INFORMATICS JOURNALS

Online **ISSN :** 3049-3455

Mineral Metal Energy Oil Gas and Aggregate

Contents available at: *www.informaticsjournals.com/index.php/2MEOGA*

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Determining Factors Influencing Risk-taking Behaviour of Employees at Work in Factories: A Case Study

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Abstract

Safety has become a top priority for industries with the advancement of technology. As production is being increased on a large scale, it simultaneously increases the risk of those working in industries due to increased work demand under cost control. Despite all efforts to improve overall safety at the workplace industrial accidents are common. Conventional risk assessment theory emphasizes four major aspects and doesn't deal with the behavioural aspect of those working in the industry. Without knowing the factors that influence the risk-taking behaviour of employees it is difficult to ensure workplace safety. The present study will deeply explore factors that influence the behaviour of an employee working in an industry that either motivates or compels an individual to take risks witch in later converts in accidents. This investigation was a case-control study conducted on 100 workers from an Industry in the period 2023. A standardized questionnaire called Workers' Response Device (WRD) was used to assess Poor Safety culture, management commitment, Safety awareness, Job dissatisfaction, job stress and Work environment. The WRD was filled by interviewing the workers. Poor safety culture scores' mean is 34.3100 and the standard deviation is 9.38158, the maximum value is 54 and the minimum value is 22. Job dissatisfaction involvement has a mean value of 17.11 and ranges from 1 to 20, the standard deviation and skewness of poor job involvement are 3.43 and 0.653 respectively. Job dissatisfaction has a mean value of 10.49 and ranges from 1 to 29, standard deviation and skewness of job dissatisfaction are 6.30 and 0.447 respectively. Skewness, mean and standard deviation for job stress are 0.128, 26.52, and 4.71 respectively. It was concluded that poor safety culture, job dissatisfaction and job stress played significant roles in the risk-taking behaviour of employees. This information would help in implementing preventive programs to improve workplace safety and reduce accidents.

Keywords: *D.G.F.A.S.L.I: Director General of Factory Advisory Service and Labour Institute, Culture: Set of values which we follow religiously, Unsafe Act: An act which leads to injury or property damage, Unsafe Condition: A condition that leads to injury or property damage. Workers' Response Device (WRD): Aset of questions in the form of questionnaire, PPE: Personal protective equipment like Safety helmet etc.*

1.0 Introduction

1.1 Background

Industrial accidents give rise to much human suffering as well as high costs for society, organizations and individuals. In India 12000 fatal and 151634 non-fatal industrial injuries in Factories have been reported from the year 2011 to 2020 (India, 2018). Despite decades of safety management systems, industrial injuries remain extremely common. The ever-increasing mechanisation, electrification, and sophistication have made industrial jobs more and more complex and intricate. This has led to increased dangers to human life in industries through

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incidents. In fact, the same underlines the need for and importance of industrial safety.

People going to work are cautious, aware and anxious about their safety. Thus, the overall workplace safety standard significantly increases with improved behaviour of employees.

It can be seen in Table 1 and Figure 1 Occupational Safety and Health data for the year 2020 of factories registered under the Factories Act, 1948. The following observations can be made from the data:

The number of registered factories and total employment shows a general increasing trend during the last ten years. In the year 2011 total manpower employed was 11634070 with 325209 registered factories as compared to 20298387 manpower employment in 363442 registered factories in 2020. During the years 2011-2020, the number of registered factories in India increased by 11.76% from 3,25,209 to 3,63,442 while the total number of workers employed increased by 74.47% from 1,16,34,070 to 2,02,98,387. The rising trend of people employed in factories must also increase the risk of workplace injuries.

It can be seen from Figure 1 that both the fatal and non-fatal injuries registered a decline as compared to the base year 2011. The largest annual decline of 12.56% is seen in fatal injuries during the year 2015 while during the year 2016; non-fatal injuries registered the largest ever annual decline of 73.51% but still, a large number of fatal and serious accidents have been in continuation in

Table 1. Statistics of Factories for the year 2020

No. of registered factories		363442
No. of working factories		306174
Employment	Total	20298387
	Women	3008867
No. of Safety Officers		5497
No. of factories having Safety Policy		32413
No. of factories having Safety Committees		24440
No. of Hazardous Process factories		41475
No. of factories having On-site Emergency Plan		2312
Total Injuries		3882
Fatal Injuries		1050

