

*Full Length Research Paper*

# Differences in strategies for coping with menopausal symptoms in full-time workers and part-time workers in Japan

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Working hours and working conditions are different for full-time workers and part-time workers. In this study, it was hypothesized that the strategies for coping with menopausal symptoms, such as hot flashes, night sweats and insomnia, and the proportion of women receiving clinical care differ between full-time and part-time workers. Four hundred and eighty-seven Japanese female workers aged 45 to 60 years responded to a health questionnaire about their understanding of menopause and their strategies for coping with menopausal symptoms. Based on the surveyed responses, the proportions of women with menopausal symptoms were 43.0% (80/186) in full-time workers and 48.2% (145/301) in part-time workers. There was no significant difference in the female worker response rate, nor were there significant differences in the proportions of full-time workers and part-time workers who had an understanding of menopause causes and treatments and who were able to cope with menopausal-related symptoms. However, there were significantly more full-time workers than part-time workers who received routine clinical care and who visited a hospital. On the other hand, significantly more part-time workers than full-time workers exercised and took dietary supplements as a means of coping with their symptoms. There are differences between female full-time and part-time workers regarding the strategies employed for coping with menopausal symptoms. The proportion of women receiving clinical care for their symptoms is greater among full-time employees than part-time employees. A physical examination can be a valuable opportunity for working women with menopausal symptoms to receive advice from a doctor or a nurse practitioner.

**Key words:** Menopause, coping strategy, full-time workers, part-time workers.

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## INTRODUCTION

In 2007, the employment rate for Japanese females aged 15 to 64 years was more than 60%, and by 2013, this percentage had increased to 62.5% (SBJ, 2013). In 2011,

the proportion of female part-time workers reached 45.9% (MHLW, 2011). Recently, part-time work has become a more popular option and has enabled Japanese women

to maintain a balance between work and family life. In Japan, various types of female employment can facilitate greater equality by providing opportunities for women to demonstrate their ability to achieve a work-family life balance.

Yoshii and Yamazaki (1999) reported that working conditions influence the status of health, though the effects of working conditions on menopausal symptoms are unclear. Researchers have shown that the frequencies of hot flushes and vaginal dryness in part-time workers were greater than those in full-time workers (Li et al., 2003). Previously, it was reported that the association of job-related stress with menopausal symptoms was different in full-time workers and part-time workers (Matsuzaki et al., 2017).

Ways for coping with menopausal symptoms such as hot flashes, night sweats and insomnia may be different according to occupation. For example, ways for coping with menopausal symptoms were previously reported to be different between nurses and general workers and that both the proportions of nurses and general workers who required a hospital visit were less than 30% (Matsuzaki et al., 2016). Also, many women in Japan are reluctant to receive hormone replacement therapy (HRT), and the number of women receiving HRT for menopausal symptoms has not been increasing. Miwa et al. (2003) reported that 80% of Japanese working women during the menopausal transition felt they were in a poor condition with physical symptoms but that 60% of those women did not visit a hospital and consult with a doctor. It was also reported that only 4.6% of women in Japan visited hospitals for receiving HRT as a treatment for menopausal symptoms (Shiwaku et al., 2001). The proportion of women who received HRT was reported to be less than 10% in general workers (Matsuzaki et al., 2016).

Ways for coping with menopausal symptoms may also be different for full-time workers and part-time workers since working hours and working conditions differ; however, the association between coping with menopausal symptoms and type of employment remains unclear. In this study, it was hypothesized that the strategies for coping with menopausal symptoms and the proportions of women receiving medical examinations differ between full-time workers and part-time workers.

## SUBJECTS AND METHODS

This study was a cross-sectional study in which survey participants were voluntarily recruited from September to December in 2013. Public health nurses interviewed female residents of community in

Tokushima and the study's researchers solicited participation from women working at manufacturing industry and service companies through the staff of those companies. Participants received an information letter that explained the study's purpose, procedures, risks and benefits. Agreement for participation was obtained by having the participants complete the questionnaire and return the form by mail. 950 female workers aged 45-60 years were recruited regardless of menopausal status. These participants completed the health questionnaire. Study participants consisted of full-time and part-time workers including self-employed workers, office workers and regular service workers. For this study, full-time workers refer to workers who worked 40 h per week during legal working hours (from 9 am to 5 pm). The designation of part-time workers refers to workers whose scheduled working hours per week were less than 40 h.

