Yoga for Menopausal Symptoms: A Review

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Abstract. The purpose of this study was to review literature about the effectiveness of yoga as a treatment for menopausal symptoms. This study used 10 literature published on International Journal from 2007-2016. Most of literature used perimenopausal and postmenopausal woman as treatment subjects. This data collect show the results compare between control group and yoga group. They assessed the effect of yoga as treatment for menopausal symptoms (psychological, vasomotor and somatic). This review found evidence to suggest that yoga effective as additional treatment for menopausal symptoms.

Keyword: yoga, menopausal symptoms, review

BACKGROUND

Menopause is a term to describe when the menstrual period ended permanently. Menopause typically occurs between 40s and 50s of age, when menstruation permanently ends (Santrock, 2012). Normal menopause is considered one of the most physiologically important in women’s life because of cessation of ovarium regular function and the end of reproductive capability (Nichols et al, 2012).

The decrease of estrogen hormone production in menopause has a quite detrimental effect to women’s health, including the increase of the risk contracting several diseases, such as osteoporosis, cardiovascular-related disease and Alzheimer (Torre, 2015). Hot flashes is a most common symptom which happens to a woman in the early stage of menopause, which is increase in body temperature in 2-30 minutes in upper chest, there are several symptoms such as sudden perspiration during night time, palpitation or sudden increase of heartbeat frequency (Cooper et al, 2008), fear and anxiety of which contributed to the decrease of sexual drive, mood swing, unstable emotion (discomfort, anxiety, depression) and difficulty in memorizing and remembering (McVeigh, 2005) to a degree that some women will experience difficulty to sleep. This symptoms is categorized as vasomotor symptoms (VMS) and these symptoms will occur to 75% of the women who were experiencing menopause.

Some women who were in menopause felt some discomfort due to the following symptoms and tried to treat the symptoms to a certain degree so that such treatment will lessen or even cure the symptoms, one of the treatment is Yoga (Cramer, Lauche, Langhorst, & Dobos, 2012). Yoga practice commonly done is posture (asana), breath control (pranayama) and meditation (dhyana). Women who practice Yoga regularly is shown to have some degree of improvement of their menopause symptoms, which is hot flashes and reduced perspiration during night time (Innes, Bourguignon, & Taylor, 2005). Meditation is part of Yoga and meditation could increase melatonin and plasma melatonin level effectively, which could increase the sleep quality for women with menopause (Cohen & Wameke, 2004). Yoga is effective in improving sleep cycle, reducing insomnia symptoms and other sleep difficulties for women with menopause (Khalsa, 2004).

PROCEDURAL REVIEW

Information regarding the research is done by searching literature in the form of article and scientific journal, which are:
1. www.eric.ed.gov
2. www.scholar.google.com
3. www.menopause.org
4. www.libgen.org

Keyword used in searching of literature in the form of scientific journal are menopause, yoga and menopausal symptoms. From these keyword then the information related to the research is retrieved in the form of 10 scientific journal.

RESULTS OF REVIEW AND STUDY

After reviewing these 10 journal about menopausal symptoms and Yoga for women with menopause, presented below in the form of table are summary of the study. These summary is presented with the intention of providing comprehensive description about the content of the reviewed journal, and the next step is to discuss the conclusion of the research results.
### Summary of Research Result Characteristic Table

