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Review Article

INTRODUCTION

Based on The American College of Obstetricians and Gynecologists, menopause is the natural phase of a woman in which the menstrual cycle ends, it usually occurs when women enter the age of 45 to 55 years. A woman must not have any menstruation period for at least 12 months to be said that a woman has entered the menopausal stage (Symptoms, 2012). The menopausal transition is a milestone in a woman's life cycle that marks the transition from reproductive to post-reproductive life. While the basic process of menopause is linked to ovarian aging, all aspects of the hypothalamic-pituitary-

Analysis of Association of Dyspareunia in Menopausal Women with The Quality of Sexual Intercourse: Literature Review

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Abstract

In postmenopausal women, sexual function may worsen with increasing menopausal status. Dyspareunia is a common complaint that is experienced by women who have experienced menopause and this also causes a decrease in the quality of sexual intercourse in women who have experienced menopause. The aim of this study is to determine the relationship between dyspareunia in menopausal women and the quality of sexual intercourse. This research method uses a literature review. Literature review means reviewing various types of literature, both national journals and international journals obtained from an academic database on Google Scholar, PubMed NCBI, and Science Direct from 2013 to 2023, without language restrictions, and full-text research journals with the keywords that related between "Dyspareunia", "Quality of Sexual Intercourse", and "Menopause Women". Data were obtained from twenty-two research journals that met the inclusion criteria. Results showed that overall the article supports the effect of dyspareunia in postmenopausal women on the quality of sexual intercourse. All of the 22 articles show a relationship between dyspareunia in postmenopausal women and the quality of sexual intercourse. As a conclusion, dyspareunia experienced by postmenopausal can lead to a decrease in the quality of sexual intercourse in postmenopausal women. These findings may contribute to the development of a valid association of dyspareunia in menopausal women with the quality of sexual intercourse.

Keywords: dyspareunia, menopause, quality of sexual intercourse

ovarian-uterine axis change over time. Chronological and degenerative ovarian aging are two interconnected processes that influence the timing and duration of menopause. Over the last decades, several studies around the world regarding the menopausal transition have described the mechanism of the reproductive and hormonal events that accompany the process (Santoro et al., 2015).

According to the statement of World Health Organization (WHO), WHO predicted that in 2025 the number of postmenopausal women in Asia will increase from 107 million to 373 million (Singh and Chourasia, 2020). The Indonesian Ministry of Health estimates that Indonesia's population in 2020 will reach up to 262.6 million people and around 30.3 million women will be living in the menopause stage with an average age of 49 years. According to Badan Perencanaan Pembangunan Nasional (Bappenas), estimates that the number of menopausal women with an average age of 45-64 years in Indonesia in 2035 will be 37 million people (Nurlina, 2021). Based on the 2017 Indonesian Demographic and Health Survey, the percentage of women aged 30-49 who experience menopause reaches 16.1% with a total of 28,767 women. The proportion of women aged 30-49 who are menopausal increases with age, from 10% in women aged 30-34 years, 17% in women aged 44-45, and 43% in women aged 48-49 years.

Every year, 1.5 million women go through the menopausal transition, which is often accompanied by distressing symptoms such as vasomotor symptoms, vaginal dryness, decreased libido, insomnia, fatigue, and joint pain. Based on research by Santoro et al (2015), three symptoms have emerged as strongly associated with menopause: vasomotor symptoms, vaginal dryness/dyspareunia, and difficulty sleeping/insomnia. Several population-based and community-based studies confirmed that approximately 27% to 60% of women report moderate to severe symptoms of vaginal dryness or dyspareunia associated with menopause. In addition to vaginal atrophy, vaginal narrowing and shortening and uterine prolapse can also occur, which causes high rates of dyspareunia (Santoro et al., 2015). When a menopausal woman has these symptoms, sexual intercourse isn't like it used to be. As the lubricant production decreases, the vagina wall may be injured and cause bleeding and pain during the intercourse. When this happens, the vagina wall will spasm and it causes the vagina cavity to narrower and the partner will feel the pain as well. Moreover, sexual intercourse duration will be minimal. Couples tend to not have sexual intercourse, furthermore, the frequency of sexual intercourse will decrease.

