



EVALUATION OF STRESS AND ITS IMPACT ON MENTAL HEALTH IN WORK FROM HOME EMPLOYEES

Clinical Science

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ABSTRACT

Background: Stress is the feeling of being overwhelmed or unable to cope with mental or emotional pressure. Nowadays, stress has become a major problem and can be seen in most of the people including young children. If stress persists for a longer time, it affects the body in several ways as the body is unable to cope with it. Stress affects both physical as well as mental health. The impact of stress is different in individuals. Stress is associated with diabetes, hypertension, suppression of the immune system, cardiovascular diseases, and neurological disorders. **Aims:** The study is aimed to evaluate Stress in Work from Home individuals which impacts mental health leading to further health complications. **Materials And Methods:** In this Randomized Prospective Observational study that was conducted online for six months, all the relevant data was collected using an online questionnaire form which includes patient demographic details, Perceived Stress Scale, Diabetes Distress Scale and Diabetes Risk Assessment scale. **Results:** During the study period we collected a total of 501 responses. Among 501, 63(12.6%) were having low stress, 372(74.3%) were having moderate stress and 66(13.1%) were having high stress. 16 employees were diabetic in which their diabetic distress is moderate. In 485 employees, diabetic risk was assessed in which 182(37%) were having slightly elevated risk, 33(7%) were having moderate risk, and 3(1%) were having high risk. **Conclusion:** Moderate stress is seen in the majority of the study population. The possibility of having Stress is high in individuals with no physical activity. Diabetes risk is seen in 45% of the study population. As the percentage of family history increases diabetes risk is increased which supports genetic predisposition to diabetes mellitus.

KEYWORDS

Stress, Physical activity, Diabetes, Work from home.

INTRODUCTION

Stress is the feeling of being overwhelmed or unable to cope with mental or emotional pressure. The word stress is coined by Hans Selye in 1936 and he defined it as the non-specific response of the body to any demand for change, it may be caused by, or results in pleasant or unpleasant conditions. Nowadays, stress has become a major problem and can be seen in most people, including young children. Both nervous and endocrine systems are involved in the stress response. Most of the body systems are affected by stress.

Generally, stress is assumed as a situation or a condition during an adverse event or state but in fact, it is a way by which the body overcomes an undesirable or demanding situation. Whenever we are exposed to unfavorable conditions (physical or mental), our body tries to maintain homeostasis by adapting to some changes and protecting itself¹. Stress is reflexed to emotional and physical demands. Whenever the demands of the situation exceed all our available recourse, we feel stressed.

Stress response Our body elicits a response whenever it is exposed to a stressor, it may be real or imagined. The response elicited in all individuals is not always uniform. Along with the duration and intensity of the stressor, other factors like age, gender, mental and physical health, personality, and past experiences influence the stress response. Hans Selye developed General Adaptation Syndrome (GAS). The 3 stages in stress response are

1. Alarm
2. Adaption
3. Exhaustion or Recovery.

The first stage is the Alarm which involves the fight or flight response. It enables us to deal with difficult situations. Various reactions in the body occur at this stage which involves the release of stress hormones: cortisol, adrenaline, noradrenaline, increased heart rate, increased blood sugar level, and rise in blood pressure.

Then comes the Adaption stage in which the body uses all its resources when the stressful situation isn't resolved to cope or adapt to it. This results in the occurrence of various types of physical (sleep problems, muscular pains, tiredness, Indigestion, allergies), emotional (impatience, and irritability), mental (lack of concentration) and behavioral problems (smoking, drinking).

The third stage is the Exhaustion stage or Recovery stage: If the body's mechanism succeeds in overcoming the effect of the stressors it results in the recovery stage. On contrary, if it fails to maintain hormonal function it leads to the exhaustion stage. Long-term effects are seen in individuals when the exhaustion stage persists for a longer duration which further leads to CAD, depression, and hypertension.

Work Related Stress:

Currently, work-related stress is one of the biggest challenges. Work-related stress is strongly related to physical symptoms such as back pain, headache, or sleep disturbances. Imagine a situation, where your boss has emailed you about an unfinished assignment, your body and mind instantly respond by activating fight or flight response, your heart beats faster, your breathing quickens and muscle tension, and then to manage yourself from getting fired you work late into the night to complete the task and when these types of situations become frequent you will develop overwhelming exhaustion, cynicism and a sense of inefficacy. Thus, long-term exposure to work-related stressors like these can affect mental health, and one may experience major depressive disorder and generalized anxiety disorder. High levels of stress at work and outside of it can affect physical health too. Repeated activation of the fight-or-flight response can increase susceptibility to disease. For example, repeated activation of the stress hormone cortisol can disturb the immune system and raises the chances of developing cardiovascular diseases, and autoimmune disorders. Work stress can also harm companies or organizations. To cope with work stress individuals must adopt stress management skills.

