

The Effect of Hypnotherapy Methods On The Quality Of Life Of Menopausal Women Through The Assessment Of The Menopause Specific Quality Of Life (Menqol) Modification Scale And Serotonin Biomarkers

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KEYWORDS

Hypnotherapy,
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ABSTRACT

Objective: This study was conducted to measure the potential of hypnotherapy in improving the quality of life of menopausal women, through an assessment study of the Menopause Specific Quality of Life (MenQoL) and Serotonin modification scale. **Materials and Methods:** The study uses a quasi-experimental design with a pretest-posttest group control approach. Data collection in Malang with menopausal female respondents (45-60 years old), treatment group 75 and control 75. Implantation is carried out 2 times with an interval of 4 mg. It will be carried out from March 2023 to May 2023. **Results:** Results of the assessment of the MenQoL modified scale questionnaire (44 items) with 30 respondents: The validity test of the questionnaire with an r value between 0.958-0.998 (meaning: Valid) and the reliability test (*Cronbach's Alpha*) $r = 1.00$ (meaning: Very High). Results of the Hypnotherapy Effect test on MenQoL (*wilcoxon*): p-value 0.000 (significantly different) in the experimental group and p-value 0.357 (no significant difference) in the control group. Results of the Hypnotherapy Effect test on Serotonin Biomarkers (*wilcoxon test*): p-value 0.000 (significantly different) in the experimental group and p-value 0.219 (no significant difference) in the control group. The results of the difference (Δ) between the pre and post averages: MenQoL experiment $-31.58 < \text{MenQoL control } 3.95$ and Serotonin experiment $-2,733.48 < \text{Serotonin control } 51,241.92$. Results of the normalized gain test (strength) of MenQoL with decreasing value (improvement): 86.6% of the experimental group and MenQoL with increased value (deterioration): 57.3%. Serotonin with increased values (improvement): 100 % of the experimental group and Serotonin with decreased values (improvement): 52 %. **Conclusion:** Hypnotherapy provides improvement in the quality of life of menopausal women through improvement of MenQoL and improvement of Serotonin biomarkers.

1. Introduction

The decline in the quality of life of menopausal women is related to disorders and complaints that occur in the menopause process due to a decrease in the hormone Estrogen will also have an impact on the decrease in serotonin levels. Estrogen plays a role in the onset of Physical (urinary incontinence, Osteoporosis), Psychological (Emptiness, Depression), Vasomotor (Hot Flashes) and Sexual (dry vaginal mucus, Dyspareunia). This decline is related to its production from the ovaries which is decreasing over time. It is expected that there will be an increase in the number of menopausal women by 2025 to around 60 million. This improvement is the basis for researchers to find new governance breakthroughs both from the measurement instrument of the quality of life determination scale and the management of alternative medicine.

The use of hypnotherapy is already very popular and many journals state many benefits. Judging from treatment techniques, hypnotherapy is very far from pharmacological matters, so it is far from the danger of cancer that is widely echoed in the administration of treatment with estrogen at this time. Monitoring of the brain waves in the administration of hypnotherapy by monitoring using Muse-2 (Android EEG application), will provide an overview of how the

state of the respondents' brain waves continuously remains on the waves.

In this review, we discuss the role of a new instrument for measuring the quality of life of menopausal women using the menopause quality of life modification scale, which adds socio-demographics. The intervention used was a hypnotherapy method with a healthy living education script.

