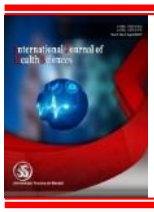

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Recreation Methods and Self-Reported Accidents or Injuries, Their Period of Recovery Among Garment Factory (Desi Arts) Workers Located in Jaipur, Rajasthan, India

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injuries;
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recreation;
workplace injuries;

Abstract

58 workers in a garment factory volunteered to take part in a cross-sectional survey, using a Google form after consent. One-way ANOVA was used as a statistical tool to analyze the relation between the impact of recreation methods on injury and accident incidents in the past year as well as their recovery time (resuming work). There were 22.4% female workers. Maximum workers were in the age group of 21-30 years. 41.4% were permanently residing in the vicinity and the majority (55.2%) were Muslims, 51.7% belonged to Rajasthan, India. The prevalence of self-reported accidents and injuries at and outside work was 9 episodes,15.52%. Maximum workers spent 6-8 hours in their occupation. 63.8% lived with their family. The majority were married. Maximum could pass time on phone, followed by sleeping (other than night sleep) for recreation. Cooking having meals together, and early morning walks were also highly practiced for recreation. Discussions with friends and family and outings with family were significantly associated with recovery. Higher salary and marriage were inversely associated with accidents, injuries, and periods of recovery.

Contents

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1 Introduction

Recreation is the process of giving new life to something, or of restoring something. It could be a stress buster, physical exercise, or adequate rest (Lay et al., 2017). The phrase "All work and no play, makes Jack a dull boy" is drilled into our minds right from childhood, to teach us that taking recreational breaks not only alleviates the stress of daily work but also enables our minds to refresh and recharge (Breslin et al., 2007). This ultimately boosts productivity at the workplace. Several observational studies have shown that active participation in recreational activities is associated with better health and well-being among working adults (Sonnentag, 2001).

The International Labour Organisation's (ILO) broader goal of promoting decent work includes aspects like work-life balance and access to leisure activities, which can be considered for organizational sustainability with less employee turnover. Among selected groups of workers with high emotional strain, recreational activities have been associated with improved self-rated health and well-being significantly (Goodman et al., 2017).

Recreational activities are mainly performed after working hours and can include sports and exercise, cultural arts and crafts, outdoor pass-times, socialization, and others to bring pleasure, joy, amusement, and meaning to our lives (Pressman et al., 2009). However, it is seen that there is a limited variety of recreational activities which are available to people of a lower socio-economic strata.

People might engage themselves in drinking alcohol, addiction to mobile phones, or smoking cigarettes to feel good after work. Such activities are common and not necessarily safe which might lead to sudden and chronic injuries, poor concentration at work, and a miserable lifestyle outside work (af Wåhlberg, 2011; Lahrmann et al., 2018).

In contrast, safe recreation helps in sharp work, and mental well-being which enables a worker to take precautions through capriciousness and emotional stability, both during work and outside it, resulting in less chances of injury and accidents (Asfaw et al., 2011; McCaughey et al., 2013). In the development of prevention strategies for alleviating injuries or accidents at and outside work, it is pertinent that the social life of workers be improved or facilitated of which recreation is a part. As an indicator of the level of living and quality of life, exploring the probable role of recreation along with influential socio-demographic factors that reduce the propensity of injuries and accidents is the aim of this research (Mata et al., 2022). The objectives of this study are:

1) To describe the socio-demographic profile of workers in a garment factory.
2) To find out the percentage of self-reported accidents or injuries and period of recovery among the workers.
3) To elicit the percentage of workers indulging in different methods of recreation.
4) To determine the association of self-reported accidents with a socio-demographic profile of workers.
5) To determine the association between self-reported accidents and recreation activities among workers.

2 Materials and Methods

A quantitative cross-sectional study was conducted among 58 workers of a small-scale garment manufacturing and export factory located in the urban field practice area of the medical college. All workers were eligible and included in the study through purposive sampling.

Ethical approval was obtained from the institutional review board of the medical college. The period of data collection was from 1st to 15th September 2024. All employees were requested to participate, we included those who wanted to participate by signing a written consent.

