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## Workforce in Transition: The Influence of Technology and Gig Economy Models on Oil and Gas Industry

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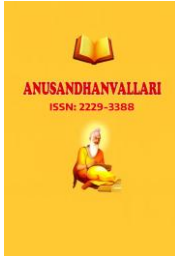
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### Abstract

In India there are so many labour laws available for regulating working hours, conditions of work and employment. Oil and Gas Industry is inevitable industry in Indian Economy. In that Industry, Employees are working as Permanent employee (Full time employee), Contract workers, Casual Workers, Backup worker. Gig economy is not defined in any part of the Indian laws. Gig economy is worked for short period on contract basis only. They are not considered as permanent workers. They didn't receive any benefits under the Indian legislations, especially under the labour legislation compared with other permanent employees. Gig economy, they didn't get proper wage for their work. There is no equal pay for equal work and there are no proper working conditions, like working hours, leave with wages and there are no proper social security benefits including maternity benefit, Provident fund or ESI benefits. Even they can't claim any compensation from the employer, in case of any industrial accidents. Still there is no proper legislation for regulating and protecting the Gig workers. In Code on Social Security, 2020 defining Gig economy. This study will help to analyse the working conditions of the Gig Economy in oil and gas industry and the positive and negative impact of Technology on Oil and Gas Industry workers.

**Keywords:** Oil and Gas Industry, Technology, Workers, Rights, Gig economy, Labour Laws

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### **Introduction:**

Oil and Gas Industry plays a significant role for Indian Economy. Oil and Gas industry is Inevitable industry. Because maximum persons enjoying these benefits. Major group of employees are working in this Industry. In India there are so many labour laws for protecting the labour and their rights. But still there are some issues faced by the Oil and Gas Industry workers due to their nature of work. Working conditions is still not regulated by the employer. Employees are working as Permanent employee (Full time employee), Contract workers, Casual Workers, Backup worker. Permanent employees only enjoyed certain rights but not every right which is mentioned in the Labour Laws. Some of the basic rights are denied by the employer. Other than the permanent employees, there are contract workers, Backup workers also there. They're working conditions are not acceptable. In this article researcher is going to discussed about Workforce of Gig Workers in Oil and Gas Industry and usage of Technology in Oil and Gas Industry and the Gig Economy's workforce. In addition to that author discussed about that what are the benefits are available to the Gig workers under the Labour Law and other National and International Legislations.

### **Objectives of the study:**

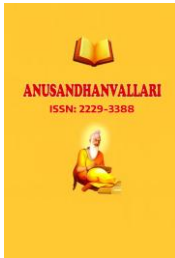
1. To Identify and assess the impact of technology on Oil and Gas Industry workers
2. To identify and assess the working conditions of the Gig Economy
3. To identify the laws to protect the Gig Economy

### **Research methodology:**

The research methodology adopted by the researcher is Doctrinal research and Non doctrinal research. List of the study materials and data and their sources, Government Reports are procured by the researcher as the instrument to conduct the research. Doctrinal method is used to analyse and describe the working conditions of the oil and gas industry workers and their social security benefits. The researcher collected samples from the employees working in an oil and gas industry as this study is limited with those employees.

### **Literature Review:**

1. Digital feature: Enhancing oil and gas worker safety: the evolution of technology for heat stress protection – Matthew Marrapode, Vice President of Strategy Epicore Biosystems, in this



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paper author discussed about the protection of the oil and gas industry workers from the heat and occupational diseases due to their nature of work.

2. Tech Evolution in Oil & Gas for Health & Safety Measures – Dave Smith, in this paper author discussed about the Technology used in Oil and Gas Industry for the purpose of protection of workers.

3. Occupational Factors Affecting Women Workers’ Sexual and Reproductive Health Outcomes in Oil, Gas, and Mining Industry: A Scoping Review – Rina Hariniaina Razafimahefa, Jerico Franciscus Pardosi and Adem Sav, author conduct the survey and find out the health hazards in oil, gas and mining industry.

4. Figa-Talamanca I. Occupational Risk Factors and Reproductive Health of Women. *Occup Med* (2006) 56 (8): 521-31. In this paper author analysis the impact of reproductive health for women those who are working in the oil industry.

5. Labour & Industrial Laws – Dr.V.G. Goswami 11<sup>th</sup> Edition, 2019 (Central Law Agency), in this book author discussed about the compensation for workers in case of any disability, accident, or death arising out of and in the course of employment and regulated working conditions of the labour.

6. Labour & Industrial Laws - S.N.Mishra (27<sup>th</sup> Edition) (Central Law Publications) author discussed about the importance of employer and employees relationship for efficient work and workers rights under various labour legislations.

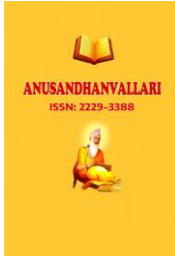
7. Introduction to Labour and Industrial Law – Avtar Singh and Harpreet Kaur (3<sup>rd</sup> Edition) (Lexis Nexis), in this book author discussed about the maternity benefits of the women workers in labour legislations.

8. Gold EB, Tomich E. Occupational Hazards to Fertility and Pregnancy Outcome. *Occup Med* (1994) 9 (3):435-69. In this paper author discussed about the pregnancy issues for women’s while working in the oil industry.

9. Thurston SW, Ryan L, Christiani DC, Snow R, Carlson J, You L., et al. Petrochemical Exposure and Menstrual Disturbances. *Am J Ind Med* (2000), in this paper author discussed about the irregular menstrual of women’s those who are working in the oil and gas industry.

