

Strong framework of Occupational health & safety play A vital role in economic growth

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ABSTRACT: In the light of rapid economic growth and industrial progress in our country, it becomes imperative that safety and health at the workplace be given its due importance. All workers are entitled to work in environments where risks to their health and safety are properly controlled and a safe & healthy work environment is the basic right of every worker. However, the ground reality falls far away of their right. It is estimated that unsafe work conditions is one of the leading causes of death and disability among India's working population. As per worldwide recent statistics on occupational health & safety (International Labour Organization) ILO declared that every 15 seconds, a worker dies from a work-related accident or disease. Every 15 seconds, 153 workers have a work-related accident. Every day, 6,300 people die as a result of occupational accidents or work-related diseases more than 2.3 million deaths per year. 317 million accidents occur on the job annually; many of these resulting in extended absences from work. The human cost of this daily adversity is vast and the economic burden of poor occupational safety and health practices is estimated at 4 per cent of global Gross Domestic Product each year. After a long run of independent it's our bad luck that, we cannot develop a scientific system of data collection & interdisciplinary research between role of strong framework of Occupational health & safety in economic growth, so there are no reliable figures for occupational diseases in India, but on the basis of different estimate we can say that if precautionary stapes would not be taken India's road to developed-nation status is littered with the bodies of its workers. Practical experiences have illustrated that preventive measures are economically beneficial in the long run and also increases employee morale, reduces employee turnover and improves market credibility. Ones Director-General ILO Juan Somavia said that, "Decent work must also be safe work." In this paper researcher try to address various issues of Occupational health & safety, in context of Gujarat State & try to draw attention that Strong framework of Occupational health & safety play a vital role in economic growth.

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I. INTRODUCTION

With the main aim to promote all rights of the workers at the workplace, ILO was founded in 1919. The **ILO (International Labour Organization)** is the international organization responsible for drawing up and overseeing international labour standards. It is the only United Nations agency that brings together representatives of governments, employers and workers to jointly shape policies and programs promoting Decent Work for all. **Work kills more people than wars and it injures and mutilates too.** The World Health Report also places occupational risks as the tenth leading cause of morbidity and mortality.

In the complex manufacturing processes of modern industry the chances of accidents & occupational diseases are increased. **ILO (International Labour Organization)** On the 28 April: World Day for Safety and Health at Work, International labour organization (ILO) says two million work deaths a year. One death for every fifteen seconds. Six thousand a day. Almost 270 million accidents are recorded each year, of which 350,000 are fatal. Any nation or industry can't bear such type of loss.

The ILO has never accepted the notion that injury and disease "go with the job". More than 70 ILO **Conventions and Recommendations** relate to questions of safety and health. In addition, the ILO has issued more than 30 **Codes of Practice on Occupational Health and Safety.**

As per Kofi Annan ones UN Secretary-General said that, 'Safe Work is not only sound economic policy,' 'it is a basic human right.' In total an accident-free plant enjoys certain benefits. Major ones are substantial saving in costs, increased productivity, and meeting legal and moral requirement.

Apart a glory picture of industrial growth in Gujarat, scenario of unsafe working condition, polluted environment and deteriorating health is also a bitter realty. Such situation make us unhappy and disappointed for the sustainable economical growth and future of our nation as well as mankind. In future for sustainable economic & better industrial growth all aspects of industrial health & safety services need a permanent and ever-active research wing.

II. JUSTIFICATION FOR THE RESEARCH

As per **International Labour Organization** due to lack of decent & safe working condition the human cost of this daily adversity is vast and the economic burden of poor occupational safety and health practices is estimated at 3.94 per cent of global Gross Domestic Product each year.

Two types of cost are incurred by the management when an accident occurs. In direct costs company has to pay compensation to the dependents of the victim if the accident is fatal, and if the accident is non-fatal medical expenses incurred. Above this direct cost hidden cost or indirect cost cannot avoid by the management. Hidden costs include loss on account of down-time of operators, slowed-up production rate of other workers, material spoiled and labour for cleaning and damages to equipment. When he/she come back on work, it can be possible that back effect of accident may reduce his/her performance.

