



Stress among unorganized sector workers in Vadodara city

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Abstract

Background: Workers who are stressed are also more likely to be unhealthy, poorly motivated, less productive and less safe at work. Their organizations are less likely to be successful in a competitive market. Stress at work can be a real problem to the organization as well as for its workers. **Aims:** To study the socio-demographic aspect of un-organized workers and Psychological stress among them. **Design and Setting:** Cross-sectional study was conducted at construction site of Sumandeep Vidyapeeth during December-January 2012. **Methods:** Study included all 103 workers (45 male, 58 female) working at study setting. For data collection researchers were used instrument “The *Stress Inventory Scale* designed and developed by *Gerard Hargreaves* from the

stress Management: The Essential Guide to Thinking and Working Smarter” for the measures of results in the present study. **Results:** Overall Mean score on stress level was 53.53 ± 9.305 (95% CI 51.72 to 55.62) where in Male and Female participants, it was 51.69 ± 9.803 (95% CI = 48.72 to 54.89) & 54.93 ± 8.7 (95% CI = 52.5 to 57.37) respectively. Almost 35.8% participants had “extreme high level stress” and 40.7% participants had “high level stress”. **Conclusion:** Workers who are working in un-organized sectors have moderate to extreme level of stress. Organizational culture is one of the key factors in determining how successful an organization will be in managing work stress.

Key words: Construction workers, Stress, Stress Inventory Scale, Un-organized sector

Introduction

Stress evokes physical and psychological responses in humans which enable them to restore inner stability through changes [1,2]. Numerous studies have shown that coronary heart disease [3-7], obesity [8-11], hypertension [12-13] and metabolic syndrome [14-16] associate with Psychological stress, implying that a certain amount of physical and psychological change accumulates as a result of stress response to psychosocial pressure, which is detrimental to the body. Stress accompanied by negative emotions such as anger,

sadness, or disgust, triggers or causes not only mental disorders but also immune system suppression and lifestyle related diseases [17-19].

Workers who are stressed are also more likely to be unhealthy, poorly motivated, less productive and less safe at work. Their organizations are less likely to be successful in a competitive market. Stress at work can be a real problem to the organization as well as for its workers [20]. The manager-subordinate relationship is the most commonly

reported cause of stress [21,22]. Job strain (job dissatisfaction, depression, psychosomatic symptoms) and burnout is significantly higher in jobs that combine high workload demands with low decision latitude. This association remained significant after controlling for age, sex, education, marital status, children, hours worked per week and shift worked [23]. So the study was conducted II. with objective to study the socio-demographic aspect of un-organized workers and Psychological stress among them.

Materials and Methods

This cross-sectional study was conducted at construction site of SumandeepVidyapeeth, Piparia, Vadodara, Gujarat during December-January 2012 (2 month). Study conducted among all 103 un-organized construction workers which were working at study setting during study period.

After taking permission of institutional ethics committee the study was initiated. Standardized questionnaire of "Stress Inventory Scale" was used to collect the primary data in quantitative nature. The actual English questionnaire was converted in local language (Gujarati), so participants can understand. The data has been collected from both males (45) and females (58) at the study setting.

I. Instrument

For data collection researchers were used instrument for the measures of results in the present study. The *Stress Inventory Scale* was designed and developed by *Gerard Hargreaves* from the stress Management: The Essential Guide to Thinking and Working Smarter [24]. This scale has 15 situation based questions that are scored from 1 -5. This scale uses scoring method as below: 1 Never, 2 Seldom, 3 Sometimes, 4 Often, 5 Nearly all the time. The procedure of interpretation is based on the below cut off score: 15-30:

experiencing a little pressure at work but generally feels in control (Low Stress), 31-45: good level of control most of the time. Situations cause stress occasionally (Moderate Stress), 46-60: often feel under pressure and out of control (High Stress), 61-75: high level of pressure and feel out of control (Extreme High Stress).

Statistical Methods

Data was collected & entered in Microsoft Excel sheet and analyzed by SPSS version 20.0. For continuous variable range, mean and standard deviation has been calculated and for categorical variables proportion and percentage will be obtained. Bi-Variate analysis regarding to know the association between dependent and independent variable, correlation and linear regression have been applied accordingly.

Results

Table 1 shows that response rate was higher in female participants than males. Almost 70% of female participants belong to the age group of 26-39 years. Out of total, 33% female participants and 40% male participants were unmarried. Almost 90% female and 51% male participants were illiterate. Table 2 shows that male participants were working more hours than female participants per day at present site.

Table 3 shows that 71% male participants believed that their job is secured. Almost 30% female participants believed that they do not get support from supervisor & co-workers at working site.

