Library Progress International *Print version ISSN 0970 1052*
Vol.44 No.2, July-December 2024: P.606-613 *Online version ISSN 2320 317X*

Original Article *Available online at www.bpasjournals.com*

A Study on Preferences for Aesthetic Service Use in relation to Climacteric Symptom Experiences and Physical and Psychological Stress in Middle-aged Women

Na-Gyeom Jung [1] and Myung-Sun Lee[*2]

[1]Postgraduate Student, Department of Beauty Health Care, Daejeon University, Korea
[*2]Professor Department of Beauty Design, Daejeon University, Korea
E-mail: 1seses10066@naver.com[1] and laura2711@naver.com[*2]
Corresponding Author *laura27111@naver.com

How to cite this article: Na-Gyeom Jung, Myung-Sun Lee (2024). A Study on Preferences for Aesthetic Service Use in relation to Climacteric Symptom Experiences and Physical and Psychological Stress in Middle-aged Women. *Library Progress International,* 44(2), 606-613

ABSTRACT
This study aims to examine the physical and psychological stress experienced by middle-aged women due to climacteric symptoms and to identify the differences in preferences for using aesthetic services and body shape care services according to the degree of stress. Based on the results, the necessity for an aesthetic program that can help middle-aged women who are experiencing discomfort due to climacteric syndrome to meet their physical and psychological needs and alleviate stress to help them spend a beautiful and healthy middle age was suggested. To this end, climacteric symptoms and physical/psychological stress experienced by midlife women were identified, and their preferences for aesthetic services were examined according to the level of stress. The results showed that there were differences in preferences for aesthetic services according to the level of stress. It is expected that aesthetic management programs that consider middle-aged women experiencing menopausal syndrome are developed.

Keywords: Climacteric Women, Climacteric Syndrome, Psychological Stress, Physical Stress, Aesthetics

1. INTRODUCTION

As the average life expectancy has increased due to advances in medical technology and modern science, the median age, the middle age of the entire population, has been rising steadily. According to the future population projections released by Statistics Korea, the median age of Korean women has been steadily increasing from 45.1 years in 2020 to 46.4 years in 2022 and 47.6 years in 2024, and it is expected to increase by 5 to 6 years to 53.4 years in 2034, 10 years later [1]. Midlife, which corresponds to the median age, is an active and vibrant time of life, representing about 1/2 of total lifespan, and is considered to be the peak of life, yet between 38% and 98% of midlife women experience climacteric syndromes [2].

Climacteric syndrome includes physical symptoms such as sweating, hot flashes, constipation, fatigue, changes in stamina, joint pain, changes in sensation, and palpitations, and psychological symptoms such as depression, anxiety, nervousness, sleep disturbances, and forgetfulness [3], [2]. In middle-aged women, pre- and post-menopausal ovarian degeneration leads to abnormally high levels of follicle-stimulating hormone and low levels of estrogen, which greatly affects the body and mind [4]. It has been reported that more than 85% of middle-aged women with climacteric syndrome have experienced various physical and psychological symptoms such as hot flashes, mood disorders, and sleep disturbances [5]. Among them, hot flashes were reported in 60% of climacteric women, with a frequency of more than 7 times per day [6]. In addition, climacteric syndrome causes severe mood swings such as excitement, irritability, apathy, poor concentration and memory, and high tension, leading to negative psychological states and stagnation rather than focusing on self-realization. These psychological changes often lead to depression, and it has been found that depression in middle-aged women is based on various factors, including physiological and physical changes due to ovarian decline and menopause, as well as children's growth and independence and changing roles in the family, rather than simply endocrine dysfunction [7],[8]. Various changes caused by climacteric symptoms, in addition to physical, psychological, and social factors, can be stressful for each individual [9]. Therefore, effective management of stress in middle-aged women may improve their quality of life and ensure health and happiness in old age. Accordingly, various complementary and alternative therapies that can effectively cope with stress are being attempted, and related

industries are also gradually expanding.