Safety and health occupy a significant place in India's Constitution. Legislation on occupational safety and health has existed in India for over 50 years. We have various **legislations like** Factories Act, 1948, (amended in 1954, 1970, 1976, 1987), Mines Act, 1952, Dock Workers (Safety, Health and Welfare) Act, 1986, Plantation Labour Act, 1951, Explosives Act, 1884, Petroleum Act, 1934, Insecticide Act, 1968, Indian Boilers Act, 1923, Indian Electricity Act, 1910, Dangerous Machines (Regulations) Act, 1983, Indian Atomic Energy Act, 1962, Radiological Protection Rules, 1971, Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 etc.

In spite of having a good legal framework for the protection of workers, India suffers from the chronic problem of lax implementation. Every year thousands of lives lost & millions of workers are injured. Growth rates and GDP figures are flaunted every quarter, but the figures of dying and ailing workers who make this growth possible are never recorded or spoken about.

On the eve of 36th Indian Labour conference Central Labour Secretary Dr. L. Mishra told that, "factory occupiers do not provide safe and comfortable atmosphere to the workers and ignore their physical and mental well being. He added that 40 crores tones of chemicals are being manufactured in the world and more and more are being added to it. Out of one lakh chemicals used in industry and agro sectors, health hazards of only three thousand chemicals are known. 250 chemicals are carcinogenic. Contract with some metals, organic dusts and pesticides is dangerous."

"He added, and warned about the toxic dusts in paper and pulp industry, petroleum refinery and ceramic industry, insufficient lighting and ventilation, exhaust system and inadequate machine design. He was referring the agenda report prepared by the Central Labour Ministry for the above conference" (News 13-04-2000)

Today's workplaces are full of materials and processes which are potentially hazardous to health. Our industry depends on a larger range of naturally occurring and synthetic materials, many of which can adversely affect the health of the worker handling them in industrial processes if the workers are excessively exposed. In present situation

Let us determine that

svReip suiqn: sNtu svRe sNtu inramya:š
sVaeR w,ai` pXytu ma kiĀt du:qmaPnuyat

Let us all be happy & healthy. Let all achieve welfare and no one gets any unhappiness. For this purpose let us try together to make our future safe and bright. Let us reduce all unsafe and unhealthy conditions from everywhere. Try to protect all people, working anywhere, by implementing the concept of safety & good health through research and development, education, awareness, proper training and by effective prevention and control measure.

III. REVIEW OF LITERATURE

Occupational health & safety is a very important and concern subject at world level since many years, so in the field of occupational health & safety many research has work taken place in past time at the national and international level.

India, a Founding Member of the ILO, has been a permanent member of the ILO Governing Body since 1922. The first ILO Office in India started in 1928 & it was set up in New Delhi in 1929.

First factory commission was appointed in 1890 by the Government of India. On the basis of recommendations of commission an act was passed in 1891, whereby the definition of Factory was amended to include premises in which fifty persons or more were employed. The local Government was empowered to extend it to premises in which twenty persons or more were employed. There were provisions about Women employees and hours of work for them were limited with a provision for thirty minute's interval for rest.

The act was amended from time to time. It was thoroughly revised and redrafted in 1934 on the lines of recommendations made by the royal commission on Labour, which was appointed in 1929. After that as early mentioned we have a very a good & strong legislative framework regarding occupational health & safety.

Recently (31/1/2014) The Supreme court of India clearly mentioned in Its judgment (Occupational Health and Safety Association Versus Union of India and others) that, “Right to **health** i.e. right to live in a clean, hygienic and safe environment is a right flowing from Article 21. Clean surroundings lead to **healthy** body and **healthy** mind. But, unfortunately, for eking a livelihood and for national interest, many employees work in dangerous, risky and unhygienic environment. Right to live with human dignity enshrined in Article 21 derives its life breath from the Directive Principles of State Policy, particularly clauses (e) and (f) of Articles 39, 41 and 42. Those Articles include protection of **health** and strength of workers and just and humane conditions of work. Those are minimum requirements which must exist to enable a person to live with human dignity. Every State has an obligation and duty to provide at least the minimum condition ensuring human dignity. But when workers are engaged in such hazardous and risky jobs, then the responsibility and duty on the State is double-fold.

On paper these laws appear very effective but by and large workers from unorganized sector or small scale industries do not get the appropriate benefit.

IV. RESEARCH – METHODOLOGY

As per any other research researcher also process consist following steps

- Defining the research problems and reviewing the literature.
- Formulation of hypothesis.
- Research design: Developing the research plan and implement it.
- Collecting data.
- Analyzing data and testing hypothesis.
- Preparation of report and preliminary analysis.
- Interpreting and reporting the findings.

