	0.013	0.981	0.016
SES	0.558	0.114**	0.585	0.146*
White ^a	1.665	0.681	1.887	0.867
Married ^b	0.734	0.197	0.784	0.253
Midwife ^c	0.752	0.343	0.591	0.349
Other Gyn ^c	2.278	0.862*	2.324	1.22
Communication				
Quality			1.022	0.027
Gen Com			0.933	0.061
Empathy			0.983	0.012
cons				
R2	0.032		0.041	
N	279		210	

Note: ** <.01, * <.05,

a denotes Non-White as Contrast Group

b denotes Non-Married as Contrast Group

c denotes MD as Contrast Group

Table 3.5. Demographics, physician communication, and predicting avoidance

Variable List	Model 1		Model 2	
	OR	S.E.	OR	S.E.
Demographics				
Age	0.996	0.013	0.988	0.016
SES	1.1	0.213	1.247	0.299
White ^a	0.978	0.36	1.033	0.444
Married ^b	0.499	0.136**	0.51	0.167*
Midwife ^c	1.44	0.622	1.452	0.742
Other Gyn ^c	1.341	0.487	1.472	0.687
Communication				
Quality			0.996	0.028
Gen Com			0.944	0.064
Empathy			0.964	0.013**
cons				
R2	0.012		0.044	
N	255		197	

Note: ** <.01, * <.05,

a denotes Non-White as Contrast Group

b denotes Non-Married as Contrast Group

c denotes MD as Contrast Group

Table 3.6. Demographics, self-concept, and predicting satisfaction

Variable List	Model 1		Model 2	
	OR	S.E.	OR	S.E.
Demographics				
Age	1.03	0.014*	0.998	0.014
SES	0.611	0.124*	0.695	0.162
White ^a	1.192	0.44	1.429	0.651
Married ^b	2.66	0.687*	2.17	0.676*
Midwife ^c	2.83	1.261*	4.544	2.599**
Other Gyn ^c	1.07	0.387	0.667	0.312
Self-Concept				
FGSC			1.112	0.02**
BPSS			1.017	0.013
cons				
R2	0.055		0.149	
N	326		256	

Note: ** <.01, * <.05,

a denotes Non-White as Contrast Group

b denotes Non-Married as Contrast Group

c denotes MID as Contrast Group

Table 3.7. Demographics, self-concept, and predicting anxiety

Variable List	Model 1		Model 2	
	OR	S.E.	OR	S.E.
Demographics				
Age	0.987	0.013	0.985	0.015
SES	0.558	0.114**	0.609	0.144*
White ^a	1.665	0.681		0.99
Married ^b	0.734	0.197	0.817	0.256
Midwife ^c	0.752	0.343	0.94	0.492
Other Gyn ^c	2.278	0.862*	5.526	2.375**
Self-Concept				
FGSC			0.978	0.0193
BPSS			0.987	0.0136
cons				
R2	0.032		0.047	
N	279		224	

Note: ** <.01, * <.05,

a denotes Non-White as Contrast Group

b denotes Non-Married as Contrast Group

c denotes MD as Contrast Group

Table 3.8. Demographics, self-concept, and predicting avoidance

Variable List	Model 1		Model 2	
	OR	S.E.	OR	S.E.
Demographics				
Age	0.996	0.013	1	0.015
SES	1.1	0.213	1.31	0.3
White ^a	0.978	0.36	1.078	0.466
Married ^b	0.499	0.136**	0.438	0.146*
Midwife ^c	1.44	0.622	1.697	0.843
Other Gyn ^c	1.341	0.487	2.463	1.133*
Self-Concept				
FGSC			1.007	0.02
BPSS			0.993	0.0139
cons				
R2	0.012		0.018	
N	255		207	

Note: ** <.01, * <.05,

a denotes Non-White as Contrast Group

b denotes Non-Married as Contrast Group

c denotes MD as Contrast Group

Table 3.9. Participant Quotes

Theme	Participant Quote Example
Clinician Communication	
Active Listening	<p>“My provider listened to my fear of gynecological care with genuine concern and seriousness. She helped me move past my worries and it resulted in a positive experience.”</p> <p>“They really took the time & really LISTENED to me!!”</p> <p>“...she stopped talking and listened!”</p> <p>“My provider was mindful of my feelings and made sure to listen to my concerns.”</p> <p>“A past gynecologist rarely listened & was very forceful with her ideas, but my current is patient, kind, listens & offers solutions that she talks through with me”</p> <p>“Listen!! Listen to what we are really experiencing!! We are all not the same. We have unique bodies & unique experiences that made us who we are. Take time & listen.”</p> <p>“When I felt rushed or that they weren’t hearing me or what my concerns or issues were. Going through menopause is tough because it is so different for every woman. It’s been a nightmare for me & sometimes you feel like you’re just all alone & have to figure all this out on your own”</p>
Explanation	<p>“when told to put on the exam robe I was very nervous about what I was actually supposed to wear under it and what I wasn’t. I was also embarrassed to ask.”</p> <p>“She was reassuring and normalized painful boils that I had on my genital area (not STI) and explained what processes of the body resulted in boils. It made me feel less like a freak and less scared!”</p> <p>“She explained different options I had to manage endometriosis in ways that were very clear and easy to understand”</p> <p>“She was always calm and explained things before they were happening and then as they were happening”</p>

“She provides very clear direction on what she is doing during the exam so there are no surprises. She takes time to connect on a personal level”

Empathic Communication

“I’ve been with my GP for over 5 years, and she was extremely compassionate when I expressed how long I postponed a pap and tried to make me as comfortable as possible during the exam”

“I was worried about my birth control and it’s effects on my body and my care provider made an effort to make me feel comfortable and explain my body’s normal reactions”

I felt they cared about me and wanted to serve me, help me with problems, anxieties, etc”

She remembered things, was able to answer questions and made me feel valued and heard”

“He was not at all sympathetic and basically treatment as though I should not be upset”

“The past OBGYN, I felt like I was a number and not a patient... He also made me feel less than and I didn’t like feeling like that when I went to the doctor. Not very good bedside manner”

“I felt uncomfortable and dismissed, largely because she come across as ‘this is so routine, it doesn’t matter, just cooperate because I’m busy.’ The nurse (vs the GP) in the room was more comforting and probably the reason I didn’t jump off the table. However, the GP made me feel like my experiences didn’t matter and she was less accommodating of my anxiety, fear, and traumatic reactions – as a result, the exam was painful and, because she was not accommodating (like using more lube or gel), there was tearing and blood and the sample which resulted in inconclusive findings – and because of that experience, I avoided the follow up and did not muster the courage to get a pap for the next 8 years.. and now I feel that I avoided it because of my fear and insecurity and trauma, and now have HPV, and I’m completely at fault for contracting HPV and feel incredibly dirty”

“Just listen, don’t dismiss fears or worries just because they seem like we should know the answers. Be kind, try to see how we feel in the seat (waiting, trying to explain issues, being embarrassed, etc)”

Pace

“My previous gynecologist did not have the time to sit and talk with me. Our visits felt rushed”

“I felt rushed during my entire appointment”

“Being rushed is a big frustration as typically this is a provider you see once a year”

“Visits tend to be rushed. I don't think it's her fault. I think her schedule is always overbooked”

“Doctors don't seem to have adequate time”

“It's not that my provider is a bad listener or that I don't think they care – it's that they are so packed/popular that time doesn't allow for an unrushed conversation”

“When she takes an extra 2 minutes to check in and see how things really are... that goes very far. I know she is busy, but she truly cares.”

“Every time I see her she spends a decent amount of time with me and makes sure she has answered all my questions before she leaves the room”

“After having all 3 miscarriages, especially one at 12 weeks, he took the time to console me, let me cry, put me in a different room to not have to be around pregnant women”

Social Environment

Hospitality

“Nurses set the tone for the appointment. Nurses that are friendly and listen attentively create a welcoming environment. Nurses that make you feel rushed don't”

“Starts with the check in person and can either continue upstream or down. I've had people show me how rushed they are throughout and the visit made me feel like I was bothering them throughout and I've had the other experience”

“A smiling face and not rushing me through the history part of my exam (intake info) makes a big difference”

“I just felt like another number to the front desk person at times”

“The waiting room on campus feels like a cattle chute, and I feel like I'm just another student ID waiting to be beeped in, given ibuprofen, and sent home.”

“The front desk workers at my providers office always see, busy and in a rush and make me feel nervous about visiting and checking in. I am always early/on time to my visits and am forced to wait while people who arrive after me and are late for their appointments. It is very frustrating”

“When I sign in and no one acknowledges me for a while, it makes me worry 1) if they know I’m there and 2) if there’s going to be a long wait for my appointment”

“Having to wait a while in the waiting room made me feel even more anxious about what I was there for.”

“Usually unfriendly staff or long wait times cause me distress”

“Waiting a long time makes you feel forgotten about. Even if they get behind, sending someone to check on you would be great.”

Relational

“Gynecologists are supposed to be the doctors who care for women, so I think they should actually practice caring for women. Visits should be more personal, and more tailored to individual patients instead of assumptions about who you are.”

“Moving too quickly, cold conversations, going through the motions”

“All of the nurses were really friendly and would speak to me like they remembered me, whether they did or not”

“The NP introduced herself by her first name and talked to me before having me get undressed.”

“When I was having trouble conceiving and it was difficult to sit in the waiting room with pregnant women, they saw my hurt and let me go straight back to an exam room. When I conceived, they all celebrated with me.”

“One time after and IUD replacement, my doctor left and a nurse came in and gave me some juice – she told me that sometimes after IUD insertions people can feel faint of nauseas so she sat with me for a few minutes before I got up to leave”

“Getting to know patients and establishing a good rapport with them will make them more comfortable and more likely to come to you for problems and checkups. “

Physical Environment

Privacy

“Having medical students in the procedure was always really uncomfortable”

“I like when there is a curtain and a door. So even if the door opens, there is still a curtain to cover me from the hallway.”

“Extra sheets for coverage during female exam. A curtain behind the door so you won’t accidentally flash the hallway if it opens. Windows securely covered”

“My provider’s exam rooms have curtains within the individual rooms to block view from hallway when the door is opened.”

Modesty

“I have always had a hard time not being very modest.”

“The paper sheet was the worst – your butt sticks to it. And leaving socks on is just weird. In my case I was draped with a sheet – but a gown would have felt more secure”

“The paper vest and sheets are a joke. They ALWAYS make me feel uncomfortable. I’d much rather pay more for a laundered fabric sheet and garment. I’ve thought about bringing my own”

“If I can keep a shirt on that would make me feel more comfortable”

“I hate when I have to wear the paper gown and they talk to me and I’m the only naked one in the room”

“No one wants to sit in a cold room in a paper gown for 45 minutes not knowing what the holdup is.”

“I appreciate that they come in and talk with me when I’m clothed and then after everything has been discussed, they leave for me the change and then come back in to do the exam. Same after. I get dressed again before they come in with any further info or questions.”

Aesthetics

Emphasis on Babies

“I love that the exam room is very professional. My previous midwife’s office was covered in baby pictures. Everywhere you looked there was a baby staring back at you. As someone who will never have a child, it was terrible to sit in that exam room while waiting.”

“There are pictures of babies on the wall and they have made me feel good when I was there while pregnant but made me feel horrible when I was there for my 2 miscarriages”

“Décor. Either being out of date or having a heavy emphasis on babies”

“All the baby pictures – I want to have a baby someday but it just made me think of how many more OBGYN appointments I’ll have, which was a stressful thought”

“Two things stood out to me at my last visit. The first was all the pictures of babies that had been delivered. It made me sad for women who may be struggling with getting pregnant. The second thing that struck me was the consistently overbearing environment at [omitted] which emphasizes breastfeeding. I tried to but was unable to. Although the intentions are good it certainly “mom shames” those of us who couldn’t. To be honest, it’s a bit overkill.”

“Some exam rooms had a lot of pictures of babies which weirdly made me anxious as we were trying to get pregnant.”

General Décor

“I’m impacted positively by the well decorated clean environment”

“The fat people chart on the wall doesn’t make me feel great to stare at while I’m half naked”

“My university health center had a poster of a palm tree and a beach on the ceiling in the room they did Pap tests and other gynecological exams. It was a very small thing but it was nice to have to focus on”

“...being clean, nicely painted, and having updated literature posted makes them feel a lot less scary”

“the physical space is usually cramped”

“The fact that there were many different areas to sit in that were not crammed together made me feel less anxious about the experience”

“When the room is very small, it heightens my sense of anxiety. Makes me a little uncomfortable as well”

“Some exam rooms are tiny and there wasn’t always space for my husband to attend the appointment comfortably”

Sensate Variables

Lighting

“All of it makes me uncomfortable, the lighting scares me the most”

“Too bright!”

“The room is generally cold and the lights are often too harsh. This creates a general negative impact.”

“Being too cold or sitting too long undressed”

Temperature

“The cold metal speculum”

“Cold. Sitting in thin paper for a while”

“Ditch the paper garments/sheets and don’t keep the exam rooms so stinking cold.”

“I wish speculums could be warmed up before insertion. They’re always cold and it’s usually a bit of a shock to the system.”

Pain

“Her paps are quick and pain free”

“This was totally not her fault, but after the pain I felt during the pap smear, I am a little nervous to have another!”

“switching from the metal speculum to the plastic, because it was extremely uncomfortable and painful...”

“For the pap smear I was very uncomfortable and the RPN had trouble getting the speculum in, and the whole thing was uncomfortable and a bit painful. Also super awkward”

“once when another doctor (male) in a practice was filling in for my primary at the time, performed procedures in a perfunctory manner and did not stop when I expressed physical discomfort at a particular procedure that normally didn’t hurt. The only time I had bleeding following a pap.”

CHAPTER 4.

MANUSCRIPT 1

Not that doctor: The influence of provider communication on gynecological care seeking behavior and anxiety

Primary proposed journal: Journal of Women's Health

Secondary proposed journal: Journal of Family Planning and Reproductive Health Care

Abstract

Regular gynecological screenings are critical for women in promotion of health and preventing diseases like cervical cancer. Despite the importance of such examinations, many women fail to adhere to recommended screening protocols. As a result, women experience an increased disease risk. The current study examined the relationship between patient-provider communication quality, skill, and empathy on pelvic exam seeking behavior and exam-related anxiety and satisfaction. A total of 350 women 19 through 80 years of age completed a one time, 15-minute online survey regarding their gynecological care seeking behavior. Ordered logistic regression analysis revealed that when controlling for demographic variables and self-concept scores satisfaction was significantly impacted by the quality of provider communication. Specifically, higher quality of communication likely increases satisfaction by 12% (coef = .77; odds ratio= 1.19 at a $p < .01$). Avoidance was significantly associated with greater provider empathy indicating a 9% decrease in avoidance is likely as empathy scores go up (coef = -.19; odds ratio= 0.96 at a $p < .01$). when controlling for various demographic factors and self-concept scores provider communication was not shown to be significantly associated with patient anxiety. These findings suggest that enhancing provider communication quality and empathy may improve satisfaction and lessen patient avoidance.