Various therapies such as yoga, massage, aromatherapy, and meditation are gaining attention as complementary and alternative therapies [10], and Hyun et al. (2018) reported that manual massage had the highest level of satisfaction among the complementary and alternative therapies experienced by middle-aged women [11]. Park et al. (2016) also found significant stress reduction in middle-aged women who applied meridian massage [12], and Lee et al. (2016) reported that receiving skin and body shape care had a positive effect on psychological symptoms of menopause [13]. Aesthetic care for midlife women goes beyond cosmetic skin care to improve their physical, psychological, and social health, contributing to delaying skin aging, escaping menopausal depression and sense of crisis, and increasing life satisfaction [14].

As aesthetic care has a positive impact on middle-aged women experiencing climacteric syndrome, there is a need for various marketing and programs in aesthetic to improve the quality of life of middle-aged women. Therefore, this study aims to examine the physical and psychological stress experienced by middle-aged women due to climacteric symptoms and analyze the differences in preferences for using aesthetic services and body shape care according to the degree of stress. Through this, it is expected to provide academic foundations for designing aesthetic programs that can help women who have to live as middle-aged for a long period of time to meet their physical and psychological needs and relieve stress to live a beautiful and healthy middle age.

2. MATERIALS AND METHODS

2.1 *Subjects*

This study included climacteric women aged 45 to 60 residing in Daejeon and a survey was conducted through members of the Daejeon branch of the Korea Skin Beauty Association.

2.2 *Procedure*

The research procedure was as follows. Data was collected after explaining the purpose of this study to the included middle-aged women and obtaining their consent to the survey. A questionnaire was created using Naver Office's Form format, and the survey was conducted from June 22 to July 5, 2023. A total of 502 copies of questionnaires were collected, and 499 copies were used for the final analysis after excluding insincere responses.

2.3 *Analysis methods*

The collected data were analyzed using the SPSS ver. 25.0 program, and the data processing and analysis methods are as follows.

First, Cronbach's α coefficient was calculated to determine the reliability of the instrument.

Second, a frequency analysis was performed to examine the climacteric symptoms experienced by middle-aged women.

Third, independent sample t-test and one-way ANOVA were performed to investigate whether there were significant differences in physical and psychological stress according to the climacteric symptoms experienced by middle-aged women, and Duncan test was used as a post-hoc test.

Fourth, a cross-analysis was performed to determine whether there were significant differences in the preferences of using aesthetic services and body shape care programs for physical and psychological stress among middle-aged women.

2.4 *Instruments*

2.4.1 Climacteric Symptoms

The questionnaire for climacteric symptoms was based on Menopause Symptom Index (MENSI), which was developed by Sarrel [15] and modified and supplemented by Han Sook-hee [16], Hyeon Myeongsuk [17], and Lee Gyeongsuk [18], which was modified and supplemented to fit the purpose of this study and consisted of four major symptoms with a total of 12 items.

2.4.2 Physical and psychological stress in middle-aged women

The questionnaire for stress in middle-aged women was based on a tool developed by Park Sunyeong [19], modified and supplemented by Kwon Jeongsun [20] and Park Igyun [21], which consisted of 13 items on physical stress and 10 items on psychological stress. Each question was measured on a Likert scale of 'Very unlikely', 'Unlikely', 'Likely', and 'Very likely'.

For the reliability of the instrument, Cronbach's α=.859 was found for physical stress and Cronbach's α =.902 for psychological stress.

Table 1: Reliability verification

Division	Number of items	Cronbach's α
physical stress	13	.859
psychological stress	10	.902

2.4.3 Preference for using aesthetic services

The questionnaires on aesthetic use and body shape care were modified and supplemented by referring to the studies of Cho Hyosun [22] and Han Yeongok [23]. The questionnaire on aesthetic usage consisted of 12 items and the questionnaire on body shape care consisted of 13 items.

3. RESULTS AND DISCUSSION

3.1 Differences in physical stress on major climacteric symptoms

The results on differences in physical stress according to subjective climacteric symptoms are summarized in Table 2.