Permission to conduct a health camp as well as the study was granted by the owners of the garment factory. The interns deployed at the urban health and training center (UHTC) of the medical college, located near the factory were subjected to prior training by the researcher and a Medico-Social Worker was instructed to supervise and report the data collection activity. A pre-tested, semi-structured questionnaire was administered

through a Google Form by interview method by the interns. This opportunity was taken during a routine health education session on prevention of Non-Communicable Diseases by the Medical Officer of UHTC who pre-informed the workers about the research activity following which a verbal affirmation to participate was given by the volunteers. They were reassured about the confidentiality of information and their anonymity at every stage of the survey.

Socio-demographic profile, indulgence in different forms of recreation, past one-year self-reported h/o of injuries and accidents that were sudden and not chronic ailments both at and outside work, and their period of recovery for which several days' gap in resuming work was asked with the help of a study tool (Banerjee et al., 2013; Järvinen et al., 2007).

For Analysis, the Google Form data sheet was imported to Jamovi version 2.5.10. The association between self-reported accidents and socio-demographic factors was determined using One-way ANOVA (non-parametric Kruskal-Wallis) statistics to test significantly less variability. Recreation methods were subjected to negative (one-tailed) Spearman's correlation with the frequency of accidents and injuries. Graphs and charts were obtained from MS Excel.

3 Results and Discussions

There are 9 (15.52%) workers who self-reported accident and injury events both in and outside the working hours. In comparison, Ravi & Joseph (2019), reported 22% of occupational accidents between 2009-12 among persons in the age group of 18-60 years from a selected rural population of India. The maximum population is in the age group 31-45 years. In contrast, our study reports 27 (46.6%) workers in the age group 21-30 years, of whom the majority are males (39.7%). Figure 1 shows that the percentage of women (10.3%) workers in the factory is highest in the age group of 31-40 years.

Similarly, Chweya et al. (2021), in Kenya, found that 14% of workers self-reported injuries. In the Kenya study, only 7.4% of injuries were documented. We did not find any documented evidence of injuries in our population because we collected data in a factory while the former was a longitudinal household survey.

Only 1 (1.7%) woman reports 1 event of injury outside work in our study. Her period of recovery was 1 month. This was different from the Kenya study where 59% of women got injured more frequently. This could be a biased comparison because there were 55% of women representing the workers enrolled in the Kenyan study, our being only 13 (22.4%), Table 1.