## Questionnaire

A self-administered questionnaire that took about 20 min to complete was designed. The first part of the questionnaire consisted of questions on socio-demographic factors, life style and medical history including questions on age, marital status, family structure, menstrual and menopausal status, drug treatment, current smoking habit and alcohol drinking habit. In the questionnaire, menstrual and menopausal status was divided into premenopause, perimenopause and postmenopause. The second part of the questionnaire consisted of questions on menopausal symptoms using Greene's Climacteric Scale (Greene, 1998), which assesses degrees of menopausal symptoms. Questions were also asked about coping strategies including improvement of lifestyle, appropriate exercise, change in mood, dietary supplements, Japanese herbal medicines and hormone replacement therapy (HRT) and about visiting hospitals for menopausal symptoms and receiving medical examinations. The third part of the questionnaire consisted of questions on understanding the causes of and treatments for menopausal symptoms. The survey instrument assessed the respondent's understanding of menopausal symptoms, causes and treatments as sufficient understanding, some degree of understanding, insufficient understanding, or no understanding. These data were anonymous and de-linked from personal identifiers. Also, consent was obtained from the participants through questionnaires.

## Ethics

The Ethics Committee of Tokushima University Hospital approved the study protocol.

## Statistical analysis

Ages of the participants are shown as means and standard deviations and the significance of differences in ages in each group was evaluated by using the Mann-Whitney U test. Each categorized variable is expressed as number with percentage of proportion. Differences in coping strategies and degrees of understanding of menopausal symptoms between full-time and part-time workers

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were analyzed by the  $\chi^2$  test. All  $p$  values are two-tailed and those less than 0.05 were considered to be statistically significant. Statistical analyses for data evaluation were carried out using SPSS version 21 for Windows.

## RESULTS

### Responses

The overall response rate was 64.5% (613/950). Incomplete questionnaires ( $n=50$ ) were excluded. Women of ages outside the age range in the inclusion criteria ( $n=10$ ) were excluded and nightshift workers were also excluded because of the difference in the daily working environment ( $n=19$ ). In addition, women who had taken hormonal drugs ( $n=7$ ), antidepressant or anti-anxiety drugs ( $n=6$ ), and thyroid hormone and anti-thyroid drugs ( $n=21$ ) were excluded. Women with coronary heart diseases ( $n=5$ ) and women with rheumatoid arthritis ( $n=8$ ) were also excluded since they took medicine. Valid responses were obtained from 186 full-time workers and 301 part-time workers.

### Background characteristics of the subjects

Of the 487 general workers, 225 women (46.2%) had experienced menopausal symptoms. There was no significant difference between the percentages of full-time workers and part-time workers who experienced menopausal symptoms (43.0% vs. 48.2%). The scores for total menopausal symptoms and clusters of menopausal symptoms (psychological, somatic, vasomotor and sexual factors) were not significantly different between the 80 full-time workers and 145 part-time workers (data not shown).

As shown in Table 1, the mean age of the part-time workers was significantly higher than that of the full-time workers. There were no significant differences between full-time workers and part-time workers in marital status, family structure, caring for their parents, current smoking habit and alcohol drinking habit. Also, the proportions of women who were supported by their family and their friends were not significantly different in the two groups.

### Comparison of strategies for coping with menopausal symptoms in full-time and part-time workers

As shown in Figure 1, of the 225 women who experienced menopausal symptoms, the proportion of full-time workers who received health examinations (62.5%) was significantly ( $p<0.05$ ) greater than that of part-time workers (45.5%). Of the women who experienced menopausal symptoms, 49.3% coped with the symptoms.

There was no significant difference ( $p>0.05$ ) between the proportions of full-time workers (47.5%) and part-time workers (50.3%) who coped with these symptoms. The proportion of women who visited hospitals for menopausal symptoms was 23.6%, with the proportion of full-time workers visiting hospitals (32.5%) significantly ( $p<0.05$ ) being greater than that of part-time workers (18.6%). On the other hand, there were significantly more part-time workers than full-time workers who exercised and took dietary supplements to cope with menopausal symptoms. There was no significant difference ( $p>0.05$ ) between the proportions of full-time workers (10.0%) and part-time workers (6.2%) who had received HRT.

