

ANALYSIS REGARDING QUALITY OF LIFE OF MENOPAUSAL WOMEN ON CLINICAL DISORDERS DURING MENOPAUSAL PERIOD, IN SUKOMANUNGGAL SUB-DISTRICT SURABAYA IN 2019

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Abstract: Approximately 70% of women in the peri period and post menopause experience vasomotor complaints, depression, psychological and somatic complaints. The severity of the symptoms will be different for each woman. This research was conducted to find out whether the clinical symptoms that appear in menopausal women will cause disruption to quality of life. This study was conducted on menopausal women at Geriatric Poly at Simomulyo Health Center Surabaya in March - April 2019 using cross sectional method. Questionnaire was used to measure clinical symptoms in menopausal women and the QOLWHO-BREF questionnaire to assess the quality of life of menopausal women. Menopausal women in this study were at the age of 60.89 ± 6.55 years. Menarche at the age of 12.49 ± 1.74 years and Menopause at 49.41 ± 4.88 years. For the BMI category mean at 24.33 ± 4.02 kg / m². Based on contraception used, it was found that most of women used combination pills (36.8%). Menopausal complaints consist of physical complaints and psychological complaints, for the major complaints from physical are complaints regarding bone and joint pain (86.5%) and for major complaints from psychological factor is a decrease in sexual desire (72.9%). The category of the amount of variety clinical symptoms that appear in each woman, it was found that at most of menopausal women felt 3 complaints (67.6%; 13.24 ± 1.76). For the quality of life (WHOQOL) results, the overall quality of life criteria is in the very bad and bad category with the environmental domain being the lowest (3.04 ± 10.93) and the better category compare than the other is the social relations domain (29.82 ± 4.74) . The results of data analysis through the Spearman correlation test showed that there was a relationship between the number of complaints with a decrease in quality of life ($Z = 3.15433$; $p = 0.00164$) and it was found that menopausal women with complaints of menopause affected the decrease quality of life ($Z = -4.30769$; $p < 0.00001$). Based on this study it was found that the factors that significantly influence the quality of life of a menopausal woman are clinical symptoms that appear both from physical symptoms and psychological symptoms. appears also has a significant effect on decreasing the quality of life of a menopausal woman

Keyword: Menopause, clinical symptoms, quality of life

INTRODUCTION

Climacterium is a transition period from reproductive phase toward senile period owing to the decline in both generative and endocrine function of the ovary. Reduction in estrogen level leads to regression in a woman's fertility. The term menopause is defined as the final menstrual period where the transition occurs during menstruation cycle. It usually begins at the age of 47 and persists through the following 5-8 years. Recently, climacterium is considered as a transition between pre-menopausal and post-menopausal period. Post-menopausal period starts after a 12-month menopausal period until reaching the senile age. Senile period is an advanced menopausal period beyond the age of 65.¹ Approximately 70% women in their pre- and post-menopausal period experience vasomotor symptoms, depression, and other psychiatric and somatic complaints. The symptoms severity greatly varies among women. The complaints peak prior to and following menopause.²

Menopause is the ending of reproductive ages in women with the resultant of discontinuation of menstrual cycle and declined ovarian function. Naturally, menopause is a continuous process that takes place between the ages of 47 - 55 years, starting with 12-month amenorrhea; the diagnosis can only be made after exclusion of other underlying pathological conditions. Oogenesis ends at 20 weeks of gestation and leaves about 7 million oocytes. Between this specific time and delivery, the number of primordial follicles steeply declines. In newborns, the number of the remaining primordial follicles is between 500,000 - 1,000,000 and will continuously decrease with age. Some women in their 35 shall have around 100,000 follicles, while the other counterpart shall only carry as much as 10,000 follicles. These oocytes are influenced by biological stress such as free radicals, permanent DNA damage, and

accumulation of chemicals as the waste products of the body's metabolism. The damaged oocytes will be removed through apoptosis, and once the primordial follicles reach the critical number, there might be some dysregulation in the hormonal system leading to corpus luteum insufficiency, anovulatory menstrual cycle, and oligomenorrhea. Hence, the menopausal symptoms naturally reflect the menopausal status.