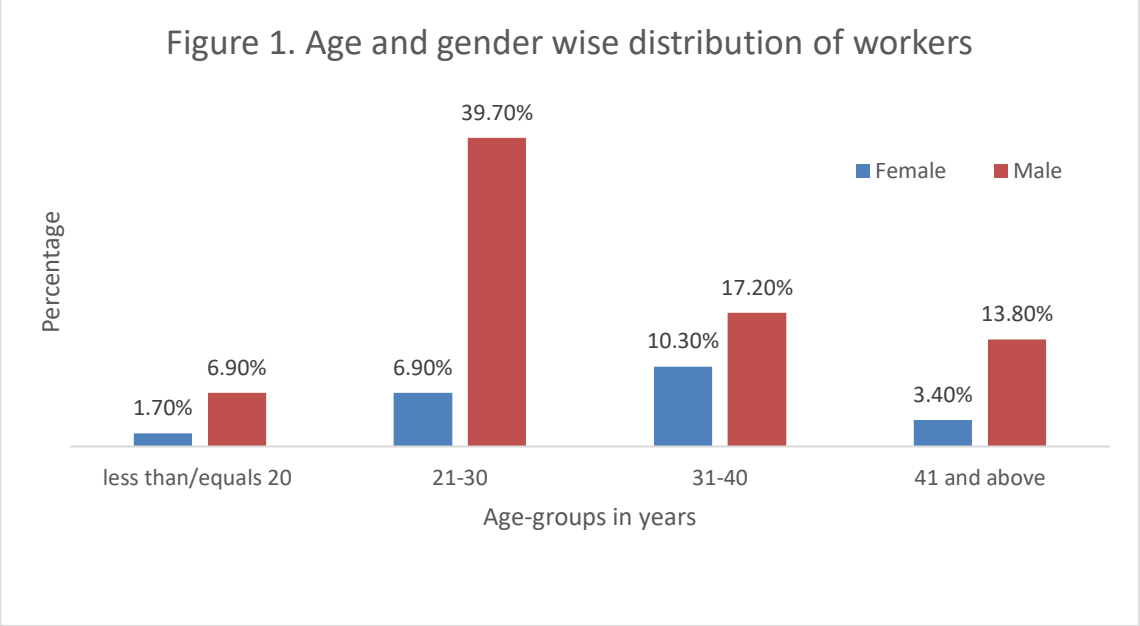

Figure 1. Age and gender-wise distribution of workers

Figure 2 depicts, that 3 (5.2%) workers suffered from 1 event each in the past year, at work. 1 (1.7%) reported recurrent events at work. Similarly, 3 (5.2%) workers informed about 1 event and 2 (3.4%), recurrent events of accidents and injuries; respectively, outside work. All cases recovered fully from the injurious events that occurred within a year. According to Chweya[6] et al, 17 injuries per 100 weeks; 1.2 episodes in 12 weeks were reported by 38 (10%) of their study population which is a much higher incidence compared to our study.

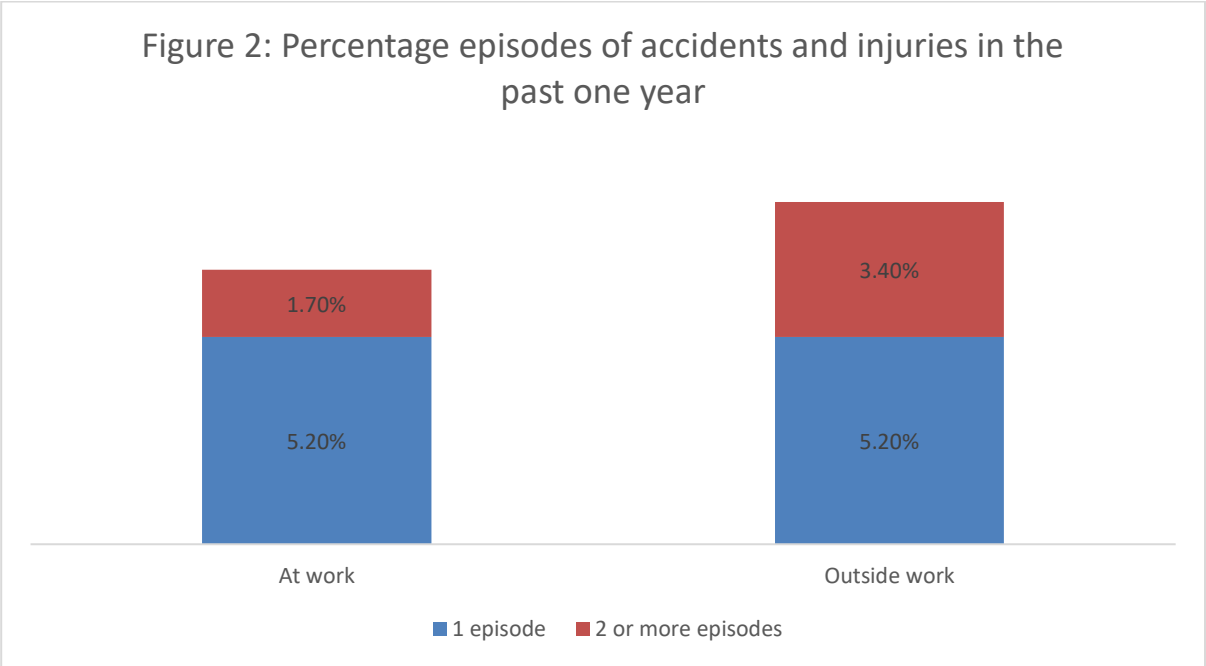

Figure 2: Percentage of episodes of accidents and injuries in the past year

Figure 3 depicts the maximum injured 6 (10.3%) who resumed their jobs within a week, 1 (1.7%) worker who recovered within a month but more than 1 week, and 2 (3.4%) who took more than 1 month to rejoin. Minor aches and pains in the musculoskeletal system are not included as injuries. Kebede Deyyas & Tafese (2014), through their research on sewing machine operators in a garment factory found that 8.1% of people with elbow or forearm disorder recovered in a week, 9.4% were in trouble for 8-30 days, 16% remained injured for more than a month and 5.9% suffer everyday chronically. Of those with hand and wrist disorders, 8.8% suffered for a week, 8.5% less than a month, 11.8% were in trouble for more than a month but not every day, and 8.5% were chronically affected.