Overall Mean score on stress level was 53.53 ± 9.305 (95% CI 51.72 to 55.62) where in Male and Female participants, it was 51.69 ± 9.803 (95% CI = 48.72 to 54.89) & 54.93 ± 8.7 (95% CI = 52.5 to 57.37) respectively. Almost 28.6% male and 41.3% female participants have extreme

high level stress (figure 1) it shows that female were suffering from more stress. Out of all participants, 40.7% (32/81) & 35.8% (29/81) participants have extreme high level and high level stress respectively (figure 2).

Table 4 shows that stress score was positively correlate with age and experience of workers but statistically not significant ($p > 0.05$). It also shows regression equation model for stress score with age and experience ($p < 0.05$).

Discussion

Stress is known as a major challenge to healthiness of organizations and workers health. Stress can be brought by pressure at home and at work. Stress can be a real problem for the organizations and to the workers. Study found that mean stress level was 53.53 ± 9.305 which is higher than the other Study (45.5 ± 19.36 in New Delhi [25]).

Mean age of participant was 27.3 ± 6.0 years & 28.9 ± 6.2 years in male and female respectively which was lesser than the other study (Kazuhiko Y et.al 2006 [26]). Stress among workers is associated with unpleasant task, lack of variety, working under pressure, strict & inflexible working schedules, long hours of working with little rest in between, badly designed shift systems, unpleasant working environment and lack of support of organization, friends and family and many more [20]. Study could not find the significant relation of stress score with age, sex, education level, experience in present job and marital status ($p > 0.05$). Scientific research and professional practice show that stressful conditions do not automatically lead to stress, which also depends on personal and resource characteristics, it is important to rely on different typologies of data collection to evaluate correctly work-related stress [27]. A healthy job is likely to be one where the pressures on employees are appropriate in relation to their abilities and

resources, to the amount of control they have over their work, and to the support they receive from people who matter to them [20]. So the study was focused also on the socio-demographic characteristics. Study found that female participants got less support from supervisor, co-workers, friends & family in comparison with male. Study found that headache, backache & sleeping problems was present in both male and female participants. Organization provides full protection equipments to workers during working. Study found that 28.6 male & 41.3 female participants had extreme high stress and 37.1 male & 43.5 female had high level stress. Study revealed that stress score is positively correlated with age & experience of participants but relation is not significant ($p > 0.05$).

Conclusion

Study results shows that workers who are working in un-organized sectors have moderate to extreme level of stress. Employers should have a policy for the management of worker health that makes reference to work stress. They should enable that policy to be implemented by putting the appropriate arrangements in place. Such arrangements should address the issues of risk assessment, timely reaction and rehabilitation. Organizational culture is one of the key factors in determining how successful an organization will be in managing work stress. Work stress can be prevented by ergonomics, work environment design, organization & management development, work education & training, sensitive & responsive management system and enhanced occupational provision.

