SOCIO-ECONOMIC CONDITIONS AND PROBLEMS OF MINING LABORERS IN BALLARI AREA

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Abstract

The mining and quarrying industry is a part of the primary sector. Mineral resources occupy a place of prominence among precious natural resources. The mining industry plays a substantial role in export promotion and earns significant foreign exchange resources.Ballari district is located on the State's eastern side, and Ballari is known as the 'Steel city of South India.The district has rich mineral deposits, especially iron ore and manganese. The Sandur hills are rich in iron and manganese, with an average annual output of three million tonnes.Mine owners and transport companies are also making an excellent profit, and Mining Creates substantial employment prospects and fair wages for the labourers in the Sandur region. However, due to mining, workers face many problems such as health problems, pollution, malnutrition, unhygienic conditions, etc.The study objectives are to examine the socio-economic conditions of the mining laborers and explore the issues faced in the Sandur region and analyze the awareness about DMF and expectations from the DMF among the respondents.The quantitative and qualitative data were collected from both primary and secondary sources. The primary data is collected from 24 respondents of selected labourers in Sandur Taluk. The preliminary cross-sectional information was obtain through a structured questionnaire and observation through a field survey. In addition, descriptive Statistical tools have been used to analyze the data.

Keywords: Mining, Labourers, Problems, and DMF.

1. Introduction:

Mineral resources occupy a place of prominence among precious natural resources. The mining industry plays a substantial role in export promotion and earns significant foreign exchange resources. Incredibly, Karnataka state has high mineral deposits in India. The Ballari region is blessed with abundant natural resources. The mining and quarrying industry is a part of the primary sector. In this region, the excavation of iron and manganese ore in the modem sense has occurred since the early 1950s. Mining is alsoa significant source of revenue to the State exchequer in terms of royalty collected from the leaseholders.Mining involves exploring or exploiting mineral deposits from the earth by surface and underground methods, changing the environment and social components. Human interference with nature and exploitation of its resources unquestionably damage the environment, mainly due to the extraction of minerals from the Earth. The mining activity has threatened the entire ecosystem, affecting the living and non-living things of the mining area by the expected reaction. Mining is a specific activity done at a site where minerals exist. The mining can only occur where minerals are present and are economically viable to exploit.

2. Mining in Ballari District:

Ballari district is located on the State's eastern side, and Ballari is known as the 'Steel city of South India.' The Undivided district is 15° 30' and 15°50' north latitude and 75° 40' and 77° 11' east longitude. Ballari district comes under the administrative control of the Kalaburagi division and development jurisdiction of K.K.R.D.B, Kalaburagi. Undivided Bellary district has Eleven taluks. For administrative convenience, the district is bifurcated into two revenue sub-divisions; Bellary and Hospet (Now Ballari district has been bifurcated into two districts).

The district has rich mineral deposits, especially iron ore and manganese. The Sandur hills are rich in iron and manganese, with an average annual output of three million tonnes. The district forms economic minerals such as haematitic iron ore and red oxide of iron, manganese ore, white clay, soapstone, etc. The other mineral deposits in the district are copper ore, galena, gypsum, magnesite, calcite, quartz, corundum, garnets, ochres, kankar, sand, and plastic clays, and decorative building stones. Numerous banded haematitic iron ore of high grade occur cresting the district's synclinal folds, especially the 'Sandur synclines. These beds of haematitic ore contain very rich Fe. Content and these beds are considered among the world's richest iron ores. They occur extensively in several parallel and disconnected bands for nearly 30 miles in the north-west-south-east strike direction.

Bellary district has 25% of India's Iron ore reserves. Large deposits of lateritoid haematitic iron ore associated with manganese ore from prominent ridges of the Sandur schist belt. There are six ranges carrying iron ore deposits: Donimalai, Kumaraswamy, Ramaghada, Yeshavanthanagar, Devagiri, and Thimmappanagudi.The Geological Survey of India (G.S.I.) has estimated a reserve of about 1876 million tonnesof iron ore, with about 63% of total iron in the Sandur belt. The Ramaghada deposit is about 10,400 m long and 150 m wide with 62.3 to 62.6% Fe. In Donimalai, six ore bodies with sizeable reserves of 65.2% Fe have been estimated. In Kumaraswamy, the Geological Survey of India has estimated iron ore over a strike length of 2.5 km and a width of 465 m.