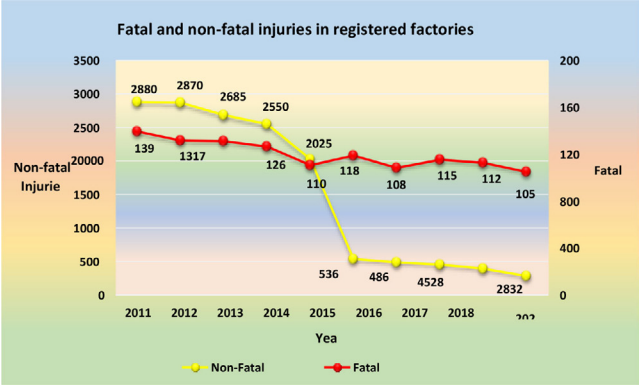


Figure 1. Fatal and non-fatal injuries in factories from 2011 to 2020.

factories or other words workers working in factories are continuing in risk of fatal or serious injuries.

1.1.1 Factors Influencing Risk-Taking Behaviour

Risk-taking behaviours can be defined as those that involve some potential for danger or harm (or loss) while also providing an opportunity to acquire some rewards (or gain)[1]. Improved behaviour is aimed at positive behavioural change in workers and developing a safe work culture. Improved employee behaviour is a collective effort that involves observing the behaviour of other workers and notifying others of unsafe behaviour[2].

A good safety system can be made from four pillars. It can be seen in Figure 2 four essential pillars of a good safety system are as follows.

1. Proper infrastructure
2. Availability of all desired tools and equipment
3. All systems and procedures are in place
4. Employees are well trained and aware of the safety of self and others.

To check whether all four pillars are effectively present and functioning organisations have an inspection and audit system to check the adequacy. Recent accident training has shown that these four pillars are not sufficient and cannot assure that incidents will not happen.

- When we have good infrastructure available.
- When we have the best Equipment available.
- When we have all the systems and procedures in place.

- When we have all our workforce properly trained and aware.
- Why do we still have accidents?
- A procedure in itself will not help if personnel do not follow it.
- The best Equipment will not help if people do not use it properly.

It is well known that a technical approach alone is not sufficient to reduce injuries. Human factors were found to make a significant contribution to injuries. Some researchers have explored the role of the social context, particularly of the safety culture[3]. Individual characteristics of workers have been little investigated. Some authors have emphasized the roles of poor perception of working conditions poor management, poor supervision, poor safety environment, risk-taking behaviour, emotional instability, negative job involvement, job dissatisfaction and job stress[4]. The issue of the safety performance of workers has been little investigated although it can play a role in occupational injury. These factors have not been investigated simultaneously, especially amongst industries. The behaviour of employees working in an organization has now become very important and one of the major causes of incidents happening in industries due to the risk-taking behaviour of employees[5]. It is a well-known fact that any decision taken by a human being is either due to his motivation or due to any compulsion.



Figure 2. Pillars of safety system.

Most of the time it is difficult to find out the root cause behind the decision-making of an employee.

It can be seen in Figure 3 that in a broad sense, there are six factors which influence the risk-taking behaviour of an employee in any organisation.

1. Poor safety culture
2. Poor management's commitment
3. Poor safety awareness
4. Job dissatisfaction
5. Job stress
6. Poor work environment

Apart from these factors, age, marital status and education might also influence the risk-taking behaviour of workers. The present study will determine the role of Poor safety culture, Poor management commitment; Poor safety awareness, Job dissatisfaction, Job stress, Poor work environment, age, marital status and education in determining the risk-taking behaviour.

1.2 The Need

According to International Labor Office statistics, 120 million occupational injuries and 210,000 fatal injuries occur annually at workplaces worldwide. They



Figure 3. Hypothesized factors influencing risk-taking behaviour.

take a considerable socioeconomic toll on workers, companies and society, whereas they draw fairly little public attention. There has been little epidemiological knowledge of preventive measures as most findings have often been based on accident investigations rather than on epidemiological studies[4].

A thorough understanding of the accident generation mechanism is necessary for accident prevention. Heinrich asserted that accidents are caused by an unsafe act (i.e., a person's behaviour or activity that deviates from the normally accepted safe procedure) or an unsafe condition (i.e., a hazard or an unsafe 6 mechanical or physical environment[6]. This implies that accidents happen due to either an 'action' of unsafe behaviour or a 'lack of action' to eliminate unsafe conditions. Based on this classification, Heinrich further claimed that the removal of either unsafe acts or unsafe conditions can prevent accidents and injuries.