According to research by Patrizia et al, menopausal symptoms are divided based on 6 organs namely: Central nervous system, skin and hair, sexual function, weight and metabolic changes, urogenital system and musculoskeletal system. Menopausal disorders will affect a woman's quality of life. Quality of life is a complex concept comprising several different aspects. These aspects (commonly called domain or dimension) can include cognitive function; emotional function; psychological well-being; general health; physical function; physical symptoms and toxicity; role function; social welfare and function; and spiritual aspect.³⁻⁶

In 1993, World Health Organization (WHO) defined the quality of life as individual perception towards themselves in the context of value and cultural systems implemented in their respective environment and in association with their goals, expectation, standard, and concern. It is a broad and complex concept that incorporates physical health, psychological condition, independence level, personal confidence, social interaction, as well as in relation to the surrounding environment.⁵

In order to investigate the quality of life of a menopause patient, score-based assessment can be performed. This score will further categorize menopause individuals according to their quality of life status, regardless of the type of symptoms they experience. This study was performed to investigate whether clinical

symptoms occurred in menopausal women interfere with their quality of life.

RESEARCH METHODS

This cross-sectional study was performed in Sukomanunggal Sub-district. This study involved menopausal women predetermined based on WHO criteria. A full-set questionnaire was used for assessing the symptoms experienced by the subjects as well as their quality of life. The menopause research questionnaire uses the Menopause health questionnaire created by The North American Menopause Society (NAMS).

The study samples comprised of post-menopausal women who visited the geriatric outpatient clinic at Simomulyo Primary Healthcare Center. From the data obtained from the Simomulyo Health Center, the average visit of menopausal women to the geriatric polyclinic is ± 198 women per month.

A comprehensive assessment was performed for all the symptoms encountered during the post-menopausal period followed by subject categorization based on their respective complaints and its association with quality of life. From the calculation using the appropriate formula, a minimum of 133 subjects were needed.

The inclusion criteria included women who reported no menstrual cycle during the past one year and agreed to participate in this study. The exclusion criteria included women who had undergone total hysterectomy with bilateral salpingo-oophorectomy procedure and those who received post-menopausal hormone replacement therapy.

This study observed the presence of any complaints reported by menopausal

women and calculated their quality of life score. This study was conducted at the Geriatric Outpatient Clinic of Simomulyo Primary Health Center Surabaya from March to April 2019.

The study began with constructing the appropriate questionnaire addressing the symptoms experienced during the menopausal period as well as preparing the questionnaire for quality of life assessment adapted from the WHOQOL scoring system. These questionnaires were subsequently distributed to all the menopausal women who visited the geriatric outpatient clinic of Simomulyo Primary Healthcare Center. Following the data collection, the subjects were classified based on the reported symptoms. These symptoms were further analyzed according to the climacteric period and the analysis was also directed for the association between menopausal symptoms and quality of life.

As for the WHOQOL score, we used a predetermined standard proposed by previous studies (Anastasi & Urbina, 1997; Nofitri 2009 and Tifani, 2015). The subjects were classified into 5 categories based on the results of the mean WHOQOL_BREF. The results were interpreted as follow: 0-20 (very poor); 21-40 (poor); 41-60 (moderate); 61-80 (good); 81-100 (very good).

RESULTS AND DISCUSSION

Simomulyo Primary Healthcare Center oversees three villages, including Simomulyo, Simomulyo Baru, and Sukomanunggal with a total of 18,095 families, 72,535 residents, and 6,531 under-five children according to the consensus in 2018.

