Quality of Life of Middle-Aged Female Staff Officers in the Royal Thai Navy Base, Bangkok†

JARUEYPORN SUPARP, MD, MPH*,
RAWIWAN SANGCHAI, BSc, MPH*,
VICHUKARN MUNGKORN, BNS, MSc**,
PRATANA SAITIVIPAWEE, BSc, MPH***

Abstract

Objectives : To assess the level of quality of life and to determine the factors associated with the quality of life of middle-aged female staff officers.

Material and Method : The population was 309 females aged 40-60 years who were working in the Royal Thai Navy Base in Bangkok, excluding those at the Naval Medical Department. Data collection was by self-administered questionnaires from June to July 2000. The *t*-test, one way analysis of variance, and Pearson's product moment correlation were used for data analysis.

Results : The majority of middle-aged female staff officers (61.8%) had overall scores which indicated that they had a moderate quality of life. The factors which were significantly associated with quality of life were marital status, menopausal symptoms, self esteem, social support, and family income. The factors which were not associated with quality of life were rank, age, educational level, number of living children, chronic diseases, stage of menopause and club membership.

Conclusions : These results suggest that the responsible organizations should improve females' the self esteem of middle-aged female staff officers, establishing social networks and providing health promotion programs to enhance their well being, as well as quality of life..

Key word : Middle-Aged Female, Quality of Life, Self Esteem

SUPARP J, MUNGKORN V,
SANGCHAI R, SAITIVIPAWEE P
J Med Assoc Thai 2003; 86: 1015-1023

* Department of Family Health, Faculty of Public Health, Mahidol University, Bangkok 10400,
** Preventive Medicine Division, Somdej Phrapinklao Hospital, Bangkok 10600,
*** Department of Biostatistics, Faculty of Public Health, Mahidol University, Bangkok 10400, Thailand.
† Paper was presented at 10th World Congress on Menopause, Berlin, Germany, 10-14 June, 2002.

Middle-aged women are at the stage of their lives when they expect success in their work and family lives. They have to take on the role not only as good mothers and wives but also as successful working women. Other important events in their lives may occur during this period. In the family, this is the time when children grow up, get married or leave home to carry on their independent lives and this may cause their parents to experience the phenomenon called the "empty nest syndrome", especially for their mother who is particularly sensitive to the children's problems[1]. Menopausal symptoms occur as a result of a decrease in the hormone estradiol, which causes the transition from the reproductive to the non-reproductive state of life, and change to physical and psychological functions. Although those changes are not considered to be a disease state, they affect normal health functions such as that of the autonomic nervous system and the urogenital system resulting in impaired sexual function[2]. So, the menopause in middle-age represents a significant physical and psychological transition in the life cycle of all women.

The trend is for morbidity and mortality in women to increase after the menopause due to the increased risk of cardiovascular disease, neoplasms of the breast or endometrium, and bone fracture due to osteoporosis. The longer life of middle-aged women will be considered as a penalty rather than a prize if it happens with increased suffering from chronic diseases or physical disability. So, the quality of life of human is as important as its quantity[3].

Quality of life is defined by the World Health Organization (WHO) as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". It is a broad ranging concept incorporating in a complex way the persons' physical health, psychological state, level of independence, social relationships, personal beliefs and their relationships to salient features of the environment. The quality of life index of the WHO, includes 5 domains - physical, psychological, social relationships, environment and general domain. This index was used to assess the quality of life of middle-aged women in the present study[4]. In resolving the health problems of middle-aged women, a physician is required, not only to provide medical services, but also to help them understand the social and environmental factors influencing the menopausal transition. Health care providers need to provide ways for middle-aged women to realize the importance of health adjustment in middle age and to physically and psychologically prepare to engage in the menopausal period successfully. In addition, there are many other important factors that affect a middle-aged woman's quality of life. These factors must be appraised by assessment of the physical, psychological, emotional, and social aspects following the philosophy of holistic care. The quality of life of middle-aged women will be reflected in their present living conditions, and the lives that they lead. Thus, in order to live a normal life for the rest of their lives, middle-aged women have to relate to powerful self-internal and external factors.

According to the study of Suparp et al (1987) [5], menopausal women who had more social support and good health perception had better life satisfaction but those showing more symptoms of estrogen deficiency had less satisfaction in their lives. The study of Munin (1998)[6], showed that the climacteric teachers who had high self-esteem and more social support had better self-care behavior. Suparp et al (2000)[7] showed that menopausal women who had more social support and good health perception had better self-care practices, whereas, those women who had more menopausal symptoms had worse self-care practices. The objectives of this study were to determine the association between menopausal symptoms, self esteem, social support, and the quality of life of middle-aged female staff officers.

