

**Shedding Light on Sexual Functioning and Quality of Life in Women from Various
Ethnicities During Different Stages of Menopause**

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A Dissertation Submitted to the Faculty of
The Chicago School of Professional Psychology
In Partial Fulfillment of the Requirements
For the Degree of PsyD Clinical Psychology

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Date of Defense (June 18, 2024)

Unpublished Work

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Abstract

The menopausal transition is marked by significant physiological, psychological, and social changes, and often impacts women's sexual functioning and quality of life. This quantitative study analyzed data from the Study of Women's Health Across the Nation (SWAN) to explore these relationships among midlife women across different menopausal stages and ethnic backgrounds. Using data from Baseline (1996–1997) and Visit 10 (2006–2008), the study assessed associations between menopausal symptoms, sexual functioning, quality of life, and ethnicity. The primary research question was how sexual functioning varies by menopausal status, ethnicity, and other demographic factors, and what impact this has on the quality of life in midlife women. Three hypotheses were tested: (1) postmenopausal women would report lower levels of sexual functioning and quality of life than premenopausal and perimenopausal women; (2) Black and Hispanic women would report lower levels of sexual functioning and quality of life than White women; and (3) higher income would be associated with higher levels of sexual functioning and quality of life. The Mann-Whitney U Test and Spearman's Rho were used to assess the relationships among variables. Results showed that postmenopausal women experienced significant declines in sexual functioning and quality of life compared to premenopausal and perimenopausal women. Black and Hispanic women reported more pronounced decreases than White women. Higher income was associated with improved sexual engagement and emotional satisfaction but also linked to physical and emotional fatigue. The findings underscore the importance of culturally sensitive, accessible healthcare and targeted interventions to address the unique needs of diverse groups during menopause, with an aim to improve the sexual health and overall quality of life for midlife women.

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Chapter 1: Nature of the Study

Background

The transition into menopause marks a significant period in a woman's life, typically occurring around the age of 45 and signaling the end of reproductive capability. This natural process, characterized by the cessation of menstrual periods due to the decline in ovarian follicles, is often regarded as a normal aspect of aging. However, menopause involves complex physiological, psychological, and anatomical changes that can profoundly impact a woman's well-being and ability to cope with this transition, including changes in sexual functioning. While the average age of menopause is around 50, variability exists, and factors such as a hysterectomy can influence its onset (Séjourné et al., 2019; Beyazit & Sahin, 2018; Nappi & Lachowsky, 2009).

Perimenopause, also known as the menopausal transition, precedes menopause by several years and is characterized by fluctuating hormone levels and reproductive changes. This stage, which typically begins around age 40 but can occur earlier, can bring about symptoms such as hormonal fluctuations and reproductive changes, impacting sexual health and functioning. The decline in estrogen levels during perimenopause can lead to changes in sexual desire, arousal, and satisfaction, affecting overall sexual functioning and quality of life (Sheikh, 2023; Santoro, 2016). Postmenopause follows menopause and is defined as the stage when a woman has not experienced menstruation for a full year (Sheikh, 2023).

Sexual satisfaction, an essential component of sexual health and well-being, encompasses mutual pleasure derived from positive sexual experiences rather than the absence of dysfunction (Pascoal et al., 2014). According to Thornton et al. (2015), sexual functioning, which includes aspects such as desire, arousal, lubrication, and orgasm, plays a crucial role in sexual satisfaction

and quality of life during the menopausal transition (Thornton et al., 2015). Although understanding the relationship among menopausal symptoms, sexual functioning, and quality of life is essential, it is challenging. Previous research has struggled to identify the precise timing and phase of menopause that most significantly impacts these outcomes due to the overlapping symptoms and variability in symptom onset (Thornton et al., 2015). This research aims to provide clarity on the relationship between menopausal symptoms, sexual functioning, and quality of life.

Kelly (2011) outlines the various menopausal experiences across different societies and cultures that reveal significant disparities in symptom perception and reporting among women from diverse ethnic and racial backgrounds who live in different cultural contexts. These discrepancies stem from several factors, including lifestyle habits like diet and exercise, variations in reproductive patterns influencing biological processes, cultural beliefs and attitudes regarding menopause, and the social status afforded to middle-aged and older women (Kelly, 2011). For example, Indian and Japanese women often welcome menopause, as they view it as a positive transition, while women in societies with prominent gender hierarchies may experience great shifts in social roles postmenopause. While menopause is universally experienced by women, societal and cultural beliefs profoundly shape individual perceptions and experiences. Women's self-esteem and self-perception during menopause are heavily influenced by societal norms regarding aging and gender roles. In cultures where aging is stigmatized or viewed as a decline, menopause can be a source of stress; however, in societies that value wisdom and maturity, menopause may signify freedom and empowerment (Kelly, 2011).

Challenges persist, particularly for minority groups such as ethnic minorities and the LGBTQIA+ community, underscoring the need for systemic changes in healthcare to

accommodate diverse needs (Glyde, 2022). Transgender individuals undergoing gender-affirming hormone therapy (GAHT) face unique challenges in aging, including mistreatment in elder care and a lack of inclusivity in healthcare systems. Menopause, traditionally associated with cisgender women, may not apply to those undergoing GAHT, which highlights the need for more research and inclusive healthcare practices. While limited data exists on managing GAHT with aging, older adults starting therapy report better quality of life (Cheung et al., 2023).

Menopause often coincides with a decline in quality of life (QoL) due to health issues associated with reduced estrogen levels. Physical activity has been shown to improve QoL for menopausal women, potentially reducing the frequency of hot flashes and aiding in weight management. Alterations in global QoL are more closely linked to changes in physical activity levels than shifts in menopausal status. Women who maintain consistent physical activity or experience increased activity demonstrate improved QoL over time (Moilanen et al., 2012). Smoking has been linked to poorer physical health-related QoL during menopause, with longer smoking duration associated with worse menopause-specific QoL. Interventions targeting smoking cessation before menopause are crucial, as smoking behavior tends to remain stable during this transition (Dotlic et al., 2023).

Problem Statement

Researchers in the field have identified that it is essential to understand all aspects of the relationship between menopause symptoms and quality of life with sexual functioning. Despite previous research efforts, there is still limited understanding of how menopausal symptoms influence sexual functioning and overall quality of life among midlife women, specifically for African American and Hispanic women. Many of the symptoms at the perimenopause stage are similar to what is experienced during the menopause stage; thus, existing studies have struggled

to identify the specific phases of menopause that most significantly impact sexual functioning and quality of life, especially regarding African American and Hispanic women. This hinders effective interventions and support for women during this transitional period.

Purpose of the Study

This study aims to examine how menopausal symptoms affect sexual functioning and overall quality of life among midlife women who identify as White, Black or African American, and Hispanic. By analyzing two datasets from various phases of menopause, the study seeks to provide insights into the specific phases of menopause that most impact these outcomes and contribute to a better understanding of women's experiences during this transitional period. Additionally, it is important to explore how access to health care impacts these women's experience of menopause, as lack of access can exacerbate health concerns and can lead to a decrease in overall quality of life. Thus, income will be utilized as the variable to demonstrate access to care.

Research Questions and Hypotheses

The research question is as follows: How does sexual functioning vary by menopausal status, ethnicity, and other demographic factors, and what impact does this have on the quality of life in midlife women? The question is examined by three hypotheses: (1) Women in a postmenopausal stage will report lower levels of sexual functioning and lower quality of life compared to premenopausal/peri-menopausal women; (2) Women who identify as Black or Hispanic will report lower levels of sexual functioning and lower quality of life compared to White women; (3) Women with higher levels of income will report higher levels of sexual functioning and higher quality of life compared to those with lower levels of income.

Theoretical/Conceptual Framework

This study will be guided by the biopsychosocial model, which posits that health and well-being are influenced by complex interactions between biological, psychological, and social factors. In the context of menopause, the biopsychosocial model suggests that hormonal changes (biological), psychological factors such as mood and self-perception, and social factors such as cultural attitudes toward sexuality all play a role in shaping women's experiences. By applying this framework, this study will explore how menopausal symptoms impact sexual functioning and quality of life while considering the interplay of biological, psychological, and social factors to contribute to a more holistic understanding of menopause-related changes in sexual functioning and overall well-being.

Definitions of Key Terms

Sexual functioning: Can be characterized in terms of libido (sexual interest, desire, motivation, and pleasure) and potency (arousal) (Cain et al., 2003).

Woman: In this study, “woman” refers to individuals who were born with a female reproductive system, including at least one ovary and a uterus.

Premenopausal: Includes women who reported bleeding in the past three months, yet, their menstrual periods stayed the same since their last visit (Sutton-Tyrrell et al., 2019).

Early perimenopause: Refers to women who bled in the last three months and said their menstrual period became farther apart, closer together, more variable, or more regular (Sutton-Tyrrell et al., 2019).

Late perimenopause: Describes women who had bleeding in the last 12 months prior to the visit but no bleeding in the past three months (Sutton-Tyrrell et al., 2019). Women may begin

to experience symptoms during the perimenopause stages, including but not limited to hot flashes, vaginal dryness, night sweats, and insomnia.

Natural postmenopausal: Includes women who reported no bleeding in the past 12 months prior to the visit (Sutton-Tyrrell et al., 2019).

Female health problems: In this study, “female health problems” refer to the experience of pelvic pain, vaginal dryness, endometriosis, polycystic ovary syndrome (PCOS), and other chronic conditions.

Hispanic: The term “Hispanic” will be used throughout this study as it was used throughout the SWAN datasets to describe the participants who spoke Spanish. However, “Latina/o/x” will be used as well in the literature review as some of the articles used this specific term either interchangeably as Hispanic or as to make a distinction between geographical location of their participants.

Significance of the Study

This study will contribute to a better understanding of how menopausal symptoms impact women's sexual functioning and overall quality of life, specifically for Black, Hispanic, and White women. By illuminating the interplay between these factors, the findings will inform healthcare providers' interventions and support services tailored to women during the menopausal transition.

Chapter 2: Literature Review

Many researchers have explored the impact of menopause on sexual functioning and the quality of life of women across the globe. Khalesi et al. (2020) discuss that many women experience the symptoms of menopause positively and with minimal discomfort; however, other women experience the menopausal transition with negative side effects that impact their daily functioning. These symptoms vary widely from mild insomnia to intense night sweats that soak through bedding, and from occasional forgetfulness to episodes of depression (Khalesi et al, 2020). While some women may experience distress due to decreased libido during menopause with fear that it may affect their sexual relationships, other women may describe a feeling of sexual liberation by it alleviating concerns about unwanted pregnancy or restrictions on sexual activity due to menstruation (Khalesi et al, 2020). Cain et al. (2003) addressed limitations of prior research by presenting the baseline data on sexual functioning from the Study of Women's Health Across the Nation (SWAN) that later became a longitudinal study. SWAN is a large multisite, multiethnic, observational study that followed mid-aged women as they transitioned through menopause. As SWAN has progressed to have several "visits" after the baseline visit, the Cain et al. article will be used as a framework for the current study which is focused on different aspects of sexual practices and functioning across varying racial backgrounds and associated differences related to menopausal status. There are psychological, physical, physiological, and social dimensions of menopause that have been explored to shed light on the association between these variables. Studies of menopausal symptoms and their impact on well-being will be reviewed with a focus on women's sexual functioning and quality of life during menopausal stages. Further, this study will include an emphasis on African American, Hispanic, and White women's experiences of sexual functioning and quality of life.