3. Literature Review:

An extensive literature review has been done, and the essential reviews are as follows

Author and Year	Title of the study	Objectives	Methodology	Findings of the study
Ackley (2008)	"Evaluating Environmental Risks in Mining: A Perceptual Study at the Vatukoula Gold Mine in Fiji" The University of Vermont (report).	Examine the perceptions of environmental and health risks in the communities surrounding the Vatukoula gold mine in Fiji.	Required primary datawas collected through a survey questionnaire from the 340 respondents.	Results revealed that gender is an essential variable in risk perception, women feel they have less knowledge about the risks of mining than men, and women think they have less control to avoid the dangers of mining than men.
Devata (2010)	"Profile of Mine Workers in Orissa" Orissa Review	To examine the socioeconomic condition and status of the miners	The study is based on oral observations and secondary sources of data.	The wage structure for the miners is pathetically low level and imperfections in the labour market. Women are paid lower wages than men. In addition, workers are affected by inhalation and absorption of dust and fume.
Solanki et al. (2014)	Oral Health of Stone Mine Workers of Jodhpur City, Rajasthan, India. Safety and Health at Work.	To assess the health status of stone mine workers.	The study sample comprised 510 men, selected based on the stratified cluster sampling procedure.	The incidence of dental caries in the workers was 74%. The oral health of mineworkers is in a poor state; steps should be taken to provide primary medical and dental care facilities.

Absar Ahmad (2015)	"Socioeconomic and Health Status of Sandstone Miners: A Case Study of Sorya Village, Karauli, Rajasthan" in International Journal of Research in Medical Sciences.	To assess the socio-economic and health status of the miners in Sorya Village of Karauli district of Rajasthan,	A cross-sectional study was conducted among 126 miners in Sorya village, Karauli, in 2014.	The average household sizes of the miners were six. Around 80 % of miners are addicted to substance abuse and spend an average of Rs. 17 daily. The average monthly incomes of them were Rs. 3200 and 39 % have miners in more than 1 lakh debt. The debt was that the father died in debt and carried it forward to the children.
Anand Kulkarni and Jayasheela (2017)	"Socio-Economic impacts of Iron Ore Mining activities around Hospet area, Karnataka, India." IJIRSET.	To assess the direct and indirect mining impacts on the environment in and around the Hospet region.	Data were obtained from primary as well as secondary sources. In addition, field sample collection and informal surveys were used to collect the data.	Poor handling of resources mining causesharmful impacts on the environment. Hence, proper safeguards must be taken to protect the environment.
Veerendra Kumar and Basavaraj (2020)	"Health Status of Mining Labourers in Bellary District" International Journal of Economics and Financial Issues.	Examine health issues and occurrences of health harm to the mining labourers.	The Primary Data has collected through a random sampling method in mining areas with the help of the Questionnaire.	Mining causes accidents such as fires, explosions, or collapsed mine tunnels that affect miners and people living in communities near mines.

4. Research Gap:

From the literature, it is found that few academicians and researchers have researched explaining issues related to respondents' socio-economic status, financial situations, health impacts, problems, and so forth issues. However, micro-level studies are required to understand the various problems of mining areas as they vary from one place to another placeand state to state.Moreover, such studies are few in the district like Ballari in the Kalyana Karnataka region. Hence, there is enough scope, and the present research is needed to analyze the issues related to socio-economic conditions and problems of mining laborers in the Ballari region.

5. Need of the study:

It is found that the Bellary region has rich iron and manganese ore. Mine owners and transport companies are also making an excellent profit, and Mining Creates substantial employment prospects and fair wages for the labourers in the Sandur region. However, due to mining, workers face many problems such as health problems, pollution, malnutrition, unhygienic conditions, etc. Several studies were already made on the labourers working in the unorganized sector. But it is highlighted that only a few studies were made on the mining labourers in India in general and Bellary district in particular.

6. Objectives of the Study:

The study objectives are as follows

- To examine the socio-economic conditions of the mining laborers in the study area.
- To explore the problems faced by the mining laborers in the Sandur region.
- To analyze the awareness about DMF and expectations from the DMF among the respondents.

7. Methodology:

The present study is an empirical inquiry into the mining labourers' socio-economic problems in the sandur regionof Ballari district. The quantitative and qualitative data were collected from both primary and secondary sources. However, the main focus of the study is on the primary source of data and information. Accordingly, the convenience sampling method has been followed in the collection of Primary data. The primary data is collected from 24 respondents of selected labourers in Sandur Taluk. The preliminary cross-sectional data

wasobtain through a structured questionnaire and observation through a field survey. In addition, descriptive Statistical tools have been used to analyze the data.

8. Major Findings:

The study's findings are classified based on the study objectives, such asSocioeconomic characteristics, problems, and awareness of and expectations from the DMF trust.

A. Socioeconomic Characteristics :

An attempt was made to document the important socio-economic characteristics of the respondent's Mining workers, which included education level, social status, economic status, house ownership status, family type, etc.Education helped the workers adopt innovations quickly; it also helped to increase their income. The 20.83 percent of labourers were educated up to secondary education, 20.83 percent studied up to matriculation level, whereas the majority of 45.83 percent qualified at graduation/diploma level and 4.63 percent up to post-graduation level. A nuclear (Small) family consists of parents and children. On the other hand, a joint family included parents and children and grandparents, aunts, uncles, and cousins. Nuclear families were the highest in number compared to joint families among all the respondents. Of the sampled farm households, 62.5 percent were nuclear-type families, and only 37.5 percent were joint-type families.Further, it was observed that out of the total sampled farm households, 41.55 percent of households were from the general category, 20.83 percent were from the backward class,and 16.66 percent of households belonged to the scheduled caste, 12.5 percent of households belonged to the scheduled tribe. It also reveals that 66.66 percent were married respondents, and 33.33 percent were unmarried.