MATERIAL AND METHOD

The research design was a cross-sectional survey of women aged 40-60 years who had no history of hysterectomy, oophorectomy, or of taking hormonal replacement therapy and who were working in the Royal Thai Navy Base in Bangkok excluding those who were working at the Naval Medical Department.

According to the formula

$$n = \frac{no}{1 + (no/N)}, \quad no = \frac{Z^2\alpha/2/CV^2}{Y^2}, \quad CV = \frac{S}{\bar{X}}$$

the sample size should be at least 228. In the present study, the total population was 419, but when women with exclusion criteria mentioned above were excluded, the total sample was 309 middle-aged

female staff officers. Data was collected by means of self-administered questionnaires from 30 June to 21 July 2000. The questionnaires consisted of 5 parts namely general characteristics (17 items), objective measurement of hormonal deficiency (28 items), self-esteem (25 items), social support (20 items) and quality of life (26 items).

The objective measurement of hormonal deficiency questions were used to evaluate the presence and severity of symptoms associated with the menopause (menopausal symptoms). Participants responded whether or not they had experienced each symptom in the past month. Each item was rated on a four-point Likert scale from not experienced to much experienced. Scores ranged from 0 (no symptoms) to 84 (severe symptoms). Self-esteem questions were used to rate self-esteem. Each item was rated on a four-point Likert scale. Scores ranged from 25 (low self-esteem) to 100 (high self-esteem). Social support questions were used to rate social support. Each item was rated on a three-point Likert scale for the frequency of support that the participant experienced. Scores ranged from 20 (least social support) to 60 (most social support). Quality of life questions were used to rate quality of life. Each item was rated on a five-point Likert scale depending on each participant's opinion of their own quality of life. Scores ranged from 26 (low quality of life) to 130 (high quality of life). The quality of life questionnaire was modified from the WHOQOL-BREF questionnaires developed by the World Health Organization[8]. The reliabilities of the self-esteem, social support and quality of life sections of the questionnaires were 0.80, 0.79 and 0.74 respectively. General characteristics included rank, age, marital status, educational level, family income, number of living children, chronic diseases, stage of menopause and club membership. Statistics used for data analysis were the *t*-test, one way analysis of variance (ANOVA) and Pearson's product moment correlation coefficient.

RESULTS

General characteristics

The sample population comprised 309 women working in the Royal Thai Navy Base in Bangkok. Almost half of them were Commissioned Officers (44.0%). Their ages ranged from 40-59 years. The majority of women were married, well educated (collage/university level 49.2%), with moderate income (ranged 5,600-80,000 baht/month) and had no chronic diseases. The average number of living children was 1.78 per person. Postmenopause was defined as the occurrence of the last menstrual period 12 or more months previously. Perimenopause was defined as the occurrence of irregular menstruation with the last menstrual period less than 12 months previously whereas premenopause was the occurrence of regular menstruation. The majority of women (54.4%) were identified as premenopausal followed by postmenopausal and perimenopausal (30.7% and 14.9% respectively).

The quality of life

The mean score of the quality of life questions was 96.70, with scores ranging from 63-128. Quality of life was classified into 3 groups (good, moderate and bad quality of life) using the criteria of the questionnaires as follows[8].

Quality of life level	Physical domain score	Psychological domain score	Social relationship domain score	Environmental domain score	Overall quality of life score
Bad quality of life	7-16	6-14	3-7	8-18	26-60
Moderate quality of life	17-26	15-22	8-11	19-29	61-95
Good quality of life	27-35	23-30	12-15	30-40	96-130

The result found that the majority of women (61.8%) were categorized as having a moderate quality of life. The remainder were found to have a good level (38.2%). No one indicated that they had a bad quality of life. When considering each aspect of quality of life, it was found that the women categorized the good environmental domain of quality of life in the highest percentage (41.4%) followed by the psychological domain, the social relationship domain and the physical domain (39.8%, 37.9% and 33.0%) respectively (Table 1).

Menopausal symptoms

The three most frequently reported symptoms within the previous month were muscle/joint pain (79.6%), tiredness (78.3%) and headache (74.4%). The most worrisome symptom was muscle/joint pain (15.5%) followed by forgetfulness (9.1%) tiredness (8.7%), moody (8.5%) and frequent-urination (8.1%). The mean score of the objective measurement of hormonal deficiency experienced by women was 17.82 with scores ranging from 0 to 63.0 (Table 2).