Menopausal Stages and Symptoms

Perimenopause

Perimenopause refers to the transition between the reproductive life of a woman to the non-reproductive life (Halloran, 2014). Halloran (2014) describes the common symptoms that women in the United States seek coping assistance for, which include painful intercourse, lower sex drive, mood swings, vaginal dryness, night sweats, flushing, and sleep disturbances. Yang et al., (2016) studied the experiences of Taiwanese women of sexual functioning during peri- and postmenopause; some of the reported symptoms were vaginal dryness, pain during vaginal penetration, lower libido, and loss of interest in sex. Once perimenopause starts, it lasts until menopause. The average time length of perimenopause is about four years, while in some people, it could be up to ten years (Sheikh, 2023).

Many studies have shown the importance of menopause to a woman's life, which can be explored from different dimensions. Thornton et al.'s (2015) study demonstrated that 76% of middle-aged women from the Study of Women's Health Across the Nation (SWAN) identified sex as moderately or extremely important to them. "Sexuality may impact quality of life through effects on the emotional and psychological health of a woman" (Thornton et al., 2015, p. 649). It is necessary that clinicians working with women can understand when the woman may experience sexual disturbance. The hormonal, physiologic, and social changes that occur during the menopausal transition are often associated with disturbances in sexual functioning. For example, declining and fluctuating gonadal steroid hormone levels that affect the elasticity of the vaginal mucosa may result in painful intercourse. Divorce, job loss, lack of a partner, or declining health during times women are experiencing menopause may impact desire for sexual intercourse (Thornton et al., 2015). When physical changes and life changes start to occur right

at the onset of the perimenopausal stage and extend through the menopause stage, the signs and symptoms associated with each phase create gradual and notable changes in the woman's life. Further, these changes are of considerable relevance to the woman's life and those that support them (Thornton et al., 2015).

Menopausal women, regardless of the menopause stage, report high rates of sexual relation infrequency problems (Beyazit & Sahin, 2018). Many women report feeling different from others, prejudice about their sexuality, insecure when needed to show affection to their partner in public, or feeling like they do not have the right support from those closest to them. Studies have clearly demonstrated that sexuality influences the quality of life for women, particularly emotional and psychological health. One study investigated the relationship between menopause symptoms and quality of life among Lebanese women, comparing it with their physical activity level, anthropometric, medical, and sociodemographic variables (El Hajj et al., 2020). The severity of the notable symptoms among the women included hot flashes (48.9%), anxiety and nervousness (68.9%), memory problems (52.9%), pain in muscles and joints (72.3%), feeling of tiredness or exhaustion (73%), lower back pain (65%), and modifications in sexual desire (43.4%) (El Hajj et al., 2020). The author highlighted the influence of genetic, cultural, and individual profiles on the transition into menopause which is a gradual process. A significant association was also found between the women's educational level, crowding index, physical and psychosocial factors, especially among less educated and economically deprived individuals (El Hajj et al., 2020). Women who were well educated or belonged to higher socio-economic levels had a better quality of life during menopause. These women displayed more concern about their condition and eager to find the solution through personal research or professional help (El Hajj et al., 2020).

Natural Menopause

Many researchers have described menopause by using a range of variables and definitions. “Menopause, defined as the complete cessation of menstrual periods, is associated with the gradual loss of ovarian follicles occurring naturally in midlife women” (Séjourné et al., 2019, p. 18). Menopause is regarded as naturally occurring changes in midlife women with the gradual loss of ovarian follicles (Séjourné et al., 2019). According to Beyazit & Sahin (2018), menopause is defined as the normal part of aging associated with psychological alterations experienced along with physical and anatomical changes in women. These definitions depict “natural menopause,” which helps explain the impact of oestradiol deprivation on a woman’s general well-being and sexual functions. Women may also experience surgical menopause which can be initiated before the age of natural menopause. Most women experience natural menopause between the ages of 45 and 55 years old. Researchers have noted that it represents a suitable clinical model to explore the effects of acute estrogen and androgen deprivation on several domains of sexual functions, physical, and mental health (Nappi & Lachowsky, 2009). Triebner et al. (2017) consider menopause to be the beginning of the non-reproductive phase of a woman’s life, which is characterized by the cessation of menstruation, accompanied by lack of energy, hot flushes, vaginal discharge, insomnia, osteoporosis, and an increased risk of developing some chronic conditions like diabetes or cardiovascular diseases.

In a longitudinal population study, Monteleone et al. (2018) explored the global prevalence, physiology, and implications of menopause symptoms. The study finds that ethnic, geographical, and individual factors affect the prevalence and severity of symptoms. One observation that has significant implications for clinical practice is the findings that certain

menopausal symptoms may be associated with the onset of other disorders or serve as the predictor for future health risks in postmenopausal women.

Postmenopause

Barati et al. (2021) examined the prevalence of menopausal symptoms among menopausal women in Hamadan City in Iran, as well as the factors associated with quality of life. About 50% of the women had been postmenopausal for less than five years and approximately 40% were postmenopausal for five or more years. Women with a higher socioeconomic status (SES) reported lower levels of vasomotor symptoms (e.g., night sweats and hot flashes) in comparison to women with a lower SES (Barati et al., 2021). These women also reported lower vasomotor symptoms when they exercised more and used Omega-3 supplements. The women from the study reported increased vasomotor symptoms if they identified as a smoker. Regarding psychosocial concerns, these were described as dissatisfied with personal life, feeling anxious or nervous, poor memory, feeling depressed, feeling impatient, and having the desire to be alone. The women from the Barati et al. (2021) study reported lower psychosocial symptoms when they identified as educated, a clerk worker as opposed to a housewife, higher SES, married rather than divorced, and utilized Omega-3 supplements. The Barati et al. (2021) study described sexual dimension through the experience of changes in sexual desire, avoidance of intimacy, and vaginal dryness during intercourse. The postmenopausal women who exercised approximately three times a week, had a higher education level, and worked as a clerk (as opposed to a housewife) reported less sexual problems. Married postmenopausal women reported more sexual concerns than divorced women. Finally, the article states that women in the postmenopausal stage that are employed, exercise more frequently, and have high social interaction with others are likely to experience a lower number of physical symptoms. Further,

employed women reportedly had better access to healthcare services, which enabled them to adapt to the menopausal symptoms. Poor economic status can increase the severity of menopausal symptoms or a longer duration of these symptoms. Lastly, the Barati et al. (2021) article discussed that vasomotor and physical symptoms were the most experienced among these women; the symptoms included hot flashes, night flashes, aching muscles and joints, lack of energy, weight gain, frequent urination, et cetera. The article reported that the least experienced symptoms among the postmenopausal women were sexual concerns.

Jones and Sutton (2008) explored the relationship between obesity and the health-related quality of life (HRQoL) of postmenopausal women. Given that women's body weight tends to increase during the menopause transition, obesity has been explored as a significant predictor of poor psychological well-being and negative HRQoL. The researchers found that postmenopausal women who were obese experienced problems with energy/vitality and general health perceptions, along with expected physical functioning concerns. "Thus, clinical management of obese postmenopausal women should focus on weight reduction and exercise in an attempt to improve wellbeing in these areas" (Jones & Sutton, 2008, p. 26). The article mentioned similar concerns between obese postmenopausal women and underweight postmenopausal women regarding physical functioning; however, the underweight women reported more bodily pain and emotional functioning concerns (Jones & Sutton, 2008).

Social and Cultural Construct of Menopause

Kelly (2011) explores how women of different cultures experience, give meaning to, and view menopause. Medical literature adopts a Western biomedical framework by portraying menopause as a deviation from typical bodily functions and potentially hazardous to women's health. Within this model, estrogen and progesterone, produced by the ovaries, play crucial roles.

When ovaries fail to produce adequate hormone levels during the menopause transition, or when hormone imbalance occurs, Hormone Replacement Therapy (HRT) is often prescribed to supplement the decrease in estrogen and progesterone levels (Kelly, 2011). Menopause reveals a significant disruption and transition in women's lives across most societies. The interpretation of menopausal implications varies depending on socio-political and economic factors in each society (Kelly, 2011). Kelly (2011) states that in non-Westernized countries, menopause remains largely non-medicalized, while in Western societies, it is often diagnosed and treated as a medical condition that requires intervention.

According to Kelly (2011), symptoms commonly associated with menopause in Western medicine, such as hot flashes and memory loss, are not universally experienced by women in non-Western cultures. Women's interpretations of menopause vary widely, with some women defining it based on changes in menstruation patterns rather than its cessation entirely. Anglo/European cultures often perceive menopause as distressing and needing treatments like HRT (Kelly, 2011). In contrast, women in certain communities, like a village in South Wales, view menopause as a threat to feminine identity and a loss of bodily control.

Feminist vs. Medical Perspective

The medical model view menopause as an ailment, with the symptoms experienced during this transition perceived as either psychological or stemming from hormonal deficiencies (Kelly, 2011). Due to the estrogen loss characteristic of menopause, considered pathogenic within the medical framework, long-term HRT is often recommended, even for asymptomatic women. Kelly (2011) explained that in the late 1960s and early 1970s, the women's rights movement began challenging the medical establishment's disease model of menopause and questioning its validity. Though feminists acknowledge the short-term benefits of HRT in

alleviating symptoms like hot flashes and vaginal dryness, they advocate against its prolonged use, while advocating instead for dietary modifications, exercise, and vitamin supplements to manage menopausal symptoms (Kelly, 2011). Feminists reject the notion that menopause is an illness that requires pharmaceutical intervention. They argue that HRT strips women of bodily autonomy, as it exerts control over natural bodily processes (Kelly, 2011).

Experiences of Menopause by Various Cultures

Menopause in Egypt

Kelly (2011) explored research regarding Egyptian women, which indicated these women tend to experience more menopausal symptoms compared to Western women. In a study involving 200 peri-menopausal Egyptian women, it was revealed that a significant proportion reported various symptoms. Tiredness was reported by 90% of the women, hot flashes by 88%, loss of libido by 63%, and vaginal dryness by 59%; backaches were the most reported complaint, cited by 93% of the participants (Kelly, 2011). Despite experiencing these symptoms, Egyptian women demonstrated limited knowledge about menopause. Regarding information sources about menopause, participants primarily relied on mass media (42%), followed by peers (36%), physicians (17%), and family members (15%). Egyptian women managed the menopausal symptoms by utilizing sedatives (35%) and hormone replacement therapy (18%), which indicates a reliance on Western medical practices. Overall, Egyptian women view menopause as a normal physiological change and generally maintain a positive attitude toward menopause (Kelly, 2011).

Menopause in Rural North India

Kelly (2011) described a research study on menopause conducted in rural North India that included 558 women aged 35–55; 27% of the participants had reached menopause, 7% were in the transition phase, and 4% had undergone a hysterectomy. The most frequently reported

symptom during menopause was loss of vision, with women commonly attributing it to the cessation of menstruation. While many of these women did not seek consultation for their symptoms, some acknowledged the need for professional advice to alleviate menopausal symptoms. Majority of the women acknowledged the impact of menopause on their physical health, while others noted alterations in their daily routines after menopause (Kelly, 2011). None of the women reported the use of medication to manage their symptoms, including HRT. The study revealed that most of these women welcomed menopause as a transition into a new stage of womanhood, considering themselves "cleaner" after menopause and relieved from the perceived "filth" associated with menstruation. In addition, more than one-third of the women reported engaging in additional activities postmenopause, as they felt liberated from various restrictions imposed during menstruation (Kelly, 2011). Many Indian women embrace menopause, as it viewed as socially advantageous due to the highly structured rules of conduct and rituals associated with menstruation. Kelly (2011) described that Indian culture instills in women the practice of leading a restrained and disciplined life during menstruation, from adolescence to middle age; the cessation of menstruation brings relief, as women no longer face restrictions and are perceived as less threatening to men. As women grow older, they gain increasing authority and may assume broader societal roles, which could lead to wider social recognition and control over resources previously unavailable to them (Kelly, 2011). In regard to HRT in India, the medicalization of menopause is minimal and none of the participants reported using HRT. Most women expressed positive attitudes toward menopause and considered it a welcome stage of life (Kelly, 2011).