### **Gig Economy:**

The term ‘Gig Worker’ is very new in India. But the nature of work of Gig Worker is not a new in India. Gig Worker is defined in anywhere of Indian Labour Legislations. And the benefits which is mentioned in the Labour legislations is not applicable for this gig workers which is



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applicable to other workers. But in the first time it was mentioned in the Social Security Code, 2020.

As per Section 2(35) Social Security Code, 2020 Gig Worker means, a person who performs work or participates in a work arrangement and earns from such activities outside of traditional employer-employee relationship.

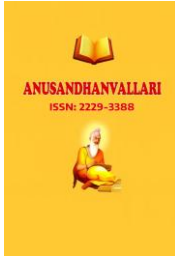
In the case of *The Indian Federation of App Based Transport Workers (IFAT) v. Union of India* (Case Number: WP (C) 1068/2021), The Supreme Court will decide whether gig workers fall under the scope of ‘Unorganised workers’ and are eligible for **social security benefits**. This case pending before the Supreme Court. (Supreme Court Observer, 2024)

The key issue involved in this case is ‘Is the failure to include gig workers under the scope of ‘Unorganised Workers’ a violation of their **right to equality**’ and ‘Does the denial of social security to gig workers amount to a violation of right to life under Article 21, and exploitation through **forced labour** under Article 23 of the Indian Constitution?’.

Gig worker also enjoy the social security benefits under social security laws including The Maternity Benefit Act, 1961, Employees Provident Funds and Miscellaneous Provisions Act, 1952, The Maternity Benefit Act, 1961, The Payment of Gratuity Act, 1972, Workmen’s Compensation Act, 1923, The Employees State Insurance Act, 1948 and The Industrial Disputes Act, 1947, if the Government and Supreme Court recognized this working group. These protections will include minimum wage requirements, social security benefits, and accident compensation. (Naveen Kumar & Naveen Kumar, 2024)

So, in my research I find out that, Gig Economy workers is not recognized as either Organised sector workers and Unorganised sector workers. So, it is violating their fundamental rights which is mentioned in the part III of the Indian Constitution and their Labour Laws rights also. As per the Employees Compensation Act, if any of the accident or death or occupational diseases arises in the course of or out of the employment, due to their nature of work, affected employee or their dependent can claim the compensation. But still Gig workers is not recognized under the Labour Laws. So, they are not eligible for claiming other social security benefits also.

Gig workers is not considered a permanent workers. So, the wages for the gig workers are not regulated by the Indian Labour Laws. Due to this non recognition of Gig workers, they have no right for collective bargaining also. Under the Collective Bargaining rights Gig workers may bargaining their working conditions, leave with wages, working hours, sick leave and other health and welfare facilities. But there are some lack of employer-employee relationship in the Gig economy. So, Gig workers is not enjoying their collective Bargaining rights.



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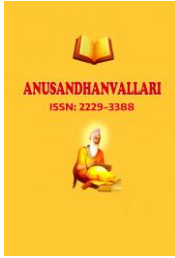
### **Gig Economy's Effects on Oil and Gas Workforce:**

Author conducted the research with Gig Economy in Chennai area to those who are working in the Oil and Gas Industry as a Gig worker. Gig workers are working in very flexible timing, cost saving, and they already have specific skill for the particular nature of work. They are working for a short-term period only. An inclination towards flexible work is being driven by factors such as freedom, technology upgradation, skill focus, additional income and human capital. (*Gig Economy – Shaping the Future of Work*, n.d.)

In this research author find out that, Gig workers are facing many challenges such as

1. There is no job security for Gig workers
2. There is no sick leave
3. There is no proper uniform for the gig economy workers.
4. There are no proper working conditions.
5. Lack of legal protection
6. Working conditions is not properly regulated
7. Working time is not regulated by the employer.
8. Gig Workers is not treated equally with other employees
9. There are no retirement benefits
10. There are not comes under the permanent employee's category. So, in case of any accident arises in the course of or out of the employment or any occupational diseases arises, they couldn't get compensation from the employer.
11. They are not coming under the purview of the social security benefits. In case of any accident arises in the course of or out of the employment or any occupational diseases arises or in case death of the employee, the dependents of employees also will affect.

In this research author find outs that working conditions is not regulated by the employer even though it is mentioned in the Indian Labour Legislations. They are working after their fixed time also. In most of the time, workers are not getting the proper wage for their nature of work. Because in India, there is no specific legislation for protecting gig workers rights and regulating their wages. Indian Labour legislations protecting some category of workers in India. But not for all category of workers. So, in this research, researcher analyzed we need special legislation for Gig workers for recognizing their nature of work also comes under the Labour category, fixation of their wages, conditions of service, sick leave, leave with wages, maternity benefits, compensation for accidents, occupational diseases and death, caused in the course of or out of the employment like other workers. None of the social security benefits are applicable to the Gig workers. So I my point of view, the Government may enact the separate legislation for the purpose of protecting gig workers



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and the government may insert the specific conditions for applicability of the social security benefits to the gig workers.

National Human Rights Commission filed a writ petition before the Supreme Court for the purpose of better condition for gig workers. (Manupatra, n.d.)

### **Health Hazards in the Oil and Gas Industry for Gig Workers:**

1. Physical Hazards
2. Psychological Hazards
3. Biological Hazards

Gig Workers in the Oil and Gas Industry may affect in many health related risks, like Chemical exposure, Respiratory issues, Hearing loss, long-term health issues, occupational diseases, skin diseases, Musculoskeletal conditions due to their nature of work. In view of this health and safety related issues, technology is using for protecting the workers in modern era.