Considering that 88% of accidents are caused by unsafe acts and 10% by unsafe conditions and that unsafe acts of workers are more difficult to identify and prevent than unsafe conditions[6], industries need to shift their safety management effort toward the elimination of unsafe acts.

In today's scenario large number of incidents has led businesses to take unprecedented measures to ensure the health and safety of employees during their jobs. At such times, where health, safety and well-being are of paramount importance, industries are giving special attention to employee behaviour (risk-taking behaviour). Since it is a known fact that unsafe employee behaviour is a major cause of accidents in workplaces, businesses cannot afford to ignore the importance of conditions or situations which either motivate or bound employees to take risks while working in industry.

The present study aimed to assess the relationships between age, poor safety culture, poor safety awareness, poor work environment, poor management commitment, job dissatisfaction, job stress, and with risk-taking behavior of employees in an industry.

1.3 Objectives

1. Identification of factors responsible for the risk-taking behaviours.
2. Determination of the relationship between these factors and the risk-taking behaviour of an individual.
3. Formulate recommendations to reduce the risk-taking behaviour of workers.

1.4 Scope

1. Framing of a field study design for collecting data for conditions behind the risk-taking behaviour of employees on the field.
2. Collection of data from a manufacturing plant. Detailed questionnaires will be used as well and face-to-face interviews of the employees will be done to collect the data.
3. A comparison of the six factors and their impact on the risk-taking behaviour of employees will be done.
4. Systematic analysis of all the collected data will be done to establish the model to predict the factors behind the risk-taking behaviour of employees.
5. Recommendations for factors which work behind the risk-taking behaviour of employees as measures to reduce the chances of accidents will be proposed to the plant.

1.5 Behavioural Aspects

In recent years, an increase in the number of fatal and non-fatal accidents of employees has drawn the attention of various researchers and practising safety professionals. Due to the behaviour of employees, a lot of accidents happened in industries in recent years and behavioural safety has become a heated topic for the industries as well as for the researchers. So, it has become mandatory for the industry to assess various factors behind risk-taking behaviour so that the employees are safe and there is a substantial decrease in accidents. This project will focus on four important factors namely demographic factor, organizational factor, environmental factor and job-related factors as some of the most important components of an employee working in an industry. This project will help in determining the motivating factors and factors which work as a compulsion while working in an Industry. This will help in protecting the employees from accidents due to unsafe behaviour.

This work is directed at identifying the risk factors, which influence risk risk-taking behaviour of workers and identification of factors influencing the risk-taking behaviour of employees to improve the safety performance of workers and reduce injury rate in the Industry.

According to DGFASLI, 1394 people died in 2011, 1317 in 2012, 1312in 2013, 1266 in 2014, 1107 in 2015, 1189 in 2016, 1084 in 2017, 1154 in 2018, 1127 in 2019 and 1050 in 2020 due to fatal accidents in Industries. Though the fatal injury rate has declined over the years because of better working conditions, and technological advancement still accidents are occurring, and they are causing huge monetary losses to organisations and loss of skilled manpower. Therefore, it is important to identify the causes of these accidents proactively. One of the major causes of accidents and injury is the risk-taking behaviour of workers. If the factors which influence the risk-taking behaviour of workers can be identified, and controlled then the safety performance of workers can be improved and accident and injury rates can be minimized. Therefore, there is a need to determine the factors which influence the risk-taking behaviour of employees.

2.0 Methodology

2.1 Steps in Analysis

The first step of successful analysis is to plan a strategy. A good analytic strategy will ensure that appropriate hypothesis is considered, and relevant data is collected and analysed. Therefore, the method of data collection and analysis should be planned as given in figure 4.