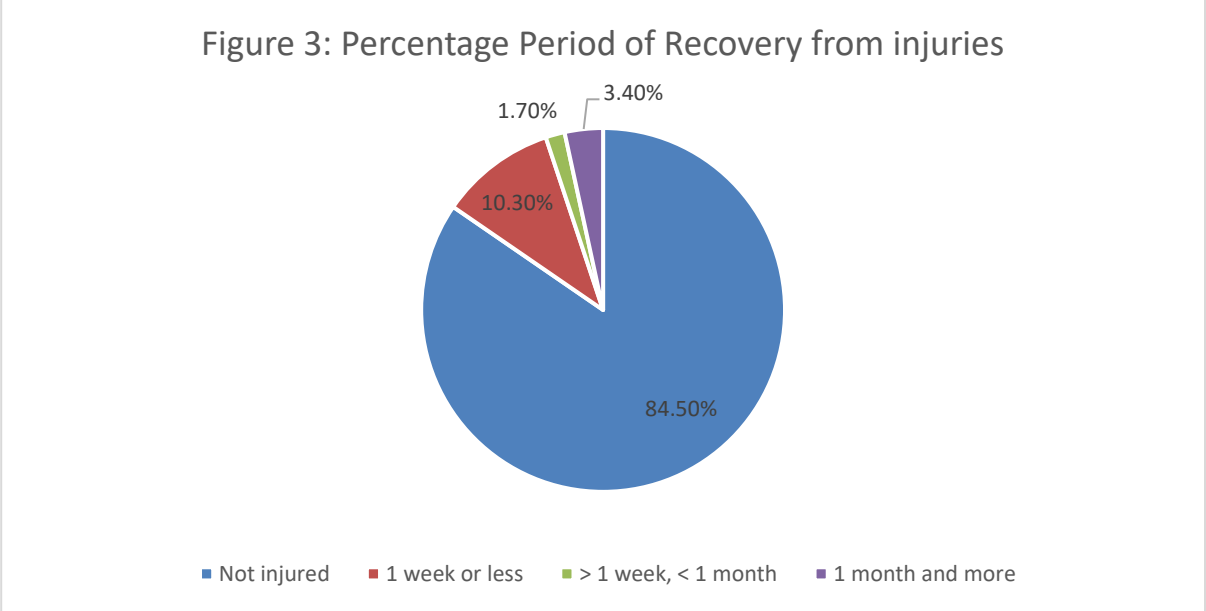

Figure 3: Percentage Period of Recovery from injuries

Table 1
Distribution of social variables among workers of a garment factory and their relation to accidents and injuries both at and outside work with their period of recovery

Social variables	Number (%)	One-way ANOVA (non-parametric) p-value: Accidents at work/outside work/period of recovery
Age		
Below 20 years	5 (8.6)	0.375/0.923/0.696
21- 30 years	27 (46.6)	
31-40 years	16 (27.6)	
41 and above	10 (17.2)	
Gender		
Male	45 (77.6)	0.543/0.856/0.564
Female	13 (22.4)	
Residential permanence		
Less than 2 years	24 (41.4)	0.852/0.938/0.687
2-5 years	12 (20.7)	
5-10 years	10 (17.2)	
More than 10 years	12 (20.7)	
Religion		
Hindu	26 (44.8)	0.181/0.538/0.303
Muslim and others	32 (55.2)	
Ethnicity		
Bihar/Jharkhand	6 (10.3)	0.121/0.298/0.135
Rajasthan	30 (51.7)	
U.P/Uttarakhand	5 (8.6)	
W. Bengal	17 (29.3)	
Type of work		
Class 4	5 (8.6)	0.581/0.709/0.912

