SOCIO-ECONOMIC CONDITIONS OF MINING LABOUR IN PRAKASAM DISTRICT --- AN EMPIRICAL PERSPECTIVE

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Abstract

The mining industry is an important socioeconomic sector that significantly increases India's GDP. Even though the mining industry only makes up 2.2% to 2.5% of the GDP, it accounts for 10% to 11% of the GDP of the whole industrial sector. The study aim is to analyze the economic problems faced by the mining labour and to examine the health status of the mining labour in the study area. The present research study involves both primary and secondary data. Primary data was collected through interview schedule method with the help of a structured questionnaire. The questionnaire consists of definite, concrete and pre- ordered questions. The Likert scaling technique was applied in the questionnaire. For the collection of the research sample , the sampling area selected for the study was Prakasam district in the state of Andhra Pradesh. Purposive and Stratified Random Sampling method was applied for identifying and selecting the requisite sample respondents for the research study. For the identification of sampling units in the selected Prakasam district of Andhra Pradesh, the entire district was demarcated into four mining regions where mining activities were concentrated on a major scale.

Keywords: Socioeconomic, Mining, Labour etc.

INTRODUCTION

An vital socioeconomic sector that considerably boosts India's GDP is the mining industry. Although the mining sector's GDP contribution only swings between 2.2% and 2.5%, it contributes roughly 10% to 11% of the GDP of the entire industrial sector. Even small-scale mining adds 6% to the total cost of producing minerals. About 700,000 people in India can find work in the mining business. India is the world's fourth-biggest producer of iron ore, alumina, chromite, and bauxite as of 2015. As of 2012, India is the largest producer of sheet mica. Within the fifth largest reserve in the world is a coal and iron ore project. In 2020, it was predicted that India's mining and metals sector would be worth $106.4 billion. In 2020, the nation was the fourth-largest producer of iron ore, fourth-largest producer of chromium, fifth-largest producer of bauxite, fifth-largest producer of zinc, seventh-largest producer of manganese, seventh-largest producer of lead, seventh-largest producer of sulfur, eleventh-largest producer of titanium, eighteenth-largest producer of phosphate, sixteenth-largest producer of In 2019, it was the 11th-largest uranium producer in the world (Goswami, Sribas, 2021)

Mining Activities are defined as those operations carried out by the Asset Sale Companies on or in connection with the use of the Purchased Assets, including surface, underground, and auger mining, processing, or transportation of coal, and handling of coal byproducts.

Asbest, coal, iron, manganese, sand, salt, diamonds, rubies, gold, silver, copper, asbestos, and uranium are among the materials that are mined. All forms of mining are hazardous, and it is challenging for miners to support themselves while protecting their health and the environment. Mining may be safer. Citizen pressure is the only way to persuade the mining industry to use less damaging practices. Both large corporations and locally owned small-scale miners run open-pit surface mines and deep underground mines. Because it necessitates clearing land, excavating pits and tunnels, and moving tons of earth, large-scale mining causes more damage. However, small-scale mining is bad for the environment and people.

STATEMENT OF THE PROBLEM

Mining is the major economic activity in majority of the developing countries which includes India. India is said to be the country that possess rich natural heritage. It comprises the centrality of naturally well designed structure that safeguards its natural environment in a manner which has the ability to offer the activities of commercial nature for exploiting the same. In the present globalization era, in order to accelerate the nation in the development wave, various activities of commercial nature including mining had emerged out. It can not be ignored the fact that change in one direction provokes the change on other directions too. It is observed that when mining is growing in large scale it automatically shades its impact on the aspects of environment, individual health and livelihood status and the structural aspects of socio-economic nature are undergoing significant changes. The rapid industrialization process had clearly made its dent on the traditional joint family system in the rural sector of India, which practices agricultural as their prime occupation. Mining activities will enter as an external agent and they will end up in the form of industrialization, urbanization and modernization which will have they significant impact on the socio-economic conditions and livelihood status of the individuals in the society. Thus, the researcher attempts to examine the socio-economic conditions of the mining labour in Prakasam district of Andhra Pradesh.