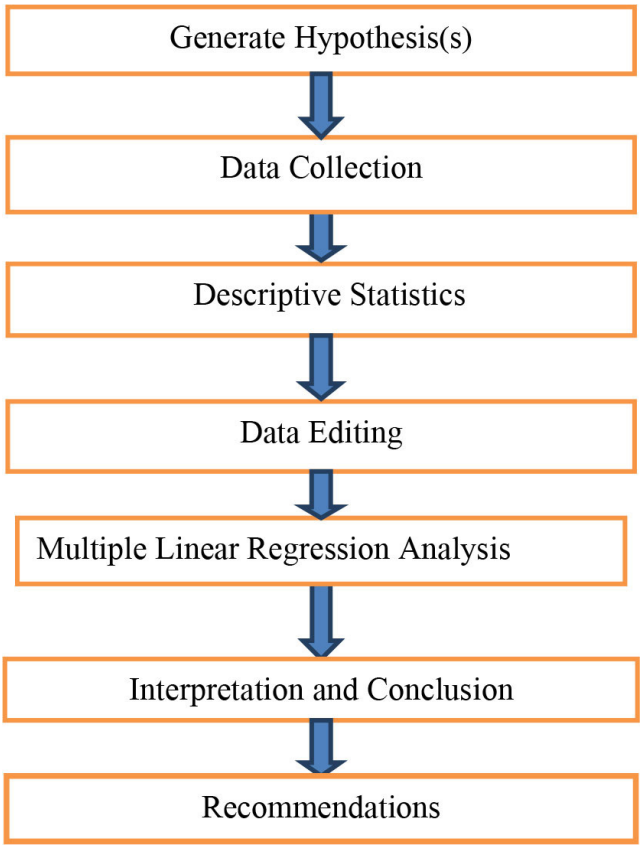


Figure 4. Steps in analysis.

2.2 Hypothesized Risk Factors

Based on the literature survey and data available following factors are considered which may influence worker's risk-taking behaviour, Poor safety culture, Poor management commitment, poor safety awareness, Job dissatisfaction, Job stress and poor work environment.

2.2.1 Safety Culture

Safety culture is a measure of an employee's perception of the state of safety in an organisation; it is related to safety guards, proper Standard Operating Procedures (SOPs), proper maintenance and supervision, workers and management's attitude towards safety, organisation's policies vis-à-vis safety as mentioned in figure 5.

2.2.2 Management's Commitment

Management commitment provides the motivating force and the resources for organizing and controlling safety activities within an organization. Employee involvement provides the means through which workers develop and/or express their commitment to safety and health protection for themselves and their fellow workers.

2.2.3 Safety Awareness

Safety awareness is a collective knowledge about the hazard and their control in the system in which workers are working. The presence of safety awareness promotes a healthier workplace culture among employees towards managing hazards.

2.2.4 Job Dissatisfaction

Job dissatisfaction is another aspect of attitude to work which has been operationalised in safety research studies. Job dissatisfaction is after all simply emotional responses. The relationship between job dissatisfaction and work injury has been examined in several studies.



Figure 5.

2.2.5 Job Stress

Job stress is defined as the non-specific response of the body to a demand made upon it. With the advancement of science and technology, the organizational structure is changing rapidly. As a result, the individuals operating in various job settings are facing stress stemming from job dimensions, and this stress can affect negatively the safety performance of workers.

2.2.6 Work Environment

The work environment is the setting, social features and physical conditions in which workers perform their jobs. These elements can impact feelings of well-being, workplace relationships, collaboration, efficiency and employee health.

2.3 Hypothesis

Experience, Safety environment, Management commitment, Safety awareness, Job satisfaction, Job stress and work environment, age, marital status and education are significantly related to the risk-taking behaviour of workers.

2.4 Data Collection

Data collected directly from workers have been used in this study. Data is taken from an investigation conducted on workers from industry which employed 2,200 workers in the period 2022–2023. Both male and female workers were employed in industry. The survey to collect the data was conducted from December to March 2023 (four months).

A standardized questionnaire called Workers' Response Device (WRD) was used to assess Poor Safety culture (20 items), Management commitment (13 items), Safety awareness (18 items), Job dissatisfaction (12 items), job stress (10 items), and Work environment (16 items). The WRD was filled by interviewing the workers; each interview took approximately 45 mins. The interview was conducted at a lonely place so that supervisors could not influence the worker's responses.

The data which is used in the present work was collected through a questionnaire survey. A face-to-face interview was conducted instead of an auto questionnaire survey so that workers did not face any difficulties. Data was analysed using various statistical methods including simple descriptive analysis (mean, range, standard deviation, skewness, and kurtosis), and multiple linear regression, the findings of this study are concluded in the following section.

Each item has possible three responses Yes, cannot say and no, which are assigned values of 3, 2, and 1, or 1, 2, and 3 for items negatively formulated. Apart from the mentioned variables experience, is also recorded. A sample size of 100 is used in the present study.

2.5 Statistical Methods

2.5.1 Bi-Variate Correlation

The Pearson product-moment correlation is a measure of the strength of a linear association between two variables and denoted by r, it lies between -1 to 1. The correlation between two variables given by

$$r = \frac{\rho_{xy}}{\sigma_x \sigma_y} \quad (1)$$

where, ρ_{xy} is covariance between two variables and σ_x, σ_y are standard deviations of two variables.