Keywords: women's health, patient-provider communication, gynecological care

Introduction

Engaging in regular gynecological exams is the prevention strategy for combating the most common sexually transmitted infection, the Human Papillomavairs (HPV), which can lead to cervical cancer (CDC, 2017). According to the most recent numbers from 2017, close to 13,000 women in the United States are diagnosed with cervical cancer each year (CDC, 2019). Although engaging in regular gynecological exams can effectively mitigate the impact of HPV through early detection, the American Cancer Society (ACS) estimated that in 2018 nearly 13,240 cases of invasive cervical cancer will be diagnosed (2018). Additionally, it is estimated that over 14,000 women will die from this type of cancer (ACS, 2018). Yet even with this diffusion of facts and figures concerning cervical cancer, many women continue to forgo regular screenings (Amy et al., 2006). In fact, of those diagnosed each year, nearly 50-60% of cases are among women who rarely or never participate in annual screenings (CDC, 2017). Yet, cervical cancer, when caught early, is one of the most successfully treated cancers (ACS, 2018). However, in order to take advantage of this life saving prevention, women must adhere to regular screening protocols.

Patient-Provider Communication

To best promote adherence to screening protocols it is of paramount importance to ensure that the interaction between the provider and patient is one that imbues comfort and trust and not one that produces dissonance or further anxiety concerning medical care. Effective patient-provider communication enables care providers to establish a caring relationship with their patients, better facilitate an accurate diagnosis, and provide meaningful counsel (Ha & Longnecker, 2010). Previous research articulates that

improvements in a physician's communicative approach often results in immediate patient improvement (e.g., reduction in anxiety over medical concerns) and ultimately improved psychological and physiological health for patients, even if mediated through other variables (Street, 2003). Successful communication in a clinical setting involves the inclusion of patient-centered care that engenders respect of patient preferences, values and needs during clinical decision-making (IOM, 2001). According to Barry & Edgman-Levitan (2012), providers must both elicit and understand the perspectives of their patients and be understanding and accepting of the psychosocial and cultural contexts from which their patients come.

Further, a patient-centered approach should privilege a strong interpersonal relationship with patients to improve health outcomes (Barry & Edgman-Levitan, 2012). This strong interpersonal relationship was further described by Harter & Bochner as one in which the provider actively strives to understand the patient's illness narrative and experience (2009). Hesse & Rauscher describe the importance of the interpersonal relationship as communication that is affectionate in nature, or reveals care for the patient thereby improving patient perception of the providers investment in the relationship (2018). Attention to the patient-provider relationship improves the overall strength of the relationship, the perceived trustworthiness of the provider, and thus lessens trepidation for the patient surrounding care seeking (Barry & Edgman-Levitan, 2012; Harter & Bochner, 2018).

Providers who exhibit effective communication skills are perceived to deliver a higher quality of care than providers who do not (Street et al., 2009). Moreover, when patients perceive a strong interpersonal bond with their provider they report improved

ability to cope with health issues, a reduction in illness symptoms, and have fewer referrals to specialists (Little et al., 2000). Patients who are more interpersonally engaged with their provider report greater satisfaction with care (Fallowfield, 2010) and are more likely to adhere to recommended medical protocol (Zolnierek & DiMatteo, 2009). Beyond adherence to protocol, patients receiving improved patient-centered care are also found to experience less anxiety surrounding medical care (Rosenberg, Peele, Keyser, McAnallan, & Holder, 2012).

Conversely, deficient interpersonal patient-provider relationships may severely impede care. According to Martin and colleagues (2005), ineffective communication has been linked to patients feeling misunderstood, insignificant, and rejected by their physician. Patients also reported increased uncertainty and anxiety surrounding the diagnosis and health concerns when they perceived physician communication to be ineffective or ingenuine (Agha et al., 2009). Furthermore, poor patient-physician communication has been found to potentially reduce patient adherence to recommended treatment regimens by as much as 40% (Martin et al., 2005).

Shared Decision-Making

Shared decision-making is an interactive process between physicians and patients, where both parties exchange health information, discuss treatment options, and reach an agreement on a treatment plan (Charles, Gani, & Whelan, 1997). In this decision-making model, physicians relinquish their “paternalistic authority” over patients in order to provide patient-centered care (Charles et al., 1997). Instead of merely listening, patients should be encouraged to take an active role in their care and assume greater autonomy over their treatment decisions by incorporating their needs, values, and preferences

(Makoul & Clayman, 2006). Incorporating patients in the decision-making process has been shown to reduce patients' decisional conflict and increase perceived satisfaction with their healthcare experience (Edwards et al., 2004). Additionally, patients that participate in their own care are far more likely to adhere to a treatment regimen that they co-constructed with their providers (Joosten et al., 2008). Alternatively, patients who assume a passive role in their healthcare have indicated reduced health outcomes and significantly lowered quality of life (Hack, Degner, Watson, & Sinha, 2006).

When care is patient-centered and conducive to shared-decision making, patients report feeling more engaged in the treatment process, supported by, and accepted by their physicians (Bieber et al., 2006; Elwyn et al., 2003). Furthermore, physicians who receive training to improve communication rapport with patients are more likely to display empathy toward their patients and report improvements overall with patient care (Bieber et al., 2006). Practitioners who are to be successful in reducing anxiety and improving patient adherence, particularly in the vulnerable confines of gynecological exams, must understand the multifaceted aspects of patient anxiety influenced by culture, self-concept, personal history, and procedural knowledge. Although many patients may give consent for the examination, there may remain a significant number of women who experience anxiety and distress related to this medical encounter. This anxiety may negatively impact a woman's behavioral intention to seek gynecological care in the future. However, through investigation of specific communicative constructs within the patient-provider relationship we are able to understand and therefore better address communicative constructs that impact behavioral intention for seeking care and subsequent anxiety surrounding the gynecological care seeking and receiving process.

Theoretical Framework

Adherence to gynecological screening protocols is a complex behavior to understand as a myriad of factors can impact a woman's decision to attend a pelvic exam or pap test. Bronfenbrenner's Socioecological model (1977) posits that the decision to adopt any healthcare behavior is made up of an amalgam of influences ranging from personal knowledge to policy. Fundamental to this model is the understanding, often used to describe public health phenomenon, that a person's behavioral choices are far more intricate than simply knowing the facts; in a sense human behavior is a product of the layers of influence that surround us and not merely our knowledge. Conversely, the complexity represented in the socioecological model affords a variety of intervention options aimed at one or several levels of the model.

The current study sought to examine a woman's behavioral intentions concerning gynecological health care seeking through intrapersonal factors (e.g. anxiety of an individual), interpersonal (social and interactive influences within the clinic setting), and organizational layers (the clinical psychosocial environment). To best examine the influences within these layers of the model, the current study nests a health centered view of the Social Exchange Theory (SET), as espoused by Roter & Hall (1991), within the socioecological model of behavioral understanding. Use of Roter & Hall's SET posits that reciprocity and social exchange within the medical interaction can aid in the understanding of the dynamic nature of the communicative interaction between patients and providers in the clinical setting and thus help researchers understand social barriers that influence care seeking behavior, namely patient-provider interaction (1991).

It is well documented that a provider's verbal and non-verbal communication, both the skill and quality of it, may account for patient compliance with and intention to seek out recommended actions within the gynecological care experience including preventative screenings (Street et al., 2009; Little et al., 2000; Zolnierek & DiMatteo, 2009). Therefore, in the investigation of current and intended compliance with recommended screenings, it is prudent to include examination of the impact of social exchange and reciprocity on health care decision making. Through this approach, investigators can identify modifiable barriers within the communicative realm that can be improved upon through provider and patient interventions, respectively.

Summary

The current study will help to better explain the role of patient-provider communication quality, skill, and empathy on behavioral intentions for seeking gynecological care and the subsequent anxiety and satisfaction surrounding the gynecological care process. Investigating the impact of provider communication in this area will help to identify modifiable barriers within the communicative realm that can be improved upon through provider and patient education respectively. Identifying and removing these barriers may improve patient adherence to screening protocols and remove unnecessary anxiety. Based on the literature, the following research questions are offered:

RQ1: After controlling for demographic factors, how do patient-provider interaction quality, general provider communication skills, and provider empathy function to predict patient satisfaction?

RQ2: After controlling for demographic factors, how do patient-provider interaction quality, general provider communication skills, and provider empathy function to predict pelvic exam related anxiety?

RQ3: After controlling for demographic factors, how do patient-provider interaction quality, general provider communication skills, and provider empathy function to predict pelvic exam-seeking behavior?

Methods

Procedures

A convenience sample of participants were gathered by posting the study survey link to various social media websites (e.g., Facebook, Twitter, and Instagram) over the course of five weeks in the summer and fall of 2019. Additionally, a study announcement was sent via email to colleagues in the author's professional network asking them to share recruitment information and the survey link with colleagues and students via email and social media. All participants completed the same online Institutional Review Board approved survey through a secure and anonymous web link via Qualtrics, a web-based software program.

Participants

In total, 359 participants age 18 and over voluntarily participated in the study. Participants had a mean age of 31.12 (SD 9.36) the youngest participant was 19 years old and the oldest was 80. The sample was not diverse with 91.3% self-identifying as Caucasian/White, African-American/Black (3.7%), Hispanic (2.3%), Asian Pacific Islander (1%), and other (1.3%). Due to significant incomplete data, 9 participants were

excluded. Thus, the final analytical sample size was 350. See Table 3.1 for additional participant demographics.

Constructs Measured

In measuring effective patient-provider communication, a modified version the Bieber, Muller, Nicolai, Hartmann, and Eich (2010) Questionnaire on the Quality of Patient-Provider Interaction (QQPPI) was employed. Additionally, the General Physician Communication scale (Tabler, Scammon, Kim, Farrell, & Tomoaia-Costisel, 2014), and the Physician Empathy Scale portion of a model by Kim, Kaplowitz, & Johnston (2004) that test the relationship between perceived physician empathy and its effect on patient satisfaction and compliance were utilized.

Quality of Patient-Provider Interaction

Quality of Patient-Provider Interaction (QQPPI). The QQPPI serves to directly assess the quality of the patient-provider interaction. Bieber et. al. (2010) explain that the questionnaire places emphasis on the physician-patient relationship including how information is exchanged, patient comfort, patient satisfaction, and shared decision making. The unidimensional instrument has been employed in several studies assessing the quality of patient-provider interaction among patients with hypertension (Hickman, Clochesy, & Marym, 2016) and breast cancer patients (Reniscow et al., 2014). The instrument consists of 14 items rated on a 5-point Likert-type scale ranging from 'I do not agree' to 'I fully agree' (Bieber et. al., 2010). The instrument includes questions to evaluate the patients' overall experience with physician interaction i.e., "The physician seemed to be genuinely interested in my problems," "The physician's explanations were

easy to understand,” and “The physician did all he/she could to put me at ease.” The QQPPI has a high internal reliability ($\alpha = 0.95$). See Appendix 1 for scale items.

General Physician Communication

As part of a larger instrument assessing patient experience and relationship with providers, this general physician communication scale used by Tabler et al., (2014) captures a patient’s perception of a provider’s general ability to communicate during clinical interactions. The scale consists of five questions rated on a five-point Likert scale. Higher scores indicate more positive assessment of the provider’s communication. The scale has a high internal reliability ($\alpha = 0.91$). See Appendix 2 for scale items.

Physician Empathy

Physician Empathy. Perceived provider empathy will be assessed by using the 10-item empathy assessment section of a model by Kim, Kaplowitz, & Johnston (2004). This scale tests the relationship between perceived physician empathy and its effect on patient satisfaction and compliance. Answers are based on a five-point Likert scale ranging from strongly agree to strongly disagree with lower scores indicating better-perceived provider empathy skills. The coefficients for this scale were all rated above ($\alpha = 0.70$). See Appendix 3 for scale items.

Exam Satisfaction, Anxiety & Avoidance

Satisfaction. Satisfaction concerning routine gynecological care screenings was assessed by the following question: “On a scale from 1(poor) to 5 (excellent), please rate your overall satisfaction with your gynecological care experience.” Responses were recorded on a five-point Likert scale.

Avoidance. Avoidance of routine gynecological care screenings is assessed by the following question: I avoid scheduling routine and recommended gynecological exams. I responses are recorded on a five-point Likert scale ranging from 1= strongly agree to 5=strongly disagree.

Anxiety. Anxiety concerning routine gynecological care screenings is assessed by the following question: Routine gynecological exams cause me anxiety/distress. Responses are recorded on a five-point Likert scale ranging from 1= strongly agree to 5=strongly disagree.

Data Analysis

As expected with a large survey data set there was missing data. Analysis revealed that 49.71% of participants were missing at least 1 data point in the total survey. In order to examine whether the pattern of missing data was introducing bias, a logistic regression was performed by combing the missing cases and including that indicator alongside all other included covariates (Little & Rubin, 2002). Results showed no significance between the missing cases and covariates, suggesting that the data were missing at random. In order to retain cases and maximize statistical power, multiple imputation methods (MVN) were used to assign values for cases with missing data. This process performs a series of univariate regression analyses to impute missing data on a case-by-case basis drawing information from all available variables in the data set (Royston et al., 2010). The data set containing missing variables and the new data set containing imputed variables were compared to assess if any abnormal changes occurred between means, frequencies, and box plots; no abnormalities were present. All analysis for the current study outcomes were conducted with both the imputed and non-imputed

data set for comparison of outcomes and revealed no difference in model significance leading the researcher to assume that the missing data points did not impact association between independent and dependent variables. Therefore, in order that pseudo R2 values (Long & Freese, 2005) could be reported, the researcher used the non-imputed data set for coefficient and regression testing.