### Comparison of the degrees of understanding of menopausal symptoms in full-time and part-time workers

As can be seen in Table 2, 12.5% of full-time workers and 8.3% of part-time workers responded "understand sufficiently" for causes of menopausal symptoms, and there was no significant difference in these proportions. The table also shows that 8.8% of full-time workers and 5.5% of part-time workers responded "understand sufficiently" for treatments of menopausal symptoms, and there was no significant difference in these proportions.

## DISCUSSION

In the present study, it was found that there were more full-time workers than part-time workers receiving medical care and that there were more part-time workers than full-time workers who exercised and took dietary supplements in order to cope with menopausal symptoms.

Women who receive medical care may be able to obtain more information on treatments for menopausal symptoms. According to the Industry Safety and Health Law in Japan, employers must ensure that full-time employees receive regular health examinations (Ordinance on Industrial Safety and Health Articles, 2009). However, this is not the case for part-time workers for whom the number of working hours per week is less than 30 h. Since it appears that part-time workers have fewer opportunities to receive a clinical assessment, it may be difficult for them to obtain professional information on managing menopausal symptoms as health examinations provide a face-to-face opportunity for physicians or nurse practitioners to offer appropriate professional advice. An association was not found between receiving health examinations and visiting hospitals. Japanese women are likely to endure their symptoms without receiving treatment even if they have severe menopausal symptoms. Symptoms such as hot flashes and night

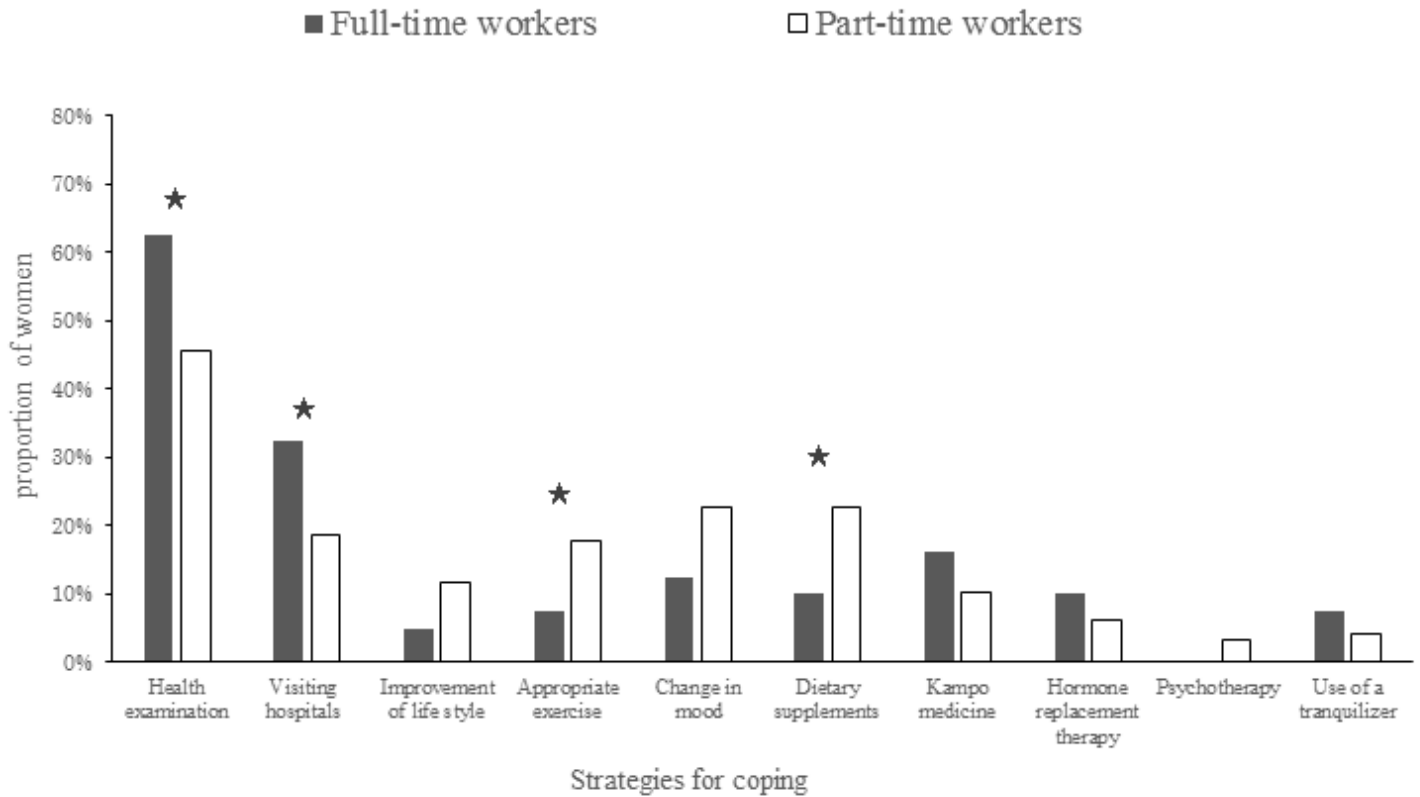
**Table 1.** Baseline characteristics of the subjects.