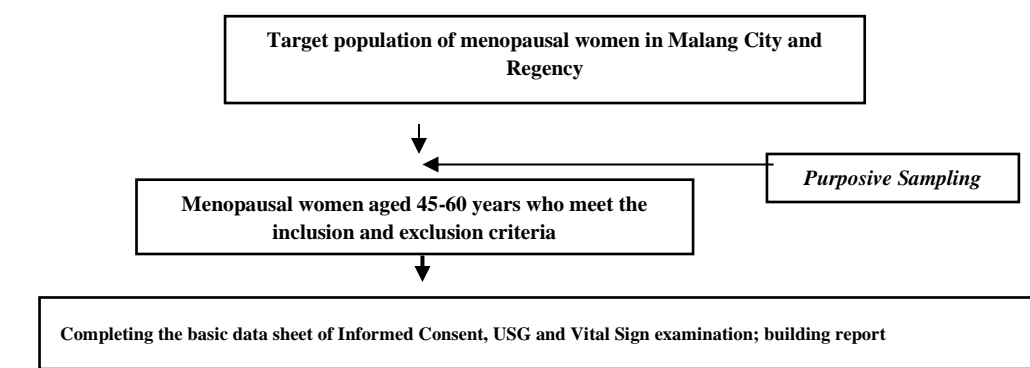
The general purpose of the study is to prove the increase in the scale of menopause modification of quality of life by the influence of hypnotherapy through changes in the biomarker Serotonin in menopausal women.

