

A Study into the Effects of Stress on Woman's Health

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Abstract: The purpose of this study was to examine in a sample of working and nonworking women, the relationship between stress and working status. Data were gathered from 540 women living in Turkey. The respondents were selected randomly. Women were informed that the purpose of the study was to gather information on stress and each participant attended a face-to-face interview. Mean, standard deviation, t test were performed. Stress Symptoms Scale, Stress Related Factors and total Stress Score were significantly associated with state of working. Family issues ($p>0.001$), environmental issues ($p<0.001$), social self issues ($p<0.001$), individual role issues ($p<0.001$) and financial issues ($p<0.001$) in working women, have a higher score than that of the non-working women. Working women in the subscales of immune system ($p<0.001$) and susceptibility to stress scale have a higher average score than that of the non-working. It has been determined that total stress score of working women is higher compared to non-working women and that there is a significant difference between woman's working status and total stress scores ($p<0.001$). Working women have high levels of stress than non-working women. The results suggest that increased stress was associated with working status of Turkish women. Subjects were administered a questionnaire containing demographic profile, Stress Scale were used for descriptive purposes.

Key words: Stress • stress symptoms • stress related factors • total stress score • working status health

INTRODUCTION

Stress affects health not only through direct psychophysiologic processes, but also by modifying behaviors that affect health, such as physical exercise, smoking and life quality[1].

Stress is the physiological reaction which occurs when people perceive an imbalance between the level of demand placed upon them and their capability to meet those demands. Most people view stress as a negative feature in their lives [2,3]. But there might be individual differences in response to stress. Stressor-induced physiological, psychological and behavioral mechanisms (e.g. functional disturbance in hormone production; anxiety; risk-taking behavior) are activated, leading to work-stress-related mental and physical disease; and decrease in well-being, satisfaction and quality of life[4].

Today, in order to protect the life standard in a fixed level, many families are dependent on women's working in a paid work [5]. Usually the work and family responsibilities become complicated and the unshared work load of women by their spouses result in stress [6-9]. The contribution of men to household duties decrease the stress experienced by women. Due to family and household duties, spouses' professional improvement and successes aren't hindered [10].

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The work load cause women to be affected from stress. Even when women don't work outside home, they are confronted with high levels of stress. Such roles of women as carrying out household duties, motherhood and wife cause some situations as overloading of role and role conflict and may become a reason of stress [11-15]. Stress is related to perceiving the world as manageable or unmanageable. The practice of positive thinking, selecting and reflecting principles on life will decrease stress and will strengthen the manageability of life [4,16-18].

Everyone experiences stress throughout life. Despite a long history of research on stress and its effects, stress on women health has only recently been taken into consideration in Turkey. The impact of stress on women may be severe due to the fact that they often have a more vulnerable physical and psychological health status and fewer resources to buffer the effects of stress. The aim of this study was to examine the effects of stress on health in working and non-working women.

MATERIALS AND METHODS

Randomly selected working and nonworking women aged 20 to 50 years from 6 primary schools' teachers and their students' mothers (n: 270 nonworking women, n: 270 working women) which are living in different regions in Ankara, Turkey, completed the survey in March-May 2004. Women were briefed about the purpose of the study and about right to participate in the study.

Ninety-two percent of the women volunteered to complete the survey. The questionnaire was administered to women and took 25 to 30 minutes to fill in. A total of 786 analyzable questionnaires for women were obtained.

Survey methods: After a pilot testing on 80 women and revision, the survey consisted of following:

1. Demographic questions that included age, marital, education and working status.
2. Asking women to rate of their own consumption of alcohol, cigarettes, tea, coffee.
3. Stress Scale Turkish version [19]: This scale is used to measure 13 primary symptom dimensions and 3 global indices. In the present study, only the Stress Symptom Scale (total 70 questions, 10 each on muscle system, parasympathetic nervous systems, sympathetic nervous systems, emotional, cognitive, endocrine system and immune system; and answers are on a 5-point scale from 0: "not at all" to 4: "extremely"). Stress Related Factors (total 141 questions, family life (30), individual role (25), social self (19), environmental (14), financial/ economic (15), job (38) answers are on a 5 point scale from 1: "not at all" to 5: "extremely". Susceptibility to Stress Scale (20 questions, answers are on a 5-point scale, from 0: "extremely" to 4: "not at all") were used [19,20].

In this study, Stress Scale internal reliability coefficient (Cronbach's alpha) was 0.75.