Table 1. Baseline Characteristics of the Study Participants

Age	Mean + SD: 60,89+ 6.55 year Minimum 48 Maksimum 79
Age Category	
Menarche	Mean + SD: 12.49+ 1.574 year
Menopause	Mean + SD: 49.41+ 4.88 year
BMI	Mean + SD: 24.33+ 4.02 year
BMI classification:	
UW (< 18,5)	16.33 ± 0.77
Normal (18.5-23)	21.39 ± 1.20
Overweight (23-27.5)	24.92 ± 1.20
Obesitas (>27.5)	31.07 ± 2.17
Exercise history	N = 43 (32.3%)
Contraception history	No contraception: 41 (30.8%) Oral Combination: 49 (36.8%) IUD: 13 (9.8%) Injection 1 month: 10 (7.5%) Injection 3 month: 15 (11.3%) Implant: 4 (3%) Sterile: 1 (0.8%)

This study involved a total of 133 subjects recruited following health education session at Simomulyo Primary Healthcare Center. Pooled data showed that the mean age was 60.89 ± 6.55 years. The patients' age ranged from 48 to 79 years. The subjects were grouped based on the age of the onset of menarche. The mean age of menarche onset was 12.49 ± 1.74 years. Whereas, the mean menopausal age was 49.41 ± 4.88 years. The range of this data is in accordance with the age range of menarche and menopause for Indonesian women, namely the age of menarche between 12-15 years and the age of menopause starting from 45 years.⁷

From BMI measurement, it was noted that the mean BMI in the study cohort (n = 133) was 24.33 ± 4.02 kg/m². BMI subclassification resulted in the following results: the mean BMI for underweight (n=8) subjects was 16.33 ± 0.77 , normoweight (n = 41) was 21.39 ± 1.20 , overweight (n=62) was 24.92 ± 1.20 , and obese (n=22) was 31.07 ± 2.17 . Based on Kaori et al's study, an increase in BMI was

associated with the appearance of clinical symptoms in menopausal women (BMI: 23.4 vs 22.4 kg / m²; 63.3vs36.7%; p = 0.002).⁸

In terms of exercise, 43 subjects engaged with regular exercise regimen; we defined exercise as performing a 30-minute work out at least three times a week.

According to the type of contraceptive method used, it was noted that 41 (30.8%) subjects did not use any contraception, 49 (36.8%) subjects took combination pills before menopause, 13 (9.8%) subjects used IUD, 10 (7.5%) subjects received contraceptive injection every month, 15 (11.3%) subjects received contraceptive injection once every 3 months, 4 (3%) subjects used implant, and 1 (0.8%) subject was sterilized. According to Moon's research, the use of hormonal contraception before menopause will reduce the incidence of menopause symptoms.⁹

Table 2. Menopausal Symptoms

No	Type of Symptoms	No. of Respondents	Percentage
1	Do you often feel a sudden burning sensation and flushing around your face?	19	14.3
2	Do you often have a headache?	102	76.7
3	Have you ever feel that you gain weight and have movement difficulties?	10	7.5
4	Have you ever had bone and joint pain, particularly around your waist and knee joints?	115	86.5
5	Have you ever experienced sudden palpitations?	10	7.5
6	Have you ever had any difficulties in defecation and bloating?	7	5.3
7	Have you ever felt a electric shock and tingling sensation under your skin?	18	13.5
8	Have you ever experienced sudden visual disturbance?	9	6.8
9	Have you ever felt so scared, anxious, and depressed thinking that some unfortunate event will happen?	1	0.8
10	Have you ever been so irritable, scared, nervous, and angry sometimes?	6	4.5
11	Have you ever had any troubles sleeping at night?	11	8.3
12	Have you ever felt unable to concentrate, exhaustion, forgetful, and lacking energy?	15	11.3
13	Have you ever felt not interested in sexual intercourse?	97	72.9

The authors used a previously-designed questionnaire to evaluate the clinical symptoms experienced by the patients thus far. In this study, we found that all the respondents complained of experiencing one of the clinical symptoms that had previously been tabulated by the authors. The clinical symptoms are categorized into physical symptoms (1-8) and psychological symptoms (9-13). Results of the study, it was found that the most common organic complaints were

pain in the bones and joints, especially the lumbar and knee joints (86.5%). Then the psychological symptoms that arose most were loss of passion for sexual relations (72.9%). Dominance of pain in bones in menopausal patients this is in accordance with Fiona's study, which states that musculoskeletal pain increases in menopausal women. For decrease of sexual passion similar to Eliza's study, the prevalence of sexual dysfunction in menopausal women reaches 91.2%.¹⁰⁻¹¹