Sexual life

Almost half of the married women (44.4%) had had sexual desire within the previous month as usual. Of the 93.6 per cent of women, who had sexual intercourse within the previous month, the majority (70.9%) had no dyspareunia (Table 3).

Self-esteem

The mean score of the self-esteem questionnaires was 75.82, with the scores ranging from 45 to 94. The majority of women were categorized as having moderate self-esteem (65.6%). The low and high self-esteem groups each accounted for 17.2 per cent.

Social support

The most important type of social support was emotional support with a mean score 2.53, followed by appraisal support ($\bar{X}$ = 2.50), information support ($\bar{X}$ = 2.34), and instrument support ($\bar{X}$ = 2.30), with scores ranging from 1 to 3. The mean score of social support questionnaires was 48.46, with scores ranging from 27-60. The majority of women (65.0%) fell into the moderate social support group. The remainder fell into the high social support group (17.8%) and low social support group (17.2%).

Statistical analysis between age, educational level, family income, menopausal symptoms, self-esteem, social support and quality of life of the middle-aged female staff officers by Pearson's product moment correlation coefficient

The result showed that family income, self-esteem and social support were all significantly correlated with quality of life (p value < 0.05 r = 0.196, p-value < 0.01 r = 0.553, and p-value < 0.01 r = 0.572 respectively). It also found that menopausal symptoms had a significant negative association with quality of life (p-value < 0.01 r = -0.345). However, age and educational level were not associated with quality of life. (Table 4).

The comparison of the quality of life mean scores among chronic disease groups and club membership groups using *t*-test

Although the quality of life mean scores among women who did not have any chronic diseases appeared higher than that of the women who had a chronic disease ($\bar{X}$ = 97.50 and 94.33 respectively) this difference was not significant. The quality of life mean score among women who were club members

Table 1. Number and percentage of middle-aged female staff officers classified by level of quality of life.

Quality of life	Bad level		Moderate level		Good level		Total	
	N	%	N	%	N	%	N	%
Physical domain	2	0.6	205	66.3	102	33.0	309	100
Psychological domain	5	1.6	181	58.6	123	39.8	309	100
Social relationship domain	17	5.5	175	56.6	117	37.9	309	100
Environmental domain	11	3.6	170	55.0	128	41.4	309	100
Overall Quality of life (include general domain)	-	-	191	61.8	118	38.2	309	100

$\bar{X}$ = 96.70, SD = 13.70, range = 63-128

Table 2. Percentage of level of severity of menopausal symptoms.

Menopausal symptoms	Severe (4-7days/week) %	Moderate (2-3 days/week) %	Mild (at least 1 day/month) %	None (never) %	Ever (symptoms) %
Vasomotor symptoms					
Hot flashers	2.5	10.7	28.5	58.3	41.7
Sweat	7.2	17.8	26.8	48.2	51.8
Psychological symptoms					
Moody	8.5	16.5	41.7	33.3	66.7
Depressed	0.7	7.1	20.7	71.5	28.5
Fear of being alone in public	2.3	3.9	7.1	86.7	13.3
Loss of confidence	1.9	6.8	30.1	61.2	38.8
Feeling tense	5.2	15.2	45.3	34.3	65.7
Loss of energy	4.5	11.7	34.0	49.8	50.2
Disruption	1.9	6.2	25.9	66.0	34.0
Dizziness	3.6	18.4	44.3	33.7	66.3
Chest pressure	1.0	5.8	24.6	68.6	31.4
Shortness of breath	1.9	6.2	26.5	65.4	34.6
Palpitation	1.0	7.4	34.6	57.0	43.0
Headache	7.1	17.8	49.5	25.6	74.4
Insomnia	7.1	15.9	31.4	45.6	54.4
Urinary symptoms					
Involuntary urination	2.6	7.1	17.5	72.8	27.2
Stress incontinence	2.3	7.1	26.2	64.4	35.6
Frequent-urination	8.1	16.1	29.8	46.0	54.0
Dysuria	0.3	2.3	7.8	89.6	10.4
Vaginal dryness	1.7	5.5	18.4	74.4	25.6
Genital itching	1.0	2.9	22.3	73.8	26.2
Vaginal discharge	1.0	2.9	32.0	64.1	35.9
Other complaints					
Numbness	6.5	10.6	35.0	47.9	52.1
Pins and needles	0.6	4.6	23.0	71.8	28.2
Tiredness	8.7	20.1	49.5	21.7	78.3
Muscular/joint pain	15.5	23.3	40.8	20.4	79.6
Forgetfulness	9.1	21.4	43.0	26.5	73.5
Dry eyes	2.6	6.8	22.0	68.6	31.4

$\bar{X}$ = 17.82 SD. = 12.08 range 0 - 63.0

Table 3. Number and percentage of married middle-aged female staff officers classified by sexual life.