Menopause in Latin America

Kelly (2011) reviewed the literature of Mayan women; they viewed menopause as the cessation of menstrual periods once a woman had exhausted all her menstrual blood. In Puebla, Mexico, Kelly (2011) discussed a study that investigated women's attitudes toward menopause, considering the influence of education levels on these attitudes. The study revealed that postmenopausal women with lower educational attainment were more likely to report symptoms such as hot flashes, joint aches, and nervous tension. Negative attitudes were associated with various symptoms, including feeling depressed and experiencing headaches, although only a few were significantly linked to estrogen-related symptoms like hot flashes (Kelly, 2011). The women described their menopausal symptoms as normal and viewed menopause as a time to save money that was previously spent on menstrual pads, mature as women, experience freedom, and perceive it as a phase of life ordained by God. However, many women also expressed feelings of insecurity and unattractiveness in conjunction with a sense of completion and success (Kelly, 2011). Information about menopause was obtained from television, radio programs, advertising, public conferences, menopause clinics, and magazines.

In Oaxaca, Mexico, residents regarded menopausal women as a threat to the household. Kelly (2011) discussed a researcher that reported how Mexican women undergoing menopause often encounter challenges with their children, elderly parents, or spouses. The researcher observed perceptions that some women distanced themselves from their husbands and focused more on their children, relying on them for care, which reflected a shift in traditional gender roles and Catholic cultural influences. According to an interview of women in Mayan regions of rural Guatemala and Chichimilá, as well as in Mexico's Yucatán peninsula, regarding menopause and women's health, some women in these areas reported minimal or no significant menopausal symptoms compared to women in other regions. Mayan women engaged in an all-natural, herb-

based diet and they experienced fewer menopausal symptoms. Additionally, menopausal Mayan women gained a new status and could assume leadership roles within their spiritual community (Kelly, 2011). Despite variations in symptom experiences, Mayan women anticipated menopause with optimism, and they embraced the newfound freedom and status it conferred (Kelly, 2011).

Menopause in Asia

As HRT gained wider recognition, numerous health articles in newspapers and magazines began addressing its use, which informed many Taiwanese women about managing menopausal symptoms through this treatment method (Kelly, 2011). Kelly (2011) discussed the results of 386 women that were surveyed. Ninety-seven percent were familiar with menopause, but only half could accurately define the term. The primary source of information on menopause was reading materials like newspapers and magazines (43%), followed by friends (22%), medical professionals (18% and family members (8%). Taiwanese women commonly reported symptoms such as lower back pain (68%), fatigue (59%), memory impairment (55%), vaginal dryness (50%), and hot flashes and sweating (49%). Approximately 80% of Taiwanese women initiated HRT to alleviate menopausal symptoms, prevent cardiovascular disease, and manage osteoporosis (Kelly, 2011).

Taiwanese women generally adopt a medicalized perspective on menopause, treating it as an illness (Kelly, 2011). However, only 18% received advice from doctors, with over half acquiring knowledge about menopause through reading; this possibly reflects the socioeconomic status of the women, as women of a higher SES may have increased access to medical resources.

In Japanese culture, though hot flashes and night sweats are commonly experienced, they are not considered normative menopausal signs (Kelly, 2011). Kelly (2011) reviewed a study that revealed that Japanese women express menopausal symptoms uniquely. Most Japanese

women do not dwell on menopause, primarily due to the cultural significance of the term "konenki," which conveys renewal and regeneration. This cultural perspective contributes to a more positive view of menopause among Japanese women, with the transition associated with increased respect and honor as they enter a stage of life valued within their society.

Consequently, many Japanese women eagerly anticipate this phase as a liberation from societal burdens, with fewer experiences of typical menopausal symptoms compared to women from Western or other cultures (Kelly, 2011).

Menopause and Female Sexual Functioning

Sexual functioning encompasses a set of psychosocial factors, such as sexual stimulation, sexual desire, arousal, vaginal tightness, or the ability to climax (Thompson et al., 2011; Heidari et al., 2019). Sexuality is made up of physical, emotional, psychological, and social welfare states associated with sexual desire (Heidari et al., 2019). At the menopausal stage, women may face many problems or complications that could be associated with a lack of sex hormones leading to sexual dysfunction (Ornat et al., 2013). The quality of sexual relationships is clearly documented to be one of the most important factors that affect the happiness of partnered relationships. If there are problems within sexual relationships, feelings of failure, defeat, or lack of security may occur (Heidari et al., 2019). According to Pascoal et al. (2014), sexual satisfaction is a subjective indicator of sexual health. The author also found mutual pleasure as a crucial component when discussing sexual satisfaction, which greatly relates to a positive sexual experience (Pascoal et al., 2014). Sexual satisfaction remains an important variable when evaluating sexual functioning and sexual health during the perimenopausal, menopausal, or postmenopausal stage. During each of these stages, dysfunctions have been noted to affect health or sexual indicators. Heidari (2019) concludes that any disorder that leads to inconsistency of or

dissatisfaction with a sexual relationship could cause sexual dysfunction. The prevalence of sexual dysfunction among all women is estimated to be 25% to 63% (Heidari et al., 2019). Such prevalence is higher among women with menopause with estimates ranging from 68% to 86.5% (Heidari et al., 2019). It also stated that sexuality is not solely a physical phenomenon but is linked to individual lifestyle (Heidari et al., 2019).

Sexual Functioning and Ethnicity

The article “Sexual functioning and practices in a multi-ethnic study of midlife women: Baseline results from Swan” described an analysis that found that rates with which women engage in sex did not vary significantly by ethnicity or menopausal status (Cain et al., 2003). In this study, the importance of sex varied across ethnicity, but not menopausal status, and results showed that “Caucasian, African American, and Hispanic women were more likely to find sex quite or extremely important than Chinese or Japanese women” (Cain et al., 2003). Menopause status was not determined to be a unique predictor of the importance of sex or engaging in sex variables. However, when controlling for the demographic and socioeconomic status variables, ethnic differences in the importance of sex remained. Further, African American women were somewhat more likely than White women to report that sex was important to them, Hispanic and White women did not differ, and Chinese and Japanese women were less likely to report sex as important in their lives.

Sexual Functioning and Black Women

The participants reported five primary reasons for engaging in sexual activity in the past six months: to “express love,” “for pleasure,” “partner wanted to,” “relieve tension,” and “to get pregnant,” respectively (Cain et al., 2003). Concurrently, the reasons for not engaging in sexual activity in the past six months are as follows: “no partner,” “no interest,” “too tired,” “physical

problem,” “partner no interest,” “partner too tired,” and “partner physical problem.” The two least likely reasons for African American women to not engage in sex are “physical problem” and “partner too tired” (Cain et al., 2003). The top two reasons for Black women to engage in sex are “for pleasure” and “to express love.” White women depicted similar ranks to African American women for these specific variables: to engage in sex and not to engage in the past six months. The Cain et al. (2003) study provides valuable information regarding sexual functioning of menopausal women as related to ethnicity; however, the SWAN study now has more recent data about this same population that will be analyzed in this study.

Prather et al., (2018) discusses the historical sexual and reproductive health of African American women and implications for health equity. Race-based mistreatments in the United States of Africans and their descendants involved acts of sexual and reproductive violence to the women and their sexual partners. To describe only a few examples, African American women were exploited for medical experimentation, experienced public sexual violence, and were not protected by laws regarding rape. All of these experiences contribute to the poor sexual and reproductive health outcomes among African American women in the United States. A full explication of this topic is beyond the scope of this dissertation, although it’s important to understand the historical features related to the current study.

Sexual Functioning and Hispanic Women

According to the U.S. Census Bureau (2019) the Latinx population is the fastest growing minority group in the United States. Census data reveals approximately 17% of women between the age 45 and 54 in the United States self-identify as Latina, thus a large proportion of women going through menopause are Latina. While the average age of natural menopause for Latina women in the United States is around 51 years old, this distinction is comparable to non-white

Latina women. The term Hispanic/Latino encompasses individuals of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish cultural or ancestral background, regardless of race (Cortés et al., 2021; Gold et al., 2001).

It is worth noting that Latina women encompass a diverse range of nationalities, immigration histories, religions, cultural beliefs, education levels, and levels of acculturation, making them an ethnically heterogeneous group. These various factors significantly influence the health and lifestyle of Latina women. Consequently, researchers undertaking studies involving midlife Latina women should take into account sociological frameworks when studying midlife Latina populations. It is reasonable to consider that these sociocultural factors may play a role in explaining disparities in health outcomes during the menopausal transition (Cortés et al., 2021). “Many key indicators suggest that Latinas in the USA are disadvantaged by limited English proficiency, less formal education, living below the federal poverty level, lack of health insurance, and social isolation and discrimination; these factors are known to affect lifestyle and health adversely” (Cortés et al., 2021, p. 214-215).

Existing research indicates that sexual function tends to decline as menopause progresses (Cortés et al., 2021). A study found that approximately 14% of women aged 45–64 reported experiencing at least one distressing sexual problem, such as low desire, arousal, or orgasm (Cortés et al., 2021). In a prospective study of postmenopausal women, including 404 participants (50% Latina), 40% reported a decrease in libido (Cortés et al., 2021). However, the frequency did not differ significantly between Latina and White women. On the other hand, the Study of Women's Health Across the Nation (SWAN) revealed that Latina women reported lower rates of sexual arousal compared to White, African American, Chinese, or Japanese women (Cortés et al., 2021).

Depressive symptoms, sleep disturbances, vaginal dryness, and dyspareunia are factors that can contribute to sexual dysfunction during the menopause transition. Latina women have been found to report higher rates of vaginal dryness, urine leakage, and bladder problems compared to White women (Cortés et al., 2021). It is worth noting that the studies reviewed excluded women on hormone therapy or lacked hormone therapy data among Latina women. Relationship factors, such as the availability of a sexual partner and the quality of the relationship, as well as mood, are significant contributors to overall sexual function in midlife women, outweighing hormonal influences.

The existing literature on the menopause transition in Latina women has certain limitations. Many studies have had small samples of Latina participants, despite Latina women representing approximately 17% of the U.S. population. This underrepresentation raises concerns about the generalizability of the findings. Latina women are a diverse group, varying in nationality, immigration history, religion, cultural beliefs, education, and level of acculturation. These sociocultural factors have a significant impact on the health and lifestyle of Latina women and may partially explain disparities in health outcomes during the menopause transition. Additionally, certain factors, such as religiosity, social support, and positive attitudes toward the menopause transition, have been identified as potential resiliency factors in midlife Latina women. Identifying both risk and resilience factors within this population can provide insights into the menopause transition may affect disease development, as well as inform strategies for health promotion and disease prevention among midlife Latina women.

Sexual Desire and Arousal versus Menopause

Pellow and McGrath (2016) provide a definition of low sexual desire in menopausal women and a description of contributing factors to low sexual desire, or decreased libido, which

is considered one of the most frequent sexual complaints in menopausal women. Low sexual desire is defined as “a loss of interest in sexual activity over a period of months” (Pellow & McGrath, 2016). Hormonal, physical, and sociopsychological factors of menopause, including irregular or heavier menses, hot flashes, night sweats, anxiety, depression, insomnia, vaginal dryness, and urinary symptoms have been shown to contribute to low sexual desire (Pellow & McGrath, 2016).