Some findings are as under :-

1. Factory place wise Classification of Respondents

Table – 1

No.	Zone Name	No. Of companies
1.	Saurashtra & Kutch	12
2.	Central & North Gujarat	7
3.	South Gujarat	2
	Total	21

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1.00	161	113.1491	15.66054	1.23422	110.7116	115.5865	75.00	135.00
2.00	107	121.2710	12.91815	1.24885	118.7951	123.7470	56.00	135.00
3.00	26	118.6923	16.41163	3.21859	112.0635	125.3211	41.00	131.00
Total	294	116.5952	15.23746	.88867	114.8463	118.3442	41.00	135.00

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4365.732	2	2182.866	9.978	.000
Within Groups	63663.101	291	218.774		
Total	68028.833	293			

Hypothesis testing

Null Hypothesis:- There is no significant different between mean of different work place & health & safety of workers.

The F value for education differences is 9.978 which is significant at 0.05 level of significance. Thus, the null hypothesis is cannot be accepted. So it prove that there is significant effect of factory place on workers health & safety.

To know the group wise differences, Post Hoc Tukey test.

Multiple Comparisons

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	-8.12196*	1.84485	.000	-12.4680	-3.7759
	3.00	-5.54324	3.12621	.180	-12.9079	1.8214
2.00	1.00	8.12196*	1.84485	.000	3.7759	12.4680
	3.00	2.57872	3.23403	.705	-5.0399	10.1974
3.00	1.00	5.54324	3.12621	.180	-1.8214	12.9079
	2.00	-2.57872	3.23403	.705	-10.1974	5.0399

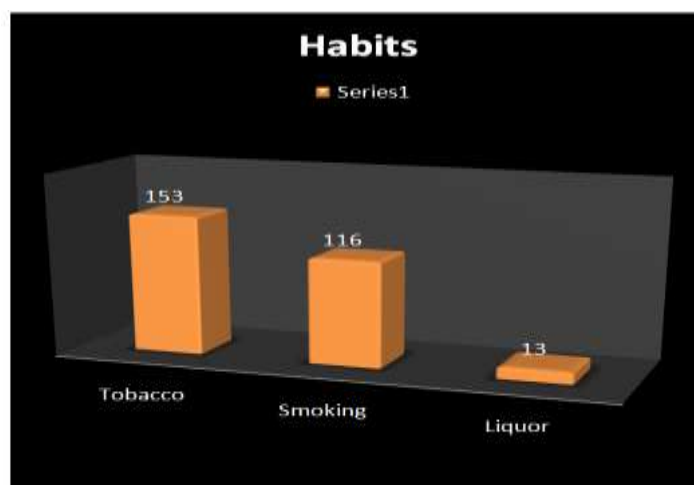
*. The mean difference is significant at the 0.05 level.

The Tukey test shows that there is a difference between Zone 1 and Zone 2. The means of the zone show that Zone 2 has higher mean than Zone 1. It means we can say that condition of worker's health & safety is better in zone 2 than zone 1.

2. Workers Habit wise Classification of data.

Table – 2: Workers Habit wise Classification of data.

Habits	No. Of Workers	Per.(%)
No habits	12	4.08%
Tobacco	153	52.04%
Smoking	116	39.46%
Liquor	13	4.42%
Total	294	100%



Descriptive

total

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	12	115.4167	13.26964	3.83061	106.9855	123.8478	88.00	129.00
1.00	153	116.1176	15.83963	1.28056	113.5877	118.6476	41.00	135.00
2.00	116	117.2155	14.92229	1.38550	114.4711	119.9599	75.00	135.00
3.00	13	117.7692	13.64523	3.78451	109.5235	126.0150	91.00	135.00
Total	294	116.5952	15.23746	.88867	114.8463	118.3442	41.00	135.00