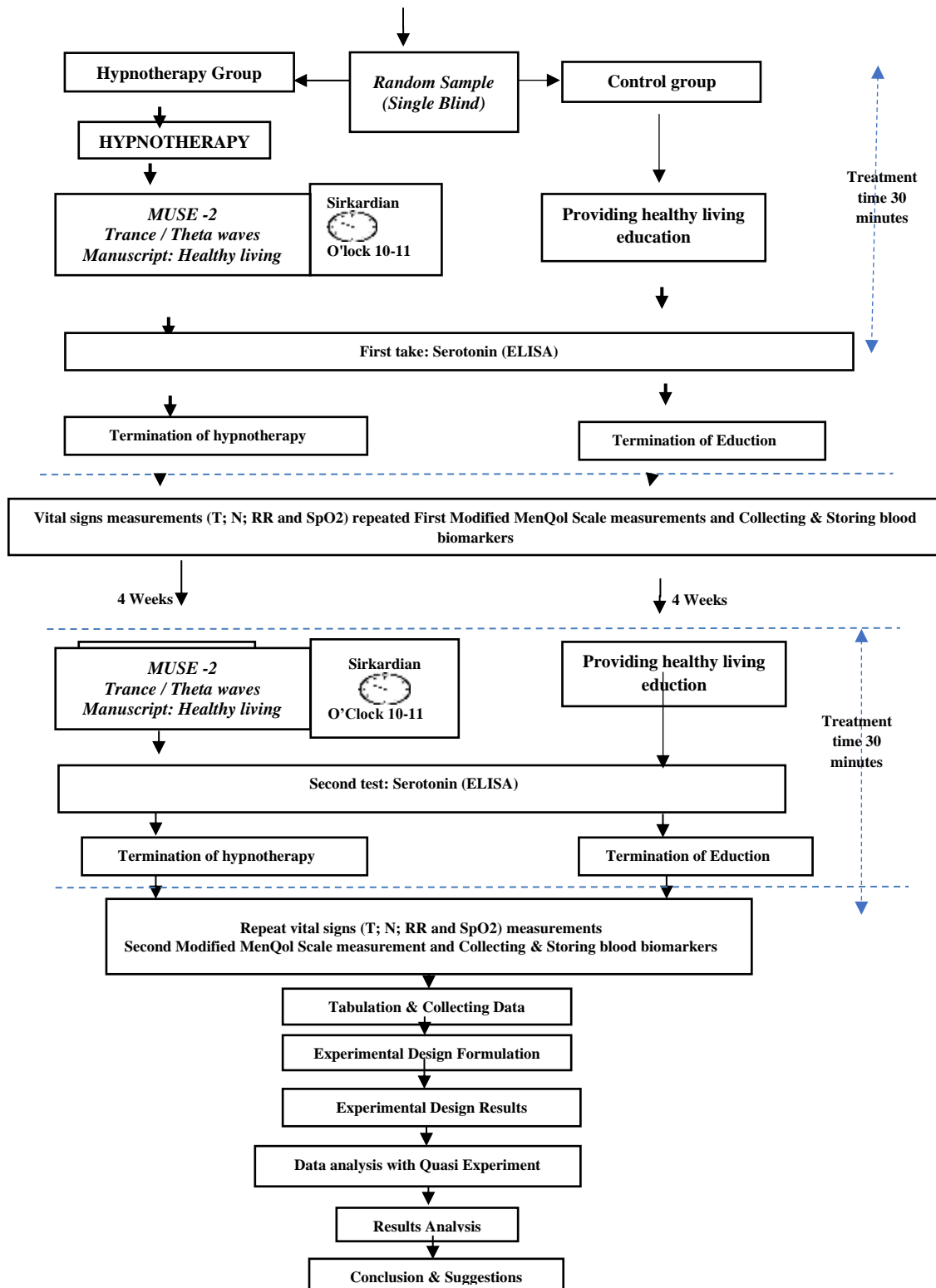
2. Methodology

The study was conducted in Malang city and district by including menopausal female respondents aged 45-60 years according to the criteria set in the inclusion, exclusion and dropout criteria. The number of respondents in the experimental group: 75 and the control group: 75. He is eligible to be accepted as a respondent after signing the Informed consent statement (respondent and husband). The research was carried out after obtaining permission from the local government No: 072/2170/35.07.207/2023 and Ethical Clearance Recommendation no: 60/EC/KEPK-S3/03/2023. The implementation from March 1, 2023 to May 30, 2023 was carried out by a team consisting of 5 Hypnotherapists (Advance certified)-10 enumerators, Plebotomy officers (certified). The use of Electro-Encephalography (EEG) muse-2 android application as many as 10 units to monitor hypnotherapy treatment respondents in trance. Examination of serotonin biomarkers is carried out in research-hub-lab. which has been accredited, the results are then carried out data collection, tabulation, analysis and conclusions.

The research design uses a quasi-experimental design that is determined in a random non-random manner. The control approach of the pretest-posttest group by comparing between two groups, namely the control group and the treatment group. The hypnotherapy group was given hypnotherapy and the control group was not given hypnotherapy. Both groups were taken blood serum to check Serotonin levels (blood collection of the hypnotherapy group for a moment in the termination phase/still trance) then observed changes in the MenQoL modification scale through filling out a questionnaire after being fully conscious, 4 weeks later the same treatment was repeated in both groups. The hypotheses are expected to be significantly different between the hypnotherapy group compared to the control group. The treatment in both groups was carried out in a lying position on a mattress mattress, followed by hypnotherapy according to the stages of the hypnotherapy process until the trance state, then suggestions were given. On the other hand, the control group was not given hypnotherapy and was kept from falling asleep. The treatment process in both groups must follow the rules of the Circadian hour, namely all disciplinary treatment activities start at 08.00 and end no later than 11.00.

Research flow





3. Result and Discussion

The results of the socio-demographic descriptive picture were obtained in the most age groups in the > 50-55 years of age by 45.3% (experiment) and 52.0% (control), the most religious groups in Islam by 100% (experiment) and 100% (control), the most education groups in high school-undergraduate by 96% (experiment) and 92.0% (control), the most ethnic group in Java by 100% (experiment) and 100% (control), the marital status group all married by 100% (experiment) and 100% (control), The highest income group is 5 million - < 19 million 50.7% (experiment) and 50.7% (control).

The results of the MenQoL modified scale questionnaire assessment as many as 44 question items were applied to 30 menopausal female respondents in the city of Malang, the results of the Validity Test (*Cronbach's Alpha*), the questionnaire was declared valid with a value of r between the coefficient of 0.958-0.998 and the reliability test (*Kuder-Richardson*) obtained a value of $r = 1.00$, so it is said that the reliability of the questionnaire is very high.

The results of the Hypnotherapy Effect test on MenQoL with *the wilcoxon* test obtained a p-value of 0.000 in the experimental group which means "significantly different" and in the control group had a p-value of 0.357 which means "no significant difference". The conclusion obtained: there was a difference in the effect of MenQoL with hypnotherapy compared to no hypnotherapy.