Recoding

Items as part of the instrument measuring physician empathy were reverse coded to reflect cohesiveness with scoring among independent variable (e.g. higher score to reflect positive evaluation). Additionally, several demographic variables were recoded. Literature supports that age, socioeconomic status (SES), race, relationship status, and provider type are often significantly associated with satisfaction, anxiety, and avoidance of gynecological care. In an effort to control for this influence, a series of binary variables were created. To account for SES, the options for reporting estimated household income were maintained with <20,000, 20-49,999, and >50,000. To account for race in this non-diverse sample, dummy variables were constructed to indicate whether a participant was Caucasian/White (91.3%), African-American/Black (3.7%), Hispanic (2.3%), Asian/Pacific Islander (1%), or Other (1.3%), assigning non-Caucasian/White participants as the contrast group. Likewise, self-identified relationship status with 9 categories was dummy coded to denote non-married as the contrast group to those who indicated being married (55.3%). Finally, to capture the impact of the type of care provider on outcome variables, the report of having a Midwife (7%) was contrasted with a group labeled “MD” consisting of Family Care Physicians (12%) and OB-GYNs (73%). Nurse practitioner (4.3%), Physician Assistant (2.3%), Campus Clinic Staff (.3%),

and Other (1%) were grouped in a variable named “Other Gyn” and set as a contrast to the “MD” and Midwife group.

Next, composite mean scores for each survey instrument with multiple questions were created. Overall the responses from the 3 scales of interest, Quality of Communication, General Communication, and Physician Empathy were independently combined to produce summative scores for each scale. Mean scores, Standard Deviation, Minimum scores, and Maximum scores for each summative scale are reflected in Table 3.2. Alpha scores for all five scales included in the study were above .90 and are reflected respectively in Table 3.2.

Assumptions Testing

One of the assumptions underlying ordered logistic regression is that relationship between each outcome group is the same. This is called the proportional odds assumption or parallel regression assumption. To assess proportional odds assumption the Brant test was employed (Brant, 1990). No variables were significant indicating that there are no violations of the proportional odds assumption.

Additionally, prior to modeling the data, variable VIF (variance inflation factor) scores and correlations were examined. Though there is no standard value to determine the presence of multicollinearity, VIF scores greater than 10 have been suggested to warrant further attention. A review of the variance inflation factor (VIF) values indicate no scores approach the threshold of 10, suggesting that collinearity is not present in the data.

Multivariate Analyses

To answer the research questions a series of ordered logistic regression analyses were conducted. Independent variables consisting of composite scores from provider communication scales (QQPPI, General Physician Communication, and Physician Empathy) were utilized. Additionally, demographic controls consisting of age and recoded demographic information (SES, race, relationship status, and type of care provider) were included. Outcome variables used in regression analysis included self-reported satisfaction, anxiety, and avoidance scores as indicated via a one-item Likert scale question respectively. After controlling for the various demographic variables, separate ordered logistic regression analysis was conducted for each outcome variable of satisfaction, anxiety, and avoidance.

The impact on each outcome variable was assessed by building a series of models for each outcome variable that introduced the impact of demographic variables in model 1 and the impact of communication variables when added to demographic variables in model 2. STATA 15.1 statistical software was employed to run these tests.

Results

Satisfaction

To begin analysis on self-reported satisfaction, associations between age, SES, race, relationship status, and type of provider were included. Model 1 in Table 3.3 shows that age, SES, being married, and having a midwife significantly predict satisfaction with the gynecological care experience. Specifically, as age increases women are 10 percent more likely to report greater satisfaction (coef = .18; odds ratio= 1.03 at a $p < .05$). As household income (SES) goes up the odds of reporting greater satisfaction decreases by 6 percent (coef = -.008; odds ratio= 0.61 at a $p < .05$). Being married, in contrast to all other

reported relationship status categories, improves the odds of greater satisfaction by 26 percent (coef = .27; odds ratio= 2.66 at a $p < .05$). Additionally, having a midwife in contrast to an MD increases the likelihood of satisfaction by 28 percent (coef = .17; odds ratio= 2.83 at a $p < .05$).

Model 2 incorporates the impact of provider communication (Quality of physician communication, General communication skill, Provider Empathy) on reported satisfaction with current gynecological care while controlling for demographic variables. As demonstrated in Table 3.3, Model 2 reveals that provider communication quality and general communication skill were significant while all demographic controls dropped out of significance. Specifically, as provider communication quality scores improve the likelihood that patient satisfaction increases by approximately 12 percent (coef = .77; odds ratio= 1.18 at a $p < .01$). Additionally, as the general communication skill of a provider increases the odds of satisfaction increase by 11 percent (coef = .74; odds ratio= 1.16 at a $p < .05$). Overall, the final model accounts for 38.5% of the variance of satisfaction among survey participants ($R^2 = 0.385$).

Anxiety

To begin analysis on self-reported anxiety, associations between age, SES, race, relationship status, and type of provider were included. Model 1 in Table 3.4 shows that SES and having another gynecological care provider (Other Gyn) other than an MD significantly predict anxiety associated with the gynecological care experience. Specifically, as household income (SES) increases the likelihood of anxiety decreases by 5 percent (coef = -.25; odds ratio= 0.55 at a $p < .01$). Having a gynecological care

provider other than an MD (family care provider or OB-GYN) increases the likelihood of higher anxiety by 22 percent (coef = .13; odds ratio= 2.27 at a $p < .05$).

Model 2 examines the association of the variable of interest, provider communication (Quality of physician communication, General communication skill, Provider Empathy), on reported anxiety with current gynecological care while controlling for demographic variables. As demonstrated in Table 3.4, Model 2 reveals that only SES held significance. Specifically, as SES increases the likelihood of anxiety related to gynecological care decreases by 5.8 percent (coef = -.25; odds ratio= 0.58 at a $p < .05$). Overall the final model accounts for 4.1% of the variance of anxiety scores among survey participants ($R^2 = 0.041$).

Avoidance

To begin analysis on self-reported avoidance, associations between age, SES, race, relationship status, and type of provider were included. Model 1 in Table 3.5 shows being married significantly predicts avoidance of gynecological care. Specifically, being married as contrasted with all other relationship status categories decreases the likelihood of increased avoidance of gynecological care by 5 percent (coef = -.15; odds ratio= 0.50 at a $p < .01$).

Model 2 examines the association of provider communication (Quality of physician communication, General communication skill, Provider Empathy) on reported avoidance of gynecological care while controlling for demographic variables. As demonstrated in Table 3.5, Model 2 reveals that marital status remained significant. Specifically, when contrasted with all other relationship status options, being married decreased the likelihood of avoidance by 5 percent (coef = -.15; odds ratio= 0.51 at a $p <$

.05). Of specific interest to the study, a provider's empathy was revealed to be significantly associated with a decrease in avoidance at the $p < .01$ level (coef = $-.19$; odds ratio = 0.96 at a $p < .01$). As empathy increases there is a likelihood of a decrease in avoidance of 9.6 percent. The overall model accounts for 4.4% of the variance of avoidance scores among survey participants ($R^2 = 0.044$).

Discussion

As expected, the current study builds upon research concerning patient provider communication that indicates improved provider communication results in an overall improved patient experience (Ha & Longnecker, 2010). As providers increase their interpersonal skill, psychological and physiological health of patients improves (Street, 2003), resulting in an ability to better interact with and adhere to medical recommendations because the patient perceives that they are being cared for genuinely (Barry & Edgman-Levitan 2012 ; Little et al., 2000). Though the current study did not find significant results concerning communication and anxiety in this sample, there are several significant results to unpack. Regarding a woman's reported satisfaction, the overall model, when controlling for demographics and self-concept scores, accounted for 41 percent of the variance in reported satisfaction. Quality of provider interaction remained significant at the $p < .01$ with all control variable present indicating a strong association between a patient's perception of provider interaction quality and their overall satisfaction. While the overall model predicting avoidance behavior accounted for a more modest 4.4 percent of the variance, it indicates the importance of the way providers communicate and interact with patients in an empathetic way. Empathy, is the only communication variable that demonstrated significance when controlling for

demographic factors and exhibited an increase in association with decreased avoidance when paired with the demographic control of being married.

Viewing satisfaction and avoidance behavior through the lens of the socioecological model reveals how a woman's behavioral decisions, in this case, gynecological care seeking, and satisfaction with care are made up of layers of influence. The regression modeling in the current study reflects how complex a woman's care seeking, satisfaction, and distress levels are when choosing to schedule and follow through with care. Before a woman even walks through the clinic doors her demographics predict, in part, what her level of satisfaction, anxiety, and avoidance may be. Specifically, it appears that SES (measured as estimated household income) may be a significant demographic factor that impacts anxiety. As SES increases the likelihood of anxiety decreases. This demographic holds significance when all other controls of interest are added.

Beyond personal demographic characteristics, the clinic door that you walk into matters in regard to anxiety. The current sample revealed that going to a care provider like a physician's assistant, nurse practitioner, or campus clinic provider in contrast to a family care MD or OB-GYN negatively impact anxiety scores. Meaning that it can be expected that having one of these providers, listed in the study as 'Other Gyn,' increases anxiety among women seeking gynecological care. Similarly, having a midwife when contrasted with having an MD (Family care MD & OB-GYN), was significant at the $p < .01$ level in predicting satisfaction. Meaning, that having a midwife is predictive of improved satisfaction. This variable, however, drops out of significance as communication variables are added. This is significant in that, as quality of provider

interaction and general communication skill of the provider are accounted for, the playing field is leveled between provider types. Midwives are often lauded for their attention to patient concern and often are described as kind and more caring than physicians (Berg, 2005). However, this analysis reveals that all types of care providers can positively impact patient satisfaction through adoption of improved quality of care. Quality, as described in the current study, includes a focus on patient comfort, shared decision making, and showing genuine interest. Quality of communication was the greatest predictor of satisfaction throughout the model and demonstrates that improved interaction quality can mitigate the difference between types of providers and various demographic variables to improve patient satisfaction.

Notably, the current study revealed that empathy, when demonstrated by a provider, protects against avoidant tendencies. Of the sample, 4.4 percent of the variance concerning avoidance of routine gynecological care was accounted for by the inclusion of perceived provider empathy. Hess & Rausher (2018) describe the care of a provider to a patient as affectionate in nature and as such it improves the way patients perceive their interaction with their provider. Empathy as described in the survey includes language consistent with previous studies that include ‘feeling cared for,’ ‘showing interest,’ ‘showing concern,’ and seeking to understand the patient experience. Overall, attention to patient needs and showing care for women in this particularly unique and often vulnerable situation is of great importance in the quest to improve adherence to routine gynecological care screenings particularly among women who are already apprehensive about gynecological care.

Interestingly, the demographic control of being married carried significance in the full regression model along with provider empathy concerning avoidance of care. Being married, when contrasted to all other self-reported relationship categories was shown to reduce the odds of avoiding gynecological care by 5 percent. This was an unexpected outcome but one that falls in line with some research suggesting that being in a supportive marriage can be protective against issues like postpartum depression (Banker & LaCoursiere, 2014) and contributes to improvements in overall health (Hughes & Waite, 2009). However, it is important to note that the contrast group to the being married group includes relationship statuses that may be indicative of lack of social support which can negatively impact care and those indicating cohabitation which is shown to have similar protective health effects when compared to being married (Wu & Hart, 2002). Future studies should investigate how the quality of interpersonal romantic relationships, not merely marital status, as a protective factor against avoidance of medical care.

The current study, together with previous research on patient-provider communication and its influence on care seeking behavior, has direct implications for GYN practitioners. Providing clear, easy to understand instruction, actively listening to patients, and creating an environment of safety and patient respect is paramount in the patient-provider communicative interaction. This is especially pertinent in the gynecological exam interaction, which engenders unique care seeking anxiety among women. Special attention should be paid to communication training among healthcare providers who provide pelvic screenings and counseling to women. Teaching providers to engage in tasks as basic active listening strategies may be instrumental in encouraging

women to continue with annual screenings examinations. The importance of annual exams that may identify cancer or other health concerns cannot be understated.

Limitations & Future Research

One limitation of the current study is that the survey was a cross-sectional design. Although the current results are enlightening and reveal much about barriers to women obtaining proper care, the current study results are only a snapshot of the reasons that women either have anxiety concerning pelvic exams or why they are less likely to attend these exams. Additionally, the sample suffered from lack of diversity and thus could not explore the role of race and the outcome variables of interests in the current study. Future studies should strive to collect a more diverse sample of participants.

Further, the generalizability of the findings to other populations could be potentially problematic given that women in lower, socio-economic groups may not have as much autonomy in accessing care given the insurance constraints imposed upon them. Future research should include demographic variables like insurance in the analysis to better understand this communicative phenomenon with a richer cultural context.

One area ripe for future research concerns the types of messages women need to hear from their providers during medical encounters that will alleviate their perceived anxiety concerning pelvic examinations and will encourage them to seek future care. Providers should be advised to employ more empathetic communication with their patients. Healthcare providers could be instructed to engage in a greater number of active listening tasks, as well as overt displays of respect and care for patients during office visits. Through self-report surveys, researchers could follow-up with patients and assess the perceived anxiety of patients following the medical encounter to assess whether or

not effective patient-provider communication encouraged patients to pursue future gynecological care.

Conclusion

The current study builds on previous research affirming the importance of patient-provider communication for improving patient health outcomes and patient adherence (Barry & Edgman-Levitan, 2012; Harter & Bochner, 2018). Although pelvic exam seeking behavior is comprised of a myriad of influencing factors, this study specifically investigates the way that provider communication influences a woman's satisfaction, anxiety, and avoidance regarding gynecological care. When controlling for various demographic variables, the quality of a provider's communication and the empathy conveyed by providers proved to be significantly associated with patient satisfaction and avoidance behavior. Results support that improved physician communication could ameliorate a significant amount of trepidation associated with seeking gynecological care. Ultimately, evidence-based interventions uniquely aimed at improving gynecological provider communication quality and empathy could improve patient satisfaction and pelvic exam protocol adherence.

CHAPTER 5.

