Original Article

PERCEIVED MENTAL STRESS AMONG EMPLOYED AND UNEMPLOYED WOMEN: A COMPARATIVE CROSS SECTIONAL STUDY DURING COVID-19 PANDEMIC

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ABSTRACT

Background: Perceived Mental Stress (PMS) is an inevitable component of life. During COVID-19 pandemic, it's ongoing and unpredictable situation has been increasing PMS among women. This present study was designed to compare the PMS level between employed and unemployed women.

Methods: This comparative cross sectional study was conducted among purposively selected 240 women; of them 120 employed women are bankers, teachers and other sectors employees and 120 unemployed women are housewives. Data were collected from these participants by using a pre tested semi structured questionnaire and PMS was assessed by using Perceived Stress Scale (PSS) Bangla version. The collected data were analyzed by using SPSS software (Version 20) and $p < 0.05$ considered as statistical significant.

Results: In this comparative study, the mean (±SD) score of PMS between employed and unemployed women found 20.0 (±5.48) and 20.5(±5.16) respectively, which was not statistically significant ($p>0.05$). The majority (81.7%) of employed women and (80.8%) of unemployed women suffered from moderate stress which was not statistically significant ($p>0.05$). There exist significant association between PMS and socio-demographic characteristics i.e. educational qualification ($p=0.04$), complete recovery from COVID-19 ($p=0.02$) in employed women; where as in unemployed women monthly family income ($p=0.03$), knowledge on specific treatment of COVID-19 ($p=0.02$) were significantly associated with PMS.

Conclusion: The study revealed no significant difference in PMS between employed and unemployed women and but some associated factors lead them to stressful situation. So, equal emphasis should be given on both employed and unemployed women to prevent perceived mental stress.

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INTRODUCTION

COVID-19 is the public health emergency and whole world is in threat. This unpredictable threat leads to stress. Stress is an unavoidable part of human life which can be both short term and long term with a variety of symptoms. Every person feels any form of stress in his/her daily life routine, but the management of this stress depends on their overall wellbeing [1].

Perceived Mental Stress (PMS) is becoming an inevitable component of life due to increasing complexity and competitiveness in living standard [2]. It can be considered as one of the most influential construct in understanding health and well-being [3]. Perceived stress scale (PSS) is the most widely used psychological instrument for measuring the perception of stress [4].

The workplace of Bangladesh is rapidly changing in according to the economic condition, technology, corporate employment practice and demographic trend of the country. Globalization has strong implication on the attitude of women, their work and health. Now-a-days women have to play dual role as employed

women and housewives. But in tradition major responsibility is to maintain family. Job stress is the occurrence of negative emotions which may damage mental and physical health. Whether women perceive stressful conditions, this stress lead to psychological, physiological or behavioral outcomes and it depends upon individual's perception and situation [5].

Women should not require permission from their spouse to work, but they must need their support. A significant number of women think that they must stay at home rather than achieving success at workforce. Society should not say a housewife is more respected than employed women or vice versa. All should be given equal respect [2] to PMS burden drastically is increasing on both employed and unemployed women. Hence this study is designed to compare the PMS level of employed and unemployed women with a view to provide information regarding the associated factors of it.

METHODS

Study design and setting

This comparative cross sectional study was conducted among employed women and unemployed women for one-year duration from 1st January to 31st December 2020 at selective areas of Mirpur, Mohakhali, and Uttara in Dhaka city.

Study subjects and sample size

Housewives who are termed as unemployed women and Employed women were teachers, bankers and other service holders. Data was collected for unemployed women (Housewives) and for employed women from government and nongovernment Banks, schools and offices from the selective areas, age was 18years and above for both groups and employed women were educationally qualified regarding their respective jobs. The study sample was selected by non-probability purposive sampling technique and among 240 participants, 120 in each group.

Data collection instrument and technique

A semi-structured questionnaire was developed in English incorporated with Perceived Stress Scale by Cohen *et al.,* 1994 [4] it was translated in to Bangla incorporated with "Perceived Stress Scale – Bengali Translation Document" by Islam, MZ [6] containing five sections-Particulars of the respondents, Socio-demographic information, Information related to COVID-19 pandemic, Information about factors associated with mental stress and lastly information related to Perceived mental stress scale by 10 questions. The questionnaire was pre tested among 10 employed and 10 unemployed women for necessary modification before finalization. Informed written consent was obtained from each participant. Then data were collected by means of face to face interview technique and privacy was maintained strictly during data collection and assurance was given regarding confidentiality and secrecy of the information they provide.

Data analysis

After proper checking and editing the collected data were analyzed by using SPSS software according to the study objectives where both descriptive statistics (frequency, percentage, mean, SD) and inferential statistics (test of significance- Chi-square test, Fisher's exact test and t-test) were used. Statistical significance for all the tests were considered at $p< 0.05$.