Interpretation: -

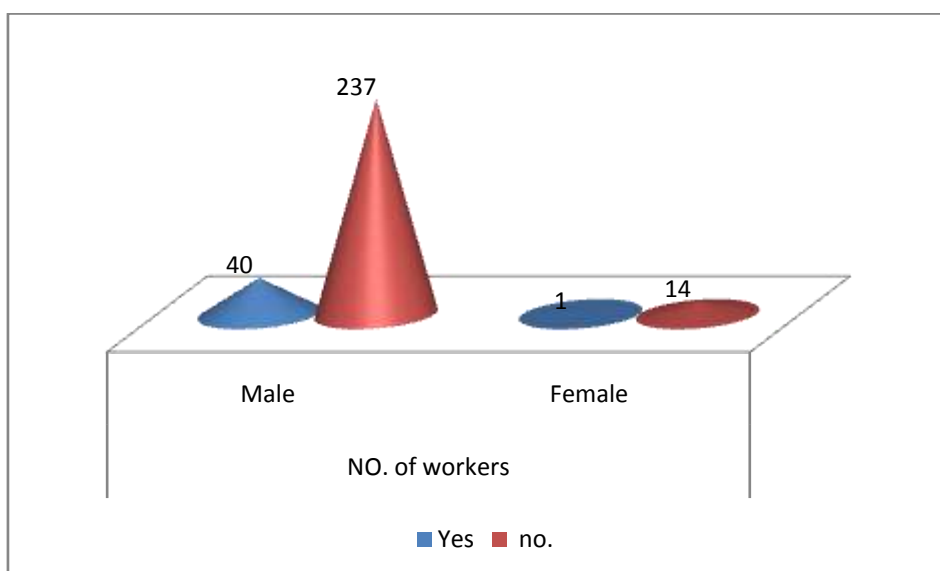
Here in the table no. 6 we can see that 153 workers have tobacco habit, 116 workers have smoking habits and 13 workers have liquor's habit. But 12 have no habit.

During researcher's visit of different industries She found that Most of the workers had the habit of chewing tobacco, which can be seen as a common habit among the workers in Indian industry.

3 No. Of workers who have any Disease wise Classification of data.

Table – 3: No. Of workers who have any Disease wise Classification of data.

Diseases	NO. of workers	
	Male	Female
Yes	40	1
no.	237	14
No. Response	2	0
Total	277	15



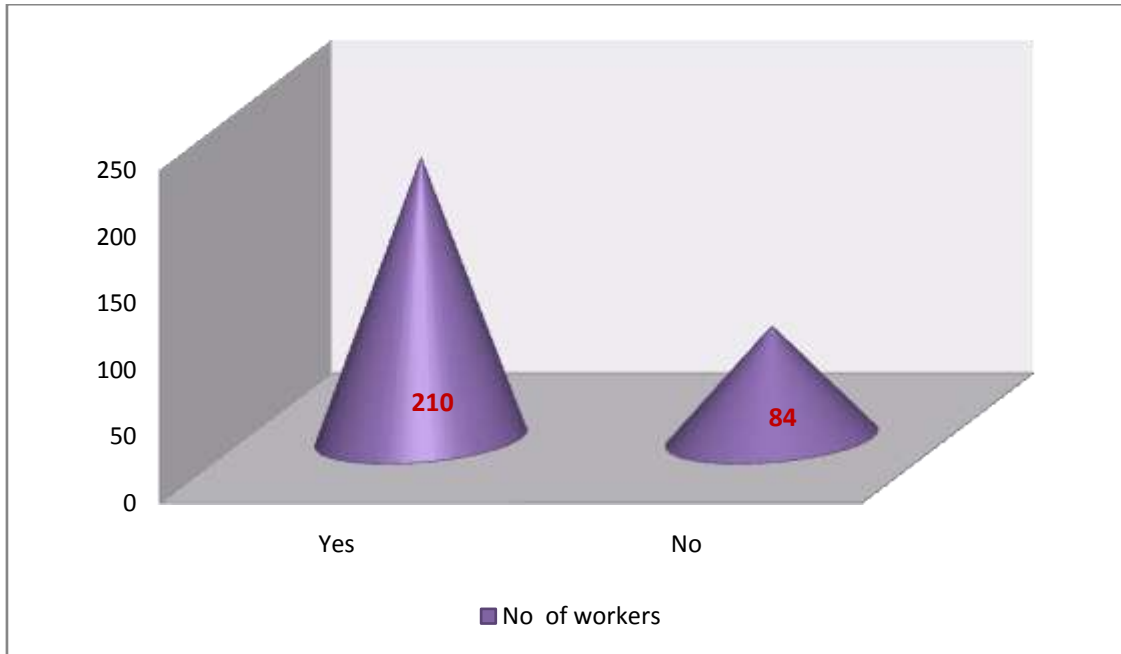
Interpretation: -

From the table no.7 we can see the data regarding diseases in male & Female workers.