SIGNIFICANCE AND NEED FOR THE STUDY

Most of the research studies in India were done on the issues of mining labour in the unorganized sector. But, no significant research studies were carried out on the mining labour in the state of Andhra Pradesh and it was found that Prakasam district in the state has the highest reserves of Granite and Slate minerals and this district comprises the largest number of mining units in terms of both major and minor minerals across the state. The Granite reserves from this district are being exported to worldwide destinations. The mining enterprises are gaining huge profits and the   transportation companies are also making a sizable profits. This

existing scenario results in the creation of more employment to the unemployed individuals in the district. These mining activities on the other hand, are creating certain harmful deeds to the people living in the vicinity of these mining areas those exists in the Prakasam district . Besides creating employment opportunities and fair wages to the mining labour, the mining activities are causing certain problems like environmental pollution, health problems, unhygienic conditions and malnutrition. The mining labour working at the mining units are facing certain specific problems like gender exploitation, social discrimination, wage discrimination, ill-health and in-secured life etc,. In this existing scenario, the present research study is conducted in order to examine the socio-economic conditions and the problems faced by the mining labour in the Prakasam district of Andhra Pradesh.

REVIEW OF LITERATURE

Based on their study, Nidhi Rai, et al (2018)in their study had concluded that the periodontal Health Status of the current mining population group is poor. Proper education in the form of oral hygiene instructions and the periodic oral checkups is necessary. It is advised to conduct frequent awareness programmes to educate the mining workers regarding the deleterious effects of the habits. Rajesh and Naik (2019) in their research study had stated that these data gives the insight into health problems of migrant sand workers and also gives information about the type of services we can provide to these workers like preventive measures, curative services and health education on personal protective equipments and personal hygiene. Sakkarai Mohamed Asha Parveen, et al (2019) in their research paper has found that the prevalence of Autumnalis among rodents and humans source tracked human leptospirosis among the miners. The study also determined that Pudukkottai miners are subjected to high-risk challenges such as exposure to water bodies on the way to the mines (odds ratio [OR] = 10.6), wet mine areas (OR = 10.6), rat infestation (OR = 4.6), and cattle rearing (OR = 10.4) and are thus frequently exposed to leptospirosis compared with Karur miners. Hence, control strategies targeting these populations will likely to prove to be effective remediation strategies benefiting Pudukkottai miners and workers in similar environments across occupations.

Sneha Gautam, et al (2020) in their study had concluded that exposure of mine workers to particulate matter (PM) in opencast mines is of major concern because of associated adverse health impacts. Dispersion of PM in such mines depends on their design and local meteorological conditions. With an increase in depth of mines, efficient vertical movement and the dispersion of PM away from mine working area become difficult. Therefore, studies on dispersion behavior of PM in opencast mines are needed. The findings of this work are important in understanding dispersion of occupational PM at the worksite and the associated exposure of mine workers.

Pradeep Kumar Jain (2021), in his study on Impact of lockdown on the mining industry in India , had concluded that India is all set to utilize the disruption caused by COVID19 to lead a phase of rapid industrialization. Country's mining sector is the key to recover in the post COVID19. The suggested improvement in the grant of mineral concessions and better coordination between government agencies

are few steps can be taken in this direction. The reforms initiated by the Government are aimed to impact the sector which is considered new horizons of growth, with the aim to unleash new investment, boost production and create jobs. During these challenging times, it is essential that the mine owners and operators take steps to carefully analyse and effectively navigate the challenges and propel the mining industry towards a new drawn. Mining in India may take to make India the $5 trillion economy by 2024 as per Government of India 2020– 2021 budget and help on speedy recovery from the economic impact of lockdown. Despite challenges posed by COVID-19, the country has to go on the industrial front and make India an Atmanirbhar Bharat or self-reliant India.