Research conducted by Nugroho (2013) entitled "Relationship Between Stages of Menopause and Sexual Changes in Menopausal Women" through a cross-sectional study of 14 female respondents at the menopause stage, there was an influence between the stage of menopause on sexual changes in menopausal women, with the results of the study 25% of respondents experienced dryness vagina and 18.75% experienced pain during sexual intercourse. A recent cross-sectional, community-based study of 2020 Australian women (40–65 years) found that the prevalence of low desire was 69.3% (Worsley et al., 2017). Several modifiable factors resulted in midlife women, specifically vaginal dryness (OR 2.08), pain during or after intercourse (OR 1.6), moderate to severe depressive symptoms (OR 2.69) and use of psychotropic medication. It is widely accepted that sexual function worsens with advancing menopause status, independently of age. Sexual dysfunction (SD) in this time of life is rooted in a wide range of predisposing, precipitating and maintaining factors, which may be of biological, psychological and socio-cultural origin (Scavello et al., 2019).

According to author knowledge, for women who will experience menopause, support from the closest people is needed, such as support from husbands, friends and family. This is a form of support so that women who are about to experience menopause are more confident in adapting to their environment, including those who experience problems with their level of sexual quality. Women's readiness to face menopause greatly influences the process of menopause that women will face. Where a woman who already has readiness in facing menopause, will help her to go through menopause better. One of the factors that influence readiness is knowledge. If a woman's knowledge of menopause is higher, she will be more prepared to face the menopausal process, including overcoming the sexual quality problems she is experiencing.

Based on the background that has been described, the researcher is interested in conducting research on 'Literature Review: Analysis of Association of Dyspareunia in Menopausal Women with The Quality of Sexual Intercourse' as the aim of this study so that later researchers can provide education through counseling on how to overcome this problem. Last but not least, the urgency and the important of this study is to form of support so that women who are about to experience menopause are more confident in adapting to their environment, including those who experience problems with their level of sexual quality. Where a woman who already has readiness in facing menopause, will help her to go through menopause better. Looking back on the previous study, we would like to give our thoughts that if a woman's knowledge of menopause is higher, she will be more prepared to face the menopausal process, including overcoming the sexual quality problems she is experiencing.

METHODS

Search Strategy

The research design used is the literature study method with the literature review type. Literature review means reviewing various types of literature, both national journals and international journals obtained from searches on Google Scholar, PubMed NCBI, and Science Direct by entering the keywords Dyspareunia, Quality of Sexual Intercourse, and Menopause without language restrictions, and full text research journals from 2013-2023. Google Scholar has around 12.400 articles, PubMed NCBI has 9 articles and Science Direct has 106 articles. In result, there are 22 articles that met all of the inclusion criteria. The inclusion criteria are: (1) The period for publication of journals is a maximum of the last 10 years (2013 – 2023); (2) The theme or content of related research journals; (3) The type of journal used is preferably a research journal, 1-2 literature studies are allowed; (4) Journals that present research results; (5) National and international journals; and (6) The journal is a full text journal. While the exclusion criteria are: (1) Journals that do not discuss the relationship between the quality of sexual relations in postmenopausal women and dyspareunia and their risk factors; and (2) Journals that do not present research results. And referring to the aim of this study, the measurement of female sexual function can be assessed using the Female Sexual Function Index (FSFI) questionnaire to identify levels of satisfaction, pain, orgasm, vaginal lubrication, sexual arousal and sexual desire. The Female Sexual Function Index (FSFI) questionnaire consists of 19 questions to measure changes in sexual function towards sexual activity in women. Obtaining a score ≥ 26.55 is categorized as FSFI (Not Sexual Dysfunction) and a Score ≤ 26.55 is categorized as Sexual Dysfunction.

Data Analysis

Data analysis begins with collecting several articles that meet the inclusion and exclusion criteria. All appropriate data are entered into a table with the format of number, name of researcher, research title, year of research publication, place of research, research objectives, research theory/concept, research methods, research sources, and research results. The results of the data contained in the form of the table will then be analyzed for content (content analysis). Content analysis is an in-depth analysis of the information content of each journal that matches the research criteria, then draws conclusions from the various data that have been analyzed based on the formulation of the problem and research objectives.