Sexual Life	Number (n = 187)	% (100.0)
Sexual desire within the last month		
More than usual	2	1.0
As usual	83	44.4
Less than usual	65	34.8
No desire feeling at all	37	19.8
Sexual intercourse (within the last 3 months)		
Yes	175	93.6
No	12	6.4
Dyspareunia		
No	124	70.9
Yes	51	29.1

Table 4. Pearson correlation coefficient between general characteristics, menopausal symptoms, self esteem, social support and the quality of life of the middle-aged female staff officers.

Factor	Pearson correlation coefficient (r)	P-value
General characteristics		
Age	0.057	> 0.05
Educational level	0.003	> 0.05
Family income	0.196	< 0.05
Menopausal symptoms	-0.345	< 0.01
Self-esteem	0.553	< 0.01
Social support	0.572	< 0.01

appeared higher than that of those who did not belong to a club but this was not significant ($\bar{X}$ = 98.96 and 96.43 respectively) when the mean scores were analysed using the *t*-test (Table 5).

The comparison of the quality of life mean scores among the middle-aged female staff officers with different rank, marital status, number of living children and stage of menopause groups using one way analysis of variance (ANOVA)

It was found that the quality of life mean score among women who were single was highest ($\bar{X}$ = 101.20), followed by married women ($\bar{X}$ = 97.47) and then those who were widowed/divorced/separated ($\bar{X}$ = 93.21). When these mean scores were compared by using ANOVA it was found that the quality of life mean scores among the women who were single, married and widowed/divorced/separated were significantly different (p-value < 0.01) (Table 6). When comparing these mean scores using the Scheffe test, it was found that the quality of life mean score of the women who were single was significantly higher than that of married women and those who were widowed/divorced/separated (p value < 0.05). No difference was found between the quality of life mean score of married women and those who were widowed/divorced/separated (Table 7).

Furthermore, it was found that there was no significant difference in the quality of life mean scores among different ranks, number of living children, and stage of menopause (Table 6).

DISCUSSION

Quality of life is defined by the WHO as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". This definition reflects the view that quality of life refers to a subjective evaluation, which is embedded in a cultural, social and environmental context[4]. According to the standard criteria of the questionnaires[8] the majority of women (61.8%) were categorized as having a moderate level of overall quality of life. The remainder fell into the good level group (38.2%). No one had a bad quality of life. When considering each domain, it was found that those with good level environmental domain of quality of life had the highest percentage (41.4%), followed by psychological domain (39.8%), social relationship domain (37.9%) and physical domain (33.0%) respectively. This finding indicates that the female staff officers perceived their overall quality of life at a rather good level. They also perceived they had a good level of their environmental domain of quality of life rather than the psychological, social relationship and physical domain.

In this current study, the female staff officers had stable jobs and income and the majority of them were commissioned officers, were married, with a good education, were premenopausal, and had no chronic diseases. The study also found that the respondents had high self-esteem, received rather good

Table 5. Comparison of the quality of life mean scores of the middle-aged female staff officers among different chronic disease groups and different club membership groups using *t*-test.

Factor	Number	$\bar{X}$	SD	t-value	df	p-value
Chronic diseases						
Having	78	94.33	14.19	1.771	307	0.72
Not having	231	97.50	13.47			
Club membership						
Yes	33	98.96	12.69	1.006	307	0.32
No	276	96.43	13.81			

Table 6. Comparison of the quality of life mean scores of the middle-aged female staff officers among different rank, marital status, number of living children, and stage of menopause using ANOVA.

