



Associated Factors of Stress among Faculty Members of Kathmandu Valley

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Authors' contributions

This work was carried out in collaboration between all authors. Authors RP and AP designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors RP and KT managed the analyses of the study. Authors AB and RCPY managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Background: With mushrooming of health Science College in Kathmandu valley, the occupational related stresses were increasing among faculty members. The stress makes the great deals for the daily life. The objective of this study is to identify the occupational related physiological, psychological and behavioral stresses.

Methods: A cross-sectional study was done on January 2017 to August 2017 among the health science faculty members of Kathmandu valley. The test tool developed by NIMHANS was used for the present study is to measure the level of stress-effects in teaching faculty members. The score was calculated to identify the stress level.

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Results: 56.6% of the faculty members rarely felt the impatience in the working environment. Less than half (47.6%) of the faculty members were gossiping due to the stressful working environment. 5.5% of the faculty members always felt fatigue due to working condition. There is the significant difference between physiological factors, psychological factors and behavioral factors among faculty members.

Conclusions: The study reveals that the stress factor is high among faculty among members. Physiological, Psychological and Behavioral factors of stress related associated factors were persists among them. Some faculty members always felt fatigue, feeling powerful and being worried about their working condition.

Keywords: Associated factors; faculty members; health science college; stress.

1. INTRODUCTION

Occupation is the important parts of our daily lives which cause a great deal of stress. Fewer studies have been conducted on the actual stress management and coping mechanism strategies used to manage the potential stressors in their lives of faculty members [1]. It will help establish facts about the existence and severity of stress among faculty members of health sciences colleges of Nepal. As far from this study, its information will be of value to the government policymakers, education providers, and other stakeholders who will work towards devising intervention strategies in order to alleviate stress levels, reduce absenteeism, reduce brain drain among faculty members of health sciences colleges [2].

The number of health sciences college of Nepal has increased tremendously for the past few years [3]. Due to the increasing number of health sciences, college faculty may face more problems in their job as the managements are facing competitive pressure from other collages [4]. Due to management pressure and other organizational factors faculty members face plenty of stress that affects their satisfaction and even their physical or mental health [4].

The study is designed to investigate levels of work stress on faculty members of health sciences college, nature of work, and coping mechanism of university faculty members. It will be helpful to the baseline study and situation of coping strategies like better tolerate, taking direct action through problem solving, conflict resolution, meditation, planning and decision-making and physical exercise or meditation needed to overcome the stress [5].

2. METHODOLOGY

The quantitative study design was chosen. The study was conducted at the different bachelor's

and master's level health sciences colleges of Kathmandu Valley in Nepal. In first stage, from the Kathmandu valley four different universities i.e. Tribhuvan University, Pokhara University, Purwanchal University, Kathmandu University and two deemed universities i.e. Patan Academy of Health Sciences and National Academy of Medical Sciences were selected. All the university and their affiliated college were listed. In second stage, a proportionate sampling was adopted to select the college and in third stage, Simple random sampling were adopted to collect the 290 sample of university level faculty members of health sciences from different universities. It contained the stress test which consisted of a total of 24 statements for identifying the stress-effects namely physiological, psychological and behavioral. Each stress effect was identified separately through symptoms listed in the statements belonging to each category of stress effect. Individual stress related factors like physiological factors: eating habit, fatigue, pressure, health problem, psychological factors i.e. worrying, depression, frustration, loneliness, inflexibility and behavioral factors i.e. blaming, anger, forgetfulness were measured. The data was collected by using self-administered questionnaire and analysis was done through the SPSS. Appropriate descriptive and inferential statistics like t test, ANOVA was used to identify the factors of stress.

This test was constructed and developed by Prabhu, (1991-2) of National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore. This test tool was used for the present study to measure the level of stress-effects in teaching faculty members. The test consists of 24 statements on a five point rating scale (1 to 5) as follows, never experience 1, rarely experience 2, sometimes experience 3, often experience 4 and always experience 5 respectively. Scoring procedure was done through the obtained responses on a five point

rating scale. Answers were given scores as follows: Physiological factors scores on items 1 to 6 were counted and totaled indicating the total score for physiological stress-effects. Psychological factors scores for items 7 to 17 were counted and totaled indicating the total score for behavioral stress-effects and behavioral scores on items 18 to 24 were counted and totaled indicating the total score for psychological stress-effects. Total scores of all the respondents on each of the statements under each stress effect was calculated.

3. RESULTS

More than half (57.6%) of the participants were male and (42.4%) of them were female. Almost three-fourth of the participants belonged to young age group and one-fourth belonged to middle age group. The mean age of male group was more than the female group. Similarly, more than three fourth (61.7%) of the participants were married.

An equal proportion (61%) of the faculty member never felt bossiness and compulsive eating due to working environment at college. More than half (56.6%) of the faculty members rarely felt the impatience in the working environment. Less than half (47.6%) of the faculty members were gossiping about the stress in the working environment. More than half (56.6%) of the faculty members sometimes felt headache problem due to working environment at college and similarly, (54%) of the faculty members felt Stomach aches or tension in the stomach. One third (33.1%) of the faculty members often felt worrying about the life in working condition and less than one third (30%) of the faculty members felt forgetfulness due to the working environment in college. Relatively low (5.5%) of the faculty members always felt fatigue due to working condition. 10 out of 100 (10%) of the faculty members always feeling powerful in the working environment. Relatively high (11.7%) of the faculty members always worrying about their working condition (Table 1).