Table 2: Differences in physical stress on major climacteric symptoms

Division		Mean (M)	Standard deviation (SD)	*t/F-value*	*p*
Postmenopausal weight changes	Not applicable	2.38^{ab}	.492	4.373**	.002
	No change	2.27^{a}	.511		
	Less than 3 kg	2.40^{ab}	.451		
	3 kg to less than 5 kg	2.51^{b}	.540		
	5kg or more	2.52^{b}	.511		
Sweating symptoms	Frequent symptom	2.57^{b}	.519	37.651***	.000
	Occasional symptom	2.50^{b}	.456		
	Same as before menopause	2.10^{a}	.481		
Hot flashes symptoms	Frequent symptom	2.71^{c}	.519	42.355***	.000
	Occasional symptom	2.50^{b}	.456		
	Same as before menopause	2.16^{a}	.475		
Depressive mood	Frequent symptom	2.86^{c}	.417	107.900***	.000
	Occasional symptom	2.47^{b}	.404		
	Same as before menopause	2.05^{a}	.462		
Total		2.41	.508		
** p<.01, ***p<.001, Duncan: a<b<c					

A mean score of 2.41 was measured for physical stress. For subjectively perceived climacteric symptoms, statistically significant differences were found in postmenopausal weight changes, sweating symptoms, hot flashes, and depressive mood (p<.05). In particular, for postmenopausal weight changes, the level of physical stress was found to be higher for those who experienced weight change from 3 kg to less than 5 kg, 5 kg or more compared to those who did not. For sweating symptoms, those who experience frequent or occasional symptoms were found to have higher physical stress compared to those with no change from premenopause. For hot flashes, frequent or occasional symptoms were associated with relatively higher physical stress than those who were no different from premenopausal women, and for depressive mood, frequent or occasional symptoms were associated with relatively higher physical stress than those who were no different from premenopausal women.

Depressive mood was relatively more frequent for climacteric symptoms with the most severe physical stress, which was also common for psychological stress. Park (2000) reported that physical stress and psychological stress were correlated and that climacteric symptoms increased with the degree of stress [24]. In addition, Choi (2008) reported that climacteric symptoms and depression were correlated and that the more severe the climacteric symptoms, the more severe the depression [25]. These results suggest that physical stress and psychological stress are most associated with depressive mood among climacteric symptoms.

3.2 Differences in psychological stress on major climacteric symptoms

The results on differences in psychological stress according to subjective climacteric symptoms are summarized in Table 3.

Table 3. Differences in psychological stress on major climacteric symptoms

Division		Mean (M)	Standard deviation (SD)	*t/F-value*	*p*
Postmenopausal weight changes	Not applicable	2.35[ab]	.578	4.175**	.002
	No change	2.12[a]	.559		
	Less than 3 kg	2.28[ab]	.556		
	3 kg to less than 5 kg	2.40[b]	.681		
	5kg or more	2.39[b]	.553		
Sweating symptoms	Frequent symptom	2.50[b]	.650	26.306***	.000
	Occasional symptom	2.37[b]	.571		
	Same as before menopause	2.00[a]	.499		
Hot flashes symptoms	Frequent symptom	2.58[c]	.591	24.703***	.000
	Occasional symptom	2.39[b]	.577		
	Same as before menopause	2.07[a]	.551		
Depressive mood	Frequent symptom	2.95[c]	.466	191.210***	.000
	Occasional symptom	2.38[b]	.445		
	Same as before menopause	1.80[a]	.446		
Total		2.30	.596		

** p<.01, ***p<.001 Duncan: a<b<c

In particular, for postmenopausal weight changes, the level of physical stress was found to be higher for those who experienced weight change from 3 kg to less than 5 kg, 5 kg or more compared to those who did not. For sweating symptoms, those who experience frequent or occasional symptoms were found to have higher physical stress compared to those with no change from premenopause. For hot flashes, frequent or occasional symptoms were associated with relatively higher physical stress than those who were no different from premenopausal women, and for depressive mood, frequent or occasional symptoms were associated with relatively higher physical stress than those who were no different from premenopausal women.