| Author, year                      | Number of subject | Subject description                              | Treatment group                          | Control group          | Duration | Treatment purpose            | Result                                                                 | Author’s conclusion                                                                 |
|----------------------------------|-------------------|--------------------------------------------------|------------------------------------------|------------------------|----------|-----------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Afonso et al (2012)              | 44 → 3            | Yoga (15), control (15), passive stretching (14)  | Yoga Treatment in the form of Yoga in Yogasana and Tibetan (Yoga HT is for menopause) | Control No treatment P | 4 months | Reducing insomnia, Improving climacteric symptoms (anxiety, stress, depression) | Yoga group scores better in posttreatment. Climacteric symptoms, insomnia, quality of life and stress resilience are improving. The decrease of insomnia severity in Yoga group is noticeably higher compared with control group and passive stretching group. | Yoga with specific and sequenced treatment are very effective in reducing insomnia caused by menopausal symptoms which also increases the quality of life. |
| Hongasram, & Venkataram, & Kim, (2012) | 16 → 2           | Yoga (8), control (8).                            | Yoga Treatment in the form of integrated coordinatio technique of breathing and movement | Control No treatment   | 16 weeks | Increasing lipid concentratio n, adipose tissue and syndrome metabolic factor in obesity | Weight, body fat percentage, body mass index with no regard to muscle/fat ratio, body mass index, waist size and visceral fat region shows a significant decrease. | Yoga is effective in reducing the risk of contracting cardiovascular disease which caused by obesity in Korean woman in menopause. |
| Newto et al (2013)               | 2 group + 2 group | Yoga (107), Control (142)                        | Yoga Breathing technique, pose (asanas), dan relaxation | Control No treatment, just regular activity | 12 weeks | Reducing the frequency of vasomotor symptoms | Control Group VMS 8.0 per hari (95% CI, 7.3 ke 8.7) Yoga Group VMS 7.4 per hari (95% CI, 6.6 ke 8,1) Gejala insomnia 1,3 (95% CI, -2.5 ke -0,1); P< 0,007 | Practicing yoga for 3 weeks and personal training in home, when compared by regular activity improves the quality of life. | |
| Afonso & Kozasa, Rodrigo, Leite, Tufik, & Hachul (2016) | 2                | Yoga (59), control (61)                          | Yoga Breathing technique, relaxation dan yoga posture |                         | 4 month   | To observe quality of life and estradiol (part of estrogen) | Ni QOLpre → 136 QOLpost → 110 E2 pre → 10 E2 post → 94 N2 QOLpre → 106 QOLpost → 80 E2 pre → 17 E2 post → 137 | Yoga affects the neuroendocrine system in way that increase the amount of estrogen, which improves quality of life. |
| Chathth a, Raghu ram, Venkara m, & Hongasandra (2008) | 120 → 2          | Yoga (59), control (61)                          | Yoga Breathing technique (breathing and meditation technique) | Control Light physical exercise | 8 weeks   | To observe the impact of yoga to vasomotor stress symptom and personality | Perceived Stress Scale scores (P < 0.001) in the yoga group compared with controls. Higher effect size in the yoga group (1.10) than the control (0.27). On the Eysenck’s Personality Inventory, the decrease in neuroticism was greater (P=0.05) in the yoga group (effect size = 0.43) than the control group (effect size = 0.21) with no change in extroversion in either the yoga or control group. | Yoga is reducing vasomotor and symptoms, stress and neuroticism in perimenopause women when compared with regular physical exercise. |
Cohen, Kanaya, Macer, Shen, Chang, & Grady (2007)

| Study | Observers | Years | Treatment | Control | Duration | Findings |
|-------|-----------|-------|------------|---------|----------|----------|
|       | ±55 years | 40-65 | Yoga → Restorative | No treatment | 8 weeks | To find out about probability and intervention acquisition of restorative yoga in relation to hot flashes experienced by women in menopause use. Most of the subject is satisfied with practicing Yoga. 75% are continuing the exercise after 3 months. The average decrease of hot flashes are 30.8% (95% CI 15.0-45.9%) and average hot flush score is decreasing by 34.2% (95% CI 16.0-52.5%) from the beginning until week 8, no adverse impact are found. |

Josh, Khandwe, Bapat, & Deshmukh (2011)

| Study | Observers | Years | Treatment | Control | Duration | Findings |
|-------|-----------|-------|------------|---------|----------|----------|
|       | ±55 years | 40-55 | Yoga → Breathing technique, posture and meditation | No treatment | 90 days | To observe the effect of yoga on menopausal symptoms using a prospective, randomized, controlled intervention study. It was observed that on day 1 the scores in both the groups were comparable. On day 90, the scores in the yoga group showed a reduction in score on all the subscales, which was statistically significant. No significant difference in the control group. |

Manoc, Semma, & Black (2007)

| Study | Observers | Years | Treatment | Control | Duration | Findings |
|-------|-----------|-------|------------|---------|----------|----------|
|       | ±55 years | 2 group | Yoga → Meditation (Sahaja Yoga) | No treatment | 8 weeks | To observe the impact of SYM (Sahaja Yoga Meditation) in menopausal symptoms management strategy. Yoga changes in vasomotor symptoms, especially hot flashes, were most prominent as a significant decrease of 67% at post-treatment and 57% and Kupperman’s Index score decreased by 58% at post-treatment. |