### **Technology and Workers Safety in Oil and Gas Industry:**

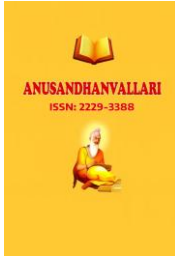
Technology playing a vital role in order to protecting the Oil and Gas Industry worker from the Safety and health hazards. Technology will progress the safety of the workers, employee's efficiency and industries productivity. Nearly 30 lakh workers die every year globally due to work-related accidents and diseases, according to a new report prepared by the International Labour Organization (ILO). More than 63% of these deaths are reported from the Asis- Pacific region. (Jigeesh, 2023)

1. Pipeline leak detection is undertaken with smart techniques, automatic ultrasonic testing, robotic inspection, thermal mass flow sensors, geographic information systems, cascade systems, and smart dispensers, etc. (Admin, 2022)

### **2. Robots and Drones:**

Robots plays a vital role in Hazardous area and it reduce the industrial accident in Oil and Gas Industry.

Drones are used for inspecting inaccessible areas, particularly the off-shore sites, where there is a higher risk for fatalities. Both of this technology is boost the safety environment in



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Hazardous Working Environment like Oil and Gas Industry. (*Tech Evolution in Oil & Gas for Health & Safety Measures* | SharpEagle, n.d.-b)

### **3. Explosion-Proof Technology:**

Ex-proof technology for cameras and lights assistances contains the sparks inside the electric wiring of the device and helps avoid fatal explosions and accidents.

### **4. Remote monitoring:**

Drones and other sensor device used in Oil and Gas Industry for protecting the employees from dangerous area. We can access remotely that dangerous area.

### **5. Internet of Things (IoT)**

This technology used for remotely monitor critical equipment and environmental conditions and this device is used for deducting abnormal situations such as leaks, pressure, etc.

### **6. Automation and robots:**

Robots and automation can decrease downtime and the risk of accidents. Autonomous under water vehicles (AUV) can inspect and preserve pipelines without the need for human divers.

### **7. Smart helmets:**

Smart helmets are used in Oil and Gas Industry for the purpose of to monitor workers and for real time video-communication with remote users.

Safety glasses also used in Oil and Gas Industry for protecting the workers from hazards.

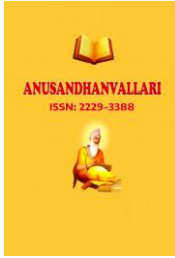
Indian Oil Corporation Limited (IOCL) has established a remote monitoring centre in Hyderabad and has also selected AVEVA, a global leader in industrial software, to drive its digital transformation and sustainability.

## **Legislative Protections:**

### **Indian Laws:**

#### **1. Constitution of India, 1950**

There are many fundamental and legal rights are defined under the Indian Constitution. This Fundamental right is applicable for every one of in India. No one waive this right. Gig worker is not defined and recognized in any labour legislations. It is violating their fundamental Right to Life under Article 21 and Right to Equality under Article 14. This kind labour is considered as a Forced Labour. It is against Article 23 of the Indian Constitution. Denial of social security benefits will lead to exploitation. It will be considered as forced labour. Right to health includes, right to live in a clean, hygienic and safe environment. But the worker working in a dangerous and risky



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environment. Gig workers are in the same condition only in India. Their wages are not fixed. Working hour or Week off or any other basic facilities not mentioned anywhere. So, it is violating their basic fundamental rights. In addition to that Article 39 (e) and (f), 41 and 42 of the Directive Principles of the State Policy also discussed about the protection of health and strength of workers.

Employer should provide decent and fair conditions of work. But the Gig worker is not enjoying their basic working conditions.

## **2. Code on Social Security, 2020**

Code on Social Security, 2020 provides social security schemes for gig workers. It includes any disability, accident insurance, maternity benefit and other health benefits.

## **3. The Employees' Compensation Act, 1923**

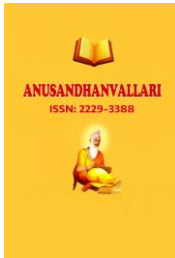
This Act will be applicable to employees those who are working in any more or less organized sector. The employees who all are working in the hazardous nature occupation they can claim compensation from the employer in case of any accident, injury or occupational diseases arises out of or in the course of employment. The employees who are working in the Oil and Gas Industry are eligible for claiming compensation in case of any accident, injury or occupational diseases. But this legislation is not properly implemented in the industry. Many of the employees didn't aware of this legislation and right. Even they didn't aware that disease caused by this nature of work. The person died due to the nature of work, they can also claim the compensation. In my research I find out that, women employees were died due to the nature of work, but the compensation is not provided by the employer.

## **4. The Maternity Benefit Act, 1961**

The Maternity Benefit Act enacted for the purpose of attaining social justice to women workers those all are working the factories, mines, etc. So, the women worker can claim the maternity benefit from the employer for certain period. but in my research women workers, even a permanent didn't claim the compensation.

## **5. The Payment of Wages Act, 1965**

As per the Payment of Wages Act, employer should provide wages on time to the employees. But in my research Wages is not properly provided to the workers on time. There is no regulation for wage fixation and revision for Gig workers. There is no wages for over time work also. In this circumstances Gig workers basic right to wage for their work violating.



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## 6. The Minimum Wages Act, 1948

As per the Minimum Wages Act, minimum wages should be fixed by the appropriate government for time to time period. As per that fixation, employer should provide at least basic wages to the employees. But in my research, I find out that Gig workers is not comes under this purview. Even they are getting fixed minimum wages. They are working for low wages for period of time. This legislation is not directly applicable to the Gig workers. But the appropriate government may include this working group under this legislation. then gig workers also enjoy this benefits.