A mean score of 2.30 was measured for psychological stress. For subjectively perceived climacteric symptoms, statistically significant differences were found in postmenopausal weight changes, sweating symptoms, hot flashes, and depressive mood (p<.01). In particular, for postmenopausal weight changes, the level of psychological stress was found to be higher for those who experienced weight change from 3 kg to less than 5 kg, 5 kg or more compared to those who did not. For sweating symptoms, those who experience frequent or occasional symptoms were found to have higher psychological stress compared to those with no change from premenopause. For hot flashes, frequent or occasional symptoms were associated with relatively higher psychological stress than those who were no different from premenopausal women, and for depressive mood, frequent or occasional symptoms were associated with relatively higher psychological stress than those who were no different from premenopausal women. Kim et al. (2010) reported that hot flashes are caused by neurotransmitter abnormalities in the peripheral and cranial nervous systems, imbalances in the autonomic nervous system, and hypothalamic thermoregulatory dysfunction, and in terms of vasoconstriction, blood vessels dilate due to decreased serotonin levels [26]. This is accompanied by a sweating and heating sensation, and patients experience sleep disturbances and fatigue [27]. It leads to hot flashes and sweating symptoms, as well as depressive mood due to fatigue and autonomic nervous system imbalance, and it is suggested that such symptoms may affect psychological stress.

3.3 Differences in the body parts mostly concerned in body management

The results on differences in the body parts mostly concerned in body management according to physical and psychological stress are summarized in Table 4.

Table 4. Differences in the body parts mostly concerned in body management according to physical and psychological stress

Division		Body parts mostly concerned in body management								χ^2 (*p*)
		Arms	Thighs	Calves	Back	Waist	Abdomen	Glutes (buttocks)	Breasts	
Physical stress	High stress group	7(2.7)	17(6.6)	15(5.8)	40(15.5)	30(11.6)	132(51.2)	12(4.7)	5(1.9)	15.814* (.027)
	Low	20(8.3)	7(2.9)	19(7.9)	49(20.3)	19(7.9)	115(47.7)	9(3.7)	3(1.2)	

	stress group									
Psychological stress	High stress group	7(2.6)	15(5.7)	19(7.2)	38(14.3)	30(11.3)	139(52.5)	12(4.5)	5(1.9)	15.552* (.030)
	Low stress group	20(8.5)	9(3.8)	15(6.4)	51(21.8)	19(8.1)	108(46.2)	9(3.8)	3(1.3)	
Total		27(5.4)	24(4.8)	34(6.8)	89(17.8)	49(9.8)	247(49.5)	21(4.2)	8(1.6)	

There was a statistically significant difference according to physical and psychological stress (p<.01). First, for physical stress, both high and low stress groups showed high concerns on abdomen and back, despite some varying results, and for psychological stress, both high and low stress groups showed high concerns on abdomen and back.

These findings are consistent with findings from the previous study by Lee Kyungjin (2019), which reported that the abdomen is the body part that middle-aged women are most concerned about when managing their body shape [28]. In addition, Kim (2021) reported that as women experience menopause around the age of 50, hormonal changes can lead to increased body fat, decreased muscle strength and bone density, and musculoskeletal disorders, which can affect body shape and posture changes [29].

3.4 Differences in aesthetic care effects on climacteric syndrome

The results on the differences in the effectiveness factors of aesthetic care for climacteric syndrome according to the physical and psychological stress perceived by 322 middle-aged women among subjects who responded that 'aesthetic care was effective' for climacteric syndrome are summarized in <Table 5>.