Mason/construction work	7 (12.1)	
others	46 (79.3)	
No. of working days		
7	15 (25.9)	0.450/0.565/0.784
5-6	42 (72.4)	
<3	1 (1.7)	
Salary		
3000-5000	2 (3.4)	0.927/**0.039**/**<0.001**
Above 5000	56 (96.6)	
No. of hours of work in a day		
6-8	27 (46.6)	**0.03**/0.26/**0.05** Negative one-tailed Spearman's Correlation is non-significant
8-10	16 (27.6)	
10-12	11 (18.9)	
12 and above	4 (6.9)	
Living with family		
yes	37 (63.8)	**0.024**/0.310/**0.044**
no	21 (36.2)	
No. of Family members staying together		
none	13 (22.4)	0.061/0.229/0.368
2-5	33 (56.9)	
6-9	7 (12.1)	
Above 9	5 (8.6)	
Marital status		
unmarried	15 (25.9)	0.262/0.143/**0.013**
married	41 (70.7)	
widowed	2 (3.4)	
Separate/divorcee	0 (0)	
Literacy level		
illiterate	12 (20.7)	0.339/0.170/0.198
Below 5th	8 (13.8)	
Below 8th	12 (20.7	
10th or higher	26 (44.8)	
Treatment facility (multiple events included)		
Home remedies	5 (8.6)	**Period of recovery; <0.001 (14 episodes among 9 injuries)**
HF ambulatory	2 (3.4)	
HF surgery	7 (12.1)	
Not required	44 (75.9)	

Table 1 provides insights about socio-demographic factors like better salary and living with family inversely influence accidents and injuries outside work and at work; respectively. The period of recovery is significantly affected (showed less variability in inversely proportional relation) by salary, living with family, being married, and type of treatment out of the whole study population (Juutinen et al., 2022; Komossa et al., 2021). There is significantly less variability according to working hours, but the one-tailed correlation was non-significant showing that the association can be spurious. Salary was not a significant factor for musculoskeletal injury in the Ethiopian study. Kebede Deyyas & Tafese (2014), also reported that years of service were associated strongly with musculoskeletal injury. Our study showed no significant association (Table 1), with years of working and residential permanence.

According to Figure 4, 20 workers (34.5%) were recreated by discussions with family that are inversely associated with accidents and injuries outside work (Table 2). The period of recovery is also shorter for workers who engaged in discussions with friends (31%) and family or reported frequent outings with family (24.1%),

as described in Table 2. Similarly, Siu & Ng (2021), found a strong relationship between workplace injury and burnout, work engagement, and safety violations due to family problems.

Spending time on phones (32; 55.2%) and sleeping outside night-time (30, 51.7%) were the most common leisure activity that every worker reported. Such activities were not detrimental (not inversely correlated) in terms of accidents and injuries, nor significantly causative.

