

**Effect Of Coal Mining On Health Of Workers And Surrounding Peoples In
Northern Coalfields Limited Singrauli, India**

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ABSTRACT

The present study was to assess the effect of coal mining on health of workers and surrounding peoples in northern coalfields limited Singrauli, India. For data collection, pre-structured questionnaire was specially prepared and survey was also done in two year (2016-2017 and 2017-2018). Sample was selected randomly from local people of selected areas. Sample size was 150 respondents from each year in which 30 each from Amlori, Nigahi, Jayant, Dudhichua and Khadiaproject. Thus the result revealed that local people were suffering from many health related problems in which most of the people were found respiratory and lung diseases. It is suggested that local people should wear mask, drink purified water and should plant more and more trees surrounding areas.

Key words: Coal, Mining, Health, Diseases, People

INTRODUCTION

Coal is an abundant fuel source and could be a source of electricity for many years to come but coal has many impurities, such as sulfur and nitrogen, and these impurities combine with water and fall to the earth as acid rain. Coal mining for fuel is harmful to the environment as well as human beings but, because coal is so enough in earth and cheap, most of the people are loath to give it up as a fuel source. There are various health effects caused by burning coal fuel. According to the scientific reports issued by WHO in 2008 and by environmental groups in 2004, burning coal fuel pollution are

estimated to less approximately 1,000,000 lives annually worldwide. Coal mining harmful for land, groundwater, surface waters and even fresh air. Impacts to the land from coal mining cause drastic changes in the surrounding area. Damage to plants, animals and humans occur from the destruction and removal of habitat and environmental contamination. While burning coal fuel not a direct threat to human beings health, coal-mining pollutants make water undrinkable by altering its taste and can also degrade water to the point where it can not be used for domestic work, agriculture or industries. All of these negative effects force local people to move to other places as their water and air gets polluted and expanding coal mines make use of more and more of their habitat. The study was carried out change with the following objective-

To study the effect of coal mining on health of workers and surrounding peoples.

MATERIAL AND METHODS

Health related survey was also done in two year (2016-2017 and 2017-2018). Sample was selected randomly from local people of selected areas. Sample size was 150 respondents from each year in which 30 each from Amlori, Nigahi, Jayant, Dudhichua and Khadiaproject from Singrauli Coalfields, Northern Coalfields Limited. For data collection, pre-structured questionnaire was specially prepared keeping in view the objectives of the study. The questionnaire was prepared in English, which was used to secure information systematically from the respondents. The questionnaire was including the aspects, which lead to fulfill the objective of the study. There were fifteen items in health questionnaires. Data collection was coded, tabulated and analyzed using appropriate statistical techniques like mean, standard deviation (SD) and correlation.

RESULT AND DISCUSSION

Table1 Frequency and percentage distribution of respondents belonging to local area of Northern Coalfield Limited Singrauli (2016-2017)

SI. No.	Diseases	Sampling sites				
		Amlori	Nigahi	Jayant	Dudhichua	Khadia
		%	%	%	%	%
1.	Headache	13.33	10.00	16.66	23.33	16.66
2.	Eye irritation	20.00	20.00	16.66	13.33	16.66
3.	Skin allergies	13.33	13.33	10.00	16.66	13.33
4.	Chest pain	6.66	10.00	6.66	3.33	10.00
5.	Respiratory problems	26.66	30.00	23.33	26.66	23.33
6.	Lung problems	20.00	16.66	26.66	16.66	20.00

%= Percentage

Table1 highlighted the frequency and percentage distribution of respondents belonging to local area of Northern Coalfield Limited Singrauli regarding their health issues in 2016-2017. The table clearly showed that the severe level of health issues i.e. headache was possessed by 13.33 percent from Amlori, 10 percent from Nigahi, 16.66 percent from Jayant, 23.33 percent from Dudhichua and 16.66 percent from Khadi whereas eye-irritation was possessed by 20 percent from both Amlori and Nigahi, 16.66 percent from Jayant, 13.33 percent from dudhichua and 16.66 percent from Khadi. It was also perceived that 13.33 percent each from Amlori and Nigahi, 10 percent from jayant, 16.66 percent from Dudhichua and 13.33 percent from Khadi were facing skin allergies as well as 6.66 percent respondents from Amlori, 10 percent from Nigahi, 6.66 percent from Jayant, 3.33 percent from Dudhichua and 10 percent from Khadi were having chest pain. The results obtained that 26.66 from

Amlori, 30 percent from Nigahi, 23.33 percent from Jayant, 26.66 percent from Dudhichua whereas 23.33 percent from Khadi were suffering from respiratory problems. Result also revealed that 20 percent from Amlori, 16.66 from Nigahi, 26.66 percent from Jayant, 16.66 percent from Dudhichua 20 percent from Khadi. The result obtained is supported by the research findings which clearly state that coal mining area are polluted which is harmful for society as well as surrounding environments because of many contamination in local surface water, ground and in soil due to coal mining. Similar results obtained by **Machey (2012)** that revealed the intensity and various diseases were very high in the selected villages in coal mining areas.

Table 2 Frequency and percentage distribution of respondents belonging to local area of Northern Coalfield Limited Singrauli (2017–18)

SI. No.	Diseases	Sampling sites				
		Amlori	Nigahi	Jayant	Dudhichua	Khadia
		%	%	%	%	%
1.	Headache	20.00	20.00	13.33	13.33	23.33
2.	Eye irritation	16.66	23.33	20.00	20.00	16.66
3.	Skin allergies	10.00	6.66	13.33	6.66	16.66
4.	Chest pain	10.00	6.66	6.66	10.00	3.33
5.	Respiratory problems	30.00	23.33	30.00	26.66	20.00
6.	Lung problems	13.33	20.00	16.66	23.33	20.00

%= Percentage

Table 2 highlighted the frequency and percentage distribution of respondents belonging to local area of Northern Coalfield Limited Singrauli regarding their health issues in 2017-2018. The table clearly showed that the severe level of health issues i.e. headache was possessed by 20 percent each from Amlori and Nigahi, 13.33

percent each from Jayant and Dudhichua and 23.33 percent from Khadi whereas eye-irritation was possessed by 16.66 percent from Amlori, 23.33 percent from Nigahi, 20 percent each from Jayant and Dudhichua and 16.66 percent from Khadi. It was also perceived that 10 percent from Amlori, 6.66 percent from Nigahi, 13.33 percent from Jayant, 6.66 percent from Dudhichua and 16.66 percent from Khadi were facing skin allergies as well as 10 percent respondents from Amlori, 6.66 percent each from Nigahi and Jayant, 10 percent from Dudhichua and 3.33 percent from Khadi were having chest pain. The results obtained that 30 from Amlori, 23.33 percent from Nigahi, 30 percent from Jayant, 26.66 percent from Dudhichua whereas 20 percent from Khadi were suffering from respiratory problems. Result also revealed that 13.33 percent from Amlori, 20 from Nigahi, 16.66 percent from Jayant, 23.33 percent from Dudhichua 20 percent from Khadi. Finding of the study also coincides with the study conducted by **Robert et al., (2002)** who concluded that human disease associated with coal mining results from inhalation of particulate matter during the mining process. It was found black lung disease among coal workers and local people.

CONCLUSION

It is concluded from the result that local people were suffering from many health related problems i.e. headache, eye irritation, skin allergies, chest pain, respiratory problems and lung problems in which most of the people were found respiratory and lung diseases. It is suggested that local people should wear mask, drink purified water and should plant more and more trees surrounding areas.

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