Table 5. Differences in aesthetic care effects on climacteric syndrome according to physical and psychological stress

Division		Effectiveness factors of aesthetic care for climacteric syndrome						χ^2 (p)
		Improvement of Depression	Weight loss	Improvement in muscle pain	Improvement in hot flashes	Improvement in sleep	Relief from fatigue	
physical stress	High stress group	24(14.7)	3(1.8)	54(33.1)	2(1.2)	13(8.0)	67(41.1)	8.677 (.123)
	Low stress group	14(8.8)	6(3.8)	49(30.8)	5(3.1)	6(3.8)	79(49.7)	
psychological stress	High stress group	28(16.7)	4(2.4)	47(28.0)	2(1.2)	12(7.1)	75(44.6)	11.548* (.042)
	Low stress group	10(6.5)	5(3.2)	56(36.4)	5(3.2)	7(4.5)	71(46.1)	
Total		38(11.8)	9(2.8)	103(32.0)	7(2.2)	19(5.9)	146(45.3)	
*p<.05								

There was no statistically significant difference according to physical stress (p>.05), while significant differences were found according to psychological stress (p<.05). Although there were some differences, both the high stress and low stress groups generally showed improvement in muscle pain and fatigue. Jeong (2007) reported relief in fatigue, improvements in sleep, and alleviation in depression after back massage treatment [30]. In addition, fatigue in middle-aged women was associated with symptoms such as depression, hot flashes, joint pain, insomnia, and palpitations [31], and psychological stress and climacteric symptoms were correlated with fatigue [32]. These findings suggest that aesthetic care can be effective in relieving muscle pain, fatigue, psychological stress, and climacteric symptoms.

4. CONCLUSION

This study aimed to identify differences in physical and psychological stress on climacteric symptoms experienced by middle-aged women and to examine their preferences in using aesthetic services according to physical and psychological stress. A total of 499 climacteric women aged 45 to 60 years were surveyed based on an instrument that was adapted, modified and supplemented from previous studies.

First, for physical stress on climacteric symptoms experienced by middle-aged women, there were significant

differences in postmenopausal weight changes, sweating symptoms, hot flashes, and depressive mood.

Second, for psychological stress on climacteric symptoms experienced by middle-aged women, there were significant differences in postmenopausal weight changes, sweating symptoms, hot flashes, and depressive mood.

Third, differences in the body parts mostly concerned in body management according to physical and psychological stress in middle-aged women were analyzed, and statistically significant differences were found according to physical and psychological stress.

Fourth, for the effectiveness factors of aesthetic care on climacteric syndrome, there were not significant differences according to physical stress, but statistically significant differences were found according to psychological stress.

These findings indicate that aesthetic care is effective in helping climacteric symptoms experienced by middle-aged women, especially in relieving psychological stress. Therefore, there is a necessity for development in various aesthetic care programs to maintain the psychological and physical health and beauty of middle-aged women, and aestheticians should be trained to strengthen their professionalism to provide quality services. In addition, since this study only investigated the differences in the preferences of middle-aged women to use aesthetic services according to their self-perceived climacteric symptoms and physical and psychological stress through questionnaires, it is recommended that further studies should be conducted to verify the effectiveness of the actual programs through clinical applications.

5. REFERENCES

●→1. Statistics Korea's Future Population Estimation

https://kosis.kr/visual/populationKorea/PopulationDashBoardDetail.do?statJipyoId=3773 HYPERLINK "https://kosis.kr/visual/populationKorea/PopulationDashBoardDetail.do?statJipyoId=3773&vStatJipyoId=5262&listId=A_02"& HYPERLINK "https://kosis.kr/visual/populationKorea/PopulationDashBoardDetail.do?statJipyoId=3773&vStatJipyoId=5262&listId=A_02"vStatJipyoId=5262 HYPERLINK "https://kosis.kr/visual/populationKorea/PopulationDashBoardDetail.do?statJipyoId=3773&vStatJipyoId=5262&listId=A_02"& HYPERLINK "https://kosis.kr/visual/populationKorea/PopulationDashBoardDetail.do?statJipyoId=3773&vStatJipyoId=5262&listId=A_02"listId=A_02

●→ 2 S. A. Kim, "Impact of attitude to developmental phenomena and climacteric symptoms to the meaning of life among climacteric women", The Korean gerontological society, 2012. Vol. 32, No. 2, pp. 631-664. DOI: http://dx.doi.org/10.5762/KAIS.2014.15.7

●→ 3. Al-Safi, Z.A., & Santoro, N. "Menopausal hormone therapy and climacteric symptoms", Fertil Steril. 2014. Vol. 101, No. 4, pp. 905-915.