## 7. The Factories Act, 1948

Factories Act regulated the working conditions and basic fundamental facilities in the factory or Industry. As per the Factories Act, employer should provide the weekly leave, hours of work, safe working environment, safety tools, toilet, canteen, etc. to the employees. But in my research, I find out that, employer is not properly providing facilities and benefits which is mentioned in the Factories Act to the employees. Weekly leave or sick leave, maternity benefit is not provided to the Gig workers.

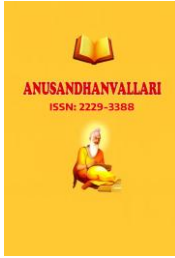
Under the Factories Act safety measures are mentioned. The object of the safety measures is to protecting the workers from the risk allied factory with machines. Employer should work in normal temperature. The employer should provide adequate ventilation temperature control facilities to control the extra temperature in the working place. Employer should provide the sanitation facilities. Employer should take precautions against dangerous fumes, gas etc.

## 8. The Employees Provident Funds and Miscellaneous Provisions Act, 1952

The Employees Provident Funds and Miscellaneous Provisions Act, 1952 is one of the social security legislation which is applicable to gig workers also.

## 9. Consumer Education & Research Centre and others Vs. Union of India and Others (1995) 3 SCC 42

Right to health and medical assistance, necessary for protection of every person at the time of employment or postretirement period, is an essential right of a worker as mentioned by Article 21 we should read this with Articles 39(e), 41, 43, 48-A, and other allied provisions, as well as basic human rights that endeavor to make the life of the worker eloquent and dignified life of the workers. In my research I found out that Gig workers is not enjoying this rights. The court ruled that the authoritative to work in a dangerous industry because of a financial need for one and his family members. should not be at the cost of one's health and well-being. The



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right to health as protected under Article 21 includes the right to live in a clean, hygienic, and healthy environment. A clean environment begets a healthy body and a healthy mind.

As per this Supreme Court Judgement, Right to Life includes every right for human beings. No one will deprive this right without authority of the law. So this is the government duty to protect the workers from the hazards. Government should monitor the employees working conditions and their safety measure. This all mentioned in the Factories Act also. But still it is not properly implemented in the Oil and Gas Industry. Even the workers having no proper toilet facilities and other basic facilities. So it is against the fundamental rights and Human rights. Government should appoint separate authority for monitoring this workers.

#### 10. Occupational Health and Safety Association v. Union of India and other

In this case it was discussed about that occupational safety and health regulations maintained in the Industry. In addition to that in case of any accident arises out of and in the course of employment, employees right to claim compensation under the Employees Compensation Act, 1923 also discussed.

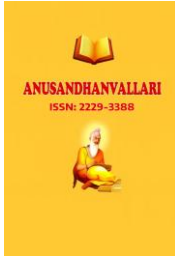
#### International Standards on Protection of Oil and Gas Industry Workers:

##### ➤ International Labour Organisation:

To boost global efforts to ensure a safe and healthy work environment, the ILO has introduced a new plan, the *Global Strategy on Occupational Safety and Health for 2024 – 2030*. The goal is to prioritize the well-being of workers in line with the ILO's dedication to social justice and the promotion of decent work worldwide.

The strategy encourages ILO Members to act on three pillars.

1. Improve national Occupational Safety and Health (OSH) frameworks by enhancing governance, promoting reliable data, and building competency.
2. Strengthen coordination, partnerships and investment in OSH at national and global levels.
3. Enhance workplace OSH management systems by promoting ILO-OSH 2001 principles, developing gender-transformative guidance, and tailoring it to specific hazards, risks, sectors and occupations.<sup>1</sup>



### **International Conventions:**



#### **Hours of Work (Industry) Convention, 1919**

In this Convention totally 22 Articles is there. As per Article 1 of this Convention, this convention is applicable to the Mine workers and Gas workers also. As per this convention working hours of persons employed in the Oil or Gas Industry shall not exceed eight hours in the day and forty-eight hours in the week. As per Article 4 of this Convention, a weekly rest period of twenty-four consecutive hours shall be allowed to all classes of workers.



#### **Weekly Rest (Industry) Convention, 1921**

As per this convention, the employee who is working in the public or private industry can enjoy in every period of seven days a period of rest comprising at least 24 consecutive hours.<sup>2</sup>



#### **Weekly Rest (Industry) Convention, 1921**

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#### **Equality of Treatment (Social Security) Convention, 1962**

As per this convention, the Member country may accept the obligations of this convention. Branches of the social security are:

Health care, Dependent benefit, Industrial Accidental benefit, retirement benefit, Illness benefit, Maternity Benefit, etc.,

As per Article 3 of the Convention, equality of treatment shall also be granted to the survivors in the case of survivor's benefits.

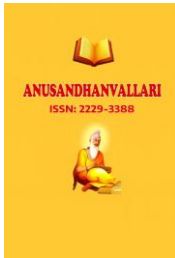


### **Safety and Health Conventions:**



#### **Workmen's Compensation (Occupational diseases) Convention (Revised), 1934**

As per this convention, this was adopted for the purpose to provide compensation to workmen those who are affected or incapacitated by occupational diseases or in case of death from those occupational diseases to their dependents in accordance with the general principles of the national legislation relating to compensation for industrial accidents.



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### **Occupational Safety and Health Convention, 1981**

Under this convention, 'Health' means physical and mental elements which is directly related to safety and hygiene at work. The situation regarding occupational safety and health and the working environment shall be reviewed at proper levels.

Part II of the Convention described as principles of national policy. The object of the policy is to prevent the accidents and injury which is occurring in the course of work.