Variables		Full-time workers	Part-time workers	p value
		(n=80)	(n=145)	
Age (years) <sup>a</sup>		51.1(4.1)	53.0(3.9)	0.003
Menstrual cycle (No, %)	Pre-menopause	22(27.5)	13(9.0)	0.001
	Peri-menopause	16(20.0)	25(17.2)	
	Post-menopause	42(52.5)	107(73.8)	
Greene's climacteric score <sup>a</sup>	Total	13.7(6.3)	13.6(6.7)	0.619
	Psychological	7.5(4.2)	7.3(4.1)	0.903
	Somatic	3.4(2.7)	3.5(2.7)	0.803
	Vasomotor	1.5(1.3)	1.3(1.3)	0.219
	Sexuality	1.3(0.6)	1.5(0.6)	0.122
Marital status (No, %)	Married	65(81.3)	126(86.9)	0.708
	Single	3(3.7)	3(2.1)	
	Divorce	9(11.3)	12(8.3)	
	Others	3(3.7)	4(2.7)	
Family structure (No, %)	Single	7(8.8)	6(4.1)	0.393
	Husband and wife	10(12.5)	17(11.7)	
	Two households	37(46.2)	80(55.2)	
	Three households	21(26.2)	29(20.0)	
	Others	5(6.3)	13(9.0)	
Caring for their parents (No, %)	Yes	18(22.5)	26(17.9)	0.483
	No	62(77.5)	119(82.1)	
Support by family and friends (No, %)	Much	59(73.7)	109(75.2)	0.248
	A little	18(22.5)	35(24.1)	
	No	3(3.8)	1(0.7)	
Current smoking (No, %)	Yes	11(13.8)	10(6.9)	0.099
	No	69(86.2)	135(93.1)	
Alcohol drinking habit (No, %)	Yes	24(30.0)	38(26.2)	0.538
	No	56(70.0)	107(73.8)	

a: Mean (SD). The values in parenthesis excluding age are percentages.

sweats lead to insomnia and general fatigue and are associated with the occurrence of psychological symptoms such as depression. Visiting hospitals may not be needed if a doctor or nurse practitioner is consulted at the health examination. Some workers are unwilling to visit hospitals even if they are recommended to do so. Yokochi et al. (2015) reported that women have various emotions and conflicts until they visit hospitals after experience of menopausal symptoms. Satoh and Ohashi (2005) reported that 19.7% of women believe that

menopausal symptoms are not symptoms of a sickness and prefer to wait until the menopausal symptoms disappear. Various studies showed that women with severe menopausal symptoms have risks of a decrease in vascular function and insulin resistance in the future (Thurston et al., 2012; Bechlioulis et al., 2010). During health examinations, physicians and/or nurses or nurse practitioners can provide information on appropriate treatments and make appropriate referrals for advanced care as needed.



**Figure 1.** Comprises of strategies for coping with menopausal symptoms in full-time workers and part-time workers (n=225). Solid column: full-time workers, Open column: part-time workers \*p<0.05 vs part-time workers.

**Table 2.** Comparison of degrees of understanding regarding menopausal symptoms in full-time workers and part-time workers.