As perimenopause is associated with fluctuations in estrogen levels, decreasing estrogen levels lead to vaginal dryness and thinning of the mucosa, likely resulting in an increased risk of vaginal atrophy and dyspareunia. Women may also experience urinary symptoms due to changes in the bladder and pelvic floor which could further worsen sexual dysfunction (Pellow & McGrath, 2016). As menopause progresses, androgen levels decrease to approximately half of premenopausal levels. This is notable since androgens are crucial in the maintenance of female sex organs and testosterone has an effect on sexual desire; thus, a decrease in androgen levels result in vast changes of genital tissue structure and function (Pellow & McGrath, 2016). Further, chronic illness, sleep disturbances, and some medications are other physical factors that can contribute to low sexual desire in menopausal women. Pellow and McGrath (2016) reported that as many as 70–90% of women experience depression and a bidirectional relationship between sexual dysfunction and depression exists. Other psychological factors that contribute to low sexual desire include anxiety, chronic stress, sexual abuse history, and poor body image. Pellow and McGrath (2016) describe sexual arousal as “a feeling that includes both physical and mental aspects of sexual excitement. It may include feelings of warmth or tingling in the genitals, lubrication, or muscle contractions” (p. 123). The release of certain neurotransmitters in the brain, such as dopamine and melanocortin, stimulate sexual desire and attention, while

norepinephrine and oxytocin stimulate sexual arousal (Pellow & McGrath, 2016). The authors reference sexual arousal when explaining a theory of the female sexual response cycle, the Basson's circular model. The model posits that a female starts in a neutral sexual desire state and if she perceives sufficient emotional intimacy, she may initiate or become receptive to sexual cues that can result a state of arousal (Pellow & McGrath, 2016). Arousal and desire are interrelated, occurring simultaneously and reinforcing each other, which is then motivation toward orgasm and sexual satisfaction. Basson believes that women relate more to the linear model (female sexual response moves through the desire, excitation, orgasm, and resolution phases) at the start of relationships and align more with the circular model in long-term relationships. However, there is no clear stance within the scientific literature regarding which model more accurately represents the female sexual response cycle (Pellow & McGrath, 2016).

Role of Hormones Regarding Sexual Functioning and Sexuality

A woman's sexual response is mainly affected by the individual's overall physical, hormonal, and psychological health. At menopause, those factors interplay to impact the women's sexual function (Alawlaqi et al., 2017). Alawlaqi et al. (2017) show that hormone production is influenced by age before and after menopause. The production of sex hormones reaches its peak between the age of 20–40 years, and after this period, there is a gradual decline during menopause and postmenopause years, typically in women older than 45 years old (Alawlaqi et al., 2017).

This altered hormonal status affects how the woman experiences sexuality (Alawlaqi et al., 2017). Female sexual dysfunction (FSD) can significantly affect women's sexual health and quality of life (Hayslett & Nykamp, 2015). The hormonal factors contributing to FSD are the declining estrogen and androgen levels linked with aging (Alawlaqi et al., 2017). When estrogen

levels decline, it usually has a noticeable effect on the vagina leading to atrophy or dryness which may impair sexual desire (Hayslett & Nykamp, 2015). Androgen level decline during this period leads to decreasing sexual desire; hence, both contribute to changes in female sexual health at menopause (Hayslett & Nykamp, 2015). The vulvovaginal symptoms experienced by women during these periods are directly related to the presence of estrogen receptors (alpha and beta receptors) in the vagina, vulva, pelvic floor musculature, urethra endopelvic fascia, and bladder trigone during the reproductive life (Kim et al., 2015). The decline in estrogen levels at menopause will lead to anatomic and histologic changes in female genital tissues (Kim et al., 2015). There is also a reduction in collagen content, elastin levels, thinning of epithelium, increased connective tissue density, and fewer blood vessels (Kim et al., 2015). Those changes lead to a reduction in the elasticity of the vagina, increase in its pH, increase the flora, and reduce lubrication, hence increasing vulnerability to physical irritation and trauma (Kim et al., 2015). Several community and population-based studies show that approximately “27% to 60% of women report moderate to severe symptoms of vaginal dryness or dyspareunia in association with menopause” (Santoro et al., 2015, p. 499).

Studies have been conducted to understand the effects and the benefits of hormonal supplementation on women’s sexual function. Hormonal therapy involving the use of estrogen alone or a combination of estrogen with progesterone has been effective in managing sexual dysfunction caused by hormonal changes (Kim et al., 2015). The primary symptoms addressed by hormonal therapy are those related to the vulvovaginal symptoms. In cases where systemic hormonal therapy is needed for the management of other menopausal symptoms, those relating to the vaginal issues are also managed with this treatment (Kim et al., 2015); however, the systemic use of hormonal therapy in the United States has reduced by around 80% (Manson &

Kaunitz, 2016) given its association with stress incontinence (Kim et al., 2015). In 10%–15% of cases of menopausal women, the addition of low-dose vaginal estrogen is needed to address symptoms (Kim et al., 2015). Despite the positive response by women for hormonal therapies, there is still limited evidence justifying its use only for management of sexual function at menopause, hence other forms of sexual dysfunction treatment are recommended to be incorporated in a woman's overall treatment (Kim et al., 2015).

Women experiencing sexuality concerns at menopause are likely to have challenges with sexual relationships and functioning, which could impact their quality of life. Challenges related to sexuality may contribute to psychological symptoms that create an imbalance in mental health. This, in turn, could result in a declining state of general health and productivity, including at work. Understanding such changes and their consequences on women and how these occur offer paths towards effective management. Women above 50 years of age who are usually faced with such challenges benefit if problems associated with menopause are clearly understood and addressed particularly those related to sexuality and emotional well-being (Jen, 2013).

Age and Sexuality

Strong (2015) described traditional femininity as, “a construct that impacts women throughout their development and manifests through inauthenticity in relationships, self-objectification, and inauthentic sexuality” (p. 5). In childhood, girls are exposed to the idea that they have to put others before them while silencing their voice to avoid conflict so that they maintain relationships. The consistent message that girls should withhold their own desires, feelings, and thoughts in relationships negatively impacted their capacity to articulate their sexual desires and needs, which resulted in diminished sexual enjoyment.

“Western culture places excessive value on youth, physical attractiveness, and vigor” (Rheume & Mitty, 2008, p. 345). Western culture bombards women with pervasive messages that link age with sexual desirability, such as advertisements for skin creams, hair color, removing facial wrinkles, etc. (Rheume & Mitty, 2008). Older adults may experience negative self-perceptions based on narrow media presentations of age and quality of life, leading to the avoidance of intimate relationships, lower sexual expectations, shame, and unworthiness.

There’s limited research that explores how aging and sexuality intersect, yet the average age of American population continues to increase signaling the need to better understand the unique needs of this population (Jen, 2013). Historically, older adults were presumed to be asexual or lacking sexual desires and were not encouraged to discuss their sexuality. Even though the majority of older adults are involved in intimate relationships, they typically do not initiate conversations about sex with their doctors or service providers (Jen, 2013). Analyzing the role of women’s sexual health and quality of life over the life span, can offer insights from older women including those living in assisted living nursing homes (Rheume & Mitty, 2008). Women outnumber men in later adulthood and in nursing homes, thus assisted living clinicians/healthcare providers play a vital role in the functioning, social activity, and intimate relationships fostered in these settings. Unfortunately, both healthcare workers and older adults lack accurate information about sexuality, sex education, and sexual health, thus, myths and stereotypes lead to flawed assumptions about elderly sexual function. This disconnect may lead to women’s hesitation (or even loathing) when discussing elderly sexuality (Rheume & Mitty, 2008).

LGBTQIA+ vs Menopause

Menopause represents a significant life transition; however, it also intersects with ageism and misogyny, which contributes to physical and mental health challenges that exacerbate existing conditions, oppressions, and past traumas (Glyde, 2022). Despite menopause affecting about half of the population in the UK, many individuals regardless of age or gender experience difficulties when seeking support for menopausal symptoms. Media narratives around aging are often Western-centric and cisgender-focused. While some individuals receive quality care from general practitioners, others share stories of dismissal and ineffective treatment, even resorting to doctors bringing cis male partners into the room for support. Glyde (2022) discusses the undergoing progress within this area, with the reclassification of vaginal estradiol tablets for over-the-counter purchase and government-backed initiatives improving menopause support in the workplace. However, challenges persist, especially for minority groups, including ethnic minorities and the LGBT+ community, who often feel misrepresented and underserved.

Glyde (2022) expresses that the mainstream menopause narrative excludes many non-women individuals, such as non-binary people and trans men, who face additional barriers in accessing care due to systemic transphobia. Enhancing inclusivity involves more than just adopting gender-neutral language; it requires systemic changes within healthcare systems to accommodate diverse experiences. Glyde (2022) discusses that practitioners must receive training on menopause, gender, sexuality, and intersex experiences to provide affirming and knowledgeable care to all individuals experiencing menopause, regardless of gender identity.

Cheung, Nolan, and Zwickl (2023) discuss aging transgender adults that are undergoing gender-affirming hormone therapy (GAHT). These adults face distinct challenges, including concerns about mistreatment in elder care, heightened feelings of isolation and loneliness due to their transgender identity, increased susceptibility to financial stressors, perceived lack of

control, and the need for more inclusive healthcare services and providers. Additionally, they often manage multiple chronic health conditions that become more burdensome with age (Cheung et al., 2023). The concept of menopause is typically associated with cisgender women and may only be relevant to older transgender individuals who were assigned female at birth and do not undergo GAHT. Limited research exists on trans women's experiences with menopause, with one study showing that most trans women view GAHT positively and do not consider menopause applicable to them.

For transgender individuals undergoing GAHT, whether testosterone or estradiol, there is insufficient data on managing hormone therapy as they age, including potential risks with starting therapy later in life or adjusting dosage over time. While there is no specific age at which GAHT is contraindicated, older adults who begin therapy report better quality of life compared to younger counterparts (Cheung et al., 2023). However, it remains uncertain whether recommendations from menopausal hormone therapy literature are applicable to transgender individuals, who typically receive higher doses of estradiol orally or transdermally. Further research in this area is warranted.

Quality of Life vs Menopause

Moilanen et al. (2012) state numerous studies have highlighted a decline in quality of life associated with menopause, often accompanied by health issues stemming from reduced estrogen levels. Some research suggests that these menopausal symptoms are linked to indicators of quality of life. However, other studies propose that overall well-being is more closely tied to current health status rather than menopausal status itself. Moilanen et al. (2012) describe how engaging in physical activity has been demonstrated to improve the quality of life for menopausal women. Some studies even suggest that physical activity may reduce the frequency

of hot flashes. This effect is believed to be related to the production of β -endorphins in the hypothalamus, which can help stabilize thermoregulation disrupted during menopausal hot flashes. Additionally, physical activity can aid in weight management, as increased body weight is often associated with more frequent reporting of vasomotor symptoms. While weight gain during midlife is not exclusively attributed to menopause but rather to the aging process, it can negatively impact quality of life (Moilanen et al., 2012).

The goal of the Moilanen et al. (2012) study was to examine the connections among changes in quality of life (QoL), menopausal status, and physical activity of Finnish women from 2000–2008. The findings suggest that alterations in global QoL are more closely linked to changes in physical activity levels rather than shifts in menopausal status. Similar conclusions have been drawn in previous research. Interestingly, women who maintained consistent levels of physical activity or weight experienced increased physical activity or had higher levels of education demonstrated improved QoL over time. Contrary to the typical decline in physical activity with age, the study observed an increase in physical activity among peri- and postmenopausal women over an eight-year period, particularly compared to premenopausal women. This shift in behavior may be attributed to a heightened motivation for lifestyle modifications during the menopausal transition (Moilanen et al., 2012). Moilanen et al. (2012) explored literature, which showed that physical activity positively influenced physical self-worth and positive affect, subsequently leading to improvements in QoL. Consistent with this, the Moilanen et al. study found that women who decreased physical activity experienced a decline in QoL, while those who increased physical activity reported improved QoL.

