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## Assessment of the health problems of workers in floriculture

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#### Abstract

Floriculture sector in India is most important sectors of agriculture which involves workers participation at great number in farm activities. Floriculture includes the several activities such as land preparation, planting, manuring, picking, pruning and transportation activities. The working method and workplace conditions at the floriculture farms, leads to numerous problems for farm workers engaged in different activities. Therefore, present study was undertaken with the objective of to assess the health problems of workers engaged in different floriculture activities. The study was conducted in Fatehabad, Hisar and Panipat district of Haryana by conducting personal interview with 68 respondents selected through simple random sampling technique and pretested interview schedule was used to collect the data. Results revealed that worker faced numerous problems such as physical problems, postural problems, problems related to high temperature, injuries and problems related to biological conditions while working in floricultural units.

**Keywords:** Floriculture, physical problems, postural problems, floriculture worker

#### Introduction

Floriculture industry is an emerging agro industry in India with significant growth potential. The demand of floricultural products increased in the national and international market in recent years. Floriculture is becoming one of the most important sectors for foreign exchange and a generating a source of employment in the agricultural sector. Increased demand of flowers and ornamental plants makes marketing of flowers a profitable sector which leads to a high involvement of laborers in this sector. Agriculture sector is considered as one of the most hazardous sectors in which vulnerable groups are daily laborers, seasonal workers and temporary workers. Workers engaged in floriculture faces many health challenges amongst one of the most prevalent health problem is the occurrence of musculoskeletal disorders. Health conditions of flower farm workers get worse due to long hours of working in awkward postures and repetitive nature of work which leads to health and safety problems. Awkward posture adopted by the floriculture workers while performing the activities can lead to postural problems such as stiffness of joints and unable to stand properly and they might further develop severe pain and strain. Floriculture activities mainly require forward bending posture during work with the repetitive and forceful movements. Floriculture workers have greater risk for musculoskeletal injuries of upper extremities especially wrist, hand, upper back and cervical. Other health related problems of floriculture workers includes headaches, skin rashes and respiratory problems. Floricultural workers health is a matter of concern due to the high and rising occurrence of health problems in the this sector. Therefore, study on occupational consequence of workers engaged in floriculture is useful to identify the possible health problems induced by work and working conditions.

#### Methodology

For conducting the present study three districts i.e. Fatehabaad, Hisar, Panipat of Haryana state were randomly selected. Out of each selected district, two floriculture units were randomly selected. Thus the total constituted sample was six floriculture units. All the workers engaged in these six floriculture units were selected for field survey. An interview schedule was developed and used to collect the data. The data were suitably coded, tabulated and statistically analyzed to draw meaningful inferences.

#### Results and discussion

**Physical problems:** Table depicts that the 67.65 percent of the respondents were suffering from backache, more than half (54.41%) of the respondents were suffering from the pain in cervical region and 14.71 percent of the respondents were suffering from the arthritis.

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Approximate twenty percent (19.12%) of the respondents were suffering from the asthma and a large number (72.06%) of respondents reported itchy rashes due to flower and its different parts. Majority (79.41%) of the respondents were suffering from pain in hands followed by 52.94 percent of the respondents who were suffering from numbness in fingers, 38.24 percent of the respondents were suffering from pain in legs and 32.35 percent of the respondents were suffering from numbness in hands. Swelling in fingers reported by the 19.17 percent of the respondents and 16.18 percent of the respondents reported swelling in hands whereas 13.24 percent of the respondents reported tingling in hands and same numbers (13.24%) of the respondents reported tingling in fingers. Njue *et al* (2017) <sup>[3]</sup> found that the musculoskeletal disorders were most prevalent in wrists and hands in floriculture workers and it was observed during the study that floriculture activities are manual and majority of these activities involve wrists and hands including harvesting and weeding leads to MSD in wrists and hands. Findings in present study revealed that 19.17 percent of the respondents reported swelling in fingers and 16.18 percent of the respondents reported swelling in hands whereas 13.24 percent of the respondents reported tingling in hands and same numbers (13.24%) of the respondents reported tingling in fingers. Suryavanshi and Parvez (2017) <sup>[4]</sup> also reported the rose and marigold flower harvesting activity as a drudgery prone activity.