RESULTS

Analysis of Dyspareunia In Menopause Woman

Table 1. Analysis in Dyspareunia in Menopause Woman

Reference; Country; Publisher; Title	Research Design; Variable; Sample Population	Statistic Test Result	Conclusion
(Lamtumiar, 2018); Indonesia; Scientia Journal; Faktor yang Berhubungan dengan Masalah - Masalah Seksualitas pada Wanita Menopause di Kelurahan Paal Merah Kecamatan Jambi Selatan Kota Jambi Tahun 2018.	Cross Sectional; Dependent Variable: Sexuality problems; Variable Independent: Menopause; n Sample: 87 respondents.	55.2% of respondents had abnormal sexuality problem. 66.7% of respondents experienced vaginal dryness. 56.3% of respondents experienced hot flushes. 51.7% of respondents experienced sleeplessness. 52.9% of respondents were easily offended. There is significant relationship between vaginal dryness, hot flushes, sleeplessness and irritability to menopausal sexuality problems (P Value <0.05).	There is significant relationship between vaginal dryness, hot flushes, sleeplessness and irritability to menopausal sexuality problems
(Santoro, Epperson and Mathews, 2015); North America; Endocrinology and Metabolism Clinics of North America; Menopausal Symptoms and Their Management	Dependent Variable: Menopausal symptoms; n Sampel = 3.471 respondents	VVA prevalence rate is 45%. among a large sample of 45 years old woman. In connection with menopause, 27% to 60% of women have VVA (vulvovaginal atrophy) symptoms such as mild to severe vaginal dryness or dyspareunia symptoms. Estrogen levels affect urogenital tissues sensitively	It is confirmed that VVA symptoms, including dyspareunia, common to postmenopausal woman.
(Diyu and Agustini, 2021); Indonesia; Journal of Islamic Nursing; The Correlation between Menopausal Symptoms and Sexual Function in Menopausal Woman.	Cross sectional; Dependent Variable: Female Sexual Function Index (FSFI); Independent Variable: Menopausal sign and symptoms; n Sample : 372 respondents	Sexual dysfunction and menopausal symptoms (somatic, psychological, and urogenital) are significantly correlated (p 0.001). Urogenital symptoms and sexual desire (r=-0.12, p=0.020). All subscales of menopausal symptoms and lubrication (somatic	There is a relationship between signs and symptoms menopause (somatic, psychology and urogenital) against Female Sexual Function Index (FSFI) especially lubrication and dyspareunia. (continue on next page)

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$r=-0.30$, $p=0.001$, psychology $r=-0.29$, $p=0.001$, and urogenital $r=-0.27$, $p=0.001$). All menopausal symptoms subscale with pain (somatic $r=-0.15$, $p=0.002$, psychology $r=-0.21$, $p=0.001$, and urogenital $r=-0.16$, $p=0.002$). urogenital symptoms and orgasm ($r=-0.17$, $p=0.024$), urogenital and somatic with satisfaction (somatic $r=-0.11$, $p=0.027$, urogenital $r=-0.16$, $p=0.002$).

(Mitchell et al., 2017); United Kingdom; BJOG: An International Journal of Obstetrics and Gynaecology; Painful Sex (Dyspareunia) in Women: Prevalence and Associated Factors in A British Population Probability Survey

Dependent Variabel: Painful sex (dyspareunia); n Sample: 8.869 respondents

7.5% (95% CI 6.7-8.3) of sexually active women reported having painful intercourse, and 25% of these women had distressing symptoms and had constantly experienced it for at least six months. Vaginal dryness (age adjusted odds ratio 7.9; 6.17-10.12), sex anxiety (6.34; 4.76-8.46), and lack of enjoyment in sex were all associated with dyspareunia (6.12; 4.81-7.79). It was linked to both negative experiences like non-volitional sex (2.17; 1.68-2.80) and sexual relationship factors such not having the same level of desire in sex (2.56; 1.97-3.33). Additionally, associations with indicators of psychological and physical health, such as depressed symptoms, were discovered (1.68; 1.28-2.21).

Health professionals should be supported to undertake holistic assessment and treatment which takes account of the sexual, relationship and health context of symptoms