MANUSCRIPT 2

Title: The impact of body image and genital self-concept on pelvic exam seeking behavior and anxiety

Primary proposed journal: Journal of Community Health

Secondary proposed journal: Patient Education and Counseling

Abstract

The tendency for many women to forgo primary and secondary prevention screenings concerning gynecological care is well documented (CDC, 2017; Amy et al., 2006). Influencing factors including accessibility barriers (Allen et al., 2008), history of trauma (Cadman, Waller, Ashdown-Barr, & Szarewski, 2012; Kelly Hunter, Daily, & Ramaswamy, 2016), and fear and misunderstanding of the medical community from a cultural perspective (Nolan et al., 2004; Golden, 2014). However, women may also combat intrapersonal barriers that may pose serious challenges to seeking inherently more physically vulnerable care like that of routine gynecological exams. Fear of embarrassment, negative self-concept, and perceived poor self-image of one's body are shown to reduce general health care seeking and increase anxiety among a significant portion of the population (Aldrich & Hackley, 2010; Amy et al., 2006).

Research indicates that, among college aged women, those with more positive evaluation of their genital self-image were more likely to feel less anxiety concerning pelvic exams (DeMaria et al., 2012). Additionally, literature supports that overall negative evaluation of appearance is linked to a variety of negative health outcomes in the physical, social, and emotional realm (Davision & McCabe, 2005; Syzmanski & Henning, 2007; Schick et al., 2010). Hence, evaluation of both general and specific physical characteristics is of particular importance to the way women seek to maintain care in the often physically exposing experience of gynecological care.

The current study assessed how constructs related to overall body satisfaction and satisfaction specific to genital self-concept impact a woman's anxiety and avoidance of gynecological care. Results indicate that women who have a more positive evaluation of

their genital self-image were more likely to feel greater satisfaction concerning gynecological care.

Keywords: genital self-image, pelvic exam, self-concept

Introduction

Women's health care clinics are also tasked with providing screenings for a myriad of complex and dynamic health concerns ranging from physical abuse to depression, eating disorders, substance abuse, and those more pathological concerns found with physical examination (Poleshuck & Woods, 2014). According to the American College of Obstetrics and Gynecology (ACOG), the leading voice of obstetrics and gynecological medicine, every woman should schedule an annual medical assessment appointment with her gynecologist (ACOG, 2016). This yearly health assessment, often referred to as the "annual exam," is necessary in providing effective medical care to women. The annual exam enables providers to disseminate information about risk factors for disease and identify medical problems of the patient. Additionally, annual assessments provide an opportunity for providers to counsel patients about preventive care and provide reference for recommended services as needed (ACOG, 2016). Annual exams typically include general screenings for physical and mental health issues (BMI, Blood Pressure, depression etc.) and more specialized examination of the breast and genitals (ACOG, 2016). While screening for cervical cancer via Pap test is recommended every three years, or according to risk level, a pelvic exam (visual inspection of the vulva and digital exam if needed) and clinical breast exam to check for abnormalities is recommended each year (ACOG, 2016).

The role of the provider in primary prevention through identifying abnormalities that may lead to cervical cancer is of paramount importance in this care setting. Engaging in regular gynecological exams is the prevention strategy for combating the most common sexually transmitted infection, the Human Papillomavirus (HPV), which can

lead to cervical cancer (CDC, 2017). According to the most recent numbers from 2016, nearly 13,000 women in the United States were diagnosed with cervical cancer (CDC, 2019). Although engaging in regular gynecological exams can effectively prevent cervical cancer through identification of cervical precancerous cell growth resulting from HPV, the American Cancer Society (ACS) estimates that in 2018 nearly 13,240 new case of invasive cervical cancer will be diagnosed (2018). Additionally, it is estimated that approximately 4,170 women will die from this type of cancer (ACS, 2018). Even with greater diffusion of knowledge surrounding cervical cancer, many women continue to forgo regular screenings (Amy et al., 2006). In fact, of those diagnosed each year, nearly 50-60% of cases are among women who rarely or never participate in annual screenings (CDC, 2017).

Adherence to gynecological screening protocols is a complex behavior to understand as a variety of variable impact a women's decision to attend a pelvic exam appointment. Even with knowledge and conviction of the importance of attending routine screenings, many women still forgo these potentially lifesaving engagements (Amy et al., 2006). Therefore, it is imperative that practitioners and health promotion interventions consider how to improve adherence through addressing physical and felt barriers to care. Previous research has detailed how barriers such as transportation and lack of insurance (Gelberg et al., 2004) can keep women from receiving consistent care. But beyond physical barriers are those that are psychological and emotional in nature. It is well established that a history of sexual assault and abuse (Cadman, Waller, Ashdown-Barr, Szarewski, 2012; Kelly, Hunter, Daily, & Ramaswamy, 2016) are significant events that can lead to anxiety, fear, and even avoidance of routine exams (Kelly et al., 2016).

Still, many barriers women face concerning clinical care seeking are due to fear of embarrassment related to evaluation of their physical features and subsequent assumption of negative bias that others may place on them. Negative evaluation of appearance, whether in a general or specific sense, is linked to a myriad of negative health outcomes including depression, anxiety, and social withdrawal (Davison & McCabe, 2005; Syzmanski & Henning, 2007). Schick & colleagues (2010) describe how the subjective visual scrutiny of women continually reinforces the pressure that women feel regarding shame of their own physical appearance. Repetitious observation of the scrutiny of women's bodies, according to Fredrickson & Roberts objectification theory, may lead women to adopt perceived observer perceptions of their bodies and begin to regard their physical person as a collection of parts (1997). This feedback loop of objectification, from others to self and back, can lead to negative psychological and physical outcomes that impact quality of life, relationships, sexual health, and overall health outcomes (Schick, Calabrese, Rima, & Zucker, 2010). The conflation of the perception of the physical form as a collection of parts and not a whole (Fredrickson & Roberts, 1997; Syzmanski & Henning, 2007) conflated with the pressure to appear a certain way based on observed objectification of other women, indicates that self-concept of women in a health care setting should be considered as an integral component of addressing overall health, but particularly gynecological care.

For example, research suggests that women are more likely to avoid gynecological screenings if they are obese or overweight (Aldrich & Hackley, 2010). Wee and colleagues (2005) demonstrate that women with higher BMIs are in fact less likely to engage in preventative gynecological screenings as they can be painful,

uncomfortable, and perceptually embarrassing. Additionally, Amy et al., (2006) indicate that being obese is a key barrier to cancer screenings. The scholars claimed that this is particularly problematic because obese patients already experience a higher risk for various kinds of cancer, and delaying screenings only exacerbates this problem.

DeMaria, Hollub, and Herbenick (2012) discuss that because such exams require the patient to expose her body to her provider, fear of embarrassment and a negative self-concept also act as a barrier to care. The scholars argue that some women may not seek gynecological exams because of their own perceived low self- image of their body. Additionally, Vu, Azmat, Radejko, & Padela (2016) reported that Muslim American women were more likely to delay or avoid pelvic examinations altogether when seeking to maintain a certain sense of modestly or when a female doctor was unable to treat them. Smith & Smith (1999) sought to determine whether or not women experienced less anxiety during the medical encounter when given a cloth drape to wear verses a paper drape. Results of their study demonstrated a significant relationship between receiving a more modest cloth gown and decreased anxiety revealing implications for further research concerning how self-concept could be managed in the clinical setting with high physical vulnerability.

Because research supports the vital role of gynecological exams in the women's health, and because the literature supports that perceived body image and self-concept may impede a woman's general health care seeking behavior and negatively impact her emotional well-being, the following research questions are offered:

RQ4: After controlling for various demographic factors, how do body image and female genital self-concept function to predict gynecological care satisfaction?

RQ5: After controlling for various demographic factors, how do body image and female genital self-concept function to predict pelvic exam related anxiety?

RQ6: After controlling for various demographic factors, how do body image and female genital self-concept function to predict pelvic exam-seeking behavior?

Methods

Study Population

The current study collected demographic information, self-reported data concerning body satisfaction and self-concept, as well as data concerning the overall health care experience. To participate in the current study, individuals had to be over the age of 18 and have had participated in at least one gynecological care appointment. Qualifying individuals were required to complete a one-time online survey lasting approximately 15 minutes and were entered to win a 20-dollar gift card upon completion of the survey with a 1 in 10 chance of winning.

Current Sample

In total, 359 participants age 18 and over voluntarily participated in the study. Due to significant incomplete data, 9 participants were excluded. Thus, the final analytical sample size was 350. As reflected in Table 3.1, participants ranged in age from 19 to 80 (mean 31.2; SD 9.36). Participants self-identified race as Caucasian/White (91.1%), African-American (3.9%), Hispanic/White (2.1%), Hispanic/Black (0.3%), Asian/Pacific Islander (1.5%), and other (1.2%).

Constructs Measured

To assess body image and self-concept relevant to the current study, DeMaria, Hollub, and Herbenick's (2012) Female Genitalia Self-Image Scale (FGSIS) and the

revised Body Parts Satisfaction Scale (BPSS-R) (Berscheid, Walster, & Bohrnstedt, 1997) were utilized. Self-reported anxiety and avoidance were also assessed using a one item Likert scale question respectively.

Female genitalia self-concept. In an effort to better understand the potential influence of genital self-concept on seeking preventative care, DeMaria et. Al (2012) developed the Female Genitalia Self-Image Scale (FGSIS). In terms of its psychometric properties, the scale is multi-dimensional with two factors. The scale has a very high internal reliability and a Cronbach alpha of .89. Additionally, each of the factors of the scale also yielded high reliabilities, with factor one revealing a reliability of .86 and factor two yielding a reliability of .82. Even among non-western college students, Pakpour, Zeidi, Ziaeiha, and Burri, (2014) revealed that the instrument maintained excellent psychometric properties, and it accounted for over one-third of the variance in explaining the reasons that women are unwilling to seek gynecological care. The FGSIS is comprised of 7 Likert-type scale questions with answers ranging from ‘strongly disagree’ to ‘strongly agree.’ Questions include “I am not embarrassed about my genitals” and “I feel comfortable letting a healthcare provider examine my genitals.” The more positive genital self-image is correlated with greater gynecological care seeking behavior. See Appendix 4 for scale items.

Body parts satisfaction. To measure satisfaction with one’s body the use of the revised Body Parts Satisfaction Scale (Berscheid, Walster, & Bohrnstedt, 1973) was employed. The scale consists of 12 items measured on a 6-point Likert scale (1= extremely dissatisfied; 6 = Extremely satisfied) to quantify satisfaction with areas of one’s body (hips, upper thighs, stomach etc.). The higher the mean score, the higher the

overall body satisfaction. In terms of psychometric properties, the scale is considered valid and reliable (Petrie, Tripp, & Harvey, 2002). In a study by DeMaria et al., (2011) this scale demonstrated very good internal consistency ($\alpha = 0.86$). See Appendix 5 for scale items.

Satisfaction. Satisfaction concerning routine gynecological care screenings was assessed by the following question: “On a scale from 1(poor) to 5 (excellent), please rate your overall satisfaction with your gynecological care experience.” Responses were recorded on a five-point Likert scale.

Patient avoidance. Avoidance of routine gynecological care screenings will be assessed by the following question: I avoid scheduling routine and recommended gynecological exams. I responses are recorded on a five-point Likert scale ranging from 1= strongly agree to 5=strongly disagree.

Patient anxiety. Anxiety concerning routine gynecological care screenings will be assessed by the following question: Routine gynecological exams cause me anxiety/distress. Responses are recorded on a five-point Likert scale ranging from 1= strongly agree to 5=strongly disagree.

Data Analysis

Of the sample participants, 49.71% were missing at least 1 data point in the total survey. In order to examine whether the pattern of missing data is introducing bias, a logistic regression was performed by combing the missing cases and including that indicator alongside all other included covariates (Little & Rubin, 2002). Results showed no significance between the missing cases and covariates, suggesting that the data are missing at random. However, in order to retain cases and maximize statistical power,

multiple imputation methods (MVN) were used to assign values for cases with missing data. This process performs a series of univariate regression analyses to impute missing data on a case-by-case basis drawing information from all available variables in the data set (Royston et al., 2010). The data set containing missing variables and the new data set containing imputed variables were compared to assess if any abnormal changes occurred between means, frequencies, and box plots; no abnormalities were present. All analysis for the current study outcomes were conducted with imputed and non-imputed data for comparison of outcomes and revealed no difference in model significance leading the researcher to assume that the missing data points did not impact association between independent and dependent variables. Therefore, in order that pseudo R2 values (Long & Freese, 2005) could be reported, the researcher used the non-imputed data set for coefficient and regression testing.

Recoding

Literature supports that age, socioeconomic status (SES), race, relationship status, and provider type are often significantly associated with satisfaction, anxiety, and avoidance of gynecological care. In an effort to control for this influence, a series of binary variables were created. To account for SES, the options for reporting estimated household income were maintained with <20,000, 20-49,999, and >50,000. To account for race in this non-diverse sample, dummy variables were constructed to indicate whether a participant was Caucasian/White (91.3%), African-American/Black (3.7%), Hispanic (2.3%), Asian/Pacific Islander (1%), or Other (1.3%) assigning non-Caucasian participants as the contrast group. Likewise, self-identified relationship status with 9 categories was dummy coded to denote non-married as the contrast group to those who

indicated being married (55.3%). Finally, to capture the impact of the type of care provider on outcome variables, the report of having a Midwife (7%) was contrasted with a group labeled “MD” consisting of Family Care Physicians (12%) and OB-GYNs (73%). Nurse practitioner (4.3%), Physician Assistant (2.3%), Campus Clinic Staff (.3%), and Other (1%) were grouped in a variable named “Other Gyn” and set as a contrast to the “MD” group.

Next, composite mean scores for each survey instrument with multiple questions were created. Overall the responses from the 2 scales of interest Female Genital Self-concept and the revised Body Part Satisfaction Survey were independently combined to produce summative scores for each scale. Mean scores, Standard Deviation, Minimum scores, and Maximum scores for each summative scale are reflected in Table 3.2. Alpha scores for both scales included in the study were above .90 and are reflected respectively in Table 3.2.

Assumptions Testing

To assess proportional odds assumption, one of the assumptions underlying logistic regression, the Brant test was employed (Brant, 1990). No variables were significant indicating that there are no violations of the proportional odds assumption meaning that the relationship between each outcome group is the same.

Further, prior to modeling the data, variable VIF (variance inflation factor) scores and correlations were examined. Though there is no standard value to determine the presence of multicollinearity, VIF scores greater than 10 have been suggested to warrant further attention. A review of the variance inflation factor (VIF) values indicate no scores approach the threshold of 10, suggesting that collinearity is not present in the data.