4. Health safety training related analysis.

Table – 4: Health safety training related analysis.

Any training related to health & safety	No of workers
Yes	210
No	84
Total	294



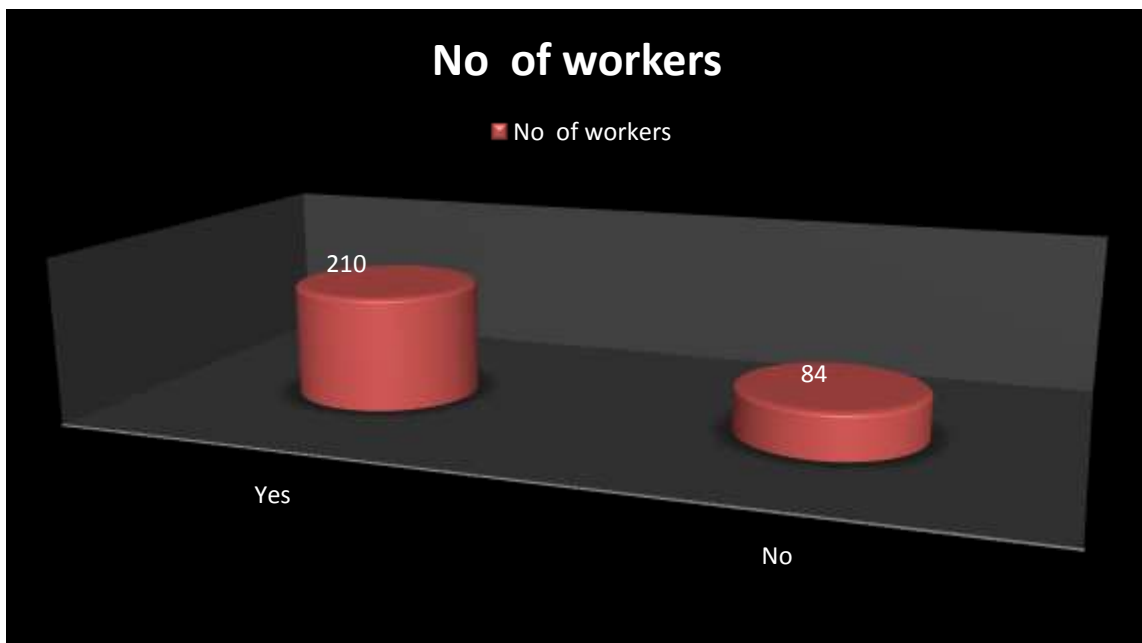
Interpretation: -

In table no.9 we found data of total no workers who took training related to health & safety. It can be seen from the data that most of the employees had received general safety training and communication of hazards from the management, which is of general nature.

5 Analysis of Medical Check -up before recruitment

Table – 5 Analysis of Medical Check -up before recruitment

Medical examination before recruitment	No of workers
Yes	210
No	84
Total	294



Interpretation: -

from the data of table no. 10 we can see that out of 294 there are 210 (71.42%) have gone through medical Check-up and 84 (28.57%) have not medically examined by their respected company.

6. Analysis of hazards at work place:-

Table – 6: Analysis of hazards at work place

Hazards at work place	No of workers
Yes	234
No	37
can't say	23
Total	294



Interpretation: -

From the data we can say that our workplaces are hazardous & workers are aware of it. We can see that most of the workers 80% (234 out of 294) faces many hazards at work place. Where only 12% (37 out of 294) do not think so. 23 workers can't say anything.

V. OBSERVATIONS

- 1) It's a very interesting observation that there is significant effect of factory place on workers' health & safety. From the observation we can see that condition of worker's health & safety is best in Central & North Gujarat.
- 2) It is observed from the data that workers, who have any habit, are suffering from any type of disease.
- 3) It is observed that most of the workers know about ESI (Employees state insurance scheme.) most of the workers (almost 78%) have accident or life insurance policy
- 4) It is observed that 80% of the workers are aware about workplaces hazardous.
- 5) It's true that 80% of the workers are aware about workplaces hazardous but it is also observed that often workers work in presence of hazardous just because of he has to work and not because he wants to do.
- 6) From the analyses of statistical data it is observed that diseases may effect on the occupational health of workers.
- 7) It is observed that most of the companies provide protective devices, but due to day to day working habit, or over confidence sometimes workers do not properly use the devices.
- 8) It is observed that 69% of the (sample data) workers never feel mental stress by work, 15% feel mental stress by their work, while 16% workers are not in a passion to say anything about work stress.