OBJECTIVES

1. To study the socio-economic profile of the mining labour in the study area

2. To analyze the economic problems faced by the mining labour in the study area

3. To examine the health status of the mining labour in the study area

4. To assess the awareness levels of the mining labour towards the social welfare and security legislations in the mining industry

5. To suggest certain policy measures for promoting the welfare of the mining labour in the study area.

HYPOTHESES (NULL)

Ho1:   There exists no significant association between the   household income of the respondents in the mining industry and their standard of living

Ho2:   There is no significant association between the socio-economic profile of the respondents and their health conditions in the mining industry

Ho3:   There exists no significant difference among the awareness levels of the respondents towards mining legislations in the mining industry.

Ho4:   There exists no significant difference among the awareness levels of the respondents towards   mining rules, social security measures and service conditions in the mining industry.

RESEARCH METHODOLOGY

For the purpose of the present study it was proposed to adopt Descriptive Research Design. In terms of purpose, it is more of a causal study, wherein the objective is to explain the relationship between variables. The present research study involves both primary and secondary data. Primary data was collected through interview schedule method with the help of a structured questionnaire. The

questionnaire consists of definite , concrete and pre- ordered questions. The Likert scaling technique was applied in the questionnaire. For the collection of the research sample , the sampling area selected for the study was Prakasam district in the state of Andhra Pradesh. Purposive and Stratified Random Sampling method was applied for identifying and selecting the requisite sample respondents for the research study. For the identification of sampling units in the selected Prakasam district of Andhra Pradesh, the entire district was demarcated into four mining regions where mining activities were concentrated on a major scale. The mining activities bench marked for the present study were granite processing units and slate processing units. The granite processing units were mainly located at three regions of the district namely, Chimakurthy, Ballikuruva and Marturu regions whereas the slate processing units were mainly located at Markapuram region. Hence, the sampling units from these four regions were demarcated for drawing the requisite sample respondents for the present research study. The mining units were stratified on the basis of their scale of operations, number of employees, productivity, turnover and product range. Basing on these parameters, 18 Granite units and 6 Slate units from the identified four sampling regions were marked as the sampling units. Thus, 24 mining units were identified as the sampling units for the study from which the requisite sample size of the respondents was drawn. Twenty sample respondents from each identified sampling unit were randomly selected as the sample respondents for the research study. Thus, 480 sample respondents were drawn from the identified sampling units for the study. Hence, the sample size for the present research study is 480 sample respondents.   The primary data was collected from the sample respondents through interview schedule method with the help of a structured questionnaire consisting both open and closed ended questions. The interview schedule was set to ensure that the responses are to be given in a frame of reference that which is relevant to the inquiry purpose and in a systematic form that can be used at the time of data analysis. The open ended questions were aimed at permitting the free response from the respondent rather than a limited response. The dimensions/ variables that the researcher have taken into account for the present study were Socio-economic problems, Health Problems, Organizational problems, Social Security and Labour Welfare Legislations. In order to draw meaningful inferences from the collected data the following statistical tools were applied. The collected data was reduced to the form of tables on which statistical tools like Percentage scores, Arthematic Mean scores, Standard Deviation (SD), Anova and Chi-square tests were applied.

RESULTS AND OUTCOMES

The present research study examines the socio-economic backgrounds of the mining workers by examining the aspects of age, gender, religion, caste, educational background , nature of family, marital status and number of children etc,.   The primary data was collected from 480 mining workers working in the granite and slate processing units in Prakasam district of Andhra Pradesh. Generally mining workers suffer with the   socio-economic problems like illiteracy, poverty, unemployment and malnourishment. The socio-economic conditions of the mining labour will have their

significant impact on the livelihood status of their children in terms of education and residential status.

THE MAJOUR OUTCOMES

- The study shows that majority of the respondents in the study area are in the age group of 26-40 years.

- The study depicts that majority (90.6%) of the respondents working in the mining industry are males by their gender.

- The study reveals that a major proportion of the respondents working in the mining units are having only primary level of education.