The results of the hypnotherapy effect test on the Serotonin Biomarker (*wilcoxon test*) obtained the results of the experimental group with a p-value of 0.000 which means "significantly different" and the control group with a p-value of 0.219 which means "no significant difference". The conclusion obtained: there was a difference in the effect on Serotonin with hypnotherapy compared to no hypnotherapy.

The difference (Δ) between the pre and post mean: in MenQoL, the experimental group with a result of -31.58 was smaller than the control group's MenQoL of 3.95 and the experimental group's Serotonin was less than 2,733.48, smaller than the control group's Serotonin which gave a result of 51,241.92. The conclusion was that if tested from the average difference between pre and post, hypnotherapy would improve MenQol values and increase serotonin levels compared to no hypnotherapy.

The results of the normalized gain test (strength) of MenQoL with a decrease (improvement) value of 86.6% in the experimental group and MenQoL with an increase (deterioration) value of 57.3% in the control group. The effect of hypnotherapy on normalized gains of Serotonin had an increase (improvement) value of 100% in the experimental group, while Serotonin in the control group had a decrease (worsening) value: 52%. The conclusion was obtained that hypnotherapy will add to the improvement of MenQol values and increase of Serotonin.

Table 1. Recapitulation of the results of the comparison test between before and after Treatment in the Experimental group and the Control group.

Comparison of Pre Vs Post On Data	Group	Wilcoxon Z test	p-value	Conclusion
MeQoL	Eksperimen	-6,023	0,000	Significantly Different
	Control	-0,922	0,357	No Significant Difference
Serotonin	Eksperimen	-7,525	0,000	Significantly Different
	Control	-1,230	0,219	No Significant Difference

Table 2. Test the hypothesis of comparison of mean difference (Δ) in the experimental group (Pre-Post) and control (Pre-Post).

Variable	Average difference (Δ)		Comparison Results Average Difference (Δ)
	Experiment	Control	
MenQoL	-31,59	3,95	Experiment < Control

Serotonin	162.858,00	22.326,79	Experiment > Control
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Table 3. N-Gain value changes in MenQoL after Treatment.

N-Gain (Trend) on MenQoL Data	Experiment		Control	
	f	%	f	%
Declining - High	10	13,3%	11	14,7%
Declining - Medium	19	25,3%	10	13,3%
Declining - Low	36	48,0%	10	13,3%
Unchanged (fixed)	2	2,7%	1	1,3%
Rising – Low	1	1,3%	19	25,3%
Increasing – Medium	3	4,0%	22	29,3%
Increase - High	4	5,3%	2	2,7%
Total	75	100%	75	100%

Table 4. N-Gain value changes in Serotonin after Treatment.

N-Gain (Trend-Power) on Serotonin Data	Experiment		Control	
	f	%	f	%
Declining - High	0	0,0%	4	5,3%
Declining - Medium	0	0,0%	6	8,0%
Declining - Low	0	0,0%	29	38,7%
Unchanged (fixed)	0	0,0%	0	0,0%
Rising – Low	26	34,7%	8	10,7%
Increasing – Medium	44	58,7%	20	26,7%
Increase - High	5	6,7%	8	10,7%
Total	75	100%	75	100%

Hypnotherapy interventions are associated with socio-demographics

Hypnotherapy treatment requires open and communicative communication and personal approach between the hypnotherapist and the respondent, this will facilitate and accelerate the process of hypnotherapy stages to the trance stage and the giving of suggestions. The success of suggestions to respondents is inseparable from the existence and absence of things that are contrary to the beliefs adhered to, things that are hidden as secrets that must be covered and the existence of unresolved conflicts. With almost 100% of religion, education, ethnicity and marriage will facilitate the interview stage (building report), which supports the success and speed of the induction and suggestion stages.

Hypnotherapy interventions lowered the *Menopause-Specific Quality of Life (MenQoL)* modification scale in menopausal women.

