

Occupational Stress among Gardeners

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ABSTRACT: Stress is defined in terms of its physical and physiological effects on a person, and can be a mental, physical or emotional strain. It can also be a tension or a situation or factor that can cause stress. Occupational stress can occur when there is a discrepancy between the demands of the environment/workplace and an individual's ability to carry out and complete these demands. Occupational stresses may be considered a type of occupational disease. This is a condition wherein the person may experience a heightened level of anxiety, mental fatigue, and other symptoms. Certain professions and jobs may involve conditions that create more stress than others. Objectives: The purpose of the present study was to assess the occupational stress among gardeners. Methods: This cross sectional research study was conducted on 120 samples, inclusive of 30 gardeners from each park by using multistage random sampling. Data was collected through interview method by using self-structured questionnaire. Results: The results showed that the gardeners feel average occupational stress in between age of 20-50 and majority of the gardeners feel occupational stress due to heavy work.

Key word: Cross-sectional studies, Gardeners, occupational stress.

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I. INTRODUCTION

A gardener is any person involved in gardening, arguably the oldest occupation, from the hobbyist in a residential garden, the home owner supplementing the family food with a small vegetable garden or orchard, to an employee in a plant nursery or the head gardener in a estate. The term gardener is also used to describe garden designers and landscape gardeners, who are involved chiefly in the design of gardens, rather than the practical aspects of horticulture.

Gardening is a practice of growing ornamental or useful plants. There are so many health related benefits of gardening like access to food, improved nutrition, increased physical activity and good mental health. The occupational gardeners have a hectic physical work profile. They have to work in the afternoons of summer and early morning in the winter and also in rainy seasons.

Occupational gardeners are exposed to various risk factors like dust, allergens, sharp tools, and pesticides, which make them vulnerable to many diseases. An occupational health hazard has been reported as high among people of India.

Occupational stress is one of the major health hazards of the modern workplace. It accounts for much of the physical illness, substance abuse, and family problems experienced by millions of blue and white-collar workers. Also, occupational stress and stressful working conditions have been linked to low productivity, absenteeism, and increased rates of accidents on and off the job. Occupational or job stress may be defined as a "mechanism whereby the human body attempts to adapt to the environment." The body has a normal mechanism for dealing with stressful situation that is known as the "fight or flight" response.

The physical work is strenuous, so proper nutritional food supply is must to meet the need of sufficient calories. Cardio and weightlifting aspects of gardening include tasks like pushing a mower, raking, lifting bags of soil, pushing the wheel barrel, turning compost, shovelling, tiling, and more. Gardening has been shown to be a relaxing active activity that can significantly lower blood pressure in people with hypertension and prehypertension. The hectic work-schedules of occupational gardeners affect the blood pressure of the subjects. This implies that one-third of gardeners are prone to be hypertensive in future if they ignore it.

The gardeners are exposed to intense sunlight, chemicals, and pesticides which cause inflammation and irritation in eyes. Long-term exposures to sunlight especially ultraviolet (UV) rays and chronic eye irritation from dry dusty conditions seem to play an important role. Some pesticides can cause skin rashes itching and watery blisters.

Apart from the social atrocities that these workers face, they are exposed to certain health problems by virtue of their occupation. These health hazards include exposure to harmful gases such as methane and hydrogen sulphide, cardiovascular degeneration, musculoskeletal disorders like osteoarthritic changes and intervertebral disc herniation, infections like hepatitis, leptospirosis and helicobacter, skin problems, respiratory system problems and altered pulmonary function parameters. Keeping in view the occupational hazards faced by the gardening labour the present study was taken up to assess the occupational stress among gardeners.

II. METHODS

This study was conducted between the years July 2012 to May 2013 in Lucknow district. Purposive sampling was used to select the Lucknow district. The methodological approach to this study was based on primary data through face to face interview. This cross-sectional study was conducted on 120 sample, comprising of 30 samples from each park aged between 20-50 years by using multistage random sampling. Research design of study was cross sectional research. Demographic data of respondents were collected by using self-made questionnaire. To assess their occupational stress, self-structured questionnaire was used. Data was collected through face to face interview method. Statistical Package and System Software (SPSS) was used in the analysis. The Pearson Chi-square and "F" test was used to test the strength of association between various categorical variables. Simple frequency distribution and cross tabulation were used to facilitate presentation of the findings.