### **Promotional Framework for Occupational Safety and Health Convention, 2006**

The object of the convention is to protect the workers against sickness, disease and injury arising out of employment. And the ILO is to obligate the protection for the life and health of the workers. This convention gives some obligation to the members country to maintain or develop the national system for occupational safety and health.

### **World Health Organisation:**

As per the World Health Organisation, 'Occupational Health' objectives are:

- To improve the working conditions and working environment to become propitious safety and health;
- To preserve and the workers' health and working capacity;
- To develop the working culture and develop the working Organisation include the effective administrative system, principles for participation and quality related management policy to improve the occupational safety and health.

### **Effects of technology developments on Oil and Gas Industry:**

Technology improves the efficiency, safety in the Oil and Gas Industry. It reduces the risk while the workers are working in the Hazardous work place. Because in the Oil and Gas Industry there are more chances for accident and Occupational health issues because of their nature of work. But due to the technology development, some renowned technologies are used in the Oil and Gas Industry. It will lead to the work efficiency in the Oil and Gas Industry and it protect the workers safety from the Hazardous risks.

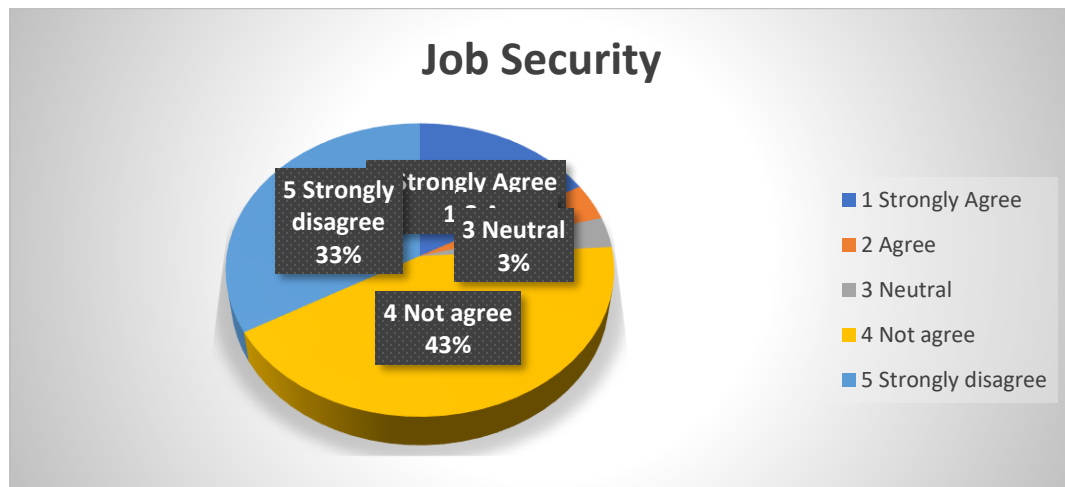
### **Findings:**

Researcher conducted the survey with Questionaries in Chennai, Tamil Nadu with 300 Oil and Gas Industry workers. Survey samples include Full time employee and Contract workers (Gig Economy). In this research researcher find out, contract workers are discriminated from the Full-time employees for claiming the all kind of benefits avoided.

**Job Security**

**Table No: 1**

S. No	Particulars	Respondents
1	Strongly Agree	50
2	Agree	12
3	Neutral	10
4	Not agree	128
5	Strongly disagree	100



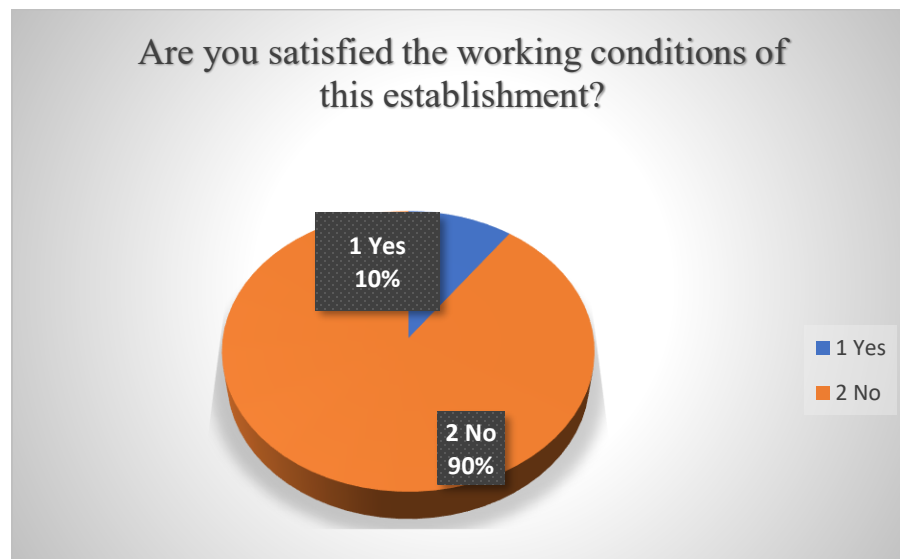
**Source:** Primary Source

In this research researcher find out that, 17% of the people only strongly agree there is a job security in their industry. 3% of the worker satisfy about (agree) their job security. 3% of the workers gave Neutral response. 43% of the worker not agree about their job security. Because employees can be removed at any time by employer. 33% of the workers Strongly disagree about their job security. Because maximum worker working as a Contract workers, Casual Worker and Backup worker. There are no proper working conditions like, working hours, Weekly leave, or for them.