Ethical implication

The protocol was approved by protocol approval committee of NIPSOM. At first ethical clearance for this study was obtained from the Institutional Review Board (IRB) of National Institute of Preventive and Social Medicine (NIPSOM). Written permission from the concern authority of the selected institutions was collected before data collection. Prior to interview, informed written and verbal consent was taken from each participant. Privacy and confidentiality of each and every participant was maintained strictly. There was no chance of any physical or emotional or societal harm to the participants. Participants had the rights to withdraw from the study. No intervention or invasion procedure was conducted in this study. Purpose and procedures of the research work were explained prior data collection.

RESULTS

During COVID -19 pandemic, among 120 women in employed and 120 women in unemployed group ranged from 18 to 59 years and mean±SD age was 37.1 (±8.2) years in employed group and 35.4(±8.9) years in unemployed group. Majority 66 (55.0%) employed women and 50 (41.7%) unemployed women were in 30–41 years' age group. Both in employed and unemployed women group most of them were married. In employed women group almost two third were graduate and above, while in unemployed women group almost half of them were graduate and above and also with the employment status, educational qualification has highly significant relation (p=.000). Mean (±SD) of monthly family income for employed and unemployed group were respectively 88,725.00 (±55099.446) TK and 76,666.67 (±85856.665) TK and the difference was not statistically significant (p=0.404). 75.8% employed and 83.3% unemployed women were from nuclear family, (Table 1).

Table 1: Comparison of socio demographic characteristics between employed and unemployed women (n=240)

Socio demographic parameters		Employed *f* (%)	Unemployed *f* (%)	Significance
Age (in years)	18 – 29	23 (19.2)	37 (30.8)	
	30 – 41	66 (55.0)	50 (41.7)	
	≥42	31 (25.8)	33 (27.5)	
	Mean (±SD)	37.1 (± 8.2)	35.4 (± 8.9)	t=1.552; p=0.088
Religion	Islam	117 (97.5)	117 (97.5)	Chi-square test=.000
	Hindu	3 (2.5)	3 (2.5)	p=1.00
Marital status	Married	102 (85.0)	113 (94.2)	
	Unmarried	13 (10.8)	-	
	Others (Divorced, Separated, Widow)	5 (4.1)	7 (5.8)	
Educational qualification	Up to S.S.C.	-	35 (29.2)	Chi-square test=50.554
	H.S.C	13 (10.8)	22 (18.3)	p=.000
	Graduate	35 (29.2)	38 (31.7)	
	Post graduate	72 (60.0)	25 (20.8)	
Monthly family income (in taka)	≥ 25000	7(5.8)	16(13.3)	
	25001-50000	32(26.7)	53(44.2)	
	50001-75000	21(17.5)	20(16.7)	
	75001-100000	29(24.2)	16(13.3)	
	>100000	31(25.8)	15(12.5)	
	Mean ±SD	88,725.00 (± 55099.446)	76,666.67 (± 85856.665)	t =1.295 p=0.404
Type of family	Joint family	29 (24.2%)	20 (16.7%)	Chi-square test=2.077
	Nuclear family	91 (75.8%)	100 (83.3%)	p=.2

The mean ± SD of PMS score (based on PSS) were 20.0 (±5.48) and 20.5 (±5.16) in employed and unemployed women group respectively and the difference of mean was not statistically significant (p >.05). Majority (81.7%) employed women and (80.8%) unemployed women suffered from moderate stress, (Table-2).

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Table2. Comparison of perceived mental stress between employed and unemployed women

Perceived mental stress (Based on PSS)	**Employed** *f* (%)	**Unemployed** *f* (%)	**Significance**
Low stress	12 (10.0)	10 (8.3)	Chi-square test=.578 p=.749
Moderate stress	98 (81.7)	97 (80.8)	
High stress	10 (8.3)	13 (10.8)	
Mean ± SD	20.0 (±5.48)	20.5 (±5.16)	t = -691 p =0.743

Association between perceived mental stress and educational qualification of employed women, was statistically significant (P=0.04), whereas, among unemployed women it was not statistically significant (P=0.09), (table-3).

Table 3. Association between PMS and education of employed and unemployed women

Educational qualification	**Perceived mental stress of Employed women**					**Perceived mental stress of Unemployed women**				
	Low *f* (%)	Moderate *f* (%)	High *f* (%)	Total	Significance	low *f* (%)	moderate *f* (%)	High *f* (%)	Total	Significance
Illiterate to HSC	0 (0)	12 (92.3)	1 (7.7)	120 (100)	Fisher's Exact= 8.705 P=0.04	7 (12.3)	42 (73.7)	8 (14)	120 (100)	Fisher's Exact= 7.598 P=0.09
Graduate	6 (7.1)	23 (65.7)	6 (17.1)			3 (7.9)	34 (89.5)	1 (2.6)		
Others	6 (8.3)	63 (87.5)	3 (4.2)			0 (0)	21 (84)	4 (16)		

*Others (Post graduate and others)

Association between perceived mental stress and monthly family income of employed women, was not statistically significant (P=0.56). On the other hand, in unemployed women, there was statistically significant (P=0.03) association found, (Table-4).