The Quality of Sexual Intercourse in Menopausal Woman with Dyspareunia

Table 2. The Quality of Sexual Intercourse in Menopausal Woman with Dyspareunia

Reference; Country; Publisher; Title	Research Design; Variable; Sample; Population	Statistic Test Result	Conclusion
(Nugroho, 2013); Indonesia; E-Journal UMM Keperawatan Indonesia; Hubungan antara Stadium Menopause dengan Perubahan Seksual Wanita Menopause di Posyandu Lansia Srikandi Kelurahan Summersari Kota Malang.	Cross Sectional; Dependent Variable: Sexual changes; Independent Variable: Menopause stages; n Sample: 112 respondents.	Distribution frequency of sexual changes in post-menopausal women (n=22 people). Pain during sexual intercourse = 100%. Decreased sexual desire = 100%. Long periods of time reaching climax/ orgasm = 100%. Frequently unable to reach climax/orgasm = 91%. Decrease in frequency of sexual intercourse = 100%.	(Nugroho, 2013); Indonesia; E-Journal UMM Keperawatan Indonesia; Hubungan antara Stadium Menopause dengan Perubahan Seksual Wanita Menopause di Posyandu Lansia Srikandi Kelurahan Summersari Kota Malang.
(Dąbrowska-Galas, D & Michalski, 2019); Polandia; Sex Medicine; Sexual Dysfunction in Menopausal Women.	Dependent Variable: Sexual dysfunction; Independent Variable: Menopause; n Sample: 294 respondents.	69.73% of respondents have sex problem (FSFI score 26,55). Satisfaction is the domain that is the highest score (3.87 ± 1.8), which means the sexual problem is minimum. The lowest score is sexual desire (2.91 ± 1.49). Woman with mild menopausal symptoms have the highest score on the domain of lubrication and satisfaction (4.32 and 4,44).	(Dąbrowska-Galas, D & Michalski, 2019); Polandia; Sex Medicine; Sexual Dysfunction in Menopausal Women.
(Koeryaman & Ermiami, 2018); Indonesia; MEDISAINS: Jurnal Ilmiah Ilmu-Ilmu Kesehatan; Adaptasi Gejala Perimenopause dan Pemenuhan Kebutuhan Sexual Wanita Usia 50-60 Tahun.	Descriptive research with quantitative methods; Dependent Variable: Sexual needs impairment; Independent Variable: Perimenopausal symptoms adaptation; n Sample:	Most women aren't fulfilled on their sexual need aspect including the aspect of passion/ interest sexual (82.43%), arousal stimulation (66.21%), orgasm (75.67%) and 56.75% of them experienced dyspareunia. Other data showed that most women aged 50-60 years	(Koeryaman & Ermiami, 2018); Indonesia; MEDISAINS: Jurnal Ilmiah Ilmu-Ilmu Kesehatan; Adaptasi Gejala Perimenopause dan Pemenuhan Kebutuhan Sexual Wanita Usia 50-60 Tahun. (continue on next page)

(continued)	246 respondents.	is categorized as poor in management of perimenopausal symptoms, including stress and emotional handling (65.69%)	
(Mulyawati, 2021); Indonesia; Jurnal Keperawatan Aisyiyah; Hubungan Perubahan Fungsi Seksualitas dengan Frekuensi Seksualitas pada Lanjut Usia di Pos Binaan Terpadu.	Cross Sectional; Dependent Variable: Sexuality frequency; Independent Variable: Sexual function changes; n Sample: 42 respondents.	Most of the sexual function was normal as many as 38 respondents. Most of them have seldom frequency of sexuality as many as 23 respondents. Meanwhile, the p-value is 0.021 from the results of the bivariate test explains the existence connection.	There is a relationship between sexual function changes and sexuality frequency
(Maharani, Jafar and Multazam, 2018); Indonesia; Jurnal Kesehatan Delima Pelamonia; Hubungan Pengetahuan dan Kolesterol terhadap Disfungsi Seksual Wanita Pre-Menopause di Puskesmas Kassi Kassi Kota Makassar.	Cross Sectional; Dependent Variable: Sexual Dysfunction; Independent Variable: Knowledge and Cholesterol level.	There is a relationship between knowledge and sexual dysfunction where the p value is 0.029 <0.05. And It is stated that there is relationship between cholesterol and sexual dysfunction.	There is a relationship between knowledge and cholesterol level against sexual dysfunction
(Istighosah & Arashima, 2017); Indonesia; Jurnal Kebidanan Dharma Husada; Perilaku Seksual pada Usia Menopause di Posyandu Lansia Dahlia RW 9 Kelurahan Dandangan Kota Kediri	Descriptive; Dependent Variable: Sexual behavior; Independent Variable: Menopausal age; n Sample:10 respondents.	Sexual positive behavior at the age of menopause was found as much 4 respondents (40%). Meanwhile, negative sexual behavior at the age of menopause was found by 6 respondents (60%).	Menopausal age effects sexual behavior in menopause woman in Posyandu Lansia Dahlia area RW 9 Kelurahan Dandangan (Kecamatan Kota Kediri)