Multivariate Analyses

To answer the research questions a series of ordered logistic regression analyses were conducted. Independent variables consisting of composite scores from self-concept scales (FGSC and BPSS-R) were utilized. Additionally, demographic controls consisting of age and recoded demographic information (SES, race, relationship status, and type of care provider) were included. Outcome variables used in regression analysis included self-reported satisfaction, anxiety, and avoidance scores as indicated via a one-item Likert scale question respectively. After controlling for the various demographic variables, separate ordered logistic regression analysis was conducted for each outcome variable of satisfaction, anxiety, and avoidance.

The impact on each outcome variable was assessed by building a series of models that introduced the impact of demographic variables in model 1 and the impact of self-concept variables when added to demographic variables in model 2. This modeling process was conducted for each of the 3 outcome variables. STATA 15.1 statistical software was employed to run these tests.

Results

Satisfaction

To begin analysis on self-reported satisfaction, associations between age, SES, race, relationship status, and type of provider were included. Model 1 in Table 2 shows that age, SES, being married, and having a midwife significantly predict satisfaction with the gynecological care experience. Specifically, as age increases women are 10 percent more likely to report greater satisfaction (coef = .18; odds ratio= 1.03 at a $p < .05$). As household income (SES) goes up the odds of reporting greater satisfaction decreases by 6

percent (coef = -.008; odds ratio= 0.61 at a $p < .05$). Being married, in contrast to all other reported relationship status categories, improves the odds of greater satisfaction by 26 percent (coef = .27; odds ratio= 2.66 at a $p < .05$). Additionally, having a midwife in contrast to an MD increases the likelihood of satisfaction by 28 percent (coef = .17; odds ratio= 2.83 at a $p < .05$).

Model 2 incorporates the variables of interest concerning self-concept: Female Genital Self-concept (FGSC) and Body Part Satisfaction (BPSS-R). Including self-concept data with existing demographic controls eliminated SES and age from significance, while being married and having a midwife held from Model 1. As depicted in Model 2 of Table 3.6, those who are married are 21 percent more likely to report satisfaction, a slight drop from Model 1 (coef = .27; odds ratio= 2.17 at a $p < .05$). With the addition of self-concept variables having a midwife as a provider increased likelihood of satisfaction from 28 percent to 45 percent (coef = .17; odds ratio= 4.54 at a $p < .01$). Of the self-concept variables included, FGSC indicated that more positive evaluation of one's genitalia increases the likelihood of satisfaction with the gynecological care appointment by 11 percent (coef = .49; odds ratio= 1.11 at a $p < .01$). Overall, the final model accounts for 14.9% of the variance of satisfaction among survey participants ($R^2 = 0.149$).

Anxiety

To begin analysis on self-reported anxiety, associations between age, SES, race, relationship status, and type of provider were included. Model 1 in Table 3.7 shows that SES and having another gynecological care provider (Other Gyn) other than an MD significantly predict anxiety associated with the gynecological care experience.

Specifically, as household income (SES) increases the likelihood of anxiety decreases by 5 percent (coef = -.25; odds ratio= 0.55 at a $p < .01$). Having a gynecological care provider other than an MD increases the likelihood of higher anxiety by 22 percent (coef = .13; odds ratio= 2.27 at a $p < .05$).

Model 2 incorporates the self-concept variables Female Genital Self-concept (FGSC) and Body Part Satisfaction (BPSS-R). As demonstrated in Table 3.7, including these covariates with existing demographic controls did not significantly change results as SES and Other Gyn remained significant. As SES increases the likelihood of anxiety related to gynecological care decreases by 6 percent (coef = -.25; odds ratio= 0.61 at a $p < .05$). Having a care provider other than an MD increases the likelihood of higher anxiety by 55 percent (coef = .13; odds ratio= 5.52 at a $p < .01$). Overall the final model accounts for 4.7% of the variance of satisfaction among survey participants ($R^2 = 0.047$).

Avoidance

To begin analysis on self-reported avoidance, associations between age, SES, race, relationship status, and type of provider were included. Model 1 in Table 3.8 shows being married significantly predicts avoidance of gynecological care. Specifically, being married as contrasted with all other relationship status categories decreases the likelihood of increased avoidance of gynecological care by 5 percent (coef = -.15; odds ratio= 0.50 at a $p < .01$).

Model 2 incorporates the self-concept variables Female Genital Self-concept (FGSC) and Body Part Satisfaction (BPSS-R). As demonstrated in Table 3.8, including these covariates with existing demographic controls did not change the significant association of being married and avoidance but introduced having Other Gyn as a

significant predictor. Being married decreases the likelihood of avoidance by 4 percent (coef = -.15; odds ratio= 0.43 at a $p < .05$). Having a provider other than an MD or midwife increases the likelihood of avoidance by 24 percent (coef = .03; odds ratio= 2.46 at a $p < .05$). The overall model accounts for 1.8% of the variance of satisfaction among survey participants ($R^2 = 0.018$).

Discussion

The current study builds on previous research that assesses how negative self-concept and perceived poor self-image impact general care seeking behavior (Aldrich & Hackley, 2010; Amy et al., 2006). Specifically, the current study furthers work that demonstrates how negative evaluation of appearance, in a specific sense, is related to negative health outcomes including anxiety, less satisfaction, and avoidance (Davision & McCabe, 2005; Syzmanski & Henning, 2007). The current study explored how constructs related to overall body satisfaction and satisfaction specific to genital self-concept impact a woman's anxiety and avoidance of gynecological care. When controlling for various demographic factors, findings point to female genital self-concept as a key factor in predicting a woman's satisfaction with gynecological care. Women who evaluate this specific body region more positively are likely to indicate an 11 percent improvement in overall satisfaction with gynecological care appointments.

It is important to consider this result in the context of a broad perspective like that of Broffennenners (1977) socioecological model. The regression models demonstrate layers of influence that impact how a woman interacts with and perceives gynecological care. In the model showing significance of self-concept in predicting satisfaction we see that before a woman even steps foot in the clinic her likely satisfaction is already

influenced by a myriad of demographic factors, namely Age, SES, Marital status, and having a Midwife as a provider. As the variables of interest (FGSC & BPSS-R) are added, the demographic control of having a Midwife becomes significant at the $p < .01$ level accounting for an increase in the likelihood of satisfaction by 45 percent. Having a Midwife is contrasted with the group labeled 'MD,' which consist of Family Care MDs and OB-GYNs as providers. Meaning, that scheduling an appointment with a midwife verses an MD may play a significant role in satisfaction outcomes. This is not out of line with previous research that indicates that midwives reportedly are more attentive and caring with patients (Berg, 2005).

As layers of self-concept are added the model reveals that FGSC is significant at the $p < .01$ level and accounts for the likelihood of an increase of satisfaction by 11 percent. The relationship with self-concept and the gynecological care experience speaks to the complex interactions that women experience regarding how they come to view themselves, even in a very specific sense. The scale measuring FGSC, The Female Genitalia Self-Image Scale, has previously been used to show how negative genital self-image can be a barrier to seeking health care (DeMaria, Hollub, and Herbenick, 2012; Herbenick et al., 2011). This scale, the Female Genital Self-Image Scale (Herbenick et al., 2011), specifically addresses feelings of embarrassment, comfort with letting a healthcare provider examine genitalia, and more aesthetic qualities like "I think my genitals look normal," and "I think my genitals smell fine." In the age of vaginoplasty and various procedures aimed at "improving" the appearance of a woman's genitals it is important to evaluate the ways in which women perceive themselves in this specific sense. The constant exchange of information and messaging within the context of

interpersonal, community, and media impact a person's view of what "normal" or "acceptable" is (Dittmar & Howard, 2004).

This developed belief or evaluation of one's self as normal or abnormal clearly impacts the way women interact with even routine medical care and adds to a growing body of literature (Davision & McCabe, 2005; Syzmanski & Henning, 2007; Schick et al., 2010) that supports how negative evaluation of appearance is linked to negative outcomes. Because of this, it is imperative that providers and those in health promotion attempt to mitigate the effects of poor self-image/poor self-concept through improved interpersonal communication and messaging concerning genital appearance and function. Intervening to combat negative patterns of thought concerning how women view their bodies, specifically their genitalia, may help to decrease this perceived barrier to care. As the current study suggest, if a woman begins to view her body as normal, even when she may initially perceive it as out of line with the mainstream influences denoting "normality," her satisfaction with care may significantly improve. Thus, addressing the way a woman views this specific bodily region may be of paramount importance when improving gynecological care and adherence.

Limitations & Future Research

One limitation of the current study is that the survey was a cross-sectional design. Although the current results are enlightening and reveal much about what influences a woman's gynecological care experience, the current study results are only a snapshot of the reasons that women either have anxiety concerning pelvic exams, what their satisfaction is attributed to, or why they are less likely to attend these exams.

One area ripe for future research concerns the types of messages women need to hear from their providers during medical encounters, and through messaging in health education, that will alleviate their perceived abnormality concerning genital self-image. Including a wide range of vulva images in the health care setting and as part of the education program may help to combat the negative feedback loop intrinsic to living as woman in a world that consistently pushes often incorrect views of beauty and normality of appearance. Providers and health educators should consider utilizing images of a multitude of different vulvas in order to help amend the idea of normality to be in line with a true description (Schick, Calabrese, Rima & Zucker, 2010).

Conclusion

The current study assessed how constructs related to overall body satisfaction and satisfaction specific to genital self-concept impact a woman's anxiety, satisfaction, and avoidance of gynecological care. Results indicate that women who have a more positive evaluation of their genital self-image were more likely to feel greater satisfaction concerning gynecological care. Additionally, women who attend care providers like midwives, or possibly other care providers with greater communication skill and relational proficiency, also have better satisfaction. It is beneficial to evaluate satisfaction, anxiety, and avoidance through the layered lens of the socioecological model. In cooperation with this view, the current study results encourage intervention on the intrapersonal level specifically addressing the way women perceive their genitalia as normal and acceptable. Results indicate that it is imperative for providers to attempt to mitigate the effects of poor self-image through improved interpersonal communication and patient education. Implications for health education in this way are also advised.

CHAPTER 6.

MANUSCRIPT 3

Waiting rooms and paper drapes: The influence of the socio-physical environment in gynecological care settings on the patient experience.

Primary proposed journal: Social Science & Medicine

Secondary proposed journal: Patient Education & Counseling

Abstract

Women are faced with a variety of barriers in the pursuit of routine gynecological care screenings. Accessibility (Allen et al., 2008), previous abuse, and fear of the medical community (Nolan et al., 2004) are among the many variables that account for avoidance of this potentially life-saving care. Additionally, many women battle interpersonal barriers, like poor provider communication (Ha & Longnecker, 2010) and fear of embarrassment (Aldrich & Hackley, 2010; Amy et al., 2006) that can hinder care seeking behavior. Considering the tendency for many women to forego primary and secondary prevention screenings concerning gynecological care (CDC, 2017), it is vital to further investigate various contributing personal, social, and environmental factors that may impact a woman's decision to engage in care. The current study explored how the social and physical environment of a gynecological care facility impacts patient experience.

A qualitative analysis was performed of open-ended responses that were part of a larger study with 350 women over the age of 18 who have attended at least one gynecological care appointment. Thematic analysis revealed several themes among 3 main areas: 1). Clinician Communication (active listening, explanation, empathic communication, & pace), 2). Social Environment (hospitality& being relational), and 3). Physical Environment (Privacy, Aesthetics, & Sensate Variables). Results suggest that distress related to gynecological care could be mitigated by improvements to the environment like increasing the temperature of the exam rooms, opting for less harsh lighting, providing a place to hang or set clothing, and more thoughtful placement of baby pictures. Detailed explanation, empathetic communication, and not rushing patients through procedures all emerged as important components that may guard against patient

anxiety. Results also suggest that improvements to modesty concerns within the exam room, like larger cloth draping and gowns, may significantly improve the patient experience.

Keywords: clinic environment, pelvic exam, self-concept,

Introduction

Regular gynecological exams are an important element of maintaining overall health for women. The recommended annual physical examination involves basic non-invasive health screenings such as body mass index (BMI) and blood pressure assessment. Additionally, more specialized and invasive pelvic exam screenings involving a genital examination, internal digital exam of the reproductive organs, and a Pap test are provided to screen for reproductive issues, infection, and precancerous cells. Particularly, every 1 to 3 years most women should engage in the specialized pap test to screen cells from the cervix for cervical cancer (ACOG, 2016). According to the American College of Obstetrics and Gynecology (ACOG), every woman should schedule an annual medical assessment appointment with her gynecological care provider. While a typical annual exam involves a pelvic and clinical breast exam, additional tests and screenings may be employed based on the patient's age and risk factors (ACOG, 2016).

Engaging in regular gynecological exams is the prevention strategy for combating the most common sexually transmitted infection, the Human Papillomavirus (HPV), which can lead to cervical cancer (CDC, 2017). According to the most recent numbers from 2016, nearly 13,000 women in the United States were diagnosed with cervical cancer (CDC, 2019). Although engaging in regular gynecological exams can effectively prevent cervical cancer through identification of cervical precancerous cell growth resulting from HPV, the American Cancer Society (ACS) estimates that in 2018 nearly 13,240 new case of invasive cervical cancer will be diagnosed (2018). Furthermore, it is estimated that approximately 4,170 women will die from this type of cancer (ACS, 2018). Yet, even with greater diffusion of knowledge surrounding cervical cancer, many women

continue to forgo regular screenings (Amy et al., 2006). In fact, of those diagnosed each year, nearly 50-60% of cases are among women who rarely or never participate in annual screenings (CDC, 2017). Cervical cancer, when caught early, is one of the most successfully treated cancers (ACS, 2018). Therefore, in order to take advantage of this life saving prevention, it is imperative to increase regular gynecological exam adherence.

While general screenings like BMI and blood pressure may be typical among a variety of medical encounters or biometric screening protocols, the screening of genitals and breast, as is common practice in gynecological care, carry significant differences and call for significantly different level of patient consideration. Considering the tendency for many women to forgo primary and secondary prevention screenings concerning gynecological care it is vital to investigate various contributing personal and sociocultural factors that may impact a woman's decision to engage in these important health screenings.