MATERIALS AND METHODS

Study Site: Multicentered Online Survey

Study Type: Randomized prospective observational study.

Study Period: Six months

Study Criteria

Inclusion Criteria:

Study criteria included the people who are working from home, people who are willing to participate in the study, both male and females.

Exclusion Criteria:

People who were not willing to participate in this study and those who are working from the office.

Source Of Data: All the relevant data was collected through an online questionnaire form and it includes the patient demographic details along with their perceived Stress, diabetes risk assessment and diabetes distress.

Forms Included In The Study

The study included Online questionnaire form, Perceived Stress Scale, Diabetes Distress Scale and Diabetes Risk Assessment Scale

Study Procedure

The online survey was conducted on WFH employees. Demographic data was collected based on age the employees were divided into 4 groups

- Group 1 – below 35 years
- Group 2 – 35 – 44 years
- Group 3 – 45 – 54 years
- Group 4 – 55 – 64 years

Responses were collected and their perceived stress score, diabetes distress score and diabetes risk assessment was analyzed. Perceived stress was categorized based on scores into Low stress (0 – 13), Moderate stress (14 – 26), High perceived stress (27 – 40). Diabetes Risk Assessment was categorized as Low risk (less than 7), Slightly elevated risk (7 – 11), Moderate risk (12 – 14), High risk (15 – 20), very high risk (higher than 20)

Statistical Analysis: The data was collected throughout 6 months from 501 employees and analyzed. The total summarized data was entered in Microsoft Excel and the results are interpreted through Graph Pad Prism.

RESULTS:

Table-1: Age wise distribution of WFH subjects

Age groups	Number
Below 35 years	412
35 – 45 years	77
45 – 54 years	9
54 – 64 years	3

Table-2: Gender wise distribution

Gender	Total number of populations
Male	250
Female	251

The total study population was 250, out of which 50% were male and 50% were Females.

Table-3: Age and Gender wise distribution

Gender	<35 years	35-44 years	45-54 years	55-64 years
Male	194	48	5	3
Female	218	29	4	0

Among the total study population, 194 (47%) Males and 218 (53%) Females are below 35 years of age. 48 (62%) Males and 29 (38%) Females belong to 35 – 44 years of age. 5 (56%) Males and 4 (44%) Females are between 45 – 54 years of age.

Table-4: Working hours at office

Working hours	Individual
<6 hours	55
6 – 8 hours	273
8 – 10 hours	164
10 – 12 hours	9

The previous Office working hours of most of the employees were 6-8 hours (54%) and 8-10 hours were 33%, less than 6 hours were 11% and 10 – 12 hours was 2%.

Table-5: Working hours at home

Working hours	Individuals
<6 hours	69
6 – 8 hours	114
8 – 12 hours	305
12 – 16 hours	13

The Home working hours of most of the employees are 8-10 hours (61%) and 6-8 hours in 23%, less than 6 hours in 14%, and 10-12 hours in 2%.

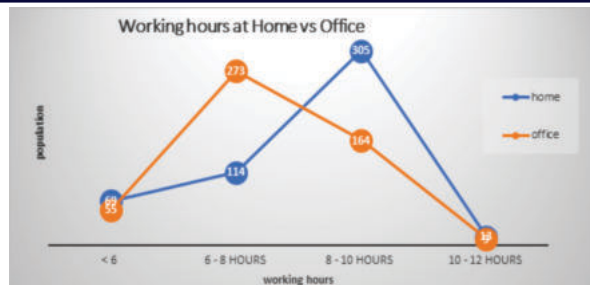


Figure 1: Working hours at home vs office

From the above chart, we can say that working hours for most of the employees has increased from 6-8 hours to 8-10 hours.