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(The North American Menopause Society (NAMS), 2013); North America; Menopause: The Journal of The North American Menopause Society; Management of Symtomatic Vulvovaginal Atrophy	Literature Review	-	Estrogen therapy is the most effective treatment for moderate to severe symptoms. Non-hormonal therapy is available without a prescription provides adequate relief for most women with mild symptoms
(Barger, 2022); Switzerland; Springer International; Sexual Function and Quality of Life: Assessing Existing Tools and Consideration for New Technologies	Meta-review; n Sample= 69 journals	-	Numerous general tools are available to make it easier to gather information on sexual function and life satisfaction for both clinical and academic purposes.
(Hurrahmi et al., 2018); Indonesia; Majalah Obstetri dan Ginekologi; Profile of sexual function using Female Sexual Function Index (FSFI) in post-menopausal women in Geriatric Clinic, Dr Soetomo Hospital, Surabaya.	Descriptive Surveys; Dependent Variable: Sexual Function; Independent Variables: Menopause; n Sample = 37 respondents.	-	High prevalence (78.4%) of sexual dysfunction in post- menopausal women is affected by impairment in the sexual domain.

Factors in Sexual Relationship Quality

Table 3. Factors in Sexual Relationship Quality

Reference; Country; Publisher; Title	Research Design; Variable; Sample; Population	Statistic Test Result	Conclusion
(Nazarpour et al., 2016); Iran; Red Crescent Med J; Sexual Function and Exercise in Postmenopausal Women Residing in Chalous and Nowshahr, Northern Iran	Cross sectional; Dependent Variable: Sexual function; Independent Variable: Sport; n Sample: 405 respondents	In general, 61% of women reported having sex problems, while 53.6% said they hadn't exercised in the previous six months. Among those who did, jogging was the most popular activity (79.8%). Women who exercised other	There is a association between exercise and sexual function in postmenopausal women. More frequent exercise will improve postmenopausal women's sexual function. (continue on next page)

<p>(continued)</p>		<p>than walking had substantially lower FSFI overall scores ($P = 0.013$), scores in the lubrication ($P_n = 0.007$), and pain ($P 0.001$) categories than women who just walked or did not exercise at all. The number of workouts per week correlated well with orgasm ($r = 0.18$, $P=0.014$) and lubrication ($r = 0.146$, $P=0.045$). With each increase in the frequency of weekly exercise, the risk of diminished sexual desire fell by 80.2% ($P =0.044$) according to a logistic regression analysis.</p>	
<p>(Mulyo et al., 2014); Indonesia; Jurnal Riset Kesehatan Poltekkes Depkes Bandung; Pengaruh Senam Kegel Terhadap Dispareunia pada Perempuan Menopause di Kelurahan Pamoyanan Wilayah Kerja Puskesmas Pasirkaliki Bandung</p>	<p>Quasi Experiment; Dependent Variable: Dyspareunia; Independent Variable: Kegel Exercise; n Sample: 36 respondents</p>	<p>According to the analysis's findings, the average dyspareunia scale before the Kegel exercise (pre-test) was 5.58, while the average dyspareunia scale after the Kegel exercise (posttest) was 2.69, indicating decreased 2.89 point. The findings of the statistical test indicate that post-menopausal women who performed Kegel exercises for six weeks has a reduction in dyspareunia, with a value of $t = 12.665$ and a p-value of 0.000 a (0.05).</p>	<p>Menopausal women with dyspareunia must do Kegel exercise as a therapy to avoid the effects of decreasing estrogen hormone so that their quality of life will increase.</p>
<p>(Setyani, 2021); Indonesia; Journal of Issues in Midwifery; Female Sexual Function Index in Perimenopause Women After Loving Yoga Intervention in Yogyakarta</p>	<p>Cross Sectional; Dependent Variable: FSFI; Independent Variable: Loving Yoga; n Sample : 30 respondents</p>	<p>Univariate and multivariate data analysis used multiple linear regression analysis with partial t test and simultaneous F test. Research results state that there is a simultaneous and partial effect on sexual function (Sig. value < 0.05), with a large influence of sexual encouragement (16.541%), sexual arousal (15.289%), lubrication (18.233%), orgasm (16.036%), sexual satisfaction (16.330%), and pain during intercourse (17.586%).</p>	<p>For perimenopausal woman, loving yoga is good in improving the quality of sexual function</p>

