



Stress and Fatigue among Lactating Female Medical Employees

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Abstract:

Introduction: Working lactating women experience stress and exhaustion, which has an impact on the family's overall quality of life and raises the likelihood of workplace accidents.

Objective: The purpose of this research was to find out to what extent lactating female medical field personnel are impacted by stress and fatigue, as well as to investigate the link between fatigue and stress.

Methods: The fatigue assessment scale and the perceived stress scale were used to evaluate stress and fatigue of 60 breastfeeding medical females who were employed in the field.

Results: The findings revealed that lactating medical sector personnel experience high levels of stress and fatigue, as well as a substantial positive correlation between fatigue and stress.

Conclusion: There was a substantial positive association between fatigue and stress in employed lactating women, and there was a high degree of fatigue and stress among employed female doctors who were breastfeeding, so it is important to find effective treatments that can solve the problem.

Key words: Relationship, fatigue, occupational stress, lactation, doctor.

1.Introduction:

Stress is described as the process through which external events trigger a cascade of cognitive and physiological responses that have an impact on one's well-being. The stimuli that cause these processes are known as stressors, and the individual's responses are known as strains (1).

Working mothers are more stressed about parenting than non-working mothers. Now is the moment. Working mothers are rushing to their jobs in order to live a better and more quiet living. However, in order to keep her job, working mothers must deal with a variety of issues such as job stress, burnout, excessive job participation, and marital conflict, all of which contribute to parenting stress (2). Also, Professional doctors report high levels of stress, which can lead to personal tragedies, inadequate patient treatment, and societal losses (3).

According to a research of stress among health care professionals (4), 59 percent of the study population experienced moderate stress, and only 46 percent of those who controlled job stress well showed symptoms, while 74 percent of those who did not show good stress management had symptoms. As a result, it shows that improved stress management reduces the risk of stress-related health problems.

Body aches and pains could be a sign of a stressor. Chronic stress has been linked to an increase in the prevalence of musculoskeletal illnesses and a decrease in female workers' productivity. According to a study looking at the link between musculoskeletal illnesses and stress, 67 percent of people have at least one musculoskeletal disorder (5).

Stress is linked to a number of chronic disorders. The capacity to precisely measure stress might aid in better characterizing the stress-health relationship. And, more importantly, it would aid in the evaluation of therapies aimed at lowering stress levels. The perceived stress scale-10 (PSS-10) can be used to evaluate perceived stress because it is brief and simple to administer to women seeking medical assistance.

The scale's ten components evaluate respondents' feelings and thoughts to determine how unpredictable, unmanageable, and stressful their current life circumstance is. The PSS-10 has been translated into classical Arabic, making it a useful tool for academics working on stress studies in a variety of Arabic-speaking groups (6).

Fatigue is a condition of physical and mental burnout (7). Fatigue can emerge as a result of issues such as excessive job demands and limited job control (8). In addition, mothers who care for infants are more exhausted than women with similar qualities who do not care for infants. More importantly, fatigue does not diminish with the age of the child; rather, it remains constant for moms with children up to the age of 26 months (9). As well as Working mothers are also more tired than mothers who do not work (10).

According to the results of a study done by **Cai et al., 2018**, 85% of female medical employees participated in the study suffered fatigue (11). Chronic fatigue has a negative impact on one's health and performance (12), besides, raising the danger of accidents and job disability (13,14).

The fatigue assessment scale (FAS) is a measure that assesses the psychological and physical elements of fatigue and assigns a single total score to identify its severity. It has good psychometric qualities and is sensitive to change when evaluating interventions. To research fatigue in mothers of newborns and small children, the FAS is a sufficiently unidimensional, valid, and reliable tool (15).

The study's goal was to determine the degree of stress and fatigue severity in lactating medical field female employees as well as to establish the association between fatigue and stress as the association between stress and fatigue could be useful in developing multidisciplinary interventions aimed at improving health-related outcomes.

2. Materials and Methods:

The study was carried out on 60 lactating medical field females working at the Ministry of Health and Population in the AlSharqia governorate, who were asked to complete two assessment questionnaires to establish whether or not they suffer from stress and exhaustion, as well as the severity of both.

In addition, data collection forms were provided to capture demographic information. All participants gave their informed consents, and the protection of the data was taken very seriously. All of them were working in the medical field, lactating, having at least one year of work experience and working between 18 and 30 hours per week, also they were between the ages of 25 and 35 years old.