		Full-time workers(n=80)	Part-time workers(n=145)	X <sup>2</sup> P value
Causes of menopausal symptoms (No, %)	Sufficient understanding	10(12.5)	12(8.3)	0.446
	Some degree of understanding	44(55)	86(59.3)	
	Insufficient understanding	16(20)	37(25.5)	
	No understanding	5(6.3)	5(3.4)	
	missing	5(6.3)	5(3.4)	
Treatments of menopausal symptoms (No, %)	Sufficient understanding	7(8.8)	8(5.5)	0.521
	Some degree of understanding	34(42.5)	65(44.8)	
	Insufficient understanding	30(37.5)	53(36.6)	
	No understanding	4(5)	14(9.7)	
	missing	5(6.2)	5(3.4)	

The number of part-time workers with menopausal symptoms who visited hospitals was less than that of full-time workers. Since it has been reported that income

per hour for female part-time workers was only 66.4% of that for female full-time workers in Japan (Ministry of Health, Labour and Welfare Employment Equality

Children and Families Bureau, 2002), it appears that low-income part-time workers select less costly and more convenient interventions to address their symptoms. Examples of these interventions include adopting an exercise regimen and/or identifying strategies that mitigate mood swings. Furthermore, it might be difficult for part-time workers who have unstable forms of employment to take time off. In an investigation by the Ministry of Health, Labour and Welfare in Japan, 28.1% of part-time workers responded that it was difficult for them to take a paid vacation (MHLW, 2011). The investigation showed that paid vacation was unavailable for 11.3% of regular employees and 65.6% of part-time workers. Part-time workers mainly use paid vacation for nursing of a disease and/or injury in their family, for housework, and for child rearing (JILPT, 2010). Not taking time off for their own reason may be a reason for the small proportion of part-time workers who visited hospitals.

In Japan, there is a need for additional information regarding treatments for menopausal symptoms. Since hot flashes and night sweats may lead to insomnia, general fatigue and depression, women with severe symptoms need to receive appropriate treatments. Thus, women who have sufficient knowledge and understanding of the many treatments for menopausal symptoms would probably visit hospitals and receive appropriate treatments. However, based on our survey findings, only 5 to 8% of full-time workers and part-time workers reported having a good understanding of these options. Arima (2009) reported that only about 2% of women receive HRT in Japan, a much lower percentage than that of women in other countries. Other research noted that 80% of Japanese who worked during the menopause felt that their health suffered as a result of their menopausal symptoms. Sixty percent of these women did not visit a hospital or consult with their clinical provider (Miwa et al., 2003). If working women can have an opportunity to access clinical care for menopausal-related symptoms, they may have a better awareness of the many available treatment options. Åstrand et al. (2007) suggests that it is important for health care providers to be aware of women's preconceptions regarding menopause so that they can communicate optimally and support middle-aged women in different health care situations.

In the present study, the number of full-time workers who received HRT was more than that of part-time workers, but there was no significant difference. Much attention has been given to the management and treatment of menopausal symptoms in the workplace in many countries (Griffiths et al., 2016; Jack et al., 2016). Part-time workers may access drugstores where they can consult with pharmacists rather than visiting hospitals because of not having sufficient time. Part-time workers may also take dietary supplements without hesitation. Nakanishi (2014) reported that women are increasingly

interested in their health and are beginning to take dietary supplements based on changes in their menstrual status. The author recommends that nurses should provide the necessary health information to women early in their middle years before the climacterium occurs. Gollschewski et al. (2008) reported that there is a need for more information and education about the safety and efficacy of complementary and alternative medicines during menopause as well as strong participatory relationships between women and their health care providers.

This study has several limitations. The authors failed to clarify more causal types of employment such as office work or differentiate the various types of employment. The means for coping with menopausal symptoms that were selected by the service providers were also not considered in this study. Lastly, due to the survey's self-reported findings, the accuracy of responses could not be objectively assessed.

## Conclusion

The strategies for coping with menopausal symptoms as well as the proportions of women receiving medical examinations and visiting hospitals were different between full-time workers and part-time workers. A clinical examination may be a valuable opportunity for working women with menopausal symptoms to receive advice from a doctor.

## CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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