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<p>(Suriyah et al., 2021); Indonesia; Psymphatic: Jurnal Ilmiah Psikologi; Popular Psychology versus Scientific Evidence: Love Languages' Factor Structure and Connection to Marital Satisfaction</p>	<p>Quantitative Survey; Dependent Variable: Marital Satisfaction; Independent Variable: Love Language; n Sample: 250 couples</p>	<p>One-way ANOVA is done, the three categories are used as factors and the variable is the husband or wife's happiness with their marriage. With $F(2, 249) = 0.823$; $p = 0.441$, matching love language statuses failed to account for the variation in the wife's level of marital happiness. The husband's marital happiness showed comparable results with $F(2, 249) = 0.084$; $p = 0.920$. This situation demonstrates that a couple's love languages do not influence how happy they are in their marriage.</p>	<p>Factorial analysis showed that the five factors' solution was not supported and love language compatibility was not affect the couple's marital satisfaction.</p>
<p>(Bunt & Hazelwood, 2017); Australia; Personal Relationships; Walking The Walk, Talking The Talk: Love Languages, Self-Regulation, and Relationship Satisfaction</p>	<p>Cross Sectional; Dependent Variable: Relationship satisfaction; Independent Variable: Love Language; n Sample: 67 heterosexual couples</p>	<p>There was no significant effect of love language compatibility on male relationship satisfaction when female satisfaction was included as a covariate, $F(1, 64)=0.481$, $p=.490$, $\eta^2=.007$</p>	<p>This study discovered that appropriate self-regulatory behavior increased relationship happiness more than love language compatibility or implicit understanding of a partner's love language.</p>
<p>(Younis et al., 2020); Egypt; Egyptian Journal of Dermatology and Venerology; Foreplay Importance from The Point of View of A Sample of Egyptian Women</p>	<p>Cross Sectional; Dependent Variable: Sexual practice; Independent Variable: Foreplay; n Sample: 200 respondents</p>	<p>Less than half of the sexual experiences (44%) had the majority of participants initiating foreplay. To pleasure both partners was the most often mentioned reason for coitus (54%). 33% of participants said that overall, their sexual life was not satisfactory. 72% of participants in the sample said that their spouses were interested in foreplay during sex. Foreplay is used by 50% of couples practically every time they have sex, and 51% say they participate actively. The majority of participants (33%) opted to strike.</p>	<p>Based on the results of the study, it was found that Foreplay has a very important role in sexual life, because it greatly affects sexual desire, arousal, and orgasm. Ignorance of the importance of one's role can have a negative impact on sexual activity and overall sexual satisfaction</p>

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(Younis et al., 2016); Egypt; Human Andrology; Female Hot Spots: Extragenital Erogenous Zones.	Cross Sectional Cohort Study; Dependant Variable: Sexually sensitive zones; n Sample : 150 respondents	In 95.3% of women, extragenital erogenous zones were discovered. The most potent erogenous areas were located in the breasts, lips, neck, ears, and buttocks, in that order. The optimal technique of stimulation varied depending on the location; for example, oral stimulation was best for lips, while manual and oral stimulation was best for breasts and nipples. 12% of subjects reported experiencing an orgasm as a result of stimulation of extragenital regions.	The great majority of women have extragenital erogenous zones. 12% of women overall claimed to be able to orgasm after stimulating these zones. Patients who have trouble getting orgasmic may benefit from telling their partners about the extragenital erogenous zones and how to activate them.
(Arini, 2021) Indonesia; Jurnal Kebidanan dan Keperawatan 'Aisyiyah; Fungsi Seksual Wanita Menopause yang Melakukan Orhiba Kombinasi Kegel Exercise: Studi Pengukuran Skor FSFI	Case control; Dependent variable: Sexual function of postmenopausal women Independent variable: Combination of Orbiba & Kegel Exercise; n sample: 54 respondents	Result of data analysis use independent t test pn treshold significance=0.05 shows that there is a significant enhancement in sexual function between control group and intervention (orhiba or combination with kegels) (P=0,000)	The combination of Orhiba and Kegel will improve sexual function and avoid sexual dysfunction problems during menopause in women who do light exercise every day.

DISCUSSION

Analysis in Dyspareunia in Menopause Woman

According to Mitchell et al. (2017) (Table 1 No. 4) in the UK, vaginal pain during intercourse or dyspareunia is a common but neglected issue in women's health. The prevalence of the female population with dyspareunia is estimated from 3 to 18% globally. In these studies, it is stated that the wide range reflects significant heterogeneity so that the underlying condition is often difficult to diagnose and to treat. In addition, there are complex and poorly understood etiological factors. Through his research, it is concluded that a large number of British women (7.5% (95% CI: 6.8%–8.3%) reported experiencing painful sexual experiences and so healthcare workers should be encouraged to examine and treat patients holistically, with considering issues of sexual context, relationships, and health.