Table 4. Comparison of PMS by monthly family income of employed and unemployed women

Monthly family income (TK)	**Perceived mental stress of Employed women**					**Perceived mental stress of Unemployed women**				
	Low *f* (%)	Moderate *f* (%)	High *f* (%)	Total	Significance	low *f* (%)	moderate *f* (%)	High *f* (%)	Total	Significance
1-50,000	6(15.8)	28(73.7)	4(10.5)	120 (100)	Fisher's Exact= 2.99 P=0.56	10(15.4)	48(73.8)	7(10.8)	120 (100)	Fisher's Exact= 9.56 P=0.03
50,001-75,000	2(10.0)	17(85)	1(5)			0(0)	19(95)	1(5.0)		
75001-Above	4(6.4)	53(85.5)	5(8.1)			0(0)	30(85.7)	5(14.3)		

Association between perceived mental stress and knowledge on specific treatment of COVID-19 pandemic of employed women, was not statistically significant (P=0.15). On the other hand, in unemployed women there was statistically significant (P=0.02) association found (Table-5).

Table 5: Comparison of PMS by knowledge of employed and unemployed women on COVID-19 treatment (n=240)

Treatment of COVID-19	Perceived mental stress of Employed women					Perceived mental stress of Unemployed women				
	Low *f* (%)	Moderate *f* (%)	High *f* (%)	Total	Significance	low *f* (%)	moderate *f* (%)	High *f* (%)	Total	Significance
Have	0(0)	22(95.7)	1(4.3)	120 (100)	Fisher's Exact =3.67 P= 0.15	7(17.5)	31(77.5)	2(5.0)	120 (100)	Fisher's Exact =7.367 P= 0.02
Have no	12(12.4)	76(78.4)	9(9.2)			3(3.8)	66(82.5)	11(13.8)		

Regarding the association between perceived mental stress and complete recovery from COVID-19 pandemic of employed women, statistically significant (P=0.02) association was found. Whereas, the association was not statistically significant (P=0.31) in unemployed women, (Table-6).

Table 6: Association between PMS and complete recovery from COVID-19 of employed and unemployed women (n=240)

Complete recovery from COVID-19	Perceived mental stress Of Employed women					Perceived mental stress of Unemployed women				
	Low *f* (%)	Moderate *f* (%)	High *f* (%)	Total	Significance	low *f* (%)	moderate *f* (%)	High *f* (%)	Total	Significance
Possible	11(11.2)	82(83.7)	5(5.1)	120 (100)	Fisher's Exact p=0.02	10(8.9)	90(79.6)	13(11.5)	120 (100)	Fisher's Exact p=0.31
Not possible	1(4.8)	15(71.4)	5(23.8)			0(0)	7(100)	0(0)		

DISCUSSION

This comparative cross sectional study revealed that the mean (±SD) age of the employed and unemployed women were 37.1 (±8.2) years and 35.4(±8.9) years respectively, almost all (97.5%) in both group were Muslim, which reflects the religion of majority population, majority (85.0%) in employed women group and (94.2%) in unemployed women group were married, average monthly family income in employed and unemployed women group were 88,725.00 taka and 76,666.67 taka respectively, which indicates well socio- economic condition of both the groups.

In this study, PMS among employed and unemployed women based on PSS, majority (81.7%) women of employed group and (80.8%) women of unemployed group suffered from moderate stress having the PMS score 14-26; where as 8.3% employed women and 10.8% unemployed women suffered from high stress having the PMS score 27-40. High level of stress observed in working women in comparison with non-working women according to the study conducted by Joseph [7]**,** which was consistent with present study findings. The mean PMS score of employed and unemployed women group were 20.0 (±5.48), 20.5

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(±5.16) respectively and the difference of mean score was not statistically significant (p>.05), which supports the study conducted by Kaur & Singh [1] where they found the mean score differences of depression, anxiety and stress among working and non-working women were not statistically significant; but oppose with the study by Kermane [8], where showed that mean score was higher among the employed women in comparison to housewives and that was statistically significant.

Significant differences in mental health, stress level among working and non-working women observed in different previous studies [8,9]. Regarding the association between PMS and socio-demographic parameters present study found that educational qualification of employed women significantly associated with PMS (p=.04); whereas the educational qualification of unemployed women was not significantly associated with PMS (p=.09). Similar findings observed in the previous studies [7,10] that highly educated working women can better perform and free from depression in comparison with non-working women. The monthly family income was not significantly associated with PMS of employed women (p=.56), but in unemployed women group it was significantly associated with PMS (p=.03). Different studies showed that there exist significant association between stress level and monthly family income [7,11].

CONCLUSION

This comparative study concludes that employed and unemployed women have different level of stress, though the difference was not significant. Some attributes of employed women like educational qualification, complete recovery from COVID-19 were significantly associated with PMS. But in unemployed women group family income, specific treatment of COVID -19 were significantly associated with PMS. Based on this study findings, financial safety should be ensured, proper and adequate knowledge should be gained about COVID-19 and equal emphasis should be given to prevent perceived mental stress in both employed and unemployed women.

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