**Are you satisfied the working conditions of this establishment?**

**Table No: 2**

S. No	Particulars	Respondents
1	Yes	30
2	No	270



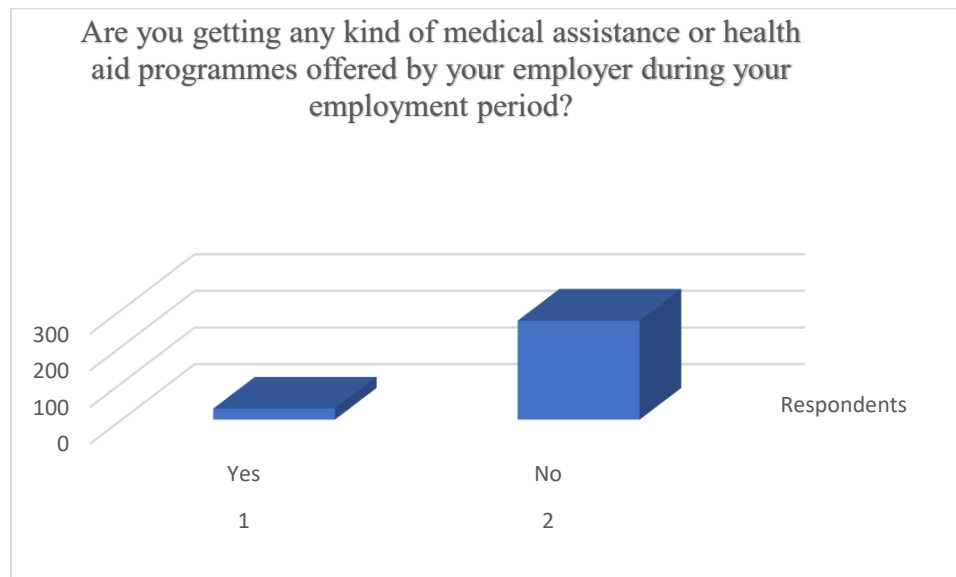
Source: Primary Data

In this research author find out that, 90% of the workers is not satisfied the working conditions of the establishment. 10% of the employees only satisfied their working conditions. Working conditions includes, Safety and Health, Working Environment, Weekly Leave, Leave with wages, Maternity Benefits, Hours of work, etc. This working condition is not regulated by the employer in this Oil and Gas Industry. Because women employee is not aware of that Maternity Benefit. So sometime they didn't enjoy the maternity benefits. In case of any occupational disease arises, employees didn't claim the compensation from the employer. Even the employees didn't aware of this right which is mentioned in the Labour Laws.

**Are you getting any kind of medical assistance or health aid programmes offered by your employer during your employment period?**

**Table No: 3**

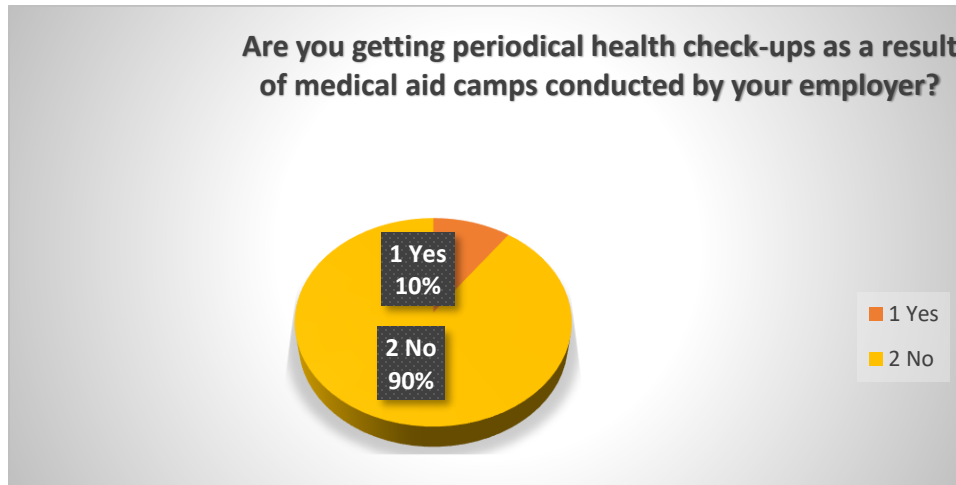
S. No	Particulars	Respondents
1	Yes	30
2	No	270



**Are you getting periodical health check-ups as a result of medical aid camps conducted by your employer?**

**Table No: 4**

S. No	Particulars	Respondents
1	Yes	30
2	No	270

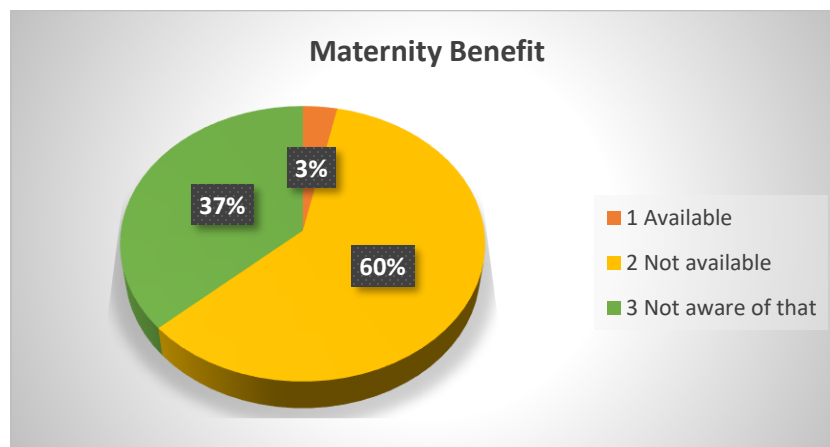


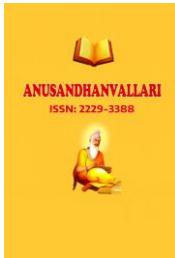
As per the Labour Legislation in India, Employer should provide periodical medical checkup to the employees with the free of cost. But the employees who all are working in the Oil and Gas Industry, they didn't get these benefits.