Another study by Santoro et al. (2015) (Table 1 No.3) mentioned in their conclusion that around 27% to 60% of women report moderate to severe symptoms of vaginal dryness or dyspareunia associated with menopause. After further review, it turns out that this was supported by vaginal atrophy, narrowing and shortening of the vagina and uterine prolapse that can also occur, which causes high rates of dyspareunia. In addition, there is evidence that the changes in estrogen level can affect brain systems involved in mood and cognition making women in menopause more prone to psychological problems.

The Quality of Sexual Intercourse in Menopausal Woman with Dyspareunia

In Nugroho's studies (2013) (Table 2 No.1), menopause has 4 phases in its development: the premenopausal stage, the perimenopausal stage, the menopause stage and the postmenopausal stage. Menopausal conditions are affected by a decrease in estrogen levels in the body so that the production of lubricant in the vagina decreases, the vaginal wall becomes thin, the rugae in the vagina decreases and sometimes, stiffness in the vaginal muscles can be found. Thus, menopausal women tend to complain of dyspareunia and are ultimately reluctant to have sexual intercourse (Nugroho, 2013). Painful intercourse / dyspareunia is common in postmenopausal women. Based on the studies by the The North American Menopause Society (NAMS), (2013) (Table 2 No. 7), it is estimated that 10%–40% of postmenopausal women experience discomfort due to vulvovaginal atrophy, and around 40% of women with vaginal atrophy reports dyspareunia. The common symptoms including low sexual desire (40–55%), poor lubrication (25–30%), and dyspareunia (12–45%) (Scavello et al., 2019).

In contrast to mental and physical health, social functioning—also known as social health—is recognized as an essential component of quality of life and is seen as a crucial component of sexual activity (Barger, 2022). Statements regarding clinical symptoms of previous menopause and statements by Barger (2022) are supported by the results of a study from Maharani, Jafar and Multazam (2018) (Table 2 No. 5) that reduced desire and sex drive can affect the quality of sexual life and have a direct effect on quality of life. According to Istighosah and Arashima's research (Table 2 No.6), which was conducted on elderly aged 48-71 years, 70% of respondents stated a loss of sexual interest and 50% of respondents experienced dyspareunia. This is in line with Maharani, Jafar and Multazam's research (2018) in premenopausal women aged 45-55 years, as many as 69.2% of respondents experienced sexual dysfunction.

Since sexual function is a multifaceted phenomenon, several variables may have an impact on each of its dimensions. According to research by Hurrahmi *et al.* (2018) (Table 2 No. 9), a high prevalence (78.4%) of sexual dysfunction in postmenopausal women is impacted by abnormalities in the sexual domain. This was discovered after evaluating the FSFI score in senior female respondents. According to this study, arousal disorders, lubrication disorders, orgasmic disorders, satisfaction disorders, and pain had the highest prevalence among the six categories of sexual function. 26 responders (70.3%) reported having had discomfort in the final domain (pain). The old age factor is the key to this problem. Less estrogen is produced by the ovaries as people age, which affects the number of vaginal secretions that are produced as vaginal lubrication (Hurrahmi et al., 2018)

Many factors affect the quality of sexual relations in postmenopausal women with dyspareunia. Research by Maharani, Jafar and Multazam (2018) stated that the incidence of sexual dysfunction in premenopausal women was mostly experienced by women who had high cholesterol as many as 57 respondents (73.1%) and from the results of the Chi-Square obtained a p-value of 0.012 <0.05 so there was a significant relationship premenopausal women's cholesterol on sexual dysfunction (Maharani, Jafar and Multazam, 2018). Estrogen and cholesterol have a causal relationship. In postmenopausal women, estrogen levels will decrease, as is known, estrogen plays an important role as an antioxidant that has a positive effect for blood vessels and plays a role in cholesterol regulation. If estrogen levels are normal, then blood flow is smooth because blood vessels dilate so that body tissues will get sufficient oxygen and nutrients, including blood flow in the vagina and pelvic muscles. Blood flow in the pelvis and vagina plays an important role in the process of lubrication, flexibility of the pelvic and vaginal muscles, and thickening of the vaginal walls and will affect the quality of sexual intercourse, including reducing dyspareunia in menopausal women. If estrogen levels are low, then cholesterol levels will be high and can affect blood flow due to blockages, so that body tissues will lack oxygen and nutrients. This theory is in line with research which states that premenopausal women who have normal cholesterol are 16 times more satisfied in sex than those with high cholesterol (Maharani et al., 2018).