2.1. Assessment measures:

2.1.1. Stress measure:

To determine the level of stress, perceived stress scale 10 was used. The PSS-10 is a ten-item self-report measure (16) designed to determine "how unpredictable, unmanageable, and overburdened people find their life." Each item on the PSS-10 is assessed on a 5-point Likert Scale, with 0 (never) to 5 (always) (very often). The PSS-10 had six positively phrased items (items 1, 2, 3, 6, 9, and 10: Positive factor) and four negatively worded items (items 4, 5, 7, and 8: Negative factor). During the analysis, negative phrased items were re-recorded. The total score ranges from 0 to 40, with higher scores indicating higher degrees of stress perception. A score of 0 to 13 is considered low stress. A score of 14 to 26 is considered moderate stress. A score of 27 to 40 indicates a high level of perceived stress.

2.1.2. Fatigue assessment

To determine the level of fatigue, the fatigue assessment scale was performed. The Fatigue Assessment Scale (17) developed a simple 10-item self-reported questionnaire to assess fatigue in the general population. The fatigue assessment scale consists of ten questions, five of which deal with physical fatigue and five of which (question 3 and 6-9) deal with mental fatigue. Responses extend on a five-point scale from never to always, items 4 and 10 scores are reversed, and the overall FAS score ranges between 10 and 50, with fatigue causing an increase in the score. Even if the individual had no objections at the time, there must be a response to each and every question. Responses to questions number 4 and 10 should be documented (1=5, 2=4, 3=3, 4=2, 5=1). An overall FAS score of less than 22 shows no weariness, whereas a score of 22 or higher indicates exhaustion. Scale scores 22-34 refer to fatigue, scale scores > or = 35 indicate extreme fatigue. The answers to questions 4 and 10 were written down (5=1, 4=2, 3=3, 2=4, 1=5), There is no fatigue if the overall FAS score is less than 22.

3. Results:

3.1. Subjects characteristics:

Table (1) Showed the subject characteristics of the participated subjects.

3.2. The scores of stress and fatigue of participants in the study ranged between moderate and sever (**Table 2**).

3.3. The correlation between PSS-10 and FAS was moderate positive significant correlation ($r = 0.39$, $p = 0.002$) (**Figure 1**).

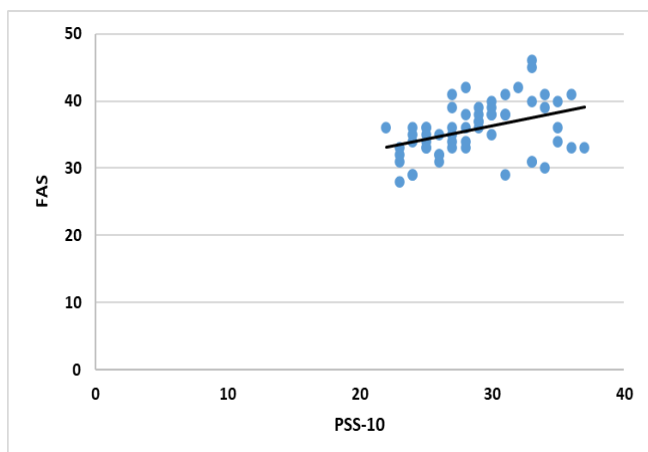
Table 1. Basic characteristics of participants.

Age (years)	
Mean	29.2
Standard Deviation	2.8511
Body mass index (Kg/m²)	
Mean	27.4687
Standard Deviation	1.5172
Occupation	
Physical therapist	(41) 68.334%
Dentist	(4) 6.667%
Pharmacist	(14) 23.33%
Physician	(2) 3.33%
Qualification	
B.SC	(56) 93.334%
Master	(4) 6.667%

Table 2: Stress and fatigue levels in lactating female doctors

	Stress	Fatigue
moderate	(20) 33.334%	(24) 40%
sever	(40) 66.667%	(36) 60%

Figure 1: Relationship between PSS-10 and FAS:



4. Discussion:

This research reveals that lactating medical female employees experience a high level of stress and fatigue because being a breastfeeding mother means having to balance work and home life, which causes more stress and fatigue, especially if mothers work in jobs that require a lot of physical and mental effort, such as medical field occupations. A second finding indicated a moderate significant relationship between fatigue and stress.

This research is supported by the findings of research (18) conducted on the assessment of stress among dentists. The cross sectional study included 105 dentists from across Bosnia and Herzegovina, aged 25 to 45, who used the PSS 10 scale to assess their stress levels. Based on the completed questionnaire and the responses provided by the respondents, the results revealed a high degree of stress.