According to Dotlic, Markovic, and Gazibara (2023), cross-sectional and prospective studies have demonstrated associations between smoking and poorer physical health-related QoL

during the menopausal transition. Former, light, and heavy smokers were more prone to painful sensations and reduced physical functioning compared to nonsmokers. Heavy smokers reported worse general health and more limitations due to poor physical health. Dotlic et al. (2023) reviewed a long-term follow-up study on midlife individuals that indicated a swifter decline in mobility among smokers versus nonsmokers. These outcomes align with the Dotlic et al. (2023) study findings, which emphasized the potential impact of prolonged tobacco smoking before menopause on overall well-being, not just physical health, throughout the menopausal transition. Longer smoking duration is linked to worse menopause specific QoL, particularly in women experiencing more intense menopausal symptoms after smoking for over 20 years. Given that women's smoking behavior tends to remain stable during the menopausal transition, interventions targeting smoking cessation before menopause are crucial (Dotlic et al., 2023).

Research question and hypotheses that address the aim of this study:

Research Question: How does sexual functioning vary by menopausal status, ethnicity, and other demographic factors, and what impact does this have on the quality of life in midlife women?

1. Women who are postmenopausal will report lower levels of sexual functioning and lower quality of life compared to premenopausal and perimenopausal women due to decreased levels of estrogen.
2. Women who identify as Black or Hispanic will report lower levels of sexual functioning and lower quality of life compared to White women due to cultural and societal attitudes towards sexuality and aging.
3. Women with higher levels of income will report higher levels of sexual functioning and higher quality of life compared to those with lower levels of income due to increased

access to healthcare resources and likely more knowledge and awareness of sexual health.

Chapter 3: Methodology

This project is intended to inform professionals in the field of psychology about the current literature on sexual functioning in women, specifically women of diverse racial-ethnic backgrounds, in varying stages of menopause, as this impacts their overall quality of life. Another purpose of this study is to begin a dialogue among clinicians in the field about discussing sexual functioning with aging women.

Research Questions and Hypotheses

The research question is as follows: How does sexual functioning vary by menopausal status, ethnicity, and other demographic factors, and what impact does this have on the quality of life in midlife women? The question is examined by three hypotheses:

1. Women in a postmenopause stage will report lower levels of sexual functioning and lower quality of life compared to premenopausal/peri-menopausal women.
2. Women who identify as Black or Hispanic will report lower levels of sexual functioning and lower quality of life compared to White women.
3. Women with higher levels of income will report higher levels of sexual functioning and higher quality of life compared to those with lower levels of income.

The SWAN Dataset

Data from the Study of Women's Health Across the Nation (SWAN) was accessed and used for the analysis. The SWAN study represents a multi-site, longitudinal, epidemiological study in the United States designed to review women's health during their middle age period. The first phase of the study started in 1994 as focus groups of women who had similar characteristics to those later enrolled in the SWAN. The second phase was the cross-sectional survey, which was administered to women residing within a specific geographic area who were

able to read and speak English or other designated languages (Chinese, Japanese, and Spanish) (Study of Women's Health Across the Nation [SWAN], n.d.). The participants' age at the cross-sectional screener was between 40–55 years old. The eligible premenopausal women were enrolled into the longitudinal study, which progressed to include a baseline dataset ('96–'97) through 16 follow-up visits ('16–'18). Visits 11–16 are not publicly available as they are under active investigation by SWAN investigators and are being used to address the aims of the study grant. SWAN is currently completing the seventeenth visit. At baseline, 3302 women who belonged to one of five ethnic/racial groups were recruited: White (n = 1550), Black (n = 935), Hispanic (n = 286), Japanese (n = 281), and Chinese (n = 250). The SWAN study examines women's physical, biological, psychological, and social changes during that transition period in the participant's life. The main goal of the research is to help scientists, healthcare providers, and women understand and learn more about changes occurring during their mid-life and the experiences which tend to influence their health and quality of life as they age. The research centers were located in several major cities across California, Massachusetts, Michigan, Illinois, New Jersey, and Pennsylvania (Study of Women's Health Across the Nation [SWAN], n.d.).

The SWAN dataset included the use of face-to-face interviews, telephone interviews, and self-administered questionnaires, such as the sexual activities and functioning questionnaire. At Visit 10, participants were 51–63 years old. The eligibility criteria included having a uterus, at least one intact ovary, reported menstrual period within the past three months, not currently pregnant, and not taking any hormone therapy or hormone medication within the last three months (Study of Women's Health Across the Nation [SWAN], n.d.). Themes of variables included in the study are sexual satisfaction, importance of sex, quality of life, menopausal status, overall health, and menopausal symptoms.

Study Design

This study is a quantitative study that used correlational research methods to observe the variables to establish the corresponding statistical relationship between them. This study examined longitudinal data from the SWAN datasets at Baseline visit ('96-'97) and Visit 10 ('06-'08), as they are publicly available on the ICPSR website. These datasets provide information related to changes in menopausal status, symptoms, sexual functioning, and quality of life of the women over time that are the focus of this study. The choice of conducting a quantitative research study was based on the nature of the problem and the associated research questions to determine the relationship between the variables within the population. This is a descriptive study that will help establish the association between sexuality outcome variables, menopausal status, ethnicity, and quality of life. The dependent variables are the sexuality outcomes measured by the self-administered questionnaire designed to address sexual activity and function in women with or without partners. A list of variables included in this study are listed in the appendix section.

Sexual Functioning Measure

Sexual outcome variables were measured annually at each study visit from Baseline to Visit 6 and biannually thereafter (at Visits 8, 10, and 12) using a 20-item self-administered questionnaire designed to address sexual activity and functioning over the past six months in women with and without partners that was returned to staff in a sealed envelope. The questionnaire was derived from several sources designed to cover sexual functioning domains of interest. For the present analyses, a single sexual functioning score based on the Female Sexual Functioning Index (FSFI) was developed. In the SWAN data, all responses were recorded on

five-point Likert scales. Themes of variables examined include sexual satisfaction, importance of sex, and frequency of intercourse.

Quality of Life Measure

The quality-of-life measure used in the SWAN study is a comprehensive self-administered questionnaire designed to assess various dimensions of women's quality of life during the menopausal transition. The questionnaire explores several areas, such as physical health, emotional well-being, social interactions, and overall satisfaction with life. The questionnaire utilized a Likert scale to obtain participants' responses, allowing for the quantitative assessment of different domains of quality of life. As the SWAN study collects longitudinal data, this enabled the researcher to track changes in quality of life over time as women progress through the menopausal transition.

Analysis

SPSS was used for the analysis. The Mann-Whitney U Test is a non-parametric test that was used to compare two sample means from the same population. Spearman's Rho test was used to measure the strength and direction of associations between two ranked variables.

Assumptions

The study assumes that SWAN participants provided accurate and reliable information during data collection. Additionally, it assumes that the SWAN dataset adequately represents women in midlife across different racial/ethnic groups and menopausal stages.

Limitations

Limitations of the study include potential biases associated with self-reported data, as well as the possibility of attrition and missing data over the course of the longitudinal study. The

SWAN dataset may not fully capture the experiences of all women, particularly those from underrepresented racial/ethnic backgrounds or those with specific health conditions.

Chapter 4: Findings

Introduction of Chapter

This chapter includes an analysis of the data derived from the dataset to evaluate the research hypotheses. Hypothesis 1 (H1) was examined using the Mann-Whitney U test. H1 posits that women who are postmenopausal will report lower levels of sexual functioning and lower quality of life compared to premenopausal/perimenopausal women. Hypothesis 2 (H2) was also examined by using the Mann-Whitney U test. H2 states women who identify as Black/Hispanic will report lower levels of sexual functioning and lower quality of life compared to White women. Lastly, hypothesis 3 (H3) was analyzed using the Spearman correlation coefficient. H3 hypothesizes that women with higher levels of income will report higher levels of sexual functioning and higher quality of life compared to those with lower levels of income.

Table 1

List of Variables for Baseline (pre/perimenopausal) and Visit 10 (postmenopausal)

CATEGORY	VARIABLE	DESCRIPTION
Sexual Functioning Variables	IMPORSE	Importance of sex
	DESIRSE	Desire to engage in sex
	ENGAGSE	Engagement in sexual activity
	NOPARTN	No sex due to lack of partner
	PARTPRO	No sex due to partner's physical problem
	PHYSPRO	No sex due to physical problem
	NOSEXOT	No sex for "other" reasons
	SATISFY	Emotionally satisfying relationship with main partner
	KISSING	Frequency of kissing
	TOUCHIN	Frequency of touching
	ORALSEX	Frequency of oral sex
	INTCOUR	Frequency of intercourse
	AROUSED	Arousal during sexual activity
	PELVIC	Vaginal or pelvic pain
	LUBRICN	Use of lubricants
	MASTURB	Frequency of masturbation
Quality Of Life Variables	PHYCTDW	Cut down on work or other activities due to physical health
	PHYACCO	Accomplished less due to physical health
	PHYLIMI	Limited in work or other activities due to physical health
	PHYDFCL	Difficulty performing work due to physical health
	EMOCTDW	Cut down on work or other activities due to emotional health
	EMOACCO	Accomplished less due to emotional health

	EMOCARE	Didn't do work as carefully due to emotional health
	INTERFR	Physical or emotional health interfere with normal social activities
	BODYPAI	Bodily pain
	PAINTRF	Pain interferes with work
	PEP	Feel full of pep
	ENERGY	Lot of energy
	WORNOUT	Felt worn out
	TIRED	Felt tired
	SOCIAL	Physical or emotional health interfere with social activities/visiting
Demographics And Other	RACE	Race/ethnicity
	STATUS	Menopausal status
	AGE	Age at current visit
	INCOME	Total family income

Results

Impact of Menopausal Status on Sexual Functioning and Quality of Life

The Mann-Whitney U test was carried out as a non-parametric test to examine the mean rank differences of sexual functioning and quality of life variables between the menopausal status variables, which were categorized as dichotomous groups (i.e. Premenopausal/Perimenopausal [Baseline visit] and Postmenopausal [Visit 10]). The null hypothesis is that there is no significant difference between the two menopausal groups if the Mann-Whitney U p-value is higher than standard significant level of 0.05.

Table 2

Mann Whitney U Test to Examine Mean Rank Difference between Menopausal Groups: Sexual Functioning

Variable	Mean Rank Value			Mann-Whitney U (F)	P-Value	Significant Difference	H1 Supported
	Premenopausal /Perimenopausal (Baseline) ^a	Postmenopausal (Visit 10) ^b	Mean Rank Difference (Δ) ^{b-a}				
SEXUAL FUNCTIONING							
IMPORSE	2571.56	2382.04	-189.52	2754030.	0	Yes	YES
DESIRSE	2629.28	2375.64	-253.64	2753624.	0	Yes	YES
ENGAGSE	2397.04	2281.23	-115.81	2507660.	0	Yes	YES
NOPARTN	700.59	698.04	-2.55	238123	0.888	No	NO
PARTPRO	602.7	616.44	13.74	176244	0.323	No	NO
PHYSPRO	613.75	614.35	0.6	183451.5	0.941	No	NO

NOSEXOT	435.92	450.99	15.07	92838	0.301	No	NO
SATISFY	1570.42	1598.94	28.52	1144921	0.368	No	NO
KISSING	1564.3	1579.61	15.31	1140231.	0.628	No	NO
TOUCHIN	1582.03	1518.88	-63.15	1088881.	0.049	Yes	YES
ORALSEX	1556.73	1509.21	-47.52	1073045.	0.12	No	NO
INTCOUR	1616.8	1476.13	-140.67	1039878	0	Yes	YES
AROUSED	1602.75	1542.97	-59.78	1122456.	0.061	No	NO
PELVIC	1456.16	1564.29	108.13	965578	0	Yes	NO
LUBRICN	1441.85	1657.61	215.76	924668.5	0	Yes	NO
MASTURB	2481.17	2456.81	-24.36	2894551	0.518	No	NO

There are statistically significant differences in sexual functioning and quality of life between postmenopausal and premenopausal/perimenopausal women. Specifically, Table 4.2 shows that postmenopausal women reported lower levels of importance placed on sexual activity, desire to engage in sex in the past six months, and engagement in sex in the past six months in comparison to women who were pre-/perimenopausal. Further, women who were postmenopausal reported significantly lower levels of touching and intercourse in comparison to pre-/perimenopausal women.