**Maternity benefits**

**Table No: 5**

S. No	Particulars	Respondents
1	Available	10
2	Not available	180
3	Not aware of that	110





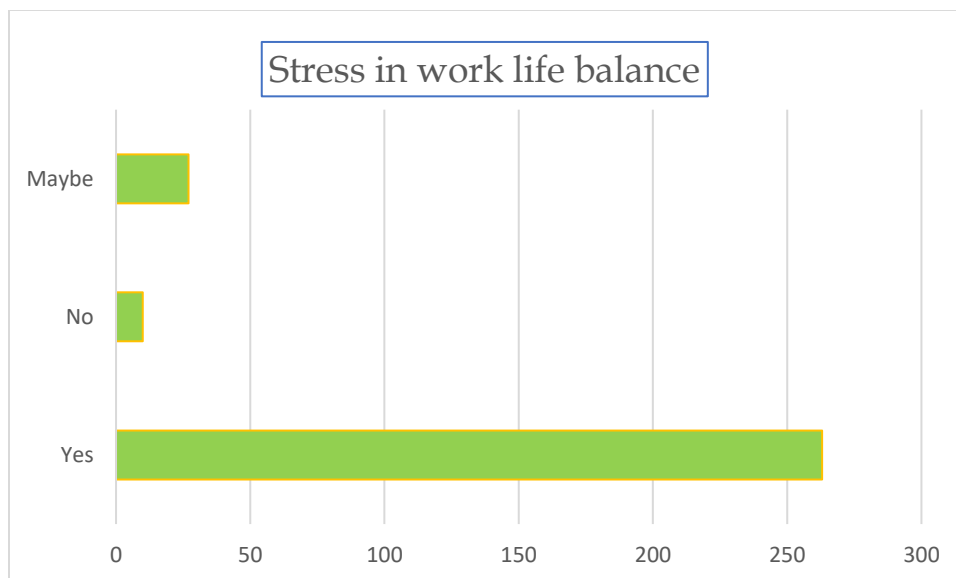
In this research author find out that, 37% of the workers in the Oil and Gas Industry didn't aware of this Maternity benefit. 60% of the workers aware of this Maternity benefit. But they didn't get the benefits from the employer. As per the Maternity Benefit Act, A woman who is working in the industry, they can claim the maternity benefit with wages for certain period. But in the Oil and Gas Industry Maximum number of employees not enjoyed their rights which is mentioned in the Labour Legislation.

### Do you feel stress while balancing work and family life?

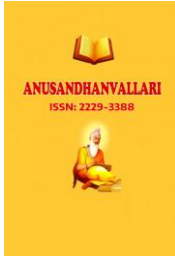
Table No: 6

S. No	Particulars	Respondents
1	Yes	263
2	No	10
3	Maybe	27

Source: Primary Data



### To what extent you can balance the stress?

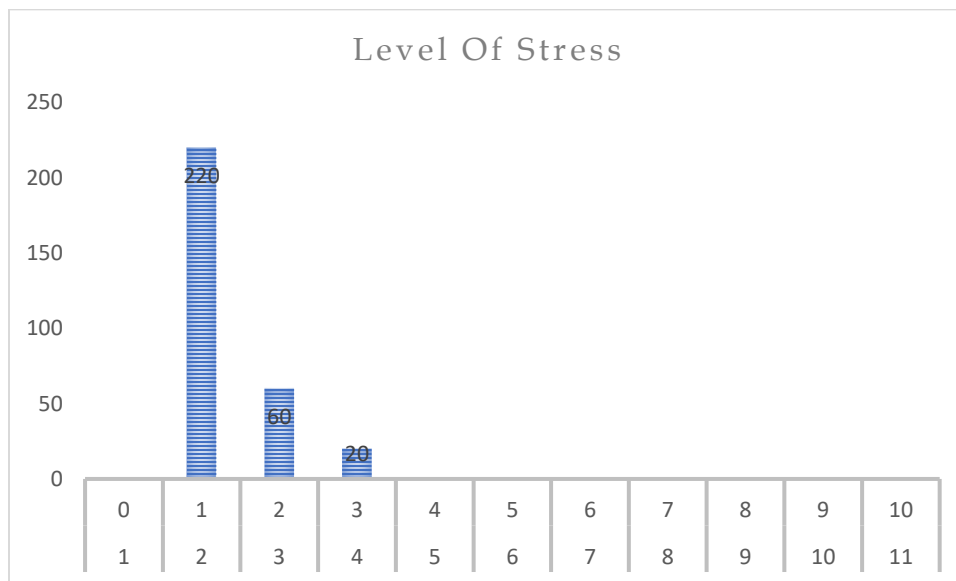


- ❖ 0 – being I can't manage it all
- ❖ 10 – I can completely manage, no problem at all