Factor	Number	$\bar{X}$	SD	F	p-value
Rank					
Commissioned officers	136	97.24	12.21	0.191	0.826
Warrant officers	73	95.93	14.30		
Permanent employees	100	96.72	14.47		
Marital status					
Single	51	101.20	12.17	7.061	< 0.01
married	187	97.47	13.24		
Widowed/divorced/separated	71	93.21	14.90		
Number of living children					
1	90	96.05	13.59	0.928	0.367
2	100	94.23	13.53		
3+	33	97.63	13.27		
Stage of menopause					
Premenopause	168	97.26	13.18	1.381	0.253
Perimenopause	46	93.60	14.27		
Postmenopause	95	97.20	14.07		

Table 7. Comparison of the quality of life mean score of the middle-aged female staff officers among different marital status groups using Scheffe test.

Marital status	$\bar{X}$	Single 101.20	Married 97.47	Widowed/divorced/separated 93.21
Single	101.20	-	*	*
Married	97.47	*	-	-
Widowed/divorced/separated	93.21	*	-	-

* = significance at p-value < 0.05

social support and had a low mean score on menopausal symptoms. Hence, the respondents could acknowledge their own worth, were self assured, took pride in themselves and could conduct their duties as expected. They were not too disturbed by menopausal symptoms, and they could perform activities or daily routines normally. Furthermore, the fact that they had received welfare housing, payment for medical expenses, and travel expenses contributed to their perception of a rather good level of overall quality of life.

The significant correlation between marital status, family income, menopausal symptoms, self-esteem, social support and quality of life were as expected and are consistent with the studies of Suparp et al[5], Kunrattanaporn[9], Peltonen and Krantz[10], Ho et al[11], Sindhunava[12], Evans et al[13]. The single women do not have the burden of looking after their family and they can prepare to look after themselves when they get older. They have a good social life at work. They can rely on themselves very well and they also receive attention from family members. A high family income enables the women to search for things that are good for their health. The more menopausal symptoms the women experienced and the more they worried about them, the more they felt ill, and so did not have the incentive to perform their duties. The correlation between self-esteem and quality of life suggests that women who have higher self-esteem could support themselves and even though they may have family or work problems they could solve these. The social support is a source of benefit for individuals that is the result of interrelating with individuals in society. Social support enables individuals to receive information, good advice, including help in the area of material, money and labour which will help them to be able to conduct daily routines conducive to a better quality of life.

SUMMARY

This study shows that marital status, family income, menopausal symptoms, self-esteem and social support were significantly associated with the quality of life of middle-aged female staff officers. The health promotion organization should utilize social support and self-esteem to improve perceived self efficacy, to engage women in healthy life styles and self-care practices, and to establish a social network among women which would include health care facilities for those with menopausal symptoms. Such health promotion programs are needed to improve the quality of life of these women. The current study documents the quality of life of a selected group of middle-aged women. Future research should focus on different groups of middle-aged women.

(Received for publication on February 9, 2003)

REFERENCES

1. Schaie KW, Willis SL. Adult development and aging. New York: Harper Collins; 1991: 59-83.
2. Chirawatkul S. Menopause : What about it. J Nursing Thai 1993; 43: 216-30.
3. World Health Organization. Research on the Menopause. Geneva: WHO; 1996: 1-30.
4. Division of Mental Health and Prevention of Substance Abuse. WHOQOL user manual. Geneva: WHO; 1998: 35-43.
5. Suparp J, Ulis A, Sangchai R, Srisorrachatr S. Factor associated with life satisfaction during the female climacteric period. Wiset Chai Chan District, Ang Thong Province. J Pub Health Thai 1997; 27: 130-41.
6. Munin V. Relationship between self-esteem, social support and self-care behavior of climacteric teachers in secondary school. Muang Chiang Mai District. (MEd Thesis in Health Promotion) Chiang Mai: Faculty of Graduate Studies, Chiang Mai University; 1998.
7. Suparp J, Kirdsuwan P, Sangchai R, Srisorrachatr S. Self-care practices during the female climacteric period and influencing factors. Mahidol J (Thailand) 2000; 7: 81-6.
8. Mahatnirunkul S, Tuntipivatanakul W, Punpisan W, Vongsuwan K, Pornmanagirunkul R, Comparison of the WHOQOL-100 and the WHOQOL-BREF (26 items). J Ment Health Thai 1998: 5: 4-15.
9. Kunrattanaporn B. Quality of life of menopausal women in Bangkok Noi District, Bangkok. (MNS thesis of Maternal and Child Nursing) Bangkok: Faculty of Graduate Studies, Mahidol University, 1997.
10. Peltonen RS, Krantz I. Perceived health among middle-aged women: Networking between individual, environment and society. Maturitas 1997; 27: 44-7.
11. Ho SC, Woo J, Lau K, et al. Life satisfaction and associated factors in older Hong Kong Chinese. J Am Geriatr Soc 1995; 43: 252-5.
12. Sindhunava P. Quality of life of menopausal women in Bangkok (MNS thesis in Maternal and Child Nursing) Bangkok: Faculty of Graduate Studies, Mahidol University, 1997.
13. Evans DR, Pellizzari JR, Culbert BJ, Metzen ME. Personality, marital and occupational factors associated with quality of life. J Clin Psychol 1993; 49: 477-85.