The statistical significance of the Pearson correlation coefficient is tested using a t-test where the null hypothesis is "Population correlation coefficient is not significantly different from zero "whereas the alternate hypothesis is "Population correlation coefficient is significantly different from zero".

H_0 : r=0

H_a : r≠0

T-statistics is given by

$$t = \frac{r\sqrt{(n-2)}}{\sqrt{\left(1-r^2\right)}} \quad (2)$$

where, n is the sample size.

2.5.2 Multiple Linear Regression Analysis

Multiple linear regressions involve fitting a model using more than one independent variable. In multiple linear regressions, each independent variable has its separate slope coefficient.

If we have p independent variables then multiple linear regression models can be expressed as.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_{2+} \beta_3 X_{3\ldots\ldots\ldots\ldots\ldots\ldots+} \beta_p X_p + \varepsilon \quad (3)$$

In the multiple regression with p independent variables, we have to check whether all of the regression coefficients are zero i.e. $\beta_1 = \beta_2 = \ldots\ldots\ldots \beta_p = 0$.

The hypothesis is tested to answer this question. The null hypothesis is tested versus the alternative hypothesis

The null hypothesis is:

$H_{0:}$ $\beta_1 = \beta_2 = \ldots\ldots\ldots \beta_p = 0$

The alternate hypothesis is:

H_a : at least one β_j is non-zero.

Assumptions of multiple linear regressions

- Linear relationship between dependent and independent variables
- Multivariate normality, i.e., residuals are normally distributed.
- No multicollinearity
- Homoscedasticity

3.0 Results and Discussion

3.1 Descriptive Statistics

As shown in figure 6 to 13 and table 2 the minimum score of risk-taking behaviour is 10 and maximum value is 26, and the mean is 18.320 It can be seen from Figure 4 that a large number of people have higher risk-taking behaviour scores, and frequency distribution is concentrated towards the left (skewness = -0.915). Poor safety culture scores' mean is 34.3100 and the standard deviation is 9.38158, the maximum value is 54 and the minimum value is 22. It can be seen from Figure 6 that the frequency distribution of poor safety culture is concentrated towards the left (skewness = -0.403). Poor management commitment has a mean of 22.3600 and its frequency distribution is right skewed (skewness= 0.749). Poor safety awareness has a mean of 28.2500 and a standard deviation of 6.64 and is skewed to the right (skewness = 0.779). Impulsiveness has a mean of 23.96 and a standard deviation of 3.80 and has positive value of skewness (skewness = 0.596). Job dissatisfaction involvement has a mean value of 17.11 and ranges from 1 to 20, the standard deviation and skewness of poor job involvement are 3.43 and 0.653 respectively. Job dissatisfaction has a mean value of 10.49 and ranges from 1 to 29, standard deviation and skewness of job

Table 2. Descriptive statistics of variables included in the study

S. N	Variables	Minimum Value	Maximum value	Mean	Standard deviation	Skewness	Excess Kurtosis
1	Age	22.00	57.00	38.400	9.4324	.132	–.967
2	Marital Status	0	1	.780	.4163	–1.373	–.119
3	Education	0	2.0	.820	.6873	.249	–.859
4	Poor safety culture	22.00	54.00	34.3100	9.38158	.560	–1.079
5	Poor Management commit	12.00	36.00	22.3600	7.36429	.267	–1.142
6	Poor safety awareness	20.00	46.00	28.2500	6.64447	.574	–.363
7	Job Dissatisfaction	11.00	31.00	17.1100	5.22599	.997	–.295
8	Poor Work Environment	18.00	44.00	28.6800	5.98800	.517	–.295
9	Job stress	11.00	25.00	20.080	3.1097	–.428	–.150
10	Risk Taking Behaviour	10.00	26.00	18.320	3.8896	–.384	–.507

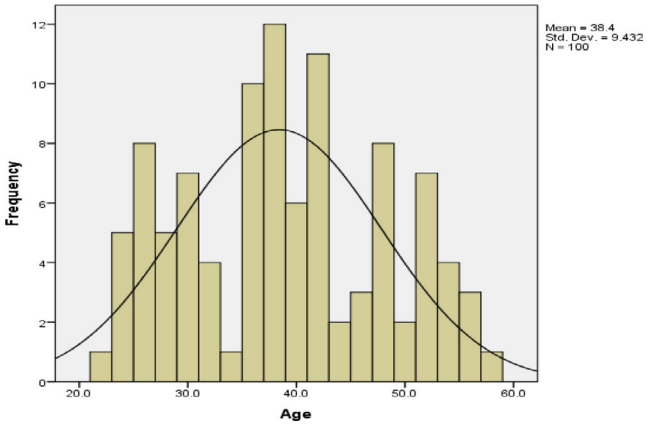


Figure 6. Frequency distribution of age.