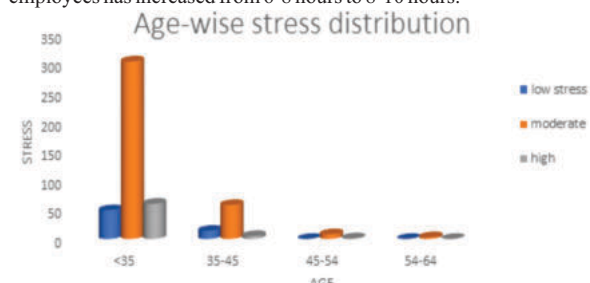


Figure 2: Age – wise stress distribution

Among the total study population, most of the employees are having moderate stress. Based on the Perceived Stress Scale, the study population was categorized into 3 groups. (12%) low stress, (73%) moderate stress, and (15%) high stress.

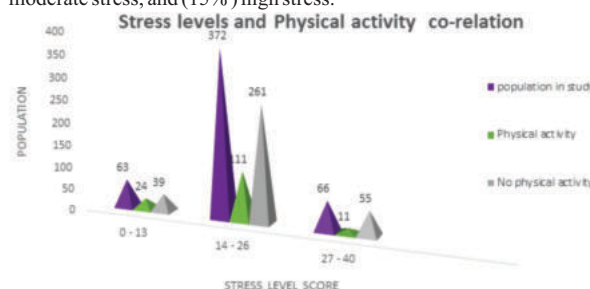


Figure 3: Stress levels and physical activity co-relation

Among the study population, most of them are having moderate stress, of which 261 (70%) are with no physical activity. 13% are with high perceived stress with 84% people having no physical activities.

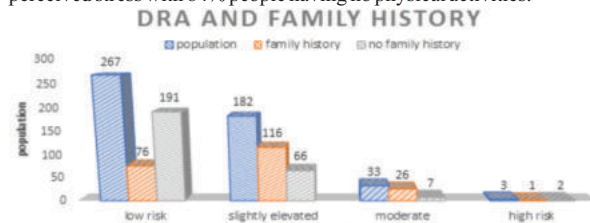


Figure 4: DRA and Family history

Among the study population, 37% are with slightly elevated diabetes risk in which 64% were with family history. 7% are with moderate risk in which 79% were with family history.

DISCUSSION:

In our study we found that the maximum individuals (61%) worked for about 8 - 10 hours at home when compared to office working hours, where the maximum individuals (54%) were working for 6 - 8 hrs at office. This shows the increase in workload in working from home individuals. The Stress scale score was calculated in individual subjects. According to the Standard Perceived Stress Scale 12.6% of employees were having low stress, 74.3% were having moderate stress and 13.1% of employees were undergoing high stress condition. This data represents most of the study population 74.3% were under moderate stress condition.

Correlation between stress Vs physical activity was interpreted using graph through which we found that out of 74.3% of the employees experiencing moderate stress 70% are those with sedentary lifestyle or with no physical activity. 13.1% (n=66) of the employees with score between 27-40 were under high perceived stress. Among them 84% (n=55) were with no physical activity. We had also analyzed that 12.6% (n=63) employees were under low stress condition out of which 62% (n=39) were with no physical activity. Generally physical activity stimulates the body to release serotonin and endorphins which helps in boosting mood and relieve stress and decrease the stress hormones. Without any physical activity the secretion of stress hormone increases which leads to an increased risk of stress in individuals. Our study findings showed that the possibility of having stress is high in individuals with no physical activity.

Diabetes risk is seen in 45% of the study population. From the Diabetes Risk Assessment scale, 37% (n=182) of members were at slightly elevated diabetic risk out of which 64% (n=116) were those with a family history of diabetes, 7% (n=33) at moderate risk of diabetes out of which 79% (n=26) were having a family history. 55% (n=267) were under low risk of diabetes with 72% (n=191) were with no family history and 28% (n=76) with family history. The people with family history are at high risk of diabetes.

CONCLUSION:

Moderate stress is seen in the majority of the study population. The possibility of having Stress is high in individuals with no physical activity. Diabetes risk is seen in 45% of the study population. As the percentage of family history increases diabetes risk is increased which supports genetic predisposition to diabetes mellitus in our study, we observed decreased mental well-being in WFH employees. If WFH is continued in the future then to avoid its negative effects, the government and private companies must develop policies that provide proper guidelines for WFH to balance individuals work and private life and provide proper working facilities for their employees at home. The employees must be counseled about the importance of having a healthy diet and physical activity to avoid stress, obesity, diabetes, and hypertension which are the major risk factors for many Cardiovascular and Neurological diseases.

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