Statistical analyses: Analyses were performed using Statistical Package for the Social Sciences (version 11.5, SPSS Inc, Chicago).

The demographical characteristics of the respondents as percentage values of the variables of age, educational level, marital and working status were shown. The effect of the stress on the health of woman was analyzed with t test whether it was meaningful statistically depending on the variable of the working status of woman as Stress Related Factors, Stress Symptoms and Susceptibility to Stress Scale, Total Stress Score. Cronbach alpha values were determined to assess the interitem reliability of the final scores (Cronbach alpha: 0.75).

Means and standard deviations were calculated for all variables.

RESULTS

The demographic characteristics of respondents are shown in Table 1. The study consist of 270 working, 270 non-working women with a mean age 36.2 ± 7.02 years old (range 20-50). Working women were the full-time workers of school, communication service, government, all non-working women were housewife and 41.1% of them were graduated primary school, 42.2% of them were university and 80.6% were married.

In the Table 2 are shown mean, standard deviation, t values and the value of significance of Stress Related Factors, Stress Symptoms Scale and Susceptibility to Stress Scale of working and non-working women.

The working women of family issues have a higher average score compared to non-working women ($p > 0.001$). There is significant differences between working and non-working women's, environmental issues (43.8, 36.22; $p < 0.001$), social self issues (46.21, 32.60; $p < 0.001$), individual role issues (65.10, 53.04; $p < 0.001$) and financial issues (41.85, 31.51; $p < 0.001$) respectively.

Table 1: Demographic characteristics of women (n = 540)

Demographic characteristics	Working Women n = 270		Non-working Women n = 270		Total n = 540	
	n	%	n	%	n	%
Age (year)						
= 25	78	28.9	42	15.6	120	22.2
26-35	117	43.4	84	31.1	201	37.2
36-45	63	23.3	105	38.9	168	31.1
46 =	12	4.4	39	14.4	51	9.5
Marital status						
Married	177	65.6	258	95.6	435	80.6
Single	69	25.5	12	4.4	81	15.0
Divorced	24	8.9	-	-	24	4.4
Education status						
Primary	30	11.1	192	71.1	222	41.1
High school	27	10.0	63	23.3	90	16.7
University	213	78.9	15	5.6	228	42.2

Table 2: Stress scale of t test results depending on the working status of woman (n = 540)

Stress scale	Working women n = 270		Non-working women n = 270		t	p
	\bar{x}	S	\bar{x}	S		
Stress related factors						
Family issues	68.11	32.31	60.60	29.76	1.62	0.107
Environmental issues	43.83	12.76	36.22	14.87	3.68	0.000*
Social self issues	46.21	20.78	32.60	19.48	4.53	0.000*
Individual role issues	65.10	21.67	53.04	25.97	3.38	0.0001*
Financial issues	41.85	16.49	31.51	18.46	2.43	0.016*
Stress symptoms						
Muscle system	19.85	12.67	17.16	12.21	1.44	0.149
Parasympathetic nervous system	20.96	11.77	18.54	11.42	1.40	0.163
Sympathetic nervous system	18.65	13.56	16.92	12.97	0.87	0.382
Emotional system	29.50	13.37	29.27	11.67	0.11	0.906
Cognitive system	25.86	12.73	22.37	13.34	1.79	0.074
Endocrine system	15.17	10.54	12.42	10.63	1.74	0.083
Immune system	17.03	11.28	12.45	11.66	2.67	0.008*
Stress aptitude	74.70	10.00	74.18	10.93	0.32	0.744
Total score	581.16	168.76	422.96	147.10	6.70	0.000*

*P < 0.001

It was observed that working women have a higher score at the muscle system (19.85, 17.16), parasympathetic nervous systems (20.96, 18.54) and sympathetic nervous systems (18.65, 16.92), emotional (29.50, 29.27), cognitive (25.86, 22.27) and endocrine (15.17, 12.42) systems compared to non-working women respectively. As a result of t test, it was seen that there has been no meaningful difference between working status of the subjects and experience of stress symptoms ($p>0.001$). But the average score of working women is higher than non-working women's immune system ($p<0.001$).

Susceptibility Stress Scale in working women (74.70) have a higher score compared to non-working women (74.18). There is no significant difference between the working status of women and Susceptibility Stress Scale ($p>0.001$).

It has been observed that Total Stress Score of working women (581.16) is higher compared to non-working women (492.96). It has been determined that there is a significant difference between the working and non-working women in Total Stress Score ($p<0.001$).