DOI: http://dx.doi.org/10.1016/j.fertnstert.2014.02.032

●→ 4. Mary Jane Minkin, Menopause: hormones, lifestyle, and optimizing aging. Obstetrics and Gynecology Clinics 2019;46(3):501-14. Doi:10.1016/ j.ogc.2019.04.008

●→ 5. Woods NF, Mitchell ES. Symptoms during the perimenopause: prevalence, severity, trajectory, and significance in women's lives. The American journal of medicine 2005;118(12):14-24. Doi:10.1016/ j. amjmed.2005.09.031

●→ 6. Shifren JL, Margery LSG, NAMS Recommendations for Clinical Care of Midlife Women Working Group. The North American Menopause Society recommendations for clinical care of midlife women. Menopause 2014;21(10):1038-62.

Doi:10.1097/GME. 000000000000031

●→ 7. Kuem Sun Han,Pyoung Sook Lee,Yong Mi Lee.Influencing Factors on Symptoms of Stress of Middle-aged Women. Journal of the Korean Society of Nursing, 2000. Vol.30 No.6 pp.1,427 - 1,436. DOI:10.4040/jkan.2000.30.6.1427

●→ 8. Park, A. Y., & Lee, S. H. The effects of Reiki self-healing on climacteric symptoms of middle-aged women. The Korean Journal of Woman Psychology, 2012, Vol.17, No. 2, PP95-114 DOI: 10.18205/kpa.2012.17.2.001

●→ 9. Younglan Kim, Mi Hwa Won. A Convergence Study of Factors Influencing on Depressive Symptoms in Postmenopausal Middle-Aged Women Journal of Convergence for Information Technology.2020. Vol. 10. No.

4, pp. 25-34. Doi.org/10.22156/CS4SMB.2020.10.04.025

●→ 10. Son, Hyun-Ok. Kim, Hae-Nam. Effects of Aroma Back Massage on the Relief of Middle-aged Women's Stress. J. Kor. Soc. Esthe. & Cosm. 2013. Vol. 8, No. 2 pp. 111-123.

https://www.earticle.net/Article/A217191

●→ 11. Hyeon Myeongsuk. Use of complementary and alternative therapy for middle-aged women according to menopause and climacteric symptoms. a master's degree, Kyunggi University,2018. P27.

●→ 12. T Byung Nam Park, Seong Gyun Hong* he Effects of Meridian Massage on Stress and Brain Activation of Middle-aged Women. Asian J Beauty Cosmetol,2016;14(1):58-64.

DOI: http://dx.Doi.org/10.20402/ajbc.2016.0019

●→ 13. Hee-Nam YEON*·Ji-Young LEE+J.The Influences of Climacteric Symptoms and Depression on the Skin Care and Body shape care Behaviors of Climacteric Women. Korea Soc. Beauty Art, 2016.Vol. 17, No. 4. DOI: http://dx.Doi.org/10.18693/jksba.2016.17.4.59

●→ 14. Jeong-sun Gwon, In-hee Lee.The Effects of Changes in the skin of menopausal women with stress. Korean Society of Beauty and Arts Management, 2012. Vol.6, No. 1, p13-25. UCI I410-ECN-0102-2021-600-000956387

●→ 15. Sarrel, P. M. Evaluation and management of postmenopausal patients. The Female Patient, 1995; 20(2), pp.27-32.

●→ 16. Han Sook-hee. Menopause Symptoms and Menopause Management and Quality of Life in Middle-Aged Women. Master's degree, Ewha Womans University. 2004. p60.

●→ 17. Hyeon Myeongsuk. Use of complementary and alternative therapy for middle-aged women according to menopause and climacteric symptoms. a master's degree, Kyunggi University, 2018.p69~72.

●→ 18.Lee Gyeongsuk. Effects of life stress, menopausal syndrome, and psychological crisis in middle-aged women on their readiness for retirement.a master's degree, Yeungnam University, 2020.p87~88.

●→ 19.Park Sunyeong. Stress and My Health Gwangju Metropolitan City, Western Health Newsletter,1999.11(84).