One such factor, as noted by Seng & Hassinger (1998), is the sometimes-distressing hierarchy innate in the patient-provider relationship. This power differential paired with the unique vulnerabilities that come with gynecological screenings can create particularly distressing engagement with routine care that may not be present in other medical care practice (Aaron, Crinite, Bonacquisti & Geller, 2013). Early research concerning pelvic exams suggest that gynecological exams are more distressing and often more emotionally difficult for women than other procedures (Haar, Halitsky, & Stricker, 1997; Areskog-Wijma, 1987; Menage, 1993; Gardner & Reading, 1979). Women consistently report that exams can often produce anxiety, physical discomfort, embarrassment, and a sometimes emotionally triggering vulnerability (Kitzinger, 1990;

Pederson & Cohen, 2010; Akerson, 2012; Domar 1985). In a study investigating the influencing factors associated with pap smear adherence and non-adherence, Akerson, Pohl, Low (2008), found that social influence and previous experience with health care can serve as a barrier. Further, Akerson and colleagues cited that women in who reported having an unpleasant experience with a previous pap test were far less likely to seek gynecological screenings in the future (2008).

Concerning their most recent gynecological visit, participants in one study indicated that constructs of control and anxiety were their highest concerns (Cadman et al., 2012). The study included women who indicated that they were survivors of sexual abuse and women who did not indicate that they had ever been sexually abused. Survivors articulated particular distress concerning having had their sexual organs examined while women who did not have a history of abuse articulated distress or uneasiness were related to the physical pain or discomfort they felt during the exam (Cadman et al., 2012). The sentiments are echoed in an early study by Domar (1985) that cited how women found gynecological screenings to be physically uncomfortable and embarrassing. Additionally, patients have described their exam experience as one that evoked feelings of vulnerability and helplessness (Domar, 1985).

Acknowledging the unique attributes of a gynecological examination is of particular importance regarding women with a history of sexual assault because the bodily areas being examined are those that were the objective of previous abuse (Cadman et al., 2012; Roberts, Reardon & Rosenfiled, 1999). Distress related to the examination among all women and especially among sexual assault survivors, can be triggered by a myriad of variables. In fact, social constructs can be as powerful as physical interaction in

preventing or promoting distress and anxiety among women receiving care. Aaron & Colleagues found that the innate power imbalance in the medical setting is relative to the power imbalance of previous or ongoing interpersonal violence (Aaron, Crinite, Bonacquisti & Geller, 2013). Additionally, the routine vernacular used by providers such as being told to lay back and relax, elevate their feet etc. can be triggering for many women (Russell et al., 2005). Akerson (2012) reported that women in her qualitative study referenced themes of re-traumatization and feeling “on-edge” from feeling rushed and even forced to comply with simple commands. Similarly, in their study of the impact of PTSD on gynecological screening, Pederson & Cohen (2010), articulate that some of the distress and anxiety women feel is related to an interpersonal environment deficient in communicative space to openly discuss fear and anxiety. The authors suggest that by creating a space that is comfortable and that fosters a safe space for patients to honestly discuss concerns may decrease distress especially among women with PTSD related to sexual abuse (Pederson & Cohen, 2010).

Pelvic exams have been described as degrading (Areskog-Wijma, 1987) and even terrifying (Menage, 1993). However, scholars offer strategies for mediating the impact of distress and anxiety with in this specific medical encounter. In their experimental study, Smith & Smith (1999), compared the effect of two exam gowns, the traditional paper drape and a specially designed modest fabric gown. Results reflected that women who receive the experimental modest gown reported significantly less distress than women in the control group who received the traditional, less modest paper drape (Smith & Smith, 1999). Likewise, Roberts et al., (1999), indicate that when women are allowed to wear more clothing during an exam they report feeling less anxious. Methods of draping

during procedures (Pederson & Cohen, 2010) and use of soft instead of metal stirrups (Olsen, 1981) are both helpful small changes that can significantly improve distress during an exam. Additionally, allowing women to choose alternate positioning during an exam, like side lying or a semi seated position instead of the more common supine position, can alleviate feeling of vulnerability and improve comfort (Cadman et al., 2012; Pederson & Cohen, 2010; Seymore, Durant, Jay, 1986).

Beyond the distress that an unfamiliar environment can cause (Muzik et al., 2013), are a myriad of social variables that may add to or protect against patient anxiety. In a synthesis of literature on trauma informed gynecological care, Reeves (2015) suggests that building trust with patients, minimizing distress, and maximizing patient autonomy are essential components of caring for patients in this setting with a history of trauma. Explanation of what sensations may occur during various exam components (Muzik et al., 2013), foregoing unnecessary procedures (Robets et al., 1999), and building an environment of trust with patients (Battaglia, Finley, & Liebschutz, 2003; Aaron et al., 2003) that also provides adequate privacy for open communication and disclosure (Van Loo et al., 2008) are all shown to improve patient experience and comfort. Consistently assessing patient distress throughout the procedure not merely at the beginning is also suggested to mitigate patient fear (Pederson & Cohen, 2010; Reeves, 2015).

Because of the sensitive nature of the annual exam, ACOG advocates that shared decision-making strategies be employed during the medical encounter. Shared decision-making strategies can address concerns related to the internal pelvic examination and the clinical breast exam; such strategies are also helpful when physicians are attempting to

explain the exam and obtain consent from the patient before performing these procedures (ACOG, 2016). Although many patients may give consent for the examination, there may remain a significant number of women who experience anxiety and distress related to this medical encounter. Therefore, the aim of the current study is to further examine how the social and physical environment of a gynecological care facility impact patient experience.

Methods

Procedures

A convenience sample of 350 participants were gathered by posting the study survey link to various social media websites (e.g., Facebook, Twitter, and Instagram) over the course of five weeks in the summer and fall of 2019. Additionally, a study announcement was sent via email to colleagues in the author's professional network asking them to share recruitment information and the survey link with colleagues and students via email and social media. All participants completed the same online Institutional Review Board approved survey through a secure and anonymous web link via Qualtrics, a web-based software program. Upon completion of the survey, participants were entered to win one of several 20-dollar gift cards with a 1 in 10 chance of winning.

A section of the survey was devoted to open ended essays aimed at exploring the overall communicative experience within the clinic setting (see Appendix 6) and answered the research question: In what ways does the social and physical environment of a gynecological care facility impact patient experience?

Participants

In total, 359 participants age 18 and over voluntarily participated in the study. Due to significant incomplete data, 9 participants were excluded. Thus, the final analytical sample size was 350. As reflected in Table 3.1, participants ranged in age from 19 to 80 (mean 31.2; SD 9.36). Participants self-identified race as Caucasian/White (91.1%), African-American (3.9%), Hispanic/White (2.1%), Hispanic/Black (0.3%), Asian/Pacific Islander (1.5%), and other (1.2%).

Analysis

Responses were analyzed following basic iterative analysis drawing insight from previous literature dealing with patient-provider communication (Akerson, 2012; Street, Makoul, Arora, & Epstein, 2009) and emic data from participant essays. The analysis began with an open coding approach to capture key phrases (Charmaz 2006; Glaser & Strauss, 1967). Patterns and themes were identified through use of the constant comparison method (Glaser, 1992). Several key themes emerged: Clinician Communication (active listening, explanation, empathic communication, & pace), Social Environment (hospitality& being relational), Physical Environment (Privacy, Aesthetics, & Sensate Variables).

Results & Discussion

Analysis revealed several key themes among three main areas: 1). Clinician Communication (active listening, explanation, empathic communication, & pace), 2). Social Environment (hospitality& being relational), and 3). Physical Environment (Privacy, Aesthetics, & Sensate Variables). Examples of participant quotes are provided in Table 3. 7.

Clinician Communication

Provider communication proved to be a major component of the patient experience either improving or impeding a patient's emotional wellbeing and self-reported satisfaction. A dichotomy of active listening versus passive hearing, lack of explanation versus detailed instruction, empathic communication versus ambivalence, and pace of the interaction (being rushed or taking time), were all key themes of the participant narratives concerning clinician interaction.

Active Listening. Participants indicated that feeling listened to and heard was an important component of mitigating feelings of distress. Participants included that listening was accompanied by a perception that the provider was genuinely concerned: "My provider listened to my fear of gynecological care with genuine concern and seriousness. She helped me move past my worries and it resulted in a positive experience."

Several participants emphasized how listening was the reason for their positive evaluation of clinician interaction with many describing in the importance of listening in all caps and with exclamation points: "They really took the time & really LISTENED to me!!" Likewise, participants emphasized that lack of listening was frustrating and contributed to an overall poor evaluation of the provider interaction. One participant exclaimed: "Listen!! Listen to what we are really experiencing!! We are all not the same. We have unique bodies & unique experiences that made us who we are. Take time & listen." The lack of active listening, described by many as "not being heard" served to set off a sequence of negative interactive events as illustrated by the following quote.

“When I felt rushed or that they weren’t hearing me or what my concerns or issues were. Going through menopause is tough because it is so different for every woman. It’s been a nightmare for me & sometimes you feel like you’re just all alone & have to figure all this out on your own”

Explanation. Participants expressed frustration at being asked to do things without an explanation as to why; including the medication prescribed, taking a urine test and even when and how to undress for the exam. What may be routine to care providers was not considered routine for participants who felt frustration with explanation even before the exam began. For example: “when told to put on the exam robe I was very nervous about what I was actually supposed to wear under it and what I wasn’t. I was also embarrassed to ask.”

Alternatively, clear explanation served to put patients at ease, e.g., “She was reassuring and normalized painful boils that I had on my genital area (not STI) and explained what processes of the body resulted in boils. It made me feel less like a freak and less scared!” Participants indicated that specific and consistent explanation throughout the exam experience was important e.g., “She was always calm and explained things before they were happening and then as they were happening.”

Empathic Communication. Demonstrating empathy and compassion in communicative interactions was a consistently cited reason for positive evaluation of the exam experience. Compassion and adaptation to patient concerns was expressed by one participant as helpful in overcoming fear of a pap test: “I’ve been with my GP for over 5 years, and she was extremely compassionate when I expressed how long I postponed a pap and tried to make me as comfortable as possible during the exam”

In contrast, the lack of empathy in the interpersonal interaction, or ambivalence to patients' feelings was considered by a significant number of participants as a reason for having a negative and even distressing experience.

“I felt uncomfortable and dismissed, largely because she come across as ‘this is so routine, it doesn’t matter, just cooperate because I’m busy.’ The nurse (vs the GP) in the room was more comforting and probably the reason I didn’t jump off the table. However, the GP made me feel like my experiences didn’t matter and she was less accommodating of my anxiety, fear, and traumatic reactions – as a result, the exam was painful and, because she was not accommodating (like using more lube or gel), there was tearing and blood and the sample which resulted in inconclusive findings – and because of that experience, I avoided the follow up and did not muster the courage to get a pap for the next 8 years.. and now I feel that I avoided it because of my fear and insecurity and trauma, and now have HPV, and I’m completely at fault for contracting HPV and feel incredibly dirty”

One participant summed up her experience with advice that she would offer providers:

“Just listen, don’t dismiss fears or worries just because they seem like we should know the answers. Be kind, try to see how we feel in the seat (waiting, trying to explain issues, being embarrassed, etc.)”

Pace. The phrase “I felt rushed” or “the appointment was rushed” were cited consistently among participants as a reason for frustration or distress e.g., “Being rushed is a big frustration as typically this is a provider you see once a year.” Participants did not always attribute distressing pace to poor provider intent but still were still bothered by the culture of “being rushed” during the care interaction. E.g., “It’s not that my provider is a bad listener or that I don’t think they care – it’s that they are so packed/popular that time doesn’t allow for an unrushed conversation”

Alternatively, when a provider takes the time to ask questions and wait for unrushed responses participants indicate that they feel cared for. This time spent, even just a few minutes extra, has significant impact. As one participant responded, “When she takes an extra 2 minutes to check in and see how things really are... that goes very far. I know she is busy, but she truly cares.”

Social Environment

From the first step into the clinic foyer to the last step out the door, it is apparent that, for better or worse, feeling welcome matters. On the whole, the current study participants indicated that not feeling welcome negatively influenced their anxiety and intentions of returning for care. This was reflected in the hospitality felt and perception of the staff and providers as relational.

Hospitality. From the first step into the facility to the moment a patient leaves there is an opportunity to strengthen or weaken the patient-provider relationship. As one participant succinctly put it:

“It starts with the check in person and can either continue upstream or down. I’ve had people show me how rushed they are throughout and the visit made me feel like I was bothering them throughout and I’ve had the other experience”

Participants remarked that from the point of entry into the clinic they begin to perceive how they are thought of by the clinic employees with many indicating that they felt like another number. E.g., “I just felt like another number to the front desk person at times.” Waiting for long periods of time were also commonly cited reasons for distress. E.g., “When I sign in and no one acknowledges me for a while, it makes me worry 1) if they know I’m there and 2) if there’s going to be a long wait for my appointment,” and

“Having to wait a while in the waiting room made me feel even more anxious about what I was there for.”

Relational. Thoughtful human connection, or the lack thereof, is a crucial component of the participant narrative concerning how hospitable the clinic is. Taking initiative to make patients feel like they are known is repeatedly expressed by participants in positive and negative ways.

“Gynecologists are supposed to be the doctors who care for women, so I think they should actually practice caring for women. Visits should be more personal, and more tailored to individual patients instead of making assumptions about who you are.”

Additionally, one participant offered a comment in the form of advice for providers, “Getting to know patients and establishing a good rapport with them will make them more comfortable and more likely to come to you for problems and checkups.”

Physical Environment

Privacy, modesty, aesthetics, and sense variables like lighting, temperature, and pain were some of the more passionately and colorfully expressed contributing factors for distress and anxiety experienced by participants in the context of the gynecological care experience. Many participants expressed themselves with a list of suggestions. “Ugh, the rooms are awful!! Normally cold & stark looking leg things!! How frightening are those things!! Nothing warm or comforting about the exam rooms at all.” Another remarked, “The clothing, light is too bright, walls are white and the physical space is too big. I felt like a naked person being exposed.” The frustration with feeling exposed was echoed by another participant, “keep room temp warm, cloth gowns/sheets, when possible softer lighting in the room decreases feeling of being exposed and doc can use a lamp for additional lighting as needed, privacy, screen or curtain to prevent accidental exposure

with door opening.” On participant colorfully added, “ditch the paper garments/sheets and don’t keep the exam rooms so stinking cold.”

Privacy. The number of people in the exam room and being shielded from accidental onlookers were important features of patients feeling secure or distressed during a medical exam. One participant summed up the feelings of many with one quote, “Extra sheets for coverage during female exam. A curtain behind the door so you won’t accidentally flash the hallway if it opens. Windows securely covered.” And, “I like when there is a curtain and a door. So even if the door opens, there is still a curtain to cover me from the hallway.”