Factors in Sexual Relationship Quality

Based on a statement by Mulyo et al., (2014) Table 3 No. 3), prolonged dyspareunia has a risk of causing atrophic vaginitis, vaginismus, and depression, so it must be treated immediately. Therapy can be given in the forms of pharmacological and non-pharmacological therapy. Pharmacological therapy can be carried out by administering the estrogen hormone, but this therapy is still being debated because the side effects of giving estrogen are quite significant, so that strong consideration is needed. Non-pharmacological therapy is preferred because it is non-invasive and easy to do (Santi, Andryani and Tihardimanto, 2022).

Physical activity and sports have an important role in the quality of sexual relations in postmenopausal women with dyspareunia. Several studies have shown that postmenopausal women who exercise regularly for 12 months at moderate intensity will experience a significant increase in estrogen levels in the body (Demirtaş and Kaybandioğlu, 2022). In addition, exercise can increase blood flow, help in thickening of the vaginal walls and increase clitoral sensitivity. Thus, it can help menopausal women to reduce complaints during intercourse, including dyspareunia. With increased arousal and sexual arousal due to the hormone estrogen, women can produce adequate lubricant for sexual intercourse and improve its quality.

This statement is supported by the results of Setyani's research (2021) (Table 3 No.4) that improving the quality of sexual relations can also be assisted by pelvic floor exercise & loving yoga, this is because the movements in yoga increase pelvic muscle tone. Movements tightening and relaxing the pelvic muscles during sex penetration can help women reach climax (Setyani, 2021)

According to Mulyo, Iryanti and Hermaningsih (2014), the implementation of Kegel exercises for 6 weeks can reduce dyspareunia in menopausal women. Before doing Kegel exercises, the dyspareunia that was felt was a moderate type of pain. After doing Kegel exercises for 6 weeks, the pain was reduced to a mild type of pain. Kegel exercises are recommended for a minimum of 20-36 contractions per day, for 4-6 weeks, and are carried out with due regard to intensity, duration and frequency to achieve the expected results.

According to Younis et al.,(2020) research (Table 3 No. 7), foreplay is crucial to sexual life since it significantly affects sexual desire, arousal, and orgasm. Sexual activity and overall sexual satisfaction can be negatively impacted by not understanding the significance of one's role. This statement is consistent with earlier study by Younis et al., (2016) (Table 3 No. 9), which found that sensitive regions that are stimulated during sexual activity (even during foreplay) reveal the level of quality of the sexual intercourse. 95.3% of women, according to the findings of the research. It was shown that 12% of women claimed that being stimulated in particular body zones might cause them to have orgasm.

Moving on from the 'way' to have sex, there are other factors that can improve the quality of sexual intercourse, namely 'preparation' before sexual intercourse, including clothing, the condition of the room used, and fragrances. According to research by Putri et al., (2020), there is a relationship between male visuals on excessive female body parts including the chest, hips, thighs, calves, facial expressions, body language, tone of voice, and clothing with male sexual satisfaction men who can stimulate their sexual desires.

On the other hand, internally in the body, there are psychological factors that also play a role in sexual quality in postmenopausal women with dyspareunia. According to research by Koeryaman and Ermiami, 58.1% of respondents had poor stress and emotional regulation and as many as 82.43% of respondents had sexual needs for sexual arousal/interest not fulfilled, even 56.75% of respondents experienced dyspareunia (Koeryaman & Ermiami, 2018). Other research stated that there is a very close relationship between the psychology of postmenopausal women and the index of female sexual function, especially regarding lubrication during coitus and dyspareunia (Diyu & Agustini, 2021)

CONCLUSION

From 22 journals that have been reviewed conclude that dyspareunia among menopausal woman can cause lower quality of sexual intercourse. Starts from decreasing vaginal lubrication production in

result of lower estrogen level. This phenomenon can cause pain during sexual intercourse, moreover individual couldn't reach orgasm nor satisfaction. If this happens so often, individual and the partner might not have sexual desire and less frequency of sexual intercourse in the future and at the end the couple might lose intimacy between each other. Even this is crucial, dyspareunia often still neglected. Dyspareunia might induce another problem such as depression-induced pain modulation and persistent anxiety. There's non-pharmacological therapy that is efficient for dyspareunia treatment in menopausal woman to increase the quality of sexual intercourse. Regular exercises can be done such as pelvic floor exercise, loving yoga, or Kegel exercises. To improve sexual life between partner, intimacy is the key. Prepare the clothes that are going to be used, room conditions and fragrances, then warm up in the form of foreplay and find out the partner's stimulation point before having sexual intercourse.

CONFLICT OF INTEREST

All authors declare that there is no conflict of interest in this study.

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