The MenQoL (*Menopause-Specific Quality of Life*) modification scale is an instrument to evaluate and measure the quality of life of menopausal women. The MenQoL scale was first introduced by J.R. Hilditch in 1996 and covers four domains: vasomotor symptoms (hot flashes), somatic symptoms, psychological symptoms (anxiety) and sexual dysfunction, the researcher developed with additional socio-demographic modifications (Age, Religion, Education, Ethnicity, Marital Status, Income). The worsening of the MenQoL modification scale during menopause actually reflects the changes that are common in a woman's body and psychological well-being during the menopausal period, and will experience severe deterioration as stress increases. The results showed that the decrease in the MenQoL modification scale in the experimental group (Wilcoxon Z test p-value 0.000) reflected a positive change in the quality of life of menopausal women (vasomotor, somatic symptoms, psychological symptoms and sexual disorders), because with a lower value of the MenQoL modification scale, the quality of life will be better. On the contrary, an increase in the value of the MenQoL modification scale in the control group does not indicate a beneficial change in quality of life, it will even decrease

further. The average difference (Δ) of the experimental MenQol (-31.59) was smaller than that of the control MenQol (3.95), and also had an improvement value in quality of life, in addition to the value of N-Gain which showed an improvement trend in the experimental group MenQoL (86.6%). In line with research conducted by Diem et al. (2020) that uses therapy, especially *mindfulness-based stress reduction* (MBSR) training, it has been proven to significantly reduce the value of the MenQoL scale in menopausal women. Another study found that MBSR training resulted in an average decrease in the total MenQoL scale by 0.3 to 0.5 points from baseline, indicating a significant change in the quality of life of menopausal women (van Driel *et al.*, 2019). This suggests that hypnotherapy therapy can be an effective approach to lower the MenQoL Scale, which is used to assess the impact of menopausal symptoms on women's quality of life. Although different in technique and approach, the study shows a role in improving women's quality of life during menopause. Thus, hypnotherapy shows the potential to be a very valuable treatment method in relieving symptoms and complaints, as well as providing an improvement in women's quality of life during menopause. This finding is one of the alternative treatment options for the management of menopausal symptoms holistically.

Hypnotherapy interventions increased Serotonin levels in a group of menopausal women.

Based on this study, it can be concluded that in the hypnotherapy group will have an impact on increasing the average value of Serotonin, this leads to an improvement in the MenQol modification scale and ultimately an improvement in the quality of life of menopausal women. Other research on increasing serotonin using hypnotherapy has not existed, but there are some studies that suggest that *mindfulness-training* (related to peace of mind) can reduce symptoms of depression. Thus, hypnotherapy offers a more valuable approach in the management of menopausal women's treatment, which will ultimately improve their quality of life.

4. Conclusion and future scope

Based on the research that has been conducted, it is known that several:

1. Results from religious, educational, ethnic and marriage groups showed almost 100% of the same variation between groups.
2. The MenQoL Modified Scale Questionnaire can be used, as it has high validity and reliability: Validity test = $0.998 > r$ (0.958) and Reliability test: *Cronbach's Alpha* 1,000.
3. Hypnotherapy exerts an improving effect on the MenQoL and Serotonin Modification Scale
4. Hypnotherapy provides an improvement in the quality of life of menopausal women.

Suggestion

Based on the research that has been conducted, some suggestions that can be considered are:

1. The MenQoL modification scale can be widely used to assess the quality of life of menopausal women.
2. The use of hypnotherapy is more beneficial to improve the quality of life if it continues to be used independently.
3. Independent hypnotherapy training to the community will help improve the quality of life of women.
4. The development of clinical practice guidelines that outline the indications, techniques, and protocols for the use of hypnotherapy in the management of menopause can help standardize treatment and ensure its effective and safe use.

DISCLOSURES

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Conflict of interest

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Author contribution

All authors have contributed to all processes in this research, including preparation, data gathering and analysis, drafting and approval for publication of this manuscript

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