- The study shows that majority of the respondents in the study units are engaged in extraction activities followed by technical processing activities. The nature of the work by the employees at the mines determines the exposure of that employees towards risk and danger that exists in mining operations.

- The study depicts that majority of the respondents in the study units are living in nuclear / single family structure. The growing incidence of nuclear family structure had certainly paved the way for the disintegration of joint family structure in the society and it is more particularly witnessed in the rural areas of the nation.

- The study shows that a major proportion of the respondents had disclosed that their fathers were illiterates and comparatively the study shows that fathers are having better literacy levels than the mothers of the respondent mining workers.

- The study reveals that majority of the respondents had disclosed that their spouses had their primary level of education and comparatively the study shows that the spouses are having better literacy levels than the parents of the respondents in the study units.

- The result shows that a sizable portion of the respondents in the study units had agreed that they are sending their children to educational institutions for their education.

- The result shows that a major proportion of the respondents had felt that female education (Girl Child Education) is needed for getting good employment / job opportunities in their life.

- The study reveals that majority of the respondents in the study units are from the family occupations like unorganized sector or seasonal employment or agriculture.

- The study shows that majority of the respondents in the study units had stated that their spouses are working in unorganized sector or they are under seasonal employment.

- The study depicts that majority of the respondents in the mining units have chosen the mining occupation because of the unemployment trends in other occupations and followed by their lower levels of their family income.

- The study reveals that majority of the respondents in the study units are having their average monthly income in the range of Rs. 10000 – 20000 category.

- The result shows that majority of the spouses of the respondents in the study units are having their average monthly income in the range of Rs. 5000 – 10000 category .

- The study reveals that majority (77.9%) of the respondents in the study units had opined that mining activities are causing health problems and more environment pollution.

- The study shows that majority of the respondents are facing ill health more frequently.

- The study reveals that majority of the respondents in the study units are visiting hospitals or health care centres once or twice in a year.

- The result shows that majority (82.9%) of the respondents are visiting government hospitals and primary health centres for their treatment during their ill health conditions.

- The study reveals that majority of the respondents working in the study units are suffering with diseases like asthma or bronchitis or tuberculosis or lung cancer.

- The study shows that majority of the respondents had developed the symptoms of chronic cough, skin rashes, stomach ache, vomiting and head ache with regard to their health problems.

- The study reveals that majority of the respondents in the study units had opined that their health status is satisfactory when compared to their co-workers in the mining industry.

- The result shows that majority of the respondents had stated that mining environment is the main cause for the existing poor or critical health conditions among the mining labour in the study units.

- The study reveals that majority of the respondents in the study units had stated that there is every risk of airway inflammation, vehicle accidents and collapsing of earth at their work sites of mining units.

- The result shows that majority of the respondents had opined that there is every possibility for risk and danger at their working places in the mining units.

- The study reveals that majority of the respondents had stated that frequent ill health, accidents and environment pollution problems are the major probable security threats against their life and health at the mining units .

- The result shows that majority (87.3%) of the respondents in the study units are not aware of any provisions related to mining legislations.

- The study shows that majority (79.4%) of the respondents in the study units are not aware of any provisions related to mining rules.

- The study reveals that majority (68.6%) of the respondents in the study units are not aware of act and legislations those related to work and service conditions of mining workers.

- The result shows that majority of the respondents in the study units had stated that they are being provided with security and safety devices like helmets, shoes, air filters and hand gloves.

- The study shows that majority of the respondents in the study units had stated that their employers are totally neglecting them during their ill health conditions due to mining activities.

- The study reveals that majority of the respondents in the study units got their life insured against risks under various insurance schemes.

- The result shows that majority of the respondents in the study units have subscribed for life insurance against risks under various government insurance schemes.

- The study reveals that majority of the respondents in the study units those subscribed for life insurance against risks under various government insurance schemes have subscribed for schemes like Pradhan Mantri Suraksha Yojana, Employees State Insurance, Janasri Bima Yojana and Rastriya Swasthya Bima Yojana.