Table 3. The number of clinical symptoms

No	Sum of symptom present	No. Subject	Mean $\pm$ SD
1	1 symptom	4	14.71 $\pm$ 0.46
2	2 symptoms	10	14.07 $\pm$ 1.36
3	3 symptoms	90	13.24 $\pm$ 1.76
4	4 symptoms	19	20.16 $\pm$ 28.56
5	5 symptoms	10	13.03 $\pm$ 1.58

We classified the subjects based on the number of clinical symptoms perceived. The results demonstrate that From the results of the study obtained the

number of complaints. Most woman reported 3 complaints (90 respondents; 13.24 $\pm$ 1.76).

Table 4. Quality of life of the menopausal women

Parameters of QOL	Mean $\pm$ SD
Quality of life	3.35 $\pm$ 0.62
General health	3.20 $\pm$ 1.82
Physical domain	22.45 $\pm$ 3.11
Psychological domain	18.36 $\pm$ 3.96
Social relations domain	29.82 $\pm$ 4.74
Environment	3.04 $\pm$ 0.63
Total Mean	14.32 $\pm$ 10.93

Table 4 summarizes the results of quality of life (QOL) assessment which are divided into 6 domains. The results showed that in menopausal patients, the quality of life quality of life domain was higher in social relations domain 29.82 $\pm$ 4.74, and lesser in environmental domain 3.04 $\pm$ 0.63.

Table 5. Association between clinical symptoms and QOL among menopausal women

No	Type of Symptoms	No. of Respondents	Percentage
1	Do you often feel a sudden burning sensation and flushing around your face?	19	13.94 $\pm$ 11.79
2	Do you often have a headache?	102	14.24 $\pm$ 12.47
3	Have you ever feel that you gain weight and have movement difficulties?	10	14.40 $\pm$ 2.43
4	Have you ever had bone and joint pain, particularly around your waist and knee joints?	115	14.32 $\pm$ 11.74
5	Have you ever experienced sudden palpitations?	10	14.28 $\pm$ 1.46
6	Have you ever had any difficulties in defecation and bloating?	7	14.24 $\pm$ 0.89
7	Have you ever felt a electric shock and tingling sensation under your skin?	18	20.43 $\pm$ 29.36
8	Have you ever experienced sudden visual disturbance?	9	14.07 $\pm$ 1.38
9	Have you ever felt so scared, anxious, and depressed thinking that some unfortunate event will happen?	1	13.17 $\pm$ 0.0
10	Have you ever been so irritable, scared, nervous, and angry sometimes?	6	14.97 $\pm$ 0.96
11	Have you ever had any troubles sleeping at night?	11	25.14 $\pm$ 37.45
12	Have you ever felt unable to concentrate, exhaustion, forgetful, and lacking energy?	15	13.93 $\pm$ 2.20
13	Have you ever felt not interested in sexual intercourse?	97	13.04 $\pm$ 1.62

We also performed a comparative analysis addressing the relationship between each symptom perceived and quality of life among menopause women suggesting that better QOL was found in subjects reporting sleeping disorder (25.14 $\pm$ 37.45) this shows that in this study sleep disorders in menopausal women slightly

affect a woman's quality of life and the QOL being the lowest in patients who complained of having no interest in sexual intercourse (13.04 $\pm$ 1.62).

According to the results, it was found that the mean age of the respondents was 60.89 $\pm$ 6.55 years. The mean age of the menarche onset was 12.49 $\pm$ 1.74 years

which is in concordance with the menarche onset of the majority of Indonesian women (10-17 years). The mean age of the menopausal onset was 49.41 ± 4.88 years which is also in concordance with the general population where the onset of menopause generally starts at the age of 49.¹²

From BMI measurement, it was noted that the mean BMI in the study cohort ($n = 133$) was 24.33 ± 4.02 kg/m². BMI subclassification resulted in the following results: the mean BMI for underweight ($n=8$) subjects was 16.33 ± 0.77 , normoweight ($n = 41$) was 21.39 ± 1.20 , overweight ($n=62$) was 24.92 ± 1.20 , and obese ($n=22$) was 31.07 ± 2.17 . The results indicate that majority of the study subjects are considered overweight regarding to their BMI. Since BMI is an ordinal parameter, normality test is not necessary. We performed Spearman Correlation test. The analysis showed no significant correlation between BMI and QoL ($r = 0.102$, $p = 0.244$). These findings indicate that an increase in body weight or BMI of a menopausal woman does not determine their quality of life.