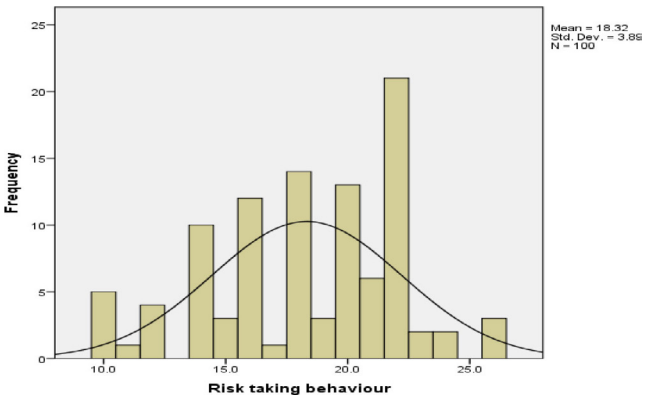


Figure 8. Frequency distribution of risk-taking behaviour.

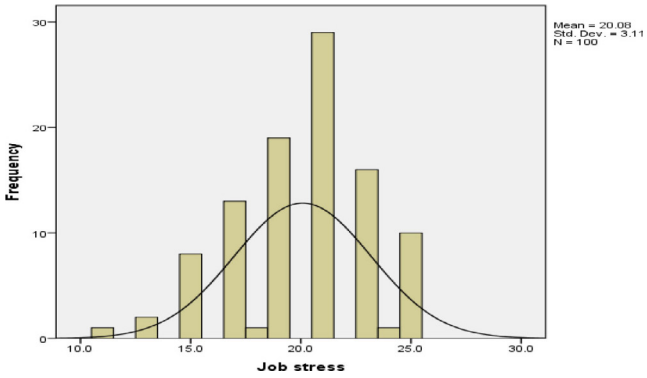


Figure 7. Frequency distribution of job stress.

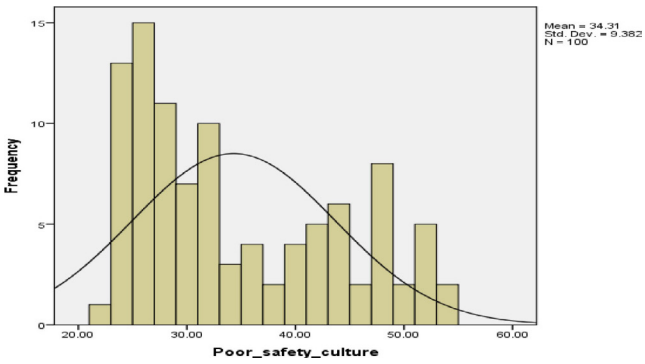


Figure 9. Frequency distribution of poor safety culture.

dissatisfaction are 6.30 and 0.447, respectively. Skewness, mean and standard deviation for job stress are 0.128, 26.52, and 4.71, respectively. Experience ranges from 1 to 38 years with a mean of 15.95 years and a standard deviation of 9.94, and it is skewed to the right with skewness 0.355. It is clear that apart from poor working conditions no risk factor has negative skewness, which means most of the workers think that they have poor working conditions.

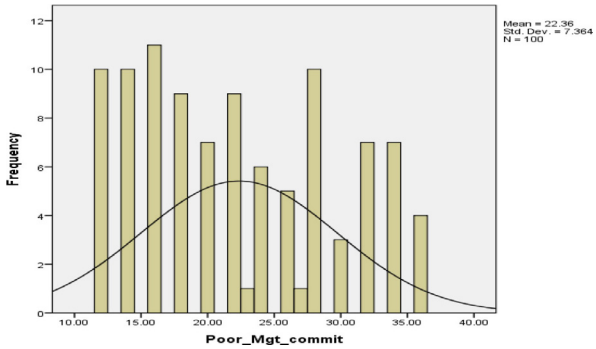


Figure 10. Frequency distribution of poor management commitment.