**Postural problems:** Table further depicts that the majority (69.11%) of the respondents were suffering from pain in body due to stiffness of joints while 61.76 percent of the respondents were suffering from pain in body due to forward bending to perform the work and half of the respondents were suffering from pain in body due to back twisting while working in floriculture activities. A large number (64.71%) of the respondents were unable to stand properly due to working in same posture for longer duration. Kumari (2016) <sup>[2]</sup> also reported the occurrence of the musculoskeletal problems in grape orchards due to the posture adopted by the workers. Gangopadhyay *et al* (2008) <sup>[1]</sup> reported that the activities which require bending, twisting and awkward postures while performing can develop musculoskeletal disorders.

**Problems related to high temperature:** Although high temperature was not an issue for floricultural workers because most of the floricultural activities were being done in comfortable temperature still some floricultural activities such as land preparation, manuring, pruning etc. were being done in uncomfortable temperature also. Therefore, some respondents (7.35%) were facing skin burn due to high temperature followed by 5.88 percent of the respondents who faced eye strain and also same numbers (5.88%) of the respondents faced headache due to high temperature.

**Injuries:** Table revealed that less than half (42.64%) of the respondents reported cuts in various body parts especially in hands while working in floriculture units. Approximate thirty percent (30.88%) of the respondents were reported wound, 5.88 percent of the respondents reported fall during work and 1.47 percent of the respondents also reported fracture while working in floriculture activity i.e. land preparation.

**Problems related to biological conditions:** Insects such as bees and wasps are commonly found in floriculture farms may bite or sting to workers which may create redness,

swelling, pain and sometimes threatening allergies to the workers. In present study 36.76 percent of the respondents faced insect biting and 11.76 faced infection risk from fungi and parasites.

**Table 1:** Problems faced by the workers while working in floricultural units (n=68)

Problems		Frequency	Percentage
<b>Physical problems</b>			
Backache		46	67.65
Pain in cervical region		37	54.41
Arthritis		10	14.71
Asthma		13	19.12
Itchy rash due to flower & its parts		49	72.06
Pain in	Legs	26	38.24
	Hands	54	79.41
Numbness in	Hands	22	32.35
	Fingers	36	52.94
Swelling in	Hands	11	16.18
	Fingers	13	19.17
Tingling in	Hands	9	13.24
	Fingers	9	13.24
<b>Postural problems</b>			
Pain due to	Stiffness of joints	47	69.11
	Twisting the back	34	50.00
	forward bending	42	61.76
Unable to stand properly		44	64.71
<b>Problems related to high temperature</b>			
Skin burn		5	7.35
Eye strain		4	5.88
Headache		4	5.88
<b>Injuries</b>			
Cuts		29	42.64
Fracture		1	1.47
Wound		21	30.88
Fall		4	5.88
<b>Problems related to biological conditions</b>			
Insect biting		25	36.76
Infection risk from fungi, parasites etc.		8	11.76

\*Multiple responses

## Conclusion

In present study, main problems were identified as physical problems, postural problems, problems related to high temperature, injuries and problems related to biological conditions in the workers engaged in floriculture activities. Majority of the respondents were suffering from backache (67.65%) and cervical pain (54.41%) while the majority (69.11%) of the respondents was suffering from pain in body due to stiffness of joints while 61.76 percent of the respondents were suffering from pain in body due to forward bending to perform the work. A large number (64.71%) of the respondents were unable to stand properly due to working in same posture for longer duration. Less than half (42.64%) of the respondents reported cuts in various body parts especially in hands and 36.76 percent of the respondents faced insect biting and 11.76 faced infection risk from fungi and parasites.

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