Booth-LaForce, Thurston, & Taylor (2007)

| Study | Observers | Years | Treatment | Control | Duration | Findings |
|-------|-----------|-------|------------|---------|----------|----------|
|       | ±55 years | 2 years | Yoga → Breathing technique, warm-up pose, main pose, relaxation pose | No treatment | 0 weeks | To observe the effectiveness of yoga in improving menopausal symptoms (Psychology symptoms and self-measuring of hot flashes symptoms) Eleven women completed the study and attended a mean of 7.45 (S.D. 1.63) classes. Significant pre- to post-treatment improvements were found for severity of questionnaire-rated total menopausal symptoms, hot-flash daily interference, and sleep efficiency, disturbances, and quality. Neither 24-h monitoring nor accompanying diaries yielded significant changes in hot flashes. |

Tuzun, Akaras, Sigpal, & Tuzun (2010)

| Study | Observers | Years | Treatment | Control | Duration | Findings |
|-------|-----------|-------|------------|---------|----------|----------|
|       | ±55 tahun | 2 group | Yoga → 2 times in one week @1 hour | No treatment | 2 weeks | To evaluate the effect of yoga exercises in postmenopausal osteoporotic women on balance and life quality and to compare the results with physical activities. The result showed that yoga education has a positive effect on pain, physical functions, social function, general health perception and balance. Yoga appears to be an alternative physical activity for the rehabilitation of osteoporotic subjects. |
Based on the summary of journal characteristic above, a study will be done to acquire recommendation about several possible research that can be done in Indonesia. The study is categorized into several subtheme which are research subject, purpose of research and result of research.

Research Subject, Purpose of Research, and Result of Research

From 10 reviewed research, there are 8 research which subjects is postmenopause and 2 research using perimenopause as the subject. All of the research are involving subject with regular menopause cycle which happened according to the age limit of the corresponding woman, which is around 40-65 years of age and experiencing any menopausal symptoms. Some researcher are also states that subject was not in a therapy or any other treatment such as hormone therapy or any yoga therapy before.

The implemented treatment is Yoga with several techniques, which are breathing technique, posture, relaxation and meditation which are practiced and supervised by the Yoga expert. Measurement is done between 8 and 16 weeks with duration about 30-60 minutes. The purpose of the Yoga exercise in these 10 research is to decrease any showed symptoms during and after menopause which are psychological, vasomotor and somatic symptoms. Most of the research shows that there are connections between Yoga and hot flashes (vasomotor symptoms) because those symptoms will be mostly experienced by woman right before menopause. Routine Yoga exercise is shown to be effective in reducing the frequency of hot flashes. At most of the research are also included control group which receives no treatment. By comparing control group and Yoga group, it is evident that yoga are more effective in reducing menopausal symptoms.

Next researcher also states that yoga effectively reducing the severity of insomnia experienced by woman with menopausal symptoms because in yoga there are relaxation techniques which reduce the uneasiness during menopause. Not only improving insomnia condition, yoga also reduces anxiety, stress, depression and neuroticism by practicing relaxation and meditation techniques in yoga. Yoga also serves as one of the alternative therapy in helping woman in menopause in dealing with osteoporosis by reducing the pain, improving physical function, social function, general health perception and body balance. Research done by Afonso, Kozasa, Rodrigues, Leitem Tufik & Hachul (2016) founds that yoga also affects neuroendocrine system which increases the amount of estrogen hormone which also increases the quality of life.

CONCLUSION

Yoga could serve as an alternative in reducing symptoms which caused by menopause cycle, such as psychological, vasomotor and somatic symptoms. Yoga exercise, if done and supervised properly in a systematic manner will have a positive impact for woman with menopause

REFERENCES

Afonso, R. F., Hachul, H., Kozasa, E. H., Oliveira, D. S., Goto, V., Rodrigues, D., Tufik, S., & Leite, J. R., (2012). Yoga decrease insomnia in postmenopausal women: a randomized clinical trial. Menopause: The Journal of The North American Menopause Society, 19(2), 186-193.

Afonso, R. F., Kozasa, E. H., Rodrigues, D., Leite, J. R., Tufik, S., & Hachul, H., (2016). Yoga increased serum estrogen levels in postmenopausal women-a case report. Menopause: The Journal of The North American Menopause Society. 23(5), 584-586.