- 9) Out of 294 total no. of workers 77.21% workers deny that Occupation is not reason behind their diseases, and 19.05% workers said that Occupation is the reason behind their diseases. While 3.74% workers are not in position to say anything.
- 10) It is observed that 80.95% workers convinced that free Medical Aids & Services Provide by their Company. But 19.05% workers didn't get free Medical Aids & Services.
- 11) It is observed that by and large curative medical aid was given; but preventive medical Aid concept was not adopted by company management.
- 12) During research it is observed that OHSAS18001 certified company was found best safety management practices.
- 13) It is a pleasant surprise that almost 93.54% workers convince that Health & safety of the workers is not only the responsibility of employer. It is every one's business.
- 14) It is observed that out of 294 total no. of workers 256 workers are completely agreed that there must be safety officer in every company.

VI. SUGGESTIONS AND RECOMMENDATIONS

- 1) Lack of safety officers in small & medium scale industries is a big problem. Though there is a notification for creation the post of safety officer in industries since 26-10-1976 under section 40B of the Factories Act 1948, but what about workers of small industries?
- 2) There must be an active safety committee in every industries who look after safety precautions of workers.
- 3) To create & promote safety Culture, Company must periodically organize effective in house based health & safety training programs for their workers.
- 4) All the important instruction regarding hazardous materials or precaution of health & safety must be written in bold letter in their regional language, so that illiterate workers can also understand. Posters is a very effective way for communication, company can use this medium for communication.
- 5) Workers should demand for basic facilities like adequate ventilation, arrangement of latrines & Urinals for male & female clean drinking water, spittoons & dustbin etc.
- 6) Trade Unions have a big role to look after health & safety of the workers of their company. They must work in cooperation of management and try to implement policies regarding health & safety.
- 7) Standard of health & safety is very high in OHSAS 18001 certified company ,so this research recommends that OHSAS 18001 certification is very necessary for industries in Gujarat.
- 8) All the institutes and organization who work in the field of occupational health and safety must work with synchronization with each other.

VII. LIMITATIONS AND SCOPE FOR THE FURTHER RESEARCH

To select a subject like occupational health & safety in reference of Gujarat is itself a challenging Job. As per Industries Commissionerate Govt. of Gujarat there are 6185 large projects and 261760 MSMES (micro, small & medium enterprises) registered in Gujarat till march-14. The universe is very big, but the effort, money and time required for carrying out such type survey was difficult for researcher, Hence in this research researcher have selected only certain industries by stratified sampling technique. Researcher can clearly bifurcate all the company of Gujarat in two parts. Big companies are careful about health & safety of their workers, but real problem accure in small scale industries & unorganized sector.

VIII. SCOPE FOR THE FURTHER RESEARCH

- 1) As researcher mention earlier during my research I found that there are many independent research potential subject like occupational health, safety, accident, basic facilities for workers, workman compensation, facilities for women workers, occupational diseases etc. can be study separately.
- 2) Problem of occupational health and safety are different for sector to sector, research can be specifying on any specific sector.
- 3) Various parts of Gujarat have their own identity or property, research on specific subject and specific region of Gujarat may get very pinpoint result.
- 4) Numerical strength of Workers working in unorganized sector is very big and condition of occupational health and safety of such workers are really very bad. some result oriented research can be done in this field.
- 5) "Safety Management or safety engineering is a potential area of research in future.

IX. CONCLUSION

This study provides lots of opportunities to understand ground reality of occupational health and safety in various sectors of industries in Gujarat. Approach to control hazardous process during production is totally changed. New plants are coming with built in safety feature, but this latest hazard control measures are in

very few companies, the vast area is still open to work hard for safety and health problem of their workers. From my research I can say that in more than 90% small and medium scale company health & safety status is still poor, below standard and need much effort to improve. It's a joint responsibility of every stakeholder or every layer of company.

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