The results showed that the majority of menopausal women used contraception (92 respondents; 69.17%). Majority of the study subjects took combination pills (49, 36.8%) and only 1 (0.8%) who underwent sterilization procedure. Kruskal Wallis analysis resulted in a $p = 0.82324$. These results indicate that contraceptive use in postmenopausal women during their reproductive age does not affect their quality of life. This is consistent with previous findings reported by Mineti et al., suggesting that contraceptive use before menopause does not have an effect on the quality of life of menopausal women.¹³

The results showed that bone and joint pain were the most common physical symptoms perceived by the study cohort (86.5%) whereas decreased interest in sexual intercourse became the most common psychological symptom reported by 97 (72.9%) subjects. This shows that

bone pain is the most frequent and disturbing symptom. On the other hand, decreased sexual arousal was the most frequent psychological disorder. This is similar to the study by Grazyna et al., suggesting that bone pain and osteoporosis greatly interfere with the patients' quality of life. Another study by Irwin et al., also supports the notion with their finding showing that declined sexual arousal is the most common psychological complaints.¹⁴⁻¹⁵

Majority of the subjects reported more than one complaint with a maximum of 5. Only 4 subjects who reported one symptom (14.71 ± 0.46) whereas 10 subjects reported 5 symptoms (13.03 ± 1.58). Most of the study participants reported 3 complaints (90 subjects; 13.24 ± 1.76). This is in accordance with Nabarun et al., who reported that menopausal women tend to report various complaints at the same time. Ensiyeh et al., also reported that menopausal women can have both physical and psychological symptoms at the same time. Because the average QoL is proven to be not normally distributed, it is not necessary to do a normality test on the number of complaints because spearman correlation test will certainly be needed. Analysis with spearman correlation test showed that there was a significant correlation between the number of complaints with the average QoL (quality of life) ($Z = 3.15433$, $p = 0.00164$).¹⁶⁻¹⁷

This study employed QoL scoring system proposed by WHO that had been written in QOLWHO Brief. The highest score was found for social relations (29.82 ± 4.74) domain while the lowest score was given for environment (3.04 ± 0.63) domain. This indicates that menopausal women are not satisfied with their environmental aspects such as lack of sleep, sexual contact, housing, access to health services and relations with the environment. It is also noted that menopausal women are in need of social support from their community in order to

improve the quality of life during their advanced age. This is consistent with the findings reported by Siti et al., suggesting that the quality of life of menopausal women is indeed low in the environmental domain.¹⁸

The authors then analyzed the complaints that appeared at menopause with an overview of the quality of life of menopausal women. The results showed that the complaints that most caused disruption to quality of life were sudden hot flushes around the face (13.94 ± 11.79) and reduced sexual arousal (13.04 ± 1.62). The results showed that the overall quality of life was poor and hot flushes and impaired sexual arousal become the important factors affecting quality of life among menopausal women. Almost all complaints resulted in a very poor QoL score (<20) and only 2 symptoms that were considered poor (21-40), namely tingling sensation and trouble sleeping at night. Correlative analysis showed a significant correlation between clinical symptoms and reduction in quality of life among menopausal women (Z Score - 4.30769; $p < 0.00001$).

CONCLUSION

Based on this study, clinical symptoms that appear in menopausal women have a very big impact on the quality of life of a menopausal woman. From this research, it is expected that there will be further research that can provide intervention to clinical symptoms that occur in menopausal women so that there is an increase in the quality of life in menopausal women.

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