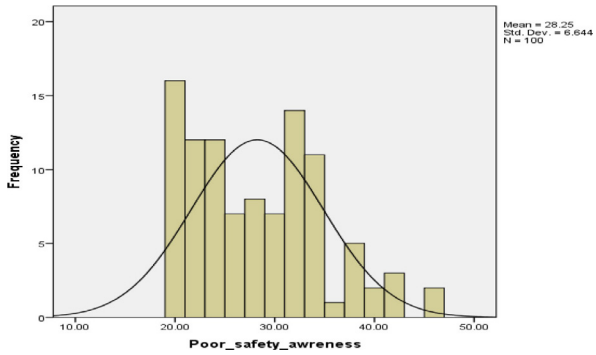


Figure 11. Frequency distribution of poor safety awareness.

3.2 Multiple Linear Regression

It can be inferred from the table 3, that risk-taking behaviour is associated with age (β = - 0.141), marital

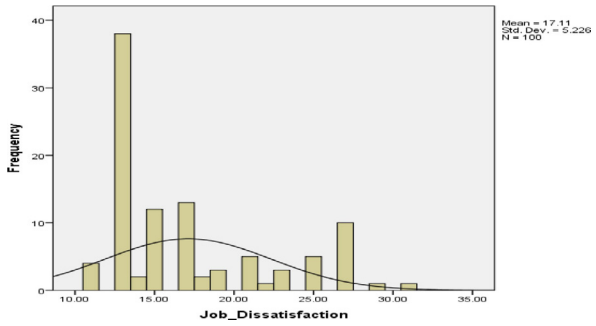


Figure 12. Frequency distribution of Job dissatisfaction.

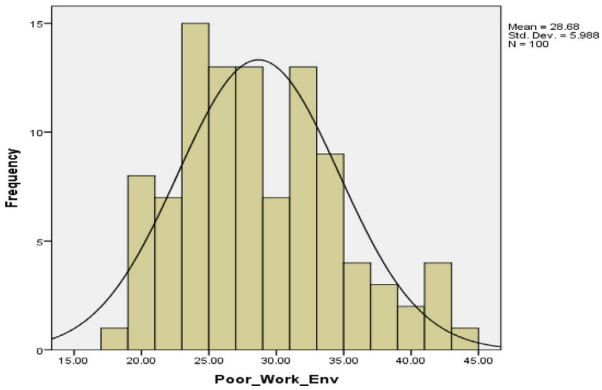


Figure 13. Frequency distribution of poor work environment.

Table 3. Multiple linear regression result

S. No	Predictors	Coefficient Estimate	Standard Error	P value
1	Age	-0.141**	0.044	0.002
2	Marital Status	1.964*	1.007	0.054
3	Education	1.019*	0.442	0.023
4	Poor safety culture	0.142#	0.076	0.066
5	Poor Management commitment	0.061	0.093	0.516
6	Poor safety awareness	0.022	0.059	0.713
7	Job Dissatisfaction	0.172*	0.078	0.030
8	Poor Work Environment	-0.030	0.057	0.602
9	Job stress	0.212#	0.112	0.061

**significant at the 0.01. Level (2-tailed); *significant at the 0.05 level (2-tailed); #significance at 0.1 level (2-tailed)
Sample size = 100

Table 4. Control measures

Dependent Factors	Independent Factors	Need Improvement	Provable causes	Recommended Action
Risk-taking Behaviour	Poor Safety Culture	Supervisors' behaviour:		
		a) Not giving positive feedback for following safe work practices.	Their belief is that following safe practices will lead to delays in the job.	Priority 1 To start the Safety Person of the Month award. Priority 2 They must appreciate safe practices being followed along with concerns related to unsafe acts.
		b) More focused on task execution and mostly ignore safety related issues.	They believe that timely job completion is the key to success.	P1 Departmental/sectional safety committee meetings with more participation of junior and contractor workmen and their important points must be discussed in the plant safety committee. P2 Through a review of all jobs being done within a short period by HODS.
		c) Ignored work-related hazards and suggestions.	Their belief is that it will lead to extra jobs.	P1 Department must start one hazard completion to encourage more and more reporting of hazards/Near misses with proper tracking of corrective actions being taken. P2 Training must be imparted to all about the importance of incident reporting and its investigation.
		d) Do not encourage to participate and give suggestions on various forums, especially junior and contractor workmen.	They believe that most of the safety-related complaints are genuine and are just to create pressure.	P1 Department must start one departmental/Sectional level safety committee meeting at least once a month with the participation of more junior and contractor workmen. P2 HOD must encourage the participation of junior and contractor workmen in departmental meetings.