คุณภาพชีวิตเจ้าหน้าที่หญิงวัยกลางคนของกองทัพเรือ กรุงเทพมหานคร†

จรวยพร สุภาพ, พบ, MPH, วิชชุกาญจน์ มังกร, พยบ, วทม**,*
ระวิวรรณ แสงฉาย, วทบ, MPH, ปรารถนา สถิตย์วิภาวี, วทบ, MPH****

วัตถุประสงค์ : เพื่อประเมินระดับคุณภาพชีวิตและศึกษาปัจจัยที่มีความสัมพันธ์กับคุณภาพชีวิตของเจ้าหน้าที่หญิงวัยกลางคนของกองทัพเรือ กรุงเทพมหานคร

วัสดุและวิธีการ : ประชากรที่ศึกษาคือ เจ้าหน้าที่หญิงวัยกลางคน จำนวน 309 คน อายุ 40–60 ปี ที่ทำงานในกองทัพเรือ กรุงเทพมหานคร ยกเว้นผู้ที่สังกัดกรมแพทย์ทหารเรือ กรุงเทพมหานคร ใช้แบบสอบถามชนิดตอบด้วยตนเองในการเก็บข้อมูลตั้งแต่เดือนมิถุนายน ถึงกรกฎาคม 2543 วิเคราะห์ข้อมูลโดยใช้การทดสอบที และสัมประสิทธิ์สหสัมพันธ์ของเพียร์สัน

ผลการวิจัย : เจ้าหน้าที่หญิงวัยกลางคนส่วนใหญ่ร้อยละ 61.8 มีคุณภาพชีวิตอยู่ในระดับปานกลาง ปัจจัยที่มีความสัมพันธ์กับคุณภาพชีวิตอย่างมีนัยสำคัญทางสถิติ คือ สถานภาพสมรส อาการของการหมดประจำเดือน ความรู้สึกมีคุณค่าในตนเอง แรงสนับสนุนทางสังคมและรายได้ครอบครัว ส่วนปัจจัยที่ไม่มีความสัมพันธ์กับคุณภาพชีวิต คือ ระดับชั้นยศ อายุ ระดับการศึกษา จำนวนบุตรที่อยู่ในครอบครัว โรคประจำตัว ระยะของการหมดประจำเดือน และการเป็นสมาชิกชมรม

สรุป : จากผลการวิจัยเสนอแนะว่า หน่วยงานที่เกี่ยวข้องควรสนับสนุน ส่งเสริม การพัฒนาความรู้สึกมีคุณค่าในตนเอง การสร้างเครือข่ายทางสังคม รวมทั้งการให้บริการโครงการส่งเสริมสุขภาพ เพื่อยกระดับคุณภาพชีวิตของข้าราชการหญิงวัยกลางคนของกองทัพเรือ

คำสำคัญ : หญิงวัยกลางคน, คุณภาพชีวิต, ความรู้สึกมีคุณค่าในตนเอง

จรวยพร สุภาพ, วิชชุกาญจน์ มังกร,
ระวิวรรณ แสงฉาย, ปรารถนา สถิตย์วิภาวี
จดหมายเหตุทางแพทย์ ฯ 2546; 86: 1015–1023

* ภาควิชาอนามัยครอบครัว, คณะสาธารณสุขศาสตร์ มหาวิทยาลัยมหิดล, กรุงเทพ ฯ 10400
** แผนกเวชศาสตร์ป้องกัน, โรงพยาบาลสมเด็จพระปิ่นเกล้า, กรุงเทพ ฯ 10600
*** ภาควิชาชีวสถิติ, คณะสาธารณสุขศาสตร์ มหาวิทยาลัยมหิดล, กรุงเทพ ฯ 10400
† การวิจัยนี้ได้นำเสนอในการประชุม 10th World Congress on Menopause ณ กรุงเบอร์ลิน ประเทศเยอรมนี วันที่ 10–14 มิถุนายน 2545