●→ 20.Kwon Jeongsun. A skin study based on menopausal awareness, stress, and subjective symptoms of middle-aged women.a master's degree, Seo Kyung University,2012. P59.

●→ 21.Park Igyun. Effect of ear pressure therapy on climacteric symptoms and psychological state in middle-aged women. doctorate, Kyung Hee University,2015. P55.

●→ 22.Cho Hyosun. A Study on skin Management Room selection and consumption behavior according to lifestyle. a master's degree, Youngsan University, 2017.p83~84.

●→ 23.Han Yeongok. An Analysis of the Preference for Use of Skin Care Centers according to the Perceptual Symptoms of Menopause in Middle-Aged Women.a master's degree, Changsin University,2019. p66~70.

●→ 24.Bok Hee Park, Young Sook Lee. The Relationship between the Stress and Climacteric symptoms of Middle-Aged Women. Women's Health Association.2000. Vol.6 No. 3 pp.383-397. UCI I410-ECN-0102-2009-510-006669560

●→ 25.Eun Gyung Kim, Deok-Sang Hwang, Cho, Jung Hoon,Chang Hoon Lee , Lee Kyung Sub .A Study about Correlation between Hot Flush and Pulse Wave Velocity (PWV)/Ankle-Brachial Index (ABI) in the Climacteric Women. The Journal of Oriental Obstetrics & Gynecology.2010, vol.23, no.1, pp. 53-64.

DOI: http://dx.Doi.org/ 10.15204/JKOBGY.2010.23.1.053

●→26. Jin Ju Roh , Dong ll kim. Acupuncture Clinical Trial on the Postmenopausal and Perimenopausal Hot Flashes. Journal of the Korean Oriental Medicine Society,2008, vol.21, no.4, pp. 193-206 UCI: G704-000835.2008.21.4.002

●→ 27.Choi Kwang-Sim, Oh Hyun-Ei, Shim Chung-Sin. A Study on the Relationship between Climacteric Symptom, Depression and Coping among Middle-Aged Women. Community Health Society of Rural Medicine, Korea, 2008, vol.33, no.3, pp. 335-345. UCI : G704002179.2008.33.3.005

●→ 28.Kyung-jin Lee,Ji-Hyun Lee,ohsooyeon. The Effects of Abdominal Therapy on Quality of Life and Body Image: Focusing on extracorporeal shockwave therapy (ESWT) and manipulative therapy, Journal of the

Korean Society of Human Beauty and Arts,2019, vol.20, no.1, pp. 139-153. DOI: 10.18693/jksba.2019.20.1.139

●→29.Kim, Jeong Ha_Dept. Development of a Dress Form for Customizing Clothing of Middle-Aged Women with Abdominal Obesity and Evaluation of Clothing Fit. Art & Fashion, Cheongju University.2021, vol.22, no.1. p. 95-108.

DOI: https://Doi.org/10.47294/KSBDA.22.1.8

●→30.Dong Hyuk Jeong , Dong Yeup Joo , Soo Keun Kim. Physical Science : Exploration on the Therapeutic Art of Aromatherapy Massage. Korea Sports Research, 2007, vol 18 HYPERLINK "about:blank"no.1 HYPERLINK "about:blank".p.p635-647 UCI I410-ECN-0102-2008-690-002601123

●→31.Hong Jong-sook, Kim Woo Yeol, Goo Chang deok. Effects of the Aromatherapy Program Using Fir Needle Essential Oil on Stress, Sleep Quality and Fatigue in Middle-Aged Women. Society for the Environment of Human Plants,2018, Vol.21 No.5, pp. 433-443.

. DOI: http://dx.doi.org/10.11628/ksppe.2018.21.5.433

●→32.Kim-Nam-Jin. A Study on the Relationship between Menopause Symptoms and Exercise Performance and Subjective Health Status of Middle-aged Women. Korean Society for Health Education and Health Promotion,2002. Vo l.19 No.1. p. 133-148. UCI: G704-000885.2002.19.1.011