III. RESULTS

Table No-1-Level of occupational stress among gardeners across age.

| Level of occupational stress | Age(in years) | | | Total |
|------------------------------|---------------|------------|------------|------------|
| | 20-35 | 36-50 | >50 | |
| High | --- | --- | --- | --- |
| Average | 60 (50) | 39 (32.5) | 12 (10) | 111 (92.5) |
| Low | 4 (3.33) | 4 (3.33) | 1 (0.83) | 9 (7.5) |
| Total | 64 (53.33) | 43 (35.83) | 13 (10.83) | 120 |

It is evident from the table that none of the gardeners have high occupational stress. 50 percent of gardeners in the age group of 20-35 years have average occupational stress where as 32.5 percent of the gardeners have average occupational stress, whereas 10 percent of the gardeners above 50 years have average occupational stress and equal percentage of gardeners in the age group of 20-35 years (3.33%) and 36-50 years (3.33%) have low occupational stress, where as 0.83 percent of the gardeners have low occupational stress to above the 50 years. Majority of the gardeners feel average occupational stress in between the age group of 20-50 years. Result indicates that the gardening labour belonging to all age group are suffering from average occupational stress.

Table No 2 -Assessment of occupational stress among gardeners according to their age.

| Items | Age(in years) | | | | | | F | 'P' Value |
|---------------------------|-----------------|------|-----------------|------|---------------|------|--------------|-------------|
| | 20-35 (N=64) | | 36-50 (N=43) | | >50 (N=13) | | | |
| | Mean | SD | Mean | SD | Mean | SD | | |
| Long hours | 2.08 | 0.27 | 2.12 | 0.32 | 2.00 | 0.00 | 0.89 | 0.14 |
| Supervise the work | 0.75 | 0.83 | 0.70 | 0.70 | 0.62 | 0.50 | 0.18 | 0.82 |
| Like work | 1.44 | 0.73 | 1.07 | 0.79 | 1.54 | 0.77 | 3.62* | 0.03 |
| Satisfied with salary | 1.22 | 0.73 | 1.07 | 0.78 | 1.54 | 0.87 | 1.18 | 0.31 |
| Summer season | 1.58 | 0.61 | 1.47 | 0.66 | 1.69 | 0.48 | 0.80 | 0.44 |
| Skin problem | 0.39 | 0.58 | 0.58 | 0.73 | 0.46 | 0.66 | 1.12 | 0.33 |
| Breathing allergies | 0.38 | 0.54 | 0.42 | 0.62 | 0.46 | 0.66 | 0.15 | 0.86 |
| Dust allergy | 0.34 | 0.54 | 0.60 | 0.69 | 0.46 | 0.66 | 2.33 | 0.10 |
| Heavy work | 1.69 | 0.56 | 1.40 | 0.76 | 1.85 | 0.37 | 3.93* | 0.02 |
| Fall sick very frequently | 1.72 | 0.60 | 1.56 | 0.66 | 1.92 | 0.46 | 1.97 | 0.14 |
| Enjoy the work | 1.77 | 0.52 | 1.60 | 0.62 | 1.85 | 0.37 | 1.50 | 0.22 |

| | | | | | | | | |
|----------------|------|------|------|------|------|------|------|------|
| Rainy season | 1.72 | 0.51 | 1.58 | 0.62 | 1.85 | 0.37 | 1.45 | 0.23 |
| Any other work | 1.69 | 0.58 | 1.58 | 0.62 | 1.92 | 0.49 | 1.68 | 0.18 |

It is evident from the table even though significant differences were not found across age for all parameters. The workers belonging to the age group of >50 years were found to be satisfied with their salary in comparison to other age group. The gardeners are tired due to summer season and the workers above 50 years ($\mu=0.46$) were found to suffer from breathing.

Bigoniya P. (2010), also conducted health surveillance on occupational gardeners in India. 50 percent of the gardeners are underweight, 31.99 percent with high normal to high blood pressure, and none with diabetes. The prevalence of vision disturbance (26.66%), eye inflammation (29.33%), stiff nose (21.33%), joint pain, swelling and muscle stiffness (29.33%), and accidental injury (28%) was significantly high among gardeners.

Ghosh T. (2010) found that the workers were affected by occupational disorder like pain at neck (80%), shoulder (20%), wrist (45%), and low back (75%) and also eye problem like irritation (30%) and burning sensation (70%). They also perform their job in hazardous postures. It was recorded that the workstation were poorly illuminated in respect to precision work. Accidents like cut and burn occurred frequently due to the unsafe condition of the workstation.

IV. CONCLUSION

From this study it can be concluded that gardeners feel average occupational stress and majority of the gardeners feel occupational stress due to heavy work. Gardeners work in unfavourable working condition with the high stress of occupation. It was concluded that musculoskeletal disorders (MSD) among the gardeners might be due to the stressful work posture. Proper training of better posture, well designed tools and proper work schedules may help the gardeners work comfortable, safe and efficient.

To overcome the occupational stress gardeners should be motivated to use safety goggles, sturdy shoes or high rubber boots, and long pants when using lawn mowers, and other machinery. The gardeners should be encouraged to wear gloves, long sleeves, and sunshades to lower risk of skin irritation, sunburn, and skin cancer. Use of well designed hand tools will also aid in reducing occupational stress among gardeners.

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