Modesty. The theme of modesty was cited by many respondents as a cause for concern. Some participants indicated that being unclothed in any setting was uncomfortable e.g., “I have always had a hard time not being very modest.” Several others took issue with the options afforded to patients for coverings during the exam. More than one participant indicated that they’ve thought about bringing alternative gowns for the exam: “The paper vest and sheets are a joke. They ALWAYS make me feel uncomfortable. I’d much rather pay more for a laundered fabric sheet and garment. I’ve thought about bringing my own”

Not only were women unsettled by the paper drape and scant covering but the timing and duration of disrobing were also troubling. E.g., “I hate when I have to wear the paper gown and they talk to me and I’m the only naked one in the room.”

Aesthetics. From the color choice and décor to the room size and style, the visual components of a clinic were revealed to be a significant influence on patient distress or

comfort. Comments on décor fell largely in two camps, the impact of baby pictures and the impact of general décor within the clinic.

Emphasis on Babies. Of particular significance are the references to the way a copious amount of baby pictures throughout the clinic impact a woman's emotion well-being in the exam setting. One woman commented on the range of emotions that baby pictures can bring, "there are pictures of babies on the wall and they have made me feel good when I was there while pregnant but made me feel horrible when I was there for my 2 miscarriages." Another summarized it this way:

"I love that the exam room is very professional. My previous midwife's office was covered in baby pictures. Everywhere you looked there was a baby staring back at you. As someone who will never have a child, it was terrible to sit in that exam room while waiting."

General Décor. Beyond the baby pictures, many participants commented on how the choice of décor made an impact on how they felt. One participant indicated that the "well decorated and clean environment" positively impacted her care experience. Another candidly indicated the compounding combination of physical vulnerability inherent in the exam environment and the choice of wall art were distressing, "The fat people chart on the wall doesn't make me feel great to stare at while I'm half naked." Other participants commented that creative placement of calming pictures was helpful to decrease distress:

"My university health center had a poster of a palm tree and a beach on the ceiling in the room they did Pap tests and other gynecological exams. It was a very small thing but it was nice to have to focus on"

Cramped Space. The size of the room was also a variable that elicited response when asked what made the experience more or less distressing. One participant indicated that “when the room is very small” it heightened her sense of anxiety and made her uncomfortable. Others were bothered by the small space because it didn’t allow for a support person. Having adequate space and seating aside from the exam table was cited as anxiety dispelling: “The fact that there were many different areas to sit in that were not crammed together made me feel less anxious about the experience”

Sensate Variables. The factors of lighting, temperature, and physical pain were repeatedly mentioned as variables that impacted the overall experience, comfort, and/or anxiety in the exam room setting.

Lighting. The florescent bright lights of the exam room were mentioned on numerous occasions as a factor in heightening a woman’s anxiety. One participant described the lighting as fear inducing, “All of it makes me uncomfortable, the lighting scares me the most.” Generally speaking, many participants indicated the lighting is “often too harsh” and that it “creates a general negative impact.”

Temperature. The cold exam room and cold speculum were consistently mentioned as “dreaded” aspects of the exam appointment. Displeasure of cold exam rooms was compounded with comments from participants that found the temperature to be “unnerving” and “unpleasant” especially when paired with “wearing next to nothing” and “sitting too long undressed.” Similarly, participants expressed how the temperature of the speculum created feelings of “shock”, “uneasiness”, and discomfort. One participant commented, “I wish speculums could be warmed up before insertion. They're always cold and it's usually a bit of a shock to the system.”

Pain. Attention to pain management, or lack thereof, in regard to gynecologic specific procedures was mentioned throughout essay responses. Not only did participants indicate that the exams felt “super awkward” but they also expressed concern about pain, especially with speculum insertion, which contributed to increased anxiety about future exams. E.g., “This was totally not her fault, but after the pain I felt during the pap smear, I am a little nervous to have another!” Other expressed that they had improved evaluation of the experience because a provider was able to perform pap test that were “quick and pain free” or that opted for more comfortable plastic speculums. One participant provided an example of a time when pain was disregarded:

“Once when another doctor (male) in a practice was filling in for my primary at the time, performed procedures in a perfunctory manner and did not stop when I expressed physical discomfort at a particular procedure that normally didn’t hurt. The only time I had bleeding following a pap.”

Implications & Conclusion

Simple environmental changes like increasing the temperature of the exam rooms, opting for less harsh lighting, providing a place to hang or set clothing may go a long way to alleviate distress and unease of the thought of attending a gynecological exam. Additionally, patient distress can be lessened with more assurance of privacy so that there is no risk of accidental exposure when the door is opened through use of a curtain or partition in addition to a windowless door. Participants emphatically suggest that a more modest cloth drape and gown would improve their experience and trepidation concerning routine care. Further, participants indicate that allowing for conversation while clothed, before and after the exam would lessen anxiety and accommodate more meaningful discussion about their health. The power difference between patients and providers is

already a barrier to care, adding physical vulnerability to that equation certainly does not assist in ameliorating that. As one participant remarked, “The attention to detail is always noticed. There are small space heaters in the exam rooms when it is cold, the instruments are warm sometimes, a second person is always brought in for the exams after I have had a chance to talk privately with my doctor.” Thoughtful environmental and social changes like these may make a meaningful difference in the care seeking experience for many women.

Of particular interest were the number of participants that commented on the amount of baby pictures in the clinic setting. This trend among participants was unexpected but extensively addressed. Women who were struggling to get pregnant, those who had suffered miscarriages, and some who felt judged because they have decided not to have children at all reported how seeing pictures of cute babies throughout the clinic environment made them distraught. Though the solution is perhaps not to eliminate baby pictures from the clinic it may behoove care providers to find a way to place the pictures in the clinic thoughtfully and less prolifically. This may serve to balance out the perception that a practice is overtly too focused on the ‘OB’ side of ‘GYN’ care.

The general décor of the facility like being clean and having updated literature and even making strides to diminish the stale clinical feel of the space can, as one participant put it, “make them feel a lot less scary.” Though it would be impractical, and perhaps inappropriate, to suggest transforming the gynecological clinic into a spa, the effort to improve aesthetics with things like warm paint colors and calming wall art may serve to improve patient unease.

From a purely communicative standpoint, providing explanation even for things that may seem routine to people who work in the clinic setting like when and how much to undress, what the wait time might be, and what to do with a urine sample once collected etc. may improve overall satisfaction for women attending a gynecological care appointment. Part of explaining things well is wrapped up in the pace of the interpersonal interaction. Rushing a patient through the intake and exam process can be jarring and, as indicated by the current study, can hinder meaningful conversation between the patient and provider, including stifling the way procedures are explained. Results also suggest that explanation of the exam procedure be a continuous process so that the provider can better manage fear and pain that a woman may experience. Slowing the pace to offer reassurance and express genuine concern for the patient's wellbeing so that the patient perceives that their provider cares for them is of paramount importance to managing distress. Patients who feel cared for, and therefore who feel less distress, express that their provider listens actively to their concerns and questions. These communicative characteristics accumulate to a greater feeling of interpersonal connection which has previously been demonstrated to improve patient outcomes and lessen anxiety (Street et al., 2009; Little et al., 2000)

The findings from the current study build upon previous research in health communication and provide implications for providers that undergird and advance previous work on gynecological care seeking barriers (DeMaria et al., 2012; Amy et al., 2006; Schick et al., 2010). Though there are many providers and clinics that already implement many elements suggested by the current study there remain many, as suggested by participant responses, that have an opportunity to improve patient care.

Women in this vulnerable care setting benefit from improved interpersonal connection that guards against the perception that they are just another number. Expressing empathy instead of ambivalence, practicing active listening instead of dismissing patient concerns, consistently explaining even routine procedures, committing to an extra two minutes to allow for patient questions, and making strides to thoughtfully address environmental components like lighting, temperature, aesthetic components, and privacy are all simple ways to improve a woman's gynecological care experience. Considering that many women avoid routine and possibly lifesaving screenings because of fear or embarrassment, it is important to address areas of concern regarding the interpersonal needs of patients and environmental factors that impact their decision to schedule and follow through with an exam.

Chapter 7 Conclusions & Recommendations

Existing evidence indicates that many women forgo routine gynecological screenings (Amy et al., 2006). The CDC emphasizes that among women diagnosed each year with cervical cancer, nearly 50-60% of cases are among those who rarely or never participate in annual exams (2017). Likewise, results from the current study reveal nearly one third of participants have avoided or canceled appointments due to distress related to seeking this type of care. Therefore, to better understand this phenomenon, the current study assessed communicative, self-concept, and environmental components comprised within the gynecological care experience that may serve as barriers to care seeking.

Practitioners who are to be successful in reducing anxiety and improving patient adherence in this field must understand the multifaceted aspects of patient anxiety influenced by culture, self-concept, personal history, and environmental components. Operating through the lens of the socioecological perspective affords a framework for practitioners to do just that. As suggested by the literature and the results of the current study, evidenced-based interventions uniquely aimed at improving gynecological provider communication skills and the modification of stressful physical environment mechanisms can lessen a significant amount of anxiety and trepidation associated with seeking medical care.

Summary of Results

Manuscript 1

The current study aimed to better explain the role of patient-provider communication quality, skill, and empathy on behavioral intentions for seeking gynecological care and the subsequent anxiety and satisfaction surrounding the exam

process. Investigating the impact of provider communication in this area helped to identify modifiable barriers within the communicative realm that can be improved upon through provider and patient education respectively

As expected, results from this study build upon research that indicates improved provider communication results in an overall improved patient experience (Ha & Longnecker, 2010). As providers increase their interpersonal skill, psychological and physiological health of patients improves (Street, 2003), resulting in an ability to better interact with and adhere to medical recommendations because the patient perceives that they are being cared for genuinely (Barry & Edgman-Levitan 2012 ; Little et al., 2000). Though this study did not find significant results concerning communication and anxiety in the sample, there were several significant results. Regarding a woman's reported satisfaction, the overall model, when controlling for demographic variables, accounted for 38.5 percent of the variance in reported satisfaction. Quality of provider interaction remained significant at the $p < .01$ with all control variable present indicating a strong association between a patient's perception of provider interaction quality and their overall satisfaction. While the overall model predicting avoidance behavior accounted for a more modest 4.4 percent of the variance, it indicates the importance of the way providers communicate and interact with patients in an empathetic way. Empathy, is the only communication variable that demonstrated significance when controlling for demographic variables and exhibited an increase in association with decreased avoidance when paired with the demographic control of being married.

Manuscript 2

Results from manuscript 2 add to a growing body of research that assesses how negative self-concept and perceived poor self-image impact general care seeking behavior (Aldrich & Hackley, 2010; Amy et al., 2006; DeMaria et al., 2012). Specifically, the current study furthers work that demonstrates how negative evaluation of appearance, in a specific sense, is related to negative health outcomes including anxiety, less satisfaction, and avoidance (Davision & McCabe, 2005; Syzmanski & Henning, 2007). Constructs related to overall body satisfaction and satisfaction specific to genital self-concept were examined to better understand their impact on a woman's satisfaction, anxiety, and avoidance of gynecological care. When controlling for various demographic factors, findings point to Female Genital Self-Concept as a key factor in predicting a woman's satisfaction with gynecological care. Women who evaluate this specific body region more positively are likely to indicate an 11 percent improvement in overall satisfaction with gynecological care appointments.

Manuscript 3

The final manuscript explored in what ways the social and physical environment of a gynecological care facility impact patient experience. Analysis revealed several key themes among three main areas: 1). Clinician Communication (active listening, explanation, empathic communication, & pace), 2). Social Environment (hospitality& being relational), and 3). Physical Environment (Privacy, Aesthetics, & Sensate Variables).

Simple environmental changes like increasing the temperature of the exam rooms, opting for less harsh lighting, and providing a place to hang or set clothing may go a long way to alleviate distress and unease regarding attending a gynecological exam.

Additionally, patient distress may be lessened with more assurance of privacy so that there is no risk of accidental exposure when the door is opened through use of a curtain or partition in addition to a windowless door. Participants emphatically suggest that a more modest cloth drape and/or gown would improve their experience and lessen trepidation concerning routine care. Further, participants indicate that allowing for conversation while clothed, before and after the exam would lessen anxiety and accommodate more meaningful discussion about their health. The power difference between patients and providers is already a barrier to care, adding physical vulnerability to that equation certainly does not assist in ameliorating that. As one participant remarked, “The attention to detail is always noticed. There are small space heaters in the exam rooms when it is cold, the instruments are warm sometimes, a second person is always brought in for the exams after I have had a chance to talk privately with my doctor.” Thoughtful environmental and social changes like these may make a meaningful difference in the care seeking experience for many women.

Of particular interest to this specific study were the number of participants that commented on the amount of baby pictures in the clinic setting. This trend among participants was unexpected but extensively expressed. Women who were struggling to get pregnant, those who had suffered miscarriages, and some who felt judged because they have decided not to have children at all reported that seeing pictures of cute babies throughout the clinic environment made them distraught.

Provider communication proved to be a major component of the patient experience either improving or impeding a patient’s emotional wellbeing and self-reported satisfaction. A dichotomy of active listening versus passive hearing, lack of

explanation versus detailed instruction, empathic communication versus ambivalence, and pace of the interaction (being rushed or taking time), were all key themes of the participant narratives concerning clinician interaction.

Strengths

An abundance of information concerning personal sexual history, race, and previous sexual abuse has been explored in research regarding a women's health care behavior. Likewise, a significant amount of research in communication has addressed a wealth of variables inherent in the realm of patient-provider interaction and its effect on a patient's health behavior and overall health outcomes (Zolnierek et al., 2009; Street, 2009). However there remains a scarcity of information concerning the specific ways in which provider communication specifically impacts women's anxiety, satisfaction, and exam seeking behavior in the often-sensitive environment of gynecological care beyond pregnancy related concerns.

DeMaria and colleagues (2011; 2012) have been instrumental in identifying the relationship between body self-concept and exam seeking behavior but suggest that further investigation is warranted to include interpersonal variables like provider communication interaction skill and quality. The current study addressed this call through regression analysis of demographic, self-concept, and communication variables on satisfaction, anxiety, and avoidance. Furthermore, the current study assesses various social, communicative, and environmental factors through qualitative analysis of participant essays, thus rounding out the understanding of factor that influence a woman's pursuit of and distress related to gynecological care. Thus, providing clinical

and health education implications that may improve adherence and distress related to routine gynecological screenings.