- The Chi-square test result shows that the gamma statistics (0.264) indicated strong positive and significant association between the variables. The chi-square value is 48.75 and the p-value is 0.000 and it is highly significant and

hence the proposed Null-hypothesis (Ho1) is rejected. Thus, the it can be inferred that **t**here exists a significant association between the   household income of the respondents in the mining industry and their standard of living.

- The Anova test result shows that the factors of health   like   smoking , drinking, tobacco chewing and psychotropic substances (4.16), food consumption patterns (2.36), physical impairment (4.28) and health issues (4.56) are found to be statistically significant at 0.05 level of significance. Hence, the proposed Null-hypothesis (Ho2) is rejected. Thus, it can be inferred that there is a significant association between the socio-economic profile of the respondents and their health conditions in the mining industry.

- The Chi-square test result shows that the calculated chi-square value is 54.275 and the p-value is 0.000 and it is highly significant and hence the proposed Null-hypothesis (Ho3) is rejected. Thus, the it can be inferred that **t**here exists a significant difference among the awareness levels of the respondents towards mining legislations in the mining industry.

- The Anova test result shows that the factors of awareness level (3.197), Mining Rules (8.492), Social security measures (5.724) and service conditions (6.358) are found to be statistically significant at 0.05 level of significance. Hence, the proposed Null-hypothesis (Ho4) is rejected. Thus, it can be inferred that there is a significant difference among the awareness levels of the respondents towards   mining rules, social security measures and service conditions in the mining industry

SUGGESTIONS

Based on the findings of the present research study the following recommendations are made for the policy implementation and administrative aspects with regard to the improvement of socio-economic conditions and the standard of living of the mining labour in the mining industry.

➢ Prohibition of Child Labour

➢ Housing Schemes for the mining workers

➢ Gender Equity and prevention of discrimination in wage structure for the women mining workers

➢ Awareness Programs to mining workers

➢ Provision and Incentives for Education of the children belonging to mining workers

➢ Provision for the improvement of working and environmental conditions in the mining industry

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- ➢ Provision for health care and Life insurance

- ➢ Role of Non Government Organizations (NGOs) and Voluntary Organizations

CONCLUSION

The present study had analyzed the socio-economic conditions of the mining labour in the Prakasam district of Andhra Pradesh. The study had examined the socio-economic profile of the mining labour and it has analyzed the problems and other occupational hazards faced by the mining labour in the study area. The study had assessed the health status of the mining labour and it had estimated the awareness levels of the mining labour towards the existing social welfare and security legislations in the mining industry.

The study depicts that the socio-economic profile of the mining labour in the study area is medium to low in its nature and the existing health conditions of the mining workers working in the selected sampling units are very alarming and most of them are suffering with respiratory and cardio vascular diseases. The study further depicts that the awareness levels of the mining labour are very low towards the mining legislations, rules, service conditions, social security and welfare legislations.

The study further concludes that there exists a significant difference among the awareness levels of the respondents towards mining legislations in the mining industry and there exists a significant difference among the awareness levels of the respondents towards mining rules, social security measures and service conditions in the mining industry.

SCOPE FOR FURTHER RESEARCH

The present study had analyzed and verified the aspects of socio-economic conditions of mining labour in the selected mining units of Prakasam district of Andhra Pradesh. In the interests of the research community, the following avenues for further research are here with postulated.

1. Research studies can be done by applying this research model on the mining units of other districts in the state of Andhra Pradesh.

2. Descriptive research studies can be done on the labour legislations and their impact on the living conditions of the mining labour in the Mining industry

3. Comparative research studies can be done on the aspect of socio-economic conditions of mining labour working in the major and minor minerals mining units across the nation.

4. Diagnostic research studies can be done on the impact of labour legislations on the economic empowerment of mining labour in the state.

5. Experimental research studies can be done on the impact of social welfare programs on the standard of living and economic well being of the mining labour in the mining industry across the state.

6. Longitudinal research studies can be done on the emerging patterns of economic development among the mining labour in the state.

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