		e) Contractor workmen are more dissatisfied as they have seen other systems.	Supervisors believe that senior workmen are more competent as compared to junior or contractors.	P1 Department must start one departmental/sectional level safety committee meeting at least once a month with the participation of more junior and contractor workmen. P2 Roster system must be followed for participation in various safety meetings.
		Incident Reporting:		
		a) No discussion and encouragement of incident reporting and there is a fear of disciplinary action.	Management encourages incident reporting, especially Near Miss. It may be due to the feeling of extra work.	P1 Department must start one hazard completion to encourage more and more reporting of hazards/Near misses with proper tracking of corrective actions being taken. P2 If possible separate manpower deployment for safety-related issues inside the department.
		b) No priority of safety issues being identified in the safety round.	Due to continuous pressure on production.	P1 Department must start one hazard completion to encourage more and more reporting of hazards/Near misses with proper tracking of corrective actions being taken. P2 Proper tracking and review of safety points and their status by concerned HOD.
		Communication, training and policies		
		a) Taking shortcuts and risks at the workplace is accepted.	Due to a lack of appreciation for following safe practices.	P1 Department must start one hazard completion to encourage more and more reporting of hazards/Near misses with proper tracking of corrective actions being taken. P2 Training must be imparted to all for the importance of following safe practices at the workplace.
		b) No PPE policy for contractors.	No PPE policy for contractors exists.	Contractors must be informed to follow a PPE policy similar to the company

		c) No PSSR for new machine trial.	PSSR Policy bypass sometimes due to the criticality of plant operations.	The safety department is advised to develop one SOP for prestart-up safety review for all newly commissioned machines for taking a trial at the beginning.
		d) Lack of competency due to ineffective training programs.	Due to the lack of job training programs	Emphasis on job training in place of classroom.
Risk-taking behaviour	Job Dissatisfaction	Lack of participation in decision-making:		
		No appreciation from seniors for quality and competency	Seniors are mostly focused on job execution.	P1 Workers must be appreciated for doing a good job in the appropriate forum. P2 Department must start one departmental/Sectional level safety committee meeting at least once a month with the participation of more junior and contractor workmen.
Risk Taking Behaviour	Job Stress	Poor living conditions		
		Poor living conditions of workers specially contractor room and shed.	No emphasis on checking the room and contractor sheds for contractor workmen.	The safety department is advised to conduct an Audit of all sheds of workers and give a report of all improvement points for prompt action.
		Shutdown maintenance:		
		Continuous working in break down specially contractor workmen.	Due to the majority of unskilled workmen from contractor sites.	HOD'S are advised to reduce excess load as far as possible.
		Shortage of Manpower:		
		Pressure to work in a hurry due to a shortage of manpower.	Lack of job planning with respect to manpower.	HOD'S are advised to reduce excess load as far as possible.
		Lack of awareness:		
		Common feeling that work is full of danger	Due to some previous accidents.	HOD'S are advised to share safety-related best practices with all team members as well as initiatives taken by the department for safety to enhance the confidence of team members.

status (β = 1.964), education (β = 1.019) and job dissatisfaction (β = 0.172) at 0.005 level of significance. Poor safety culture (β = 0.142) and job stress (β = 0.212) were found to be associated with risk-taking behaviour at a 0.10 level of significance. F statistics is 13.076 and p value is less than 0.001 so it can be inferred that at least one of the regression coefficients is not equal to zero.

4.0 Control Measures

Based on the results of the present work following recommendations are suggested in table 4.

5.0 Summary and Conclusion

In conclusion, our study reported that older age, poor safety culture, job dissatisfaction, and job stress of workers play significant roles in the risk-taking behaviour of employees. This valuable information would help in implementing preventive programs in which firms, workers and researchers have to work together in partnership. Work conditions have to be improved.

Some of the important findings of this study are as follows:

Lack of communication, participation and recognition are the three important factors that influence the risk-taking behaviour of employees.

Effective down-the-line communication is very much essential to restrict employees from taking risks.

Participation of all is also important to restrict employees from taking risks. Less participation or no participation leads to dissatisfaction and needs to be avoided.

Recognition is also important and everyone doing well in safety must be appreciated as it leads to motivation for others.

Lack of participation in decision-making, lack of appreciation from seniors and poor living condition leads to job dissatisfaction which leads to risk-taking behaviour.

Manpower shortage and continuous working in shutdown lead to job stress and promote risk-taking behaviour.

By improving all these conditions, we can ensure a safe workplace and reduce the chances of accidents at the workplace.

It should be mentioned that the comparison of our results with those obtained by other authors must be made with caution. Indeed, there are marked socio-cultural differences between the subjects investigated and those of the other studies. Moreover, the populations and the professional sectors could also be different.

6.0 References

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