Table-1 Socio-Economic characteristics of the respondents

Socio-Economic Characteristics	Categories	Frequency (Percentage)	Socio-Economic Characteristics	Categories	Frequency (Percentage)
Education	Secondary Education	5 (20.83%)	Ownership of House	Own House	13 (54.16%)
				Rented	6 (25%)
	PUC	5 (20.83%)		Company Provided	5 (20.83%)
	Diploma/ Graduate	11 (45.83%)	Living area	Urban	4 (16.66%)
	Post Graduate	1 (4.63%)		Rural	20 (83.33%)
Religion	Hindu	20 (83.33%)	Nature of employment	Permanent	9 (37.5%)
	Muslim	4 (16.66%)		Temporary / Daily Wage	11 (45.83%)
Caste	SC	4 (16.66%)		Contract	4 (16.66%)
	ST	3 (12.5%)	Average Monthly Income	Less than 10,000	9 (37.5%)
	OBC	5 (20.83%)		10,001 to 20,000	10 (41.66%)
	General	10 (41.66%)		20,001 to 30.000	4 (16.66%)
	Not Informed	2 (8.33%)		30.001 and above	1 (4.16%)
Marital Status	Married	16 (66.66%)	Type of Mine	Government	1 (4.16%)
	Unmarried	8 (33.33%)		Private	23 (95.83%)
Family Size	Nuclear Family	15 (62.5%)	Migration	Yes	5 (20.83%)
	Joint Family	9 (37.5%)		NO	19 (79.16%)

Source: Primary data

B. Problems and facilities available to the mining labourers:

- 50% of respondents revealed that social discrimination is done based on Caste, Gender, and Area in the workplace.
- Out of 24 respondents, 50% of respondents are entirely protected, 37.5% are protected, and 12.5% are not protected at the workplace.

- 90% of respondents revealed that the company provides all safety tools like helmets, masks, gloves, shoes, etc. However, the remaining 10% demonstrates that safety tools are not offered in the workplace.
- Respondents reveal that life threats facedat mine sites are vehicle accidents, blasts, landslides, trachea inflammation, etc.
- Suppose there are health problems on the site. In that case, 50% of respondents revealed that companies provided health expenditure and salary, 41.66% of respondents informed only offered salary, and 16.66% reported that the company helps get insurance. However, 4.16% of respondents said the company did not provide compensation or other facilities during leaves.
- Respondents say that the mining environment, malnutrition, and contaminated water are the main reasons for their illness.
- The study shows that 29.16 % of respondents suffer from asthama, 20.83% are from allergies, 4.16% are from T.B, and 25% do not suffer from any diseases in the workplace.
- It also disclosesthat 20.83% of respondents reveal yearly once, 37.5% of respondents say monthly, 16.66% of respondents indicate weekly Health check-ups done in the workplace, and 25% of respondents show no health care check-up has been organized.
- The study also reveals that 45.83% of respondents visit private hospitals, and 54.16 visits the government hospital whenever they suffer from any illness.
- The study shows that 54% of respondents are available ESI facilities, and 46% are not availed. Meanwhile, 83.33% of respondents are available in the PPF facilities, and the remaining are unavailable.
- 75% of respondents have insurance facilities, and the remaining 25% are not getting any insurance facilities.

C. Awareness of and Expectations from the DMF Fund among the respondents:

- Among the respondents, 54.16% of respondents were aware of DMF and its activities, and 45.84% of respondents were not aware of DMF and its activities in the study area. Moreover, the study shows that no respondent has not availed any benefits from the DMF.
- The respondents are expected to get a separate route for mining vehicles to prevent road accidents, better educational facilities, scholarships, and employment for their children, housing facilities for houseless people, and provision of 24x7 well-equipped hospital facilities in the mining-affected areas.
- The respondents expected the provision of pensions to retired employees, improvement of the environment, and development of lakes.
- They required the bus facilities to the villages and the proper time for school children, providing compensation to those who have lost their crops due to mining, etc.

9. Conclusion:

The mining operation is the second most crucial activity next to agriculture and is generally considered an environmentally unfriendly activity. The mining activities significantly impact economic, social, and industrial development. The study focused on Socioeconomic characteristics, problems, and awareness of and expectations from the DMF trust. 50% of respondents revealed that social discrimination is done based on Caste, Gender, and Area in the workplace. 54.16% of respondents were aware of DMF and its activities, and 45.84% of respondents were not aware of DMF and its activities in the study area. The respondents also expect many activities and measures to improve the mining area; hence, the government must provide proper facilities to the mining-prone area.

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