Figure 1: Stress Level of Males & Females

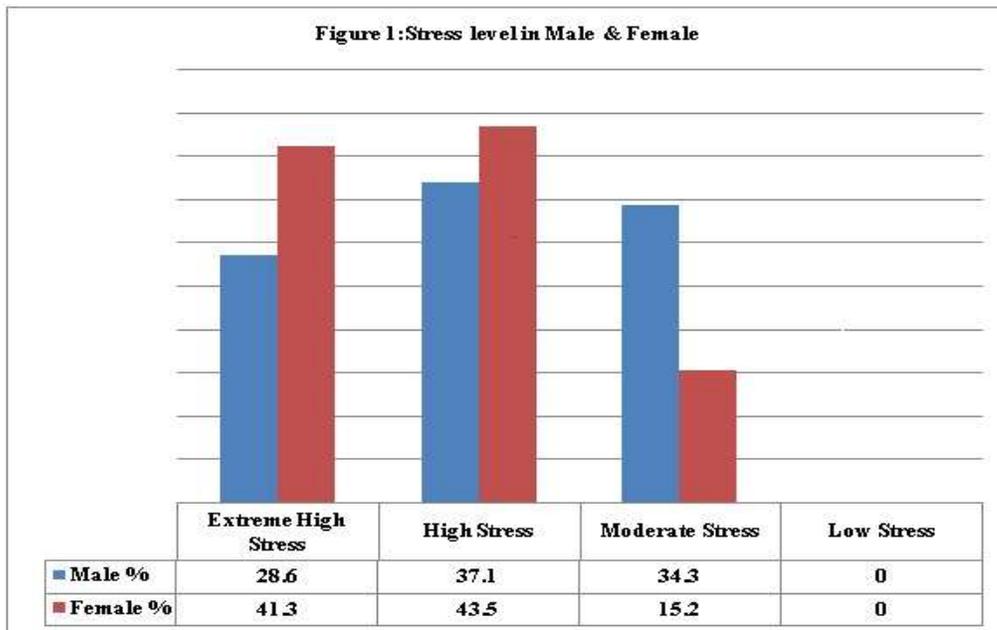


Figure 2: Overall percentage of stress level

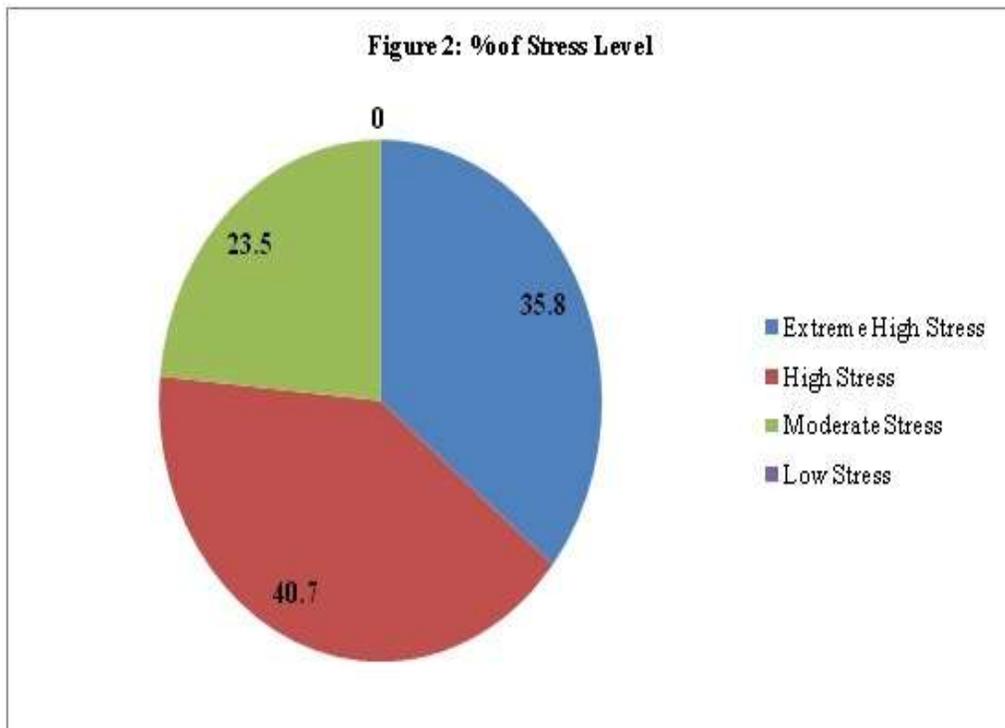


Table 1: Sample Characteristics (N=81)

Characteristics	Male (n=35)	Female (n=46)
Response Rate	77.77	79.31
Age		
10-25 years, %	54.3	26.1
26-39 years, %	42.9	69.6
40-55 years, %	2.9	4.3
Mean Age \pm SD (95% CI)	27.3 \pm 6.0 years (25.3 to 29.4)	28.9 \pm 6.2 years (27.2 to 30.7)
Marital status		
Married, %	60.0	63.0
Unmarried, %	40.0	32.6
Widow/Divorce, %	0.0	4.3
Education		
Illiterate, %	51.4	89.1
Primary, %	22.9	10.9
Secondary, %	25.7	0.0

Table 2: Practice of workers at working site (N=81)

	Mean \pm SD (95% CI)		T test
	Male	Female	
Working hours at present site (per day)	8.6 \pm 1.1 hours (8.3 to 9.0)	8.1 \pm 0.5 hours (8.0 to 8.3)	2.7 (p = 0.008)
Working experience in current work (in years)	7.3 \pm 5.6 years (5.5 to 9.3)	10.3 \pm 5.1 years (8.9 to 11.8)	2.5 (p = 0.015)
Duration of working at present site (in month)	6.8 \pm 3.7 month (5.7 to 8.0)	4.9 \pm 4.0 month (3.7 to 6.2)	2.3 (p = 0.02)

Table 3: Response of Participants on their work and working condition (N=81)

Sr.No	Questions	Yes (%)		No (%)	
		Male	Female	Male	Female
1.	Do you feel that your job is secure?	71.4	47.8	28.6	52.2
2.	Do you get support from your supervisor and co-workers in your work?	100.0	69.9	0.0	30.4
3.	Do you get support from your family and friends in your work?	100.0	87.0	0.0	13.0
4.	Have you provided personal protection equipment from above mentioned hazards?	100.0	100.0	0.0	0.0
5.	Do you ever face sleeping problems?	37.1	23.9	62.9	76.1
6.	Do you ever face headache problem?	80.0	69.6	20.0	30.4
7.	Do you ever face backache problem?	71.4	80.4	28.6	19.6

Table 4: Simple regression analysis and correlation of stress score with age & experience of participants

Regression Equation	Correlation coefficient
Stress score = 50.998 + (0.09) Age in years	0.059*
Stress score = 51.976 + (0.172) experience in years	0.102*

*p value > 0.05

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