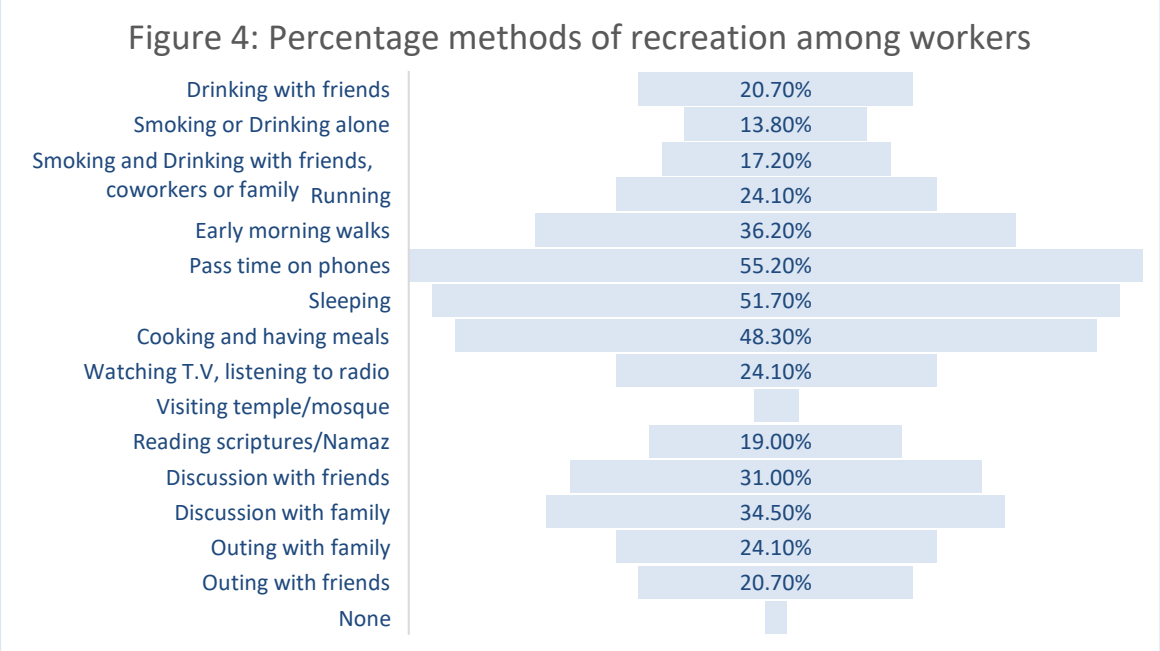

Figure 4: Percentage methods of recreation among workers

Table 2: Distribution of methods of recreation among workers and their correlation to the episodes of accidents and injuries at and outside work with their periods of recovery

Methods of recreation	Number (%)	Spearman's neg correlation p-value: Accidents at work/outside work/period of recovery
Drinking with friends	12 (20.7)	0.94/0.43/0.77
Smoking or drinking alone	8 (13.8)	0.21/0.59/0.42
Smoking and drinking with friends, coworkers or family	10 (17.2)	0.68/0.12/0.28
Running	14 (24.1)	0.13/0.74/0.17
Early morning walks	21 (36.2)	0.31/0.76/0.23
Pass time on phone	32 (55.2)	0.40/0.11/0.10
Sleeping	30 (51.7)	0.13/0.44/0.16
Cooking and having meal	28 (48.3)	0.17/0.33/0.07
Watching tv, listening to radio	14 (24.1)	0.13/0.43/0.17
Kirtan/mosque	2 (3.4)	0.35/0.33/0.27
Reading scriptures/namaz	11 (19.0)	0.94/0.51/0.67
Discussion with friends	18 (31.0)	0.09/0.06/**0.02**
Discussion with family	20 (34.5)	0.07/**0.05**/**0.009**
Outing with family	14 (24.1)	0.125/0.25/**0.03**
Outing with friends	12 (20.7)	0.15/0.12/0.21
none	1 (1.7)	0.39/0.38/0.34

4 Conclusion

- Self-reported episodes of accidents and injuries in the past 1 year for both at and outside work were among 9 (15.52%) workers.
- Age, gender, residential permanence, no. of working days (only 1 worked for less than 3 days) religion, and ethnicity were not significantly related to accidents or injuries with the h/o 1-year from the period of data collection.
- Length of working hours, living with family for at least the past 1 year had significantly less variability of means (negative relationship) with 1-year h/o accidents and injury. Salary and Discussions with family were negatively correlated to accidents outside work.
- Period of recovery had inverse proportionality to salary, fewer working hours, living with family, marital status, treatment facility chosen as social factors and outings with family, and discussions with family and friends as methods of recreation.

Recommendations

- Work-life balance in the form of shorter working hours, spending time with family and friends, and marital stability are suggested to the working force for avoiding accidents and injuries at the workplace, and brisk recovery if they still might happen.
- Workers are also recommended home-based care for management of accidents and injuries both at work and outside it. A decent salary should be provided with similar pay slabs for equal positions and work.
- Find work nearer home. This stabilizes a person mentally with less incidence of accidents.
- Employee turnover as a detrimental factor can be studied with the permission of the employer.
- Further exhaustive research and accident surveillance are required over the years to analyze the social determinants of their frequency in detail.

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