Limitations & Future Research

As with the majority of studies, the design of this current body of work is subject to some limitations. Although the current results are enlightening and reveal much about barriers to women obtaining proper care, the current study results are only a cross-sectional snapshot of the reasons that women either have anxiety concerning pelvic exams or why they are less likely to attend these exams. Additionally, this snapshot of participants suffered from lack of diversity which impacted analysis concerning the role that race plays in gynecological care satisfaction, anxiety, and avoidance. Future studies should strive for a more diverse demographic make-up of participants.

Further, the generalizability of the findings to other populations could be potentially problematic given that women in lower, socio-economic groups may not have as much autonomy in accessing care given the insurance constraints imposed upon them. Future research should include demographic variables to account for insurance in the analysis to better understand this communicative phenomenon with a richer cultural context.

Finally, geographical location was not accounted for when gathering participant data which may result in potentially important missing data concerning accessibility to preventative care and cultural norms specific to areas of the country. Future studies should seek to obtain a more diverse sample and seek to include geographical information, including identification of living in rural or urban areas.

One area ripe for future research concerns the types of messages women need to hear from their providers during medical encounters that will alleviate their perceived anxiety concerning pelvic examinations and will encourage them to seek future care. These messages include visual aid to help dispel incorrect thinking about genital self-concept in addition to communication strategies to employ during interaction with a provider. Providers should be advised to employ more empathetic communication with their patients. Healthcare providers could be instructed to engage in a greater number of active listening tasks, as well as overt displays of respect and care for patients during office visits. Through self-report surveys, researchers could follow-up with patients and assess the perceived anxiety of patients following the medical encounter to assess whether or not effective patient-provider communication encouraged patients to pursue future gynecological care.

Additionally, environmental analysis of the physical attributes of clinic setting could be conducted to compare patient distress levels and environmental qualities like décor (including images of babies), temperature, lighting, privacy, and type of drapes and gowns used among a variety of clinics. Moreover, the results from manuscript 3 could serve as a guide for developing a semi-structured interview guide for focus groups of women to further explore key factors impacting care in the gynecological setting.

Implications for Practitioners & Health Promotion Professionals

Researching the barriers that may exist to routine gynecological care offer clinically relevant information to those providing services and care within the realm of women's health. Implications for how to improve patient-care in this setting are informed by study results and may improve patient adherence to screening protocols and thus

improved effectiveness of secondary prevention efforts. Gaining a better understanding of factors influencing satisfaction, anxiety, and avoidance in this unique care setting serve to better inform educational approaches regarding women's health in a variety of settings – in the community, classroom, and clinic. The provision of the data analysis of the study findings can serve to effectively enable key components of health promotion, including organizational mechanisms that prepare and ensure practitioners have better empathetic and quality communication skill sets. Additionally, information gleaned from this study may aid the design of educational interventions within communities and among women who are apprehensive about gynecological care.

The current study, together with previous research on patient-provider communication and its influence on care seeking behavior, has direct implications for GYN practitioners. Providing clear, easy to understand instruction, actively listening to patients, and creating an environment of safety and patient respect is paramount in the patient-provider communicative interaction. This is especially pertinent in the gynecological exam interaction, which engenders unique care seeking anxiety among women. Special attention should be paid to communication training among healthcare providers who provide pelvic screenings and counseling to women. Teaching providers to engage in tasks as basic active listening strategies may be instrumental in encouraging women to continue with annual screenings examinations.

Although many patients may give consent for the examination, there remain a significant number of women, as evidenced by the current study, who experience anxiety and distress related to this medical encounter. Implementing organizational mechanisms to ensure providers and staff are being trained to communicate effectively and with

greater concern for the patient throughout every gynecological care setting would improve adherence and increase satisfaction.

Training has been shown to improve physicians' ability to use shared decision-making skills when interacting with patients effectively in a general care setting (Bieber et al. 2009). Training, as detailed in previous research, was especially effective for physicians who indicated lacking interpersonal skills, like being overly domineering or hostile to challenges from patients. Subsequently, patients are more likely to feel engaged in the treatment process, supported, and accepted by their physicians when providers have received further communication training (Bieber et al., 2006; Elwyn, Edwards, Wensing, Hood, Atwell, & Grol, 2003).

Likewise, communication training with patients has been shown to be fruitful in increasing patient-participation in the medical encounter even among disparate populations. Cegala & colleagues (2012), revealed that physicians tended to provide more information to patients' questions and concerns when patients had been trained to communicate more effectively with their providers (2012).

The current study also carries implications for addressing self-concept deficiencies. As revealed by participant data, the developed belief or evaluation of one's self as normal or abnormal clearly impacts the way women interact with even routine medical care and adds to a growing body of literature (Davision & McCAbE, 2005; Syzmanski & Henning, 2007; Schick et al., 2010) that supports how negative evaluation of appearance is linked to negative outcomes. Because of this, it is imperative that providers and those in health promotion attempt to mitigate the effects of poor self-image through improved interpersonal communication and messaging concerning genital

appearance and function. Intervening to combat negative patterns of thought concerning how women view their bodies, specifically their genitalia, may help to decrease this perceived barrier to care. As the current study suggest, if a woman begins to view her body as normal, even when she may initially perceive it as out of line with the mainstream influences denoting “normality,” her satisfaction with care may significantly improve. This indicates that addressing the way a woman views this specific bodily region may be of paramount importance when improving gynecological care and adherence.

Overall, women in this vulnerable care setting benefit from improved interpersonal connection that guards against the perception that they are just another number. Expressing empathy instead of ambivalence, practicing active listening instead of dismissing patient concerns, consistently explaining even routine procedures, committing to an extra two minutes to allow for patient questions, and making strides to thoughtfully address environmental components like lighting, temperature, aesthetic components, and privacy are all simply ways to improve a woman’s gynecological care experience. Future work in the area of improvement to the clinic environment may benefit from the development of an environmental analysis tool that provides a methods of scoring and thus direct implications for how to improve the patient experience with suggestions for modification to the built environment.

Conclusions

The current study sought to investigate the trepidation women feel when seeking gynecological care. Results go beyond the often-discussed obstetrics side of the OB-GYN encounter to address concerns specific to routine gynecological care. Results offer

implications for simple environmental changes in the clinic setting, including more modest draping, increasing the temperature, and adjusting for harsh lighting.

Unexpectedly, findings suggest that clinics should guard against the prolific placement of baby pictures throughout the environment to guard against distress and emotional triggers for women who have suffered through infertility, pregnancy loss, or for women, who for various reasons, have made the choice not to have children.

Self-concept, especially female genital self-image as espoused by DeMaria et al., (2012) was a significant component attached to predicting participant satisfaction with their gynecological care. Dispelling myths associated with the appearance of genitalia through visual aids and education may lessen the trepidation a woman feels regarding care seeking in this very specific exam experience.

Across all three manuscripts provider communication proved to be a significant variable accounting for satisfaction, anxiety, and avoidance of care. Specifically, improved provider communication quality and empathy account for improvements in all areas of care seeking for women. Building skill in these specific communicative capacities will allow for improved interpersonal connection, guard against a woman's perception that she is "just another number," and allow for the development of shared-decision making. Ultimately, evidence-based interventions uniquely aimed at improving gynecological provider communication quality and empathy, in addition to environmental changes could improve patient satisfaction and pelvic exam protocol adherence.

APPENDICES

APPENDIX 1. Questionnaire on the quality of patient-provider interaction

QQPPI (Bieber et al., 2010)

On a likert scale from 0 (I Do Not Agree) to 5 (I Fully Agree)

1. The gynecological care provider seemed to be genuinely interested in my problems.
2. The gynecological care provider gave me detailed information about the available treatment options.
3. I felt I could have trusted the gynecological care provider with my private problems.
4. The gynecological care provider and I made decisions together.
5. The gynecological care provider's explanations were easy to understand.
6. The gynecological care provider spent sufficient time on my consultation.
8. The gynecological care provider understood my needs and problems and took them seriously.
9. The gynecological care provider did all he/she could to put me at ease.
11. The gynecological care provider gave me enough time to talk about all my relevant problems.
13. The gynecological care provider gave me a thorough examination.
14. The gynecological care provider gave me detailed information.

APPENDIX 2. GENERAL PHYSICIAN COMMUNICATION SCALE

General Physician Communication (Tabler et. al., 2014)

On a 5 point likert scale 1 = Poor to 5= Excellent

My gynecological care provider:

1. Explains things in an easy to understand terms
2. Listens carefully to me
3. Answers questions to my satisfaction
4. Understands what is important to me
5. Respects what I have to say

APPENDIX 3. PHYSICIAN EMPATHY SCALE

Physician Empathy Scale (Kim et. al., 2004)

On a 5 point likert scale from 1= strongly agree to 2 = strongly disagree

My gynecological care provider ...

1. is interested in knowing what my experience means to me
2. Still understand me when I am not clear
3. Always knows exactly what I mean
4. Responds to me mechanically
5. Tries to keep me from worrying
6. Respects my feelings
7. Shows interest in me
8. Shows caring about my psychological well-being
9. Shows great concern for my well-being
10. Cares about me

APPENDIX 4. FEMALE GENITALIA SELF-IMAGE SCALE

FGIS (DeMaria, Hollub, & Herbenick, 2012)

On a likert scale from 0 (Strongly Disagree) to 5 (Strongly Agree).

1. I feel positively about my genitals
2. I am satisfied with the appearance of my genitals
3. I would feel comfortable letting a sexual partner look at my genitals
4. I think my genitals smell fine
5. I think my genitals work the way they are supposed to work
6. I feel comfortable letting a healthcare provider examine my genitals
7. I am not embarrassed about my genitals

APPENDIX 5. BODY PARTS SATISFACTION SCALE - REVISED

BPSS-R (Petrie, Tripp, & Harvey, 2002)

On a likert scale from 1 (Extremely Dissatisfied) to 6 (Extremely Satisfied)

Please rate how you feel about your:

Weight

Hair

Complexion

Overall face

Arms

Stomach

Breasts

Buttocks

Hips

Upper thighs

General muscle tone

Overall satisfaction with the size and shape of your body

APPENDIX 6. OPEN ENDED SURVEY QUESTIONS

In the following section, please share any thoughts, feelings, or examples you have about your communication with your gynecological health care provider.

Are there any instances that you recall during interaction with your gynecological health care provider that resulted in a positive experience?

Are there any instances that you recall during interaction with your gynecological health care provider that resulted in a negative experience?

Think about the communicative experience from the time you entered the front doors of the facility until your exam/consultation began – were there interaction with others that put you at ease/made you feel welcome?

Think about the communicative experience from the time you entered the front doors of the facility until your exam/consultation began – were there interaction with others that made you feel nervous, anxious, or unwelcome?

Think about the physical exam room environment – are there aspects of the physical space, lighting, amenities etc. that positively or negatively impacted your physical and/or psychological comfort?

If you could give your gynecological care provider suggestions for maintaining great care or to improve care what suggestions would you give?

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VITA

EDUCATION

- Ph.D. University of Kentucky (Expected Dec, 2019)
Health Promotion
Advisor: Dr. Kristen Mark
- MPH Eastern Kentucky University (2011)
Public Health, Community Health
Advisor: Dr. Phyllis Bryden
Thesis: "Emotional dependency: Contributors to collegiate social wellness"
- B.S. Eastern Kentucky University (2007)
Health Education
Advisor: Dr. Michylen Bhandari

PROFESSIONAL POSITIONS HELD

- 2015 – present Assistant Professor
Health Promotion & Administration Department,
Eastern Kentucky University
- 2015 - present Member/Researcher/Project Coordinator
Sexual Health Promotion Lab, University of Kentucky
- 2013-2015 Assistant Professor
Health & Human Performance Program,
Berea College
- 2012-2013 Kentucky Safe Aging Coalition Coordinator
Kentucky Department of Public Health and The Kentucky Injury
Prevention & Research Center
- 2012-2013 Kentucky Occupational Safety and Health Surveillance
Writer/Investigator
Kentucky Injury Prevention & Research Center
- 2010-2013 Adjunct Instructor
Health Promotion & Administration,
Eastern Kentucky University
- 2008-2010 Graduate Assistant
Department of Health Promotion & Administration,
Eastern Kentucky University
- 2005-2008 Peer Health Educator

Student Health Services,
Eastern Kentucky University

PROFESSIONAL HONORS

- 2019 Critical Thinking Teacher of the Year Awardee, Eastern Kentucky University
- 2017 Nominee for Critical and Creative Teacher of the Year Award, Eastern Kentucky University
- 2012 Nominee for the Golden Apple Teaching Award, Eastern Kentucky University.
- 2012 Recognized as an ECU STAR, Eastern Kentucky University.
- 2010 Presidential Award, Kentucky Association of Health, Physical Education, Recreation, and Dance (KAHPERD)
- 2007 Health Education Student of the Year, Kentucky Association of Health, Physical Education, Recreation, and Dance (KAHPERD)
- 2007 Outstanding Senior in Health Education, Eastern Kentucky University, Department of Health Promotion and Administration.
- 2007 Outstanding Undergraduate in Health Education, American Association for Health Education (AAHE).

PROFESSIONAL PUBLICATIONS

- Lasslo, J.A.**, Anthony, K.E., Rief, C.E., Bell, N.H., (2017). Overcoming health disparities: The need for communication and cultural competency training for healthcare providers practicing virtually in rural areas. In *Health Professionals' Education in the Age of Clinical Information Systems, Mobile Computing and Social Networks*. Toronto, Canada: Elsevier
- Mark, K.P., **Lasslo, J.A.** (2018). Maintaining sexual desire in long-term relationships: A systematic review and conceptual model. *Annual Review of Sex Research. Journal of Sex Research*
- Rief, C.E., **Lasslo, J.A.**, Anthony, K.E., (2018). Healthcare organizations and patient safety: Questions of ethical public relationship practices. In *Translating Values into Conduct: Cases in Public Relations Ethics*. New York, NY: Oxford University Press

Manuscripts Under Review

- Rief, C.E., **Lasslo, J.A.**, Anthony, K.E., (under review). Healthcare organizations and patient safety: Employing a first and second things framework to ethical public relations practices.

Manuscripts in Progress

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Anthony, K.A., **Lasslo, J.A.,** (In-progress). *Are healthy babies worth the wait? A communication investigation into the role of healthcare providers in pregnant women's delivery decisions.*

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