The variables assessing the absence of sexual partners, partner-related reasons for no sex, physical problems affecting sexual activities, and lack of sexual activity in the past six months due to reasons categorized as “other” showed no differences between the two groups. There were no differences between the two groups for the following variables: satisfaction with sexual activity, frequency of kissing, frequency of oral sex, arousal during sexual activity, and frequency of masturbation.

Table 3

Mann Whitney U Test to Examine Mean Rank Difference between Menopausal Groups: Quality of Life

Variable	Mean Rank Value			Mann-Whitney U (F)	P-Value	Significant Difference	H1 Supported
	Premenopausal /Perimenopausal (Baseline) ^a	Postmenopausal (Visit 10) ^b	Mean Rank Difference (Δ) ^{b-a}				

QUALITY OF LIFE VARIABLES							
PHYCTDW	2642.18	2582.88	-59.3	3213612	0.029	Yes	YES
PHYACCO	2640.61	2580.22	-60.39	3207081.	0.066	No	NO
PHYLIMI	2623.94	2612.82	-11.12	3276746	0.711	No	NO
PHYDFCL	2642.79	2579.45	-63.34	3205959	0.04	Yes	YES
EMOCTDW	2634.59	2581.78	-52.81	3209341.	0.037	Yes	YES
EMOACCO	2648.78	2564.19	-84.59	3173107.	0.006	Yes	YES
EMOCARE	2639.45	2570.68	-68.77	3185212.	0.008	Yes	YES
INTERFR	2683.52	2514.44	-169.08	3069663.	0	Yes	YES
BODYPAI	2625.26	2599.57	-25.69	3246989	0.534	No	NO
PAINTRF	2641.1	2579.5	-61.6	3205560.	0.108	No	NO
PEP	2581.21	2668.33	87.12	3172497.	0.035	Yes	NO
ENERGY	2587.64	2657.42	69.78	3192719.	0.092	No	NO
TIRED	2631.45	2592.76	-38.69	3233266	0.342	No	NO
WORNOUT	2673.41	2525.91	-147.5	3093175.	0	Yes	YES
SOCIAL	2653.79	2561.68	-92.11	3168808.	0.015	Yes	YES

Table 4.3 shows that postmenopausal women reported significantly lower levels of current physical health, specifically indicating a reduction in work or other activities due to health issues when compared to pre-/perimenopausal women. Women in the postmenopausal stage reported significantly higher levels of physical difficulty, specifically in regards to performing work or other activities in the past month due to health when compared to pre-/perimenopausal women.

Women who were in the postmenopausal stage were more likely to indicate that emotional problems (such as feeling depressed or anxious) led to a decrease in the amount of time they spent on work or other activities in the past four weeks. Postmenopausal women reported lower levels of emotional accomplishments related to work or other regular activities compared to pre-/perimenopausal women, which means they were more likely to indicate that emotional problems (such as feeling depressed or anxious) have led to accomplishing less than they would like in the past four weeks. In addition, postmenopausal women were more likely to indicate that emotional problems (such as feeling depressed or anxious) led to not doing work or other activities as carefully as usual in the past month.

Postmenopausal women reported significantly higher levels of “interference” with daily life and feeling worn out than pre-/perimenopausal women. Postmenopausal women also reported significantly lower levels of social functioning in comparison to women in their pre-/perimenopausal stage.

The variables that encompassed accomplished less in the past month due to physical health, limitations in work or other activities due to physical health, bodily pain in the past month, pain interference with work in the past month, energy levels, and feelings of tiredness demonstrated no statistically significant differences between the two menopausal groups. The p-values associated with these variables exceeded the predetermined significance threshold of 0.05, leading to the conclusion that hypothesis H1, positing differences between Premenopausal/Perimenopausal (Baseline) and Postmenopausal (Visit 10) women, was not shown for these specific variables.

Sexual Functioning and Quality of Life among Black and White Women

The Mann-Whitney U test was carried out as a non-parametric test to examine the mean rank differences of sexual functioning and quality of life variables between the different race groups, which were categorized as dichotomous variables (e.g., White vs Black and White vs Hispanic). Hypothesis 2 proposes that women who identify as Black or Hispanic will report lower levels of sexual functioning and lower quality of life compared to White women. The null hypothesis is that there is no significant difference between the Black and White Women nor Hispanic and White women if the Mann-Whitney U p-value is higher than the standard significant level of 0.05.

Table 4

*Mann Whitney U Test to Examine Mean Rank Difference between Black and White Women:**Sexual Functioning*

Variable	Mean Rank Value			Mann-Whitney U (F)	P-Value	Significant Difference	H2 Supported
	White a	Black b	Mean Rank Difference (Δ) b-a				
SEXUAL FUNCTIONING							
IMPORSE	1869.86	1988.1	118.24	1563240	0.001	Yes	NO
DESIRSE	1958.75	1904.77	-53.98	1677265	0.133	No	NO
ENGAGSE	1886.48	1702.08	-184.4	1371805	0	Yes	YES
NOPARTN	567.89	534.6	-33.29	140034	0.032	Yes	YES
PARTPRO	478.36	478.7	0.34	110634	0.978	No	NO
PHYSPRO	487.39	479.3	-8.09	111899.5	0.246	No	NO
NOSEXOT	333.34	364.7	31.36	52258	0.014	Yes	NO
SATISFY	1258.53	1136.49	-122.04	588458.5	0	Yes	YES
KISSING	1353.05	918.27	-434.78	413119	0	Yes	YES
TOUCHIN	1232.88	1137.49	-95.39	581940	0.001	Yes	YES
ORALSEX	1283.75	984.02	-299.73	460000	0	Yes	YES
INTCOUR	1184.33	1244.34	60.01	606471	0.035	Yes	NO
AROUSED	1231.53	1185.89	-45.64	628696.5	0.113	No	NO
PELVIC	1184.67	1048.19	-136.48	505704	0	Yes	YES
LUBRICN	1240.95	1011.51	-229.44	482271.5	0	Yes	YES
MASTURB	2060.25	1612.2	-448.05	1264804	0	Yes	YES

Several variables showed lower scores for Black women in comparison to White women, supporting the hypothesis. Table 4.4 shows that Black women reported significantly lower engagement in sexual activities and lower levels of feeling emotional satisfied in relationship with a main partner in comparison to White women. There is also a higher prevalence of not having a partner among Black women. Further, Black women reported a reduced frequency of kissing, touching in relationships, and oral sex. In comparison to White women, Black women experienced more vaginal or pelvic pain during intercourse, less use of lubricants to make sex more comfortable, lower frequency of masturbation, and higher levels of tiredness affecting sexual activities.

In contradiction to the hypothesis, Black women showed higher scores when compared to White women on several variables. Black women noted a greater importance placed on sex and

more frequent intercourse. Black women were also more likely to have not engaged in sex for the past six months for “other reasons.”

The results revealed no statistically significant differences in the mean ranks between Black and White women for some sexual functioning variables. Specifically, the variables encompassing sexual desire, partner-related reasons for no sex, physical problems affecting sexual activities, and arousal during sexual activity showed no differences. Therefore, hypothesis 2, proposing lower levels of sexual functioning among women identifying as Black compared to White women, was not substantiated for these specific variables.

Table 5

Mann Whitney U Test to Examine Mean Rank Difference between Black and White Women:

Quality of Life

Variable	Mean Rank Value			Mann-Whitney U (F)	P-Value	Significant Difference	H2 Supported
	White a	Black b	Mean Rank Difference (Δ) b-a				
QUALITY OF LIFE VARIABLES							
PHYCTDW	1956.31	2126.03	169.72	1731871	0	Yes	NO
PHYACCO	1964.84	2106.05	141.21	1753695	0	Yes	NO
PHYLIMI	1957.74	2126.13	168.39	1735543	0	Yes	NO
PHYDFCL	1975.9	2089.51	113.61	1781984	0	Yes	NO
EMOCTDW	1968.61	2091.39	122.78	1765083	0	Yes	NO
EMOACCO	1994.31	2050.82	56.51	1830743	0.046	Yes	NO
EMOCARE	1977.09	2072.56	95.47	1787907	0	Yes	NO
INTERFR	1977.96	2081.78	103.82	1788972	0.002	Yes	NO
BODYPAI	1970.39	2094.87	124.48	1769643	0.001	Yes	NO
PAINTRF	1934.82	2157.79	222.97	1678187	0	Yes	NO
PEP	2012.67	2021.75	9.08	1878163	0.806	No	NO
ENERGY	2004.8	2033.95	29.15	1859171	0.431	No	NO
TIRED	2047.3	1963.33	-83.97	1809301	0.021	Yes	YES
WORNOUT	2032.32	1987.84	-44.48	1845558	0.222	No	NO
SOCIAL	1919.63	2187.82	268.19	1639369	0	Yes	NO

Black women were more likely to have problems with work or other daily activities in the past month as a result of their physical health, specifically having to cut down on work or other daily activities. In comparison to White women, Black women were more likely to feel less

accomplished in the past month due to physical health, and experience greater physical limitations and difficulties performing work or other daily activities. Due to emotional problems, such as feeling depressed and anxious, Black women reported greater frequency of cutting down on work or other activities, feeling less accomplished, and not doing work as carefully in comparison to White women. Black women reported greater rates of their physical and emotional health interfering with normal social activities with family, friends, neighbors, or groups. Black women reported a greater experience of bodily pain and noted that their pain interfered with work and other daily activities.

There were no significant differences between Black and White women for the following variables: feelings of pep, energy levels, feelings worn out, and physical and emotional problems interfering with social activities. Therefore, hypothesis 2, proposing lower levels of quality of life among women identifying as Black compared to White women, was not substantiated for these specific variables.

Sexual Functioning and Quality of Life among Hispanic and White Women

Table 6

Mann Whitney U Test to Examine Mean Rank Difference between Hispanic and White Women:

Sexual Functioning

Variable	Mean Rank Value			Mann-Whitney U (F)	P-Value	Significant Difference	H2 Supported
	White ^a	Hispanic ^b	Mean Rank Difference (Δ) ^{b-a}				
SEXUAL FUNCTIONING							
IMPORSE	1280.55	1451.75	171.2	104105.5	0.02	Yes	NO
DESIRSE	1288.55	1501.08	212.53	101163	0.004	Yes	NO
ENGAGSE	1211.12	1245.63	34.51	109645.5	0.547	No	NO
NOPARTN	336.31	283.78	-52.53	6251	0.1	No	NO
PARTPRO	294.21	263.43	-30.78	5783	0.206	No	NO
PHYSPRO	293.68	276.5	-17.18	6083.5	0.232	No	NO
NOSEXOT	219.76	162.81	-56.95	3188	0.01	Yes	YES
SATISFY	861.11	702.08	-159.03	47291.5	0.005	Yes	YES
KISSING	864.13	533.05	-331.08	34828.5	0	Yes	YES
TOUCHIN	848.44	812.7	-35.74	52917.5	0.539	No	NO
ORALSEX	835.47	920.15	84.68	50564.5	0.128	No	NO

INTCOUR	833.47	1107.77	274.3	38782	0	Yes	NO
AROUSED	857.12	708.41	-148.71	47104	0.009	Yes	YES
PELVIC	800.66	728.7	-71.96	48524	0.168	No	NO
LUBRICN	830.89	449.68	-381.21	28992.5	0	Yes	YES
MASTURB	1290.22	864.3	-425.92	79084.5	0	Yes	YES

Table 4.6 shows lower scores for Hispanic women in comparison to White women on several variables, supporting hypothesis 2. Hispanic women reported higher levels than White women in regard to no engagement in sex in the past six months for “other reasons.” Hispanic women also reported lower levels of feeling emotionally satisfied in the relationship with a main partner, less engagement in kissing, less aroused during sexual activity, and less use of lubricants to make sex more comfortable. In comparison to White women, Hispanic women reported lower levels of masturbation. In contradiction to the hypothesis, Hispanic women showed higher scores when compared to White women on several variables. Hispanic women noted a greater importance placed on sex and more desire to engage in sex.