Among 24 questions related to stress factors, six question were related to the physiological factors of stress. The mean \pm Std. Deviation is 15.70 ± 2.78 at 95% confidence interval of the difference 15.38 to 16.02. There is the significant difference between physiological factors with stress factors of faculty members. Nine questions were related

with the psychological factor of stress with the mean \pm Std. Deviation is 24.40 ± 6.70 at 95% confidence interval of the difference 23.63 to 25.18. There is the significant difference between psychological factors with stress factors of faculty members. Seven questions were related to behavioral factor of stress with the mean \pm Std. Deviation is 17.21 ± 5.15 at 95% confidence interval of the difference 16.61 to 17.80. There is the significant difference between behavioral factors with stress factors of faculty members (Table 2).

There is significant difference among the stress scores of faculty members with the associated factors (p-value <0.01). The average stress scores of faculty members at significant with the three different factors i.e. physiological, psychological and behavioral factors (Table 3).

4. DISCUSSION

Stress levels of faculty members of health sciences amplified as their satisfaction levels decreased. Fatigue, forgetfulness, frustration, worries are the major stress feel in everyday life. Stress in the workplace of faculty members is a very costly epidemic [6–8]. Stress related factors is a crucial component that negatively influences satisfaction in any job [9,10]. The core finding of this study was the significant association between perceived levels of stress and perceived physiological, psychological and behavioral, all are as the most perceived problem [11]. This result is an affirmation of the theory of Lazarus and Folkman who declare that stress can affect people's physical, psychological and social health if variation outcomes cannot be achieved [12]. Faculty members may also turn to other problem-focused and emotion-focused coping strategies, such as active coping, social support and positive interpretation [10,13–15]. In this study, the significant relation between such variables and stress is showing in every test. Findings of this study showed that the majority of subjects had high stress rates. According to the obtained results, different factors may increase stress in faculty members. Accordingly, to reduce or remove the effects of stress on physical, psychological and social health several important steps such as training the faculty members about mental health disorders, providing adequate resting time and vacation for the faculty members and improvement of the overall communications should be taken.

Table 1. Stress factors (n=290)

N	Stress factors	Never		Rarely		Sometimes		Often		Always	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
1	Headache	43	14.8	50	17.2	163	56.2	34	11.7	0	0.0
2	Stomach aches or tension in the stomach	8	2.8	116	40.0	152	52.4	14	4.8	0	0.0
3	Backaches	39	13.4	83	28.6	99	34.1	54	18.6	0	0.0
4	Stiffness in the neck and shoulder	33	11.4	121	41.7	110	37.9	20	6.9	6	2.1
5	Increased blood pressure	72	24.8	100	34.5	72	24.8	40	13.8	6	2.1
6	Fatigue	16	5.5	82	28.3	116	40.0	60	20.7	16	5.5
7	Crying	75	25.9	116	40.0	49	16.9	50	17.2	0	0.0
8	Forgetfulness	18	6.2	115	39.7	70	24.1	87	30.0	0	0.0
9	Unprovoked shouting	81	27.9	100	34.5	95	32.8	14	4.8	0	0.0
10	Blaming others	77	26.6	130	44.8	51	17.6	21	7.2	11	3.8
11	Bossiness	177	61.0	41	14.1	20	6.9	46	15.9	6	2.1
12	Compulsive chewing	177	61.0	41	14.1	20	6.9	46	15.9	6	2.1
13	Compulsive eating	132	45.5	73	25.2	65	22.4	8	2.8	12	4.1
14	Agitation	54	18.6	113	39.0	90	31.0	21	7.2	12	4.1
15	Anger	15	5.2	94	32.4	105	36.2	67	23.1	9	3.1
16	Gossiping	62	21.4	138	47.6	70	24.1	20	6.9	0	0.0
17	Teeth grinding	145	50.0	51	17.6	51	17.6	25	8.6	18	6.2
18	Worrying	8	2.8	50	17.2	102	35.2	96	33.1	34	11.7
19	Depression	121	41.7	73	25.2	67	23.1	6	2.1	23	7.9
20	Impatience	56	19.3	164	56.6	26	9.0	30	10.3	14	4.8
21	Frustration	61	21.0	106	36.6	77	26.6	26	9.0	20	6.9
22	Loneliness	93	32.1	72	24.8	61	21.0	44	15.2	20	6.9
23	Powerfulness	99	34.1	43	14.8	96	33.1	23	7.9	29	10.0
24	inflexibility	114	39.3	44	15.2	94	32.4	23	7.9	15	5.2

Table 2. Difference in the physiological, psychological and behavioral factors of stress (N=290)

Stress effect	Mean	Std. deviation	t-value	p-value	95% Confidence Interval of the Difference	
					Lower	Upper
Physiological	15.70	2.78	95.91	<0.001	15.38	16.02
Psychological	24.40	6.70	61.94	<0.001	23.63	25.18
Behavioral	17.21	5.15	56.86	<0.001	16.61	17.80
Overall	57.32	12.44		<0.001	55.88	58.76

Table 3. ANOVA score of physiological, psychological and behavioral factors of stress (N=290)

Stress factors		df	F	p-value
Physiological	Between Groups	30	34.55	<0.001
	Within Groups	259		
	Total	289		
Psychological	Between Groups	30	165.21	<0.001
	Within Groups	259		
	Total	289		
Behavioral	Between Groups	30	56.59	<0.001
	Within Groups	259		
	Total	289		

5. CONCLUSIONS

The study reveals that the stress factor is high among faculty among members. Physiological, Psychological and Behavioral factors of stress related associated factors were persists among them. Some faculty members always felt fatigue, feeling powerful and being worried about their working condition. To identifying the sub issues of each component of overall stress among the faculty members, the better administration and management could provide better insights to the management team and academic administrators for instigating efforts to shrink the intensity of stress.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee has been collected and preserved by the authors.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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