Table No: 7

S. No	Particulars	Respondents
1	0	
2	1	220
3	2	60
4	3	20
5	4	
6	5	
7	6	
8	7	
9	8	
10	9	
11	10	

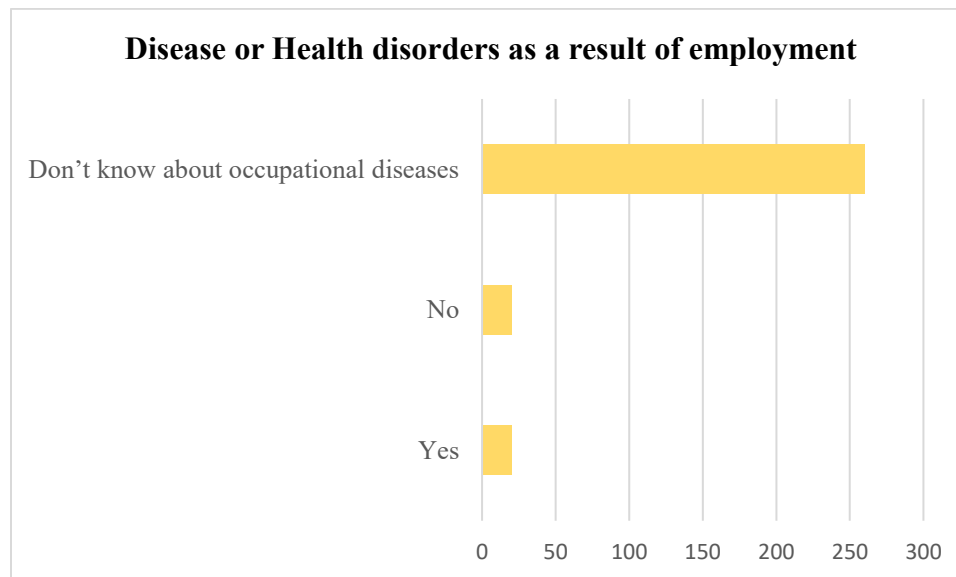
Source: Primary Data



**Do you incur with any disease or health disorders as a result of your employment**

**Table No:**

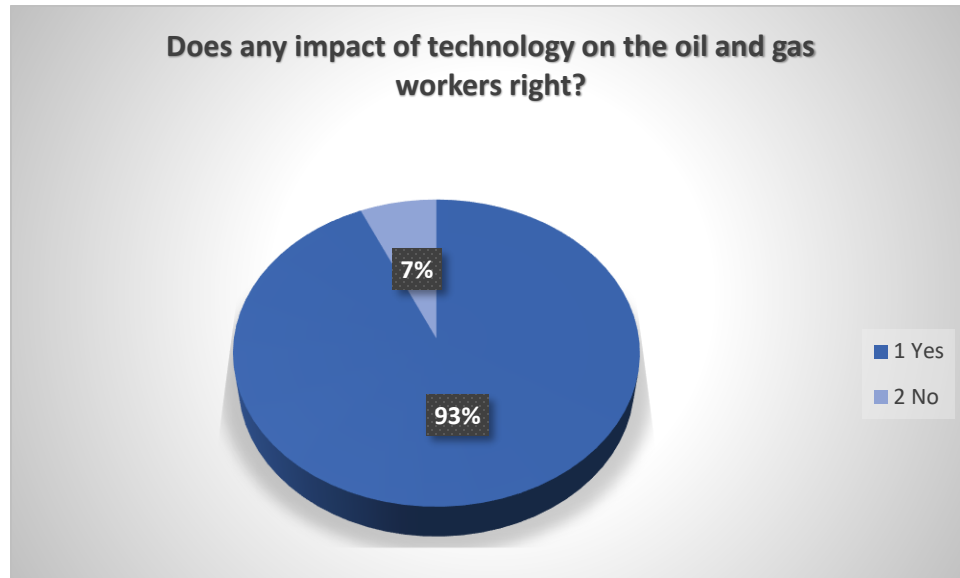
S. No	Particulars	Respondents
1	Yes	20
2	No	20
3	Don't know about occupational diseases	260



**Does any impact of technology on the oil and gas workers right?**

**Table No: 8**

S. No	Particulars	Respondents
1	Yes	280
2	No	20



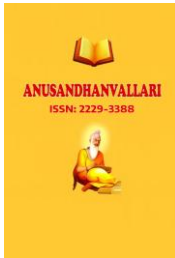
Impact of technology is very significant in Oil and Gas Industry. Now a days some technology used in Oil and Gas Industry for protecting the workers. In my research I received the response in different ways. Sometime workers feel like these technologies protecting the workers' health and safety. Robots, Drones, etc. are used in the Oil and Gas Industry for protecting the workers safety and health when there are working in the Hazardous place. In another view workers think like, there is job lose because of this technology.

Under the research in Oil and Gas Industry, researcher find out the above mentioned results from the primary data.

Women's Reproductive issues in Oil and Gas Industry:

### Conclusion:

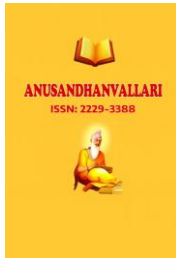
In this research, author find out that Oil and Gas Industry workers is not enjoyed their rights. Especially the workers who are working as contract workers, Gig Economy even they didn't get any rights from the employer. So, the government should enact separate legislation for protecting the Gig economy workers and the appropriate government should implement the rights which is already existence in Labour Laws and other Laws. The role of the technology is inevitable in the oil and gas industry. In modern days many technology and AI tools are used for the purpose of protecting the workers health and safety. In my research I find out that, many of the employees didn't aware of the labour laws and their rights and some of the employees having very low level



of knowledge only. As a researcher, I created some awareness to the workers about their rights and duties which is mentioned in the Labour laws and other laws. Especially for the Gig workers, they didn't get their basic rights such as medical leave, etc. as per the law even they are not eligible for retirement or other social security benefits. Even Gig workers is not defined in anywhere except in Social Security Code, 2020. So, Gig Workers also will enjoy the benefits, if the government made amendments and implement the social security code, 2020. Government should appoint separate authority under Labour Laws to monitor and settle Gig workers related issues, like Labour Commissioner, Labour Inspector, Conciliation Officer. In addition to that Oil and Gas industry workers health and safety also will be protected because of that technology utilize in Oil and Gas Industry.

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