The variables assessing engagement in sexual activities, the absence of sexual partners resulting in no sexual engagement, partner-related reasons for no sex, and physical problems affecting sexual activities demonstrated no statistically significant differences between White and Hispanic women. In addition, there were no statistically significant mean differences between these women in regard to frequency of touching, frequency of oral sex, frequency of intercourse, and experiences of pelvic pain. Thus, these findings did not support hypothesis 2, which proposed lower levels of sexual functioning among women identifying as Hispanic compared to White women for these specific variables.

Table 7

Mann Whitney U Test to Examine Mean Rank Difference between Hispanic and White Women:

Quality of Life

Variable	Mean Rank Value			Mann-Whitney U (F)	P-Value	Significant Difference	H2 Supported
	White ^a	Hispanic ^b	Mean Rank Difference (Δ) ^{b-a}				
QUALITY OF LIFE VARIABLES							
PHYCTDW	1317.82	1582.77	264.95	99253	0	Yes	NO
PHYACCO	1319.89	1528.22	208.33	104545	0.001	Yes	NO
PHYLIMI	1319.86	1528.95	209.09	104473.5	0	Yes	NO
PHYDFCL	1318.34	1569.04	250.7	100585.5	0	Yes	NO
EMOCTDW	1316.77	1568.95	252.18	100303	0	Yes	NO
EMOACCO	1320.8	1462.94	142.14	110585.5	0.015	Yes	NO
EMOCARE	1316.14	1558.14	242	101157.5	0	Yes	NO
INTERFR	1314.5	1628.79	314.29	94498	0	Yes	NO
BODYPAI	1306.85	1830.21	523.36	74961	0	Yes	NO
PAINTRF	1305.09	1890.46	585.37	69213	0	Yes	NO
PEP	1338.88	973.43	-365.45	89670	0	Yes	YES
ENERGY	1336.51	1008.69	-327.82	93089.5	0	Yes	YES
TIRED	1318.61	1494.83	176.22	106240.5	0.021	Yes	NO
WORNOUT	1312.3	1648.74	336.44	91369	0	Yes	NO
SOCIAL	1314.21	1650.13	335.92	92525.5	0	Yes	NO

In comparison to White women, Hispanic women reported less feelings of “pep” and energy. Hispanic women were more likely to have problems with work or other daily activities in the past month as a result of their physical health, specifically having to cut down on work or other daily activities. In comparison to White women, Hispanic women were more likely to feel less accomplished in the past month due to physical health, and experience greater physical limitations and difficulties performing work or other daily activities. Due to emotional problems, such as feeling depressed and anxious, Hispanic women reported greater frequency of cutting down on work or other activities, feeling less accomplished, and not doing work as carefully in comparison to White women. Hispanic women reported greater rates of their physical and emotional health interfering with normal social activities with family, friends, neighbors, or groups. Hispanic women reported a greater experience of bodily pain and noted that the pain interfered with work and other daily activities. Additionally, Hispanic women reported higher levels of feeling tired, worn out, and higher levels of physical and emotional health interfering with social activities such as visiting with friends, relatives, etc.

Impact of Income on Sexual Functioning and Quality of Life

Spearman's Rho Correlation Test was used to describe the strength and direction of the linkage between continuous variables. H3 states women with higher levels of income will report higher levels of sexual functioning and higher quality of life compared to those with lower levels of income.

Table 8

Spearman's Rho Correlation between Income and the Sexual Functioning Variables

Variables	Correlation Coefficient (R)	P-Value	Sample Size	Magnitude	Significant Correlation	Direction	H3 Supported
SEXUAL FUNCTIONING							
IMPORSE	0.017	0.229	4763	VW	No	+	No
DESIRSE	0.028	0.055	4818	VW	No	+	No
ENGAGSE	0.135***	0.000	4481	VW	Yes	+	Yes
NOPARTN	-0.084***	0.002	1329	VW	Yes	-	No
PARTPRO	0.121***	0.000	1157	VW	Yes	+	Yes
PHYSPRO	-0.011	0.706	1166	VW	No	-	No
NOSEXOT	0.052	0.135	837	VW	No	+	No
SATISFY	0.088***	0.000	3022	VW	Yes	+	Yes
KISSING	0.119***	0.000	3004	VW	Yes	+	Yes
TOUCHIN	0.023	0.2	2982	VW	No	+	No
ORALSEX	0.029	0.118	2950	VW	No	+	No
INTCOUR	-0.048**	0.009	2996	VW	Yes	-	No
AROUSED	0.01	0.594	3026	VW	No	+	No
PELVIC	0.059**	0.002	2865	VW	Yes	+	Yes
LUBRICN	0.124***	0.000	2912	VW	Yes	+	Yes
MASTURB	0.073***	0.000	4720	VW	Yes	+	Yes

The results of Spearman correlation indicated that the correlation coefficients of income with all variables of sexual functioning are lower than 0.19, indicating very weak relationships. Several specific variables show a significant positive relationship with income, supporting the hypothesis. Women with higher levels of income reported significantly higher levels of sexual engagement. Women with higher income reported a significantly lower incidence of not having sex in the past six months due to their partner having a physical problem that interferes with sex. Additionally, women with higher income reported higher levels of emotional satisfaction in their

relationships with their main partners. Higher income levels were associated with a higher frequency of kissing, lower levels of vaginal or pelvic pain in the past six months, higher frequency of using lubricants to make sex more comfortable, and higher frequency of masturbation.

Several variables show a significant negative relationship with income, which did not support the hypothesis. Women with higher levels of income reported a significantly lower incidence of not having sex due lack of partner in the past six months. Higher income levels were associated with lower frequency of sexual intercourse.

In examining the significance of correlations, the results indicated that income does not have any significant correlations with importance of sex, desire to engage in sex, physical problems interfering with sex, or lack of sex in the past six months due to reasons categorized as “other.” Also, income does not have any significant correlations with frequency of touching, oral sex, arousal during sexual activity, or frequency of masturbation. There were no correlations between income and lack of sex due to no sexual partners in the past six months or due to partners physical health.

Table 9

Spearman’s Rho Correlation between Income and the Quality-of-Life Variables

Variables	Correlation Coefficient (R)	P-Value	Sample Size	Magnitude	Significant Correlation	Direction	H3 Supported
QUALITY OF LIFE							
PHYCTDW	-0.126***	0.000	4951	VW	Yes	-	No
PHYACCO	-0.124***	0.000	4947	VW	Yes	-	No
PHYLIMI	-0.143***	0.000	4953	VW	Yes	-	No
PHYDFCL	-0.150***	0.000	4949	VW	Yes	-	No
EMOCTDW	-0.151***	0.000	4943	VW	Yes	-	No
EMOACCO	-0.133***	0.000	4946	VW	Yes	-	No
EMOCARE	-0.138***	0.000	4940	VW	Yes	-	No
INTERFR	-0.176***	0.000	4948	VW	Yes	-	No
BODYPAI	-0.151***	0.000	4946	VW	Yes	-	No
PAINTRF	-0.184***	0.000	4949	VW	Yes	-	No

PEP	0.147***	0.000	4947	VW	Yes	+	Yes
ENERGY	0.152***	0.000	4945	VW	Yes	+	Yes
TIRED	-0.106***	0.000	4946	VW	Yes	-	No
WORNOUT	-0.144***	0.000	4943	VW	Yes	-	No
SOCIAL	-0.181***	0.000	4948	VW	Yes	-	No

The results of Spearman correlation indicated that the correlation coefficients of income with all variables of quality of life are lower than 0.19, indicating very weak relationships. Some variables show a significant positive relationship with income, partially supporting the hypothesis. Women with high income reported higher levels of overall energy and feeling “full of pep.”

Several variables show a significant negative relationship with income, which did not support the hypothesis. Women with higher income reported a greater likelihood of cutting down on work or other daily activities due to physical health and of accomplishing less due to physical health reasons. Further, women with higher levels of income reported a greater likelihood of limitations in work or other activities and having difficulty performing work or other activities due to physical health reasons. Higher levels of income were associated with a higher likelihood of women cutting down on work or other activities, feeling less accomplished, and not doing work as carefully as usual due to emotional problems, such as feeling anxious or depressed. Women with higher income levels reported more likelihood of their physical health or emotional problems interfering with normal social activities with family, friends, neighbors, or groups. Women with higher levels of income reported a greater experience of bodily pain, pain interfering with work or daily activities, feeling more tired and worn out, and physical or health problems interfering with social activities and visiting with friends/relatives.

There were no correlations between income and the women feeling less accomplished due to physical health or limitations in work or other activities due to physical health. Lastly,

income was not correlated with the variables related to feeling tired, energy levels, or feelings of “pep.”

Summary

Hypothesis 1 (H1) posits that postmenopausal women would report lower sexual functioning and quality of life compared to premenopausal/perimenopausal women. The Mann-Whitney U test results indicate statistically significant differences between these groups. Postmenopausal women reported lower importance placed on sexual activity, reduced engagement in sex, and diminished physical health compared to premenopausal/perimenopausal women. Emotional and physical challenges were more pronounced for women at Visit 10, reflecting in lower levels of accomplishment and emotional satisfaction.

Hypothesis 2 (H2) explored racial disparities, positing that Black and Hispanic women would report lower sexual functioning and quality of life than White women. The Mann-Whitney U tests revealed significant differences among these groups of women. Black women exhibited lower sexual engagement, emotional satisfaction, and increased pain during intercourse. However, higher importance placed on sex and more frequent intercourse were noted. While Hispanic women reported higher levels of certain challenges, such as feeling less accomplished and experiencing bodily pain, they also displayed elevated importance placed on sex and greater desire to engage in sexual activity compared to White women.

Hypothesis 3 (H3) explored the link between income and sexual functioning/quality of life variables. The Spearman’s Rho Correlation Test highlights weak relationships overall. Higher income correlated positively with sexual engagement, emotional satisfaction, and energy levels. However, the results indicated several negative relationships between income and sexual functioning/quality of life. Women with higher income levels reported lower frequencies of

sexual intercourse and were more likely to cut down on work or daily activities due to physical and emotional health reasons. Additionally, higher income was associated with a greater likelihood of experiencing bodily pain, feeling tired and worn out, and having physical or emotional health problems interfering with social activities.

Chapter 5: Summary, Conclusions, and Recommendations

Discussion:

This study explored the impact of menopause on women's sexual functioning and quality of life, emphasizing the need for a nuanced understanding of the role of race and income between these variables. The study builds upon the framework established by Cain et al. (2003), utilizing the dataset from the Study of Women's Health Across the Nation (SWAN) to explore different aspects of sexual practices and functioning, particularly focusing on racial backgrounds and menopausal status.