DISCUSSION

For the past few decades, a growing body of research has documented that jobs or organizational roles which are associated with overload, excessive demands and many responsibilities lead to a high risk of adverse health outcomes [21].

In Turkey, there is a traditional family life. But nowadays the number of working women are getting increase. Therefore women are responsible for the household duties and work in paid work. Women are more sensitive than their spouses to the equality of their family relationships and tend to devote enormous amounts of emotional energy to maintain intimate relationships [22]. Arpacı [23], showed that woman has a large workload at home mostly, that she does the same work every day makes the life monotonous, she has to do all the house work for home management and the continuity of family life. The value of studying has revealed the family problems dealing with paid work in terms of coping with the factors of stress in the context of some life hardships or stress factors and the existence of useful sources Voydanoff and Kelly, [24]. Warner [25] said that constant stress at work or at home may be more dangerous for women than men. Kim *et al.* [26] found that the relationship of work stress and family stress to the health of women in Korea. There was a significant positive relationship between social support and perceived health status, but significant negative relationship between perceived health status and work stress as well as family stress.

Family stress was a major variable not only for explaining the variance but also for correlating with health status.

In the muscle system, parasympathetic nervous system, sympathetic nervous system, emotional, cognitive and endocrine systems of the stress symptoms, working women have a higher score compared to the non-working women. The result manifest that women's experiencing stress symptoms is not affected by working status and that both working and non-working women experience stress symptoms [27]. Krantz *et al.* [28] were to analyse how paid work, unpaid household task, child care, work-child care interactions and perceived work stress are associated with reported symptoms in male and female white-collar employees. The frequency and severity of symptoms was higher in women than men. Employed women's health was determined by the interaction between conditions at work and household duties, whereas men responded more selectively to long working hours. However, childcare appeared to have a buffer effect on the risk of a high level of symptoms in men working hours. Working life and private circumstances and the interplay between them need to be taken into account to curb stress-related ill health in both men and women.

Some of the pathways linking psychosocial factors (job stress) are elevating of physiological variables, direct and indirect effects of adverse risk behaviors such as smoking, lack of physical exercise and health care habits and heightened emotional states, such as anger, tension and anxiety [21]. Hughes *et al.*, [17] found that perceived stress score of women with physical disabilities was significantly higher than among women in general. The levels of stress found in this study can have important health consequences and should not be dismissed or overlooked. Zeytinoglu *et al.* [29] argued

that stress is a major occupational health problem for female workers in retail and consumer services, due to the working conditions in part-time and casual jobs, the psychosocial work environment and the gendered work environment in the retail trade and consumer services. Stress from part-time and casual jobs results in repetitive strain injuries, migraine headaches and feeling of self-esteem, low motivation and job dissatisfaction for women.

In present study the status of Susceptibility of Stress Scale of the women is not affected by working status and both working and non-working women are vulnerable to stress. Orth-Gomer and Leineweber [30] proposed that double exposure to stressors at work and from family are associated with increased coronary risk in women and that the same exposures are accompanied by depressive feeling. Double exposure to stress from work and family was accompanied by the highest risk. Depressive feelings were frequent and they were more closely related to family than to work stress in women. In healthy women, both stressors, but in particular their combination, led to depressive symptoms.

CONCLUSION AND RECOMMENDATIONS

In this study, working women experience much more stress than non-working women and are more affected compared to them. Half of the women included in the study work in a paid job whereas the other half don't work. Turkish society is a patriarchal community and works at home are done by woman. While man gives a support to the household work, the help is not at a desired level. That most of the works are done by woman causes her to experience stress. This can explain why the stress level of working women is higher than that of non-working women.

Stress could contribute to long-term diseases risk. The stress related results can be used in two ways;

1. To promote the regular exercise, rest, balance diet, mediation, social support
2. To develop better stress managing methods at work and in home that are consistent with women's stress levels. This would increase women's personal awareness and encourage them to manage stress symptoms, stress related factors, stress source and susceptibility stress and therefore reduce long term risk of impair life quality among women.

The main finding from this population-based study of general healthy women, using comprehensive stress assessment, was that increased stress was strongly associated with working/nonworking status. There are a few limitations of research; there may be social response bias, as some subjects would be less likely to report stress. Also women's monthly income should be measured which might influence health, life quality and stress. Nevertheless, additional research in different women samples in need to support the research findings.

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