Also, supported by (3) a study was conducted on 520 resident doctors at a tertiary care general hospital in Ahmedabad between January and June 2016, The Depression, Anxiety, and Stress Scale, a 42-item questionnaire, was used to determine the prevalence of anxiety, depression, and stress.

According to the findings, 24 percent of resident doctors are stressed.

Also, agree with (11) a cross sectional study on 1608 female medical personnel at 54 hospitals in Zhuhai, China aimed to find out how common fatigue is and what factors are linked to fatigue among female medical personnel. The Chalder Fatigue Scale and the Symptoms Checklist-90-Revised were used to assess psychiatric symptoms and fatigue, respectively. Approximately 83 percent of those polled said they had been tired in the previous week. Participants aged 30–39 years old had a higher risk of fatigue than those aged older or younger; longer sleep time was associated with a reduced risk of fatigue ($OR = .35$), while a tense physician-patient interaction was associated with a higher risk of fatigue ($OR = 1.77$).

In addition, Not only medical field female employees who suffer fatigue also males suffer work related fatigue too according to A cross-sectional questionnaire study (19) of 1729 full-time doctors working in 24 tertiary institutions in China's eastern, central, and western impoverished regions was performed. The goal of this study was to find out how common work-related accumulated fatigue is among doctors and what factors contribute to it at China's tertiary hospitals.

The "Self-diagnosis Checklist for Assessment of Workers' Accumulated Fatigue," which was graded on a scale matrix, was used to categorize accumulated fatigue into four stages. According to the findings, around 78.8% of respondents indicated a "high level" of work-related cumulative fatigue, with 42.0 percent

reporting a "very high" level. Male doctors, those between the ages of 30 and 45, and those with a professional title had higher levels of accumulative fatigue than others. Low pay and bad working conditions (particularly in the western region) were similarly linked to high levels of work-related cumulative fatigue ($p < 0.05$).

The findings of this study are supported also by (20) a study to determine the link between students' perceptions of stress and fatigue. 140 Students participated in the study. The result confirmed that levels of stress predicted levels of fatigue, The PSS-10 and PFS assessments indicated a positive connection, implying that higher stress levels were linked to increased fatigue among chiropractic students ($r = .575, p < .001$). Women in the study had much higher levels of stress and fatigue than men.

And agree with (21) a study examined cross-sectional data of $N = 7,930$ working participants (6,204 full-time and 1,726 part-time employed). Engaged in the Gutenberg Health Study (GHS) from 2007 to 2012 and were evaluated by Copenhagen Psychosocial Questionnaire (COPSOQ). According to the findings, there is a considerable link between fatigue and work-related stress.

Also, supported by (22) investigated whether stress affects fatigue and vice versa, as well as the elements that mediate the correlation. Fifty healthy subjects (31 females, 23.6 3.2 years) completed up to five transient stress and fatigue assessments over the course of five days of exam preparation (exam condition) and five days of a typical semester week (control condition). At the time of awakening, self-report was used to assess sleep quality. Saliva samples were also taken by a subgroup of participants ($n = 25$). According to the findings, fatigue was related to concurrent stress, the reported stress at the previous measurement point, and previous-day stress. On the other hand, fatigue at an earlier time point, previous-day exhaustion and concurrent fatigue, all predicted immediate stress. The link between stress and fatigue the next day was mediated by sleep quality. The stress-fatigue link was not mediated by cortisol or alpha-amylase. Finally, there is a stress-fatigue relationship that is reciprocal.

Also, agreed with (23) a descriptive-correlational study, in which 76 MS patients with an average age of 34.029.42 (16-58 years) were randomly recruited from the Guilan provincial MS association. All patients first filled out a demographic questionnaire, after which they were assessed using depression, anxiety and stress scale (depression, anxiety, stress scale-21), the fatigue severity scale and a quality of life questionnaire (Short Form-36). There was an association between fatigue severity and the patient's age, depression, anxiety, and stress levels ($p < 0.05$), and quality of life ($p < 0.01$), according to correlational analyses.

This study aids identifying levels of stress and fatigue among female medical employees who are lactating, which can aid providing assistance and preventing various complications of mothers' stress and fatigue on their health and the well-being of their entire families. It also aids in being aware of mental and physical problems, which can help limit workplace accidents. The study is limited by its small sample size.

5. Conclusion:

Lactating female medical personnel have high levels of stress and fatigue, and fatigue and stress are strongly associated.

Declaration of interest:

There are no conflicts of interest, financial interests, or benefits from this study, according to the authors.

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