Menopause is defined as the complete cessation of menstrual periods for 12 months. Perimenopause is the transitional phase leading to menopause, which is characterized by a range of symptoms, including painful intercourse, lower sex drive, mood swings, and vaginal dryness. Postmenopause is characterized by women who reported no menstrual bleeding in the past 12 months. Thornton et al. (2015) discusses the importance of sexuality during this period, linking it to emotional and psychological health. The Thornton et al. (2015) study highlights that menopausal women often face challenges such as sexual relation infrequency problems and feelings of insecurity or lack of support.

Sexual Functioning and Quality of Life on Two Menopausal Groups

The results suggests that there are statistically significant differences in sexual functioning and quality of life between postmenopausal and premenopausal/perimenopausal women. This generally aligns with the literature review, which indicated that postmenopausal women might experience lower levels of sexual functioning and quality of life compared to premenopausal and perimenopausal women due to decreased estrogen levels and associated symptoms. It is likely that the decreased hormone (estrogen) levels are a moderator between the

variables. According to Sandakova & Zhukovskaya (2023), vulvovaginal atrophy is one of the most important causes of sexual dysfunction in postmenopause as it refers to genital and urinary symptoms. Genital symptoms include dryness, burning, itching, genital pain that can be experienced before, during, or after intercourse, etc. Urinary symptoms include incontinence, recurrent urinary tract infections, discomfort when urinating, frequent urination at night, et cetera. Barbagallo et al. (2024), corroborates that vulvovaginal atrophy is one of the most well-studied clinical conditions, along with hypoactive sexual desire disorder (HSDD), that compromises sexual functioning at menopause, which was due to the significant drop in estrogen levels and the decline of androgens. Further, mood and personality, the quality of partner relationships, and the level of intimacy play an important role in sexual satisfaction (Barbagallo et al, 2024; Sandakova and Zhukovskaya, 2023).

The meta-analysis by Barbagallo et al. (2024), describes earlier research that found body weight and body mass index (BMI) to be significantly related to the degree of decreased sexual interest in postmenopausal women. However, Nackers et al. (2015), found that within the same population of midlife women from the SWAN study, sexual “desire, arousal, and ability to climax does not vary according to BMI level, but that frequency of intercourse may be somewhat lower in women of higher BMI” (p. 1179).

The results show that postmenopausal women reported lower levels of importance placed on sexual activity, desire to engage in sex, engagement in sex, touching, and intercourse. Nackers et al. (2015) found that desire, arousal, frequency of intercourse and sexual activity, and ability to climax declined over time. Additionally, postmenopausal women reported lower levels of current physical health, higher levels of physical difficulty, and emotional problems impacting work or other activities, all of which contribute to a reduction in overall quality of life. The

literature discusses sexual functioning issues that may lead to difficulties in their intimate relationships, potentially impacting their overall well-being. Nackers et al. (2015), also discussed the body composition and body proportion changes for midlife women and how this is associated with lower levels of perceived attractiveness and negative body image. Body image and self-esteem may also contribute to sexual functioning problems in postmenopausal women. These challenges can lead to psychological distress, affecting mental health and overall productivity, including in work settings. Recognizing these shifts and their implications for women offers avenues for effective intervention and management. Understanding and addressing menopause-related concerns, especially those related to sexuality and emotional health, are particularly beneficial for women aged 50 and above, aiding in navigating this life stage successfully (Jen, 2013).

Certain variables, such as satisfaction with sexual activity, frequency of kissing, frequency of oral sex, arousal during sexual activity, and frequency of masturbation, did not demonstrate statistically significant differences between the menopausal groups. This indicates that while postmenopausal women may report lower levels of sexual functioning overall, there are specific aspects of sexual activity where differences were not observed. Several factors could explain these differences. Simply, variations in how variables are operationalized could impact the outcomes as well as certain variables, such as masturbation, being left out of studies due to the lack of a partner.

Sexual Functioning and Quality of Life among Black and Hispanic vs White Women

Blanc (2021) proposes that variations in sexual functioning across racial and ethnic groups are influenced by cultural factors, and community norms, values, and behaviors that may be hard to assess directly. Cain et al. (2003) found that while rates of engaging in sex did not

significantly vary by menopausal status, there were ethnic differences in the importance of sex, with African American women more likely to find sex important. Prather et al. (2018) contextualize sexual and reproductive health disparities among African American women by describing the historical mistreatment that continues to impact their health outcomes.

For Black women, “menopausal transition and menopause represent an extended intersection of ageism, sexism, and racism” (Aririguzo et al., 2021; Calasanti, 2019). Historically, Black women and Black mothers have learned to meet a world of oppression with cultural resiliency and adaptability. Themes of cultural resilience portray how African American women survive health challenges as another form of oppression by way of self-reliance and silence, as to “not show their weaknesses, need for assistance, and to protect themselves from adversities” (Aririguzo et al., 2021, p. 270). African American women experiencing chronic stress and discrimination have shown an impact on their health risks leading to psychological symptoms of depression and dysfunctional coping tools which can directly impact quality of life and sexual functioning.

Cultural values around aging and womanhood also present positive connotations focusing on the role as “Matriarch” as a status of experiential wealth and resilience (Baker et al., 2015). Aririguzo et al., 2021 and Browdy, 2018 suggest that postmenopausal Black women can serve as mentors utilizing their lived experiences to destigmatize the stages of menopause and encourage health-promoting behaviors for Black women and creating new pathways of support.

The challenges faced by Hispanic women varies during the menopausal transition. Research indicates varying rates of sexual dysfunction among Hispanic women, including vaginal dryness, urinary problems, and relationship quality playing crucial roles. The decline in

estrogen and androgen levels during menopause is identified as a major contributor to sexual dysfunction.

Eisenman and Dantzer (2006) found that Hispanic women have more conservative sexual attitudes than European women. Conservative sexual attitudes around sexual functioning and menopause can foster a cultural silence that can negatively impact Hispanic women's perception of menopause, sexual functioning, quality of life and access to support. Cultures that place a high value on youth and fertility can adversely influence the perception of menopausal transition and sexual functioning among Hispanic women. Further, conservative sexual attitudes, youth-centered values on fertility, and cultural silences around the stages of menopause can promote negative sexual self-esteem and make these subjects taboo.

Gender roles including machismo and marianismo, and negative cognitive-emotional factors, such as hostility, anxiety, and depression, may disproportionately impact sexual well-being and quality of life of menopausal Hispanic women (Nuñez et al., 2016). Marianismo is a cultural ideal centered around family, self-sacrifice, and passivity (Gil & Velazquez, 1996; Niemann, 2004). Traditional Hispanic gender roles and cultural norms place Hispanic women in a conflicting situation, leading to a pressure to conform to expectations of femineity while also silently struggling with the menopausal transition.

Black and Hispanic women reported lower levels of sexual functioning and quality of life compared to White women on certain variables, including engagement in sexual activities, emotional satisfaction in relationships, frequency of intimate behaviors, and experiences of physical and emotional health interference with daily life and social activities. These findings are consistent with some previous research suggesting disparities in sexual functioning and quality of life among minority racial groups compared to White women. However, in contradiction to

the hypothesis, both Black and Hispanic women showed higher scores on several variables compared to White women, such as the importance placed on sex, desire for sexual activity, and reporting of physical and emotional health interference with work and daily activities.

Additionally, some variables, including sexual desire, partner-related reasons for no sex, and physical problems affecting sexual activities, showed no statistically significant differences between minority racial groups and White women. These discrepancies between the hypothesis and the results suggest a more nuanced relationship between race and sexual functioning and quality of life, highlighting the importance of considering multiple factors, including cultural norms, socioeconomic status, and individual experiences, in understanding these disparities. Further research is needed to explore these complexities and better inform interventions aimed at addressing disparities in sexual health and well-being among diverse racial groups.

Income and Sexual Functioning/QoL

The income variable is used as a proxy for access to care in this study. The Spearman's Rho Correlation Test revealed generally weak relationships between income and aspects of sexual functioning and quality of life. Higher income levels were positively correlated with sexual engagement, emotional satisfaction, and energy levels. Women with higher incomes may have better access to healthcare services, which could lead to an increased awareness of physical or emotional health issues and subsequently reporting them more frequently to professionals.

However, the findings also indicated that women with higher incomes reported lower frequencies of sexual intercourse and were more inclined to reduce work or daily activities due to physical and emotional health reasons. Additionally, higher income was linked to a greater likelihood of experiencing bodily pain, feeling tired and worn out, and encountering interference with social activities due to physical or emotional health issues. Women with a higher income

may have access to stronger social support networks, which can positively impact emotional satisfaction and overall well-being. However, social pressures or expectations related to socioeconomic status could contribute to feelings of tiredness, worn-out, or interference with social activities. Nazarpour et al. (2021) interpreted that higher income is associated with a higher quality of life, less anxiety and depression, and as a result leading to higher sexual satisfaction. Though a higher income may alleviate certain stressors for midlife women, it could also introduce new stressors or exacerbate existing ones. For example, career-related stress, societal expectations, and/or financial responsibilities might contribute to lower frequencies of sexual intercourse and increased bodily pain or fatigue, impacting overall quality of life. Lastly, cultural norms and societal expectations regarding sexuality, work-life balance, and health behaviors may vary based on income levels. These factors could influence women's perceptions of sex and how they prioritize sexual activity, work obligations, and overall health, thus affecting reported outcomes.

Recommendations

For psychologists working with women in various stages of menopause, the findings of this study suggest that psychologists should be encouraged to seek and engage in frequent continuing education courses and professional development trainings aimed at menopause and sexual health as it is important to stay aware of the relevant symptoms, treatment options, and best practices in providing holistic care to people who have experienced menopause. Additionally, interdisciplinary collaboration with healthcare professionals who specialize in women's health is warranted to ensure comprehensive support for the range of physical and social changes experienced during this phase of life. Psychologists should consider the addition of a section to their clinical interview for people identifying as women within this age range to

obtain history about menopause and sexual functioning given that many women do not typically initiate conversations about these concerns with professionals. Within sessions, psychologists can assist clients with creating questions to ask primary caregivers as not knowing what to ask could be a barrier in receiving the care that they may want and need.

Limitations

The limitations of existing studies regarding Hispanic women, such as small sample sizes and lack of representation, make it difficult to generalize findings to the broader Hispanic population and draw definitive conclusions about the specific effects of menopause on their sexual functioning and quality of life. However, the results still provide valuable information for mental health clinicians to be aware of. Additionally, the SWAN dataset asked questions about health conditions such as diabetes, hypertension, cancer, etc.; however, the current study did not control for those variables. It is possible that the conditions impacted the women's experience of menopause. Lastly, participants indicated their marital status at each visit; however, some of the women's marital status changed over time. The current study did not control for this variable, though some of the literature explores the impact of a positive romantic relationship on emotional well-being, social support, sexual functioning, and health behaviors, which influence menopausal experiences; thus, this is a limitation of the study.

Future Research

The areas of research regarding menopause are vast given the various nuances of menopause, sexual functioning, and quality of life. As the current study demonstrated there are variations in menopausal experiences and sexual functioning across different racial groups, influencing overall quality of life, it is necessary to further investigate this area. In addition, the increase in women who identify as transgender and individuals who identify as nonbinary urges

the field toward more inclusive health practices and language so individuals feel safe with, cared for, and respected by the professionals they lean on for support. Further, many women may seek alternative or non-western forms of treatment to manage associated menopause concerns, as well as poor sexual functioning; further research on the efficacy of non-pharmaceutical treatments will greatly benefit the field. Some literature described long-term health outcomes associated with menopause, such as cardiovascular disease, diabetes, osteoporosis, and others. However, longitudinal research of these health conditions associated with menopause will be helpful in crafting preventative strategies, trainings, and healthcare guidelines for women transitioning through menopause.

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