Booth-LaForce, C., Thurston R. C., & Taylor M. R., (2007). A pilot study of a hatha yoga treatment for menopausal symptoms. Maturitas. 57(3), 286-295.

Chattha, R., Raghuram, N., Venkatram, P., Hongasandra, N. R., (2008). Treating the climacteric symptoms in Indian women with an integrated approach to yoga therapy: a randomized control study. Menopause: The Journal of The North American Menopause Society. 15(5), 862-870.

Cohen, B.E., Kanaya, A.M., Macer, J.L., Shen, H., Chang A., & Grady, D. (2007). Feasibility and acceptability of restorative yoga for treatment of hot flashes:A pilot trial. Maturitas The European Menopause Journal. 56, 198-204.

Cohen, L., & Wameke, C., (2004). Psychological adjustment and sleep quality: A randomized trial of the effects of a Tibetan yoga intervention in patients with lymphoma. Cancer. (100), 2253-2260.

Cooper, H., Mishra, G., Clerrell, N., Guralnik, J., & Kuh, D. (2008). Menopausal status and physical performance in midlife: findings from a British birth cohort study. Menopause Journal, 15 (6), 1079-1085.

Cramer, H., Lauche, R., Langhorst, J., & Dobos, G., (2012). Effectiveness of yoga for menopausal symptoms: A systematic review and meta-analysis of randomized controlled trials. Evidence-Based Complementary and Alternative Medicine.

Innes, K., Bourguignon, C., & Taylor, A. (2005). Risk indices associated with insulin resistance syndrome, cardiovascular disease, and possible protection with yoga: A systematic review. J Am Board Fam Pract. 18. 491-519.

Joshi, S., Khandwe, R., Bapat, D., & Deshmukh, U., (2011). Effect of yoga on menopausal symptoms. Menopause International. 17(3), 78-81.

Khalsa, SB., (2004). Treatment of chronic insomnia with yoga: A preliminary study with sleep wake diaries. Appl Psychophysiol Biofeed Back, 29, 269-278.
Lee, J., Kim, J., & Kim, D., (2012). Effects of yoga exercise on serum adiponectin and metabolic syndrome factors in obese postmenopausal women. *Menopause: The Journal of The North American Menopause Society*, 19 (3), 296-301.

Manocha, R., Semmar, B., & Black, D., (2007). A pilot study of a mental silence form of meditation for women in perimenopause. *Journal of Clinical Psychology in Medical Settings*, 14 (3), 266-273.

McVeigh, C. (2005). Perimenopause: More than hot flushes and night sweats for some Australian women. *J Obstet Gynecol Neonatal Nurs*, 34 (1), 21-27.

Newton, K. M., Reed, S. D., Guthrie, K. A., Sherman, K. J., LaForce, C. B., Caan, B., Sternfeld, B., Carpenter, J. S., Learman, L. A., Freeman, E.W., Cohen, L. S., Joffe, H., Anderson, G. L., Larson, J. C., Hunt, J. R., Ensrud, K. E., & LaCroix, A. Z., (2013). Efficacy of yoga for vasomotor symptoms: a randomized controlled trial. *Menopause: The Journal of The North American Menopause Society*, 21 (4), 339-346.

Nichols, H. B., Trentham-Dietz, A., Newcomb, P. A., Titus, L. J., Egan, K. M., Hampton, J. M., & Visvanathan, K. (2012). Postoophorectomy estrogen use and breast cancer risk. *Obstetrics and Gynecology*, 120(1), 27-36.

Santrock, John W. (2012). Life-Span Development: Perkembangan Masa Hidup (Edisi ketigabelas). (Penerj. Benedictine Widyasinta; Ed. Novietha Sallama). Jakarta : Erlangga.

Torre, P., Leon, D., Mora, F., Salinas, A., Robinson, R., & Refaat, A. (2015). Nutrition and women’s health. *Global Health Through Education Learning and Service*, 1(2), 1-10.

Tuzun, S., Aktas, I., Akarirmak, U., Sipahi, S., & Tuzun, F. (2010). Yoga might be an alternative training for the quality of life and balance in postmenopausal osteoporosis. *European Journal of Physical and Rehabilitation Medicine*, 46 (1), 69-72.