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The Effect of Salt on The Health of Workers

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Several international and national studies, as well as field investigations, have suggested that prolonged exposure to salt fields has numerous negative health effects. A cross-sectional study was conducted to assess work-related health problems among salt workers in Rajasthan, which revealed that the prevalence of ophthalmic symptoms was 60.7%, the prevalence of dermatological symptoms was 43.8%, and 52.1% of salt workers experienced headache, giddiness, breathlessness, and muscular and joint pains. The same study also found that traumatic ulcers, dermatitis, muscular and joint pains, headaches, and giddiness were other more common symptoms observed among the salt workers.

The majority of the salt workers suffered from ophthalmic problems. However, the prevalence of hypertension was 12.0%. The NIOH (National Institute of Occupational Health) conducted a six-case-control study on 2104 subjects, including 1549 salt workers working at different salt sites in the little Rann of Kutch and 555 control subjects from nearby villages, and found that the prevalence of skin and eye symptoms was significantly higher among salt workers. However, the mean systolic and diastolic blood pressure was comparable across categories. A significant increase in urinary sodium excretion and serum pH was observed in salt production workers.

Another house-to-house survey was conducted in Vedaranyam and Kodikarai villages in Chennai, where salt workers reside. Nearly 200 households participated in the survey. The investigation revealed that all the workers have low socioeconomic status. Malnutrition, anemia, and vitamin and iodine deficiencies were significantly high among the salt workers. Furthermore, they suffered from poor vision, glare, premature loss of vision, corneal growth, and night blindness. The majority of the salt workers had musculoskeletal disorders like low back pain, shoulder pain, and joint pain. Chronic dermatitis (hands and legs), hypertension, breathlessness, asthma, cough, and goitre were also reported among young girls and women involved in salt works.

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Effects of salt on socio-economic status

Aside from health concerns, occupational, work-environmental, and personal safety are jeopardized. Substance abuse, alcoholism, workplace violence, low wages, poor nutrition status, illiteracy, and domestic violence against women are among the major social issues raised by a few NGO sectors working for salt farm workers. Accessing and utilising health care services is also difficult for salt workers, particularly women workers, due to their remote location. A case study was conducted at Magarini District in Kenya on salt farming, where the majority of the population's main occupation is salt work. The purpose of the research was to understand environmental issues and socio-economic problems emanating from salt mining, thus involving six operational salt farming companies and data collection techniques that broadly engaged questionnaires. About 120 households and 12 relevant government institutions constituted the sample, and multistage cluster sampling and snowball sampling techniques were utilized. Investigation further involved face-to-face interviews for collecting data from relevant government institutions, NGOs, and salt farming company officials. A focus group discussion (FGD) was conducted with human rights interest groups in the salt farming sector in Magarini District. The study has highlighted several social and cultural problems associated with the salt works. The major social problems were poor standards of living, family conflicts, school dropouts for employment opportunities, human displacement, an increased rate of immorality, increased cases of insecurity, poor working conditions, alcoholism, prostitution, and child delinquency. Furthermore, 66% of the salt workers were considered to be living in absolute poverty as compared to the national average, which was 56%.

Pilot study report and analysis

A short pilot surveillance survey was conducted in March 2015 at Kumbharwada village in Bhavnagar district of Gujarat with the support of the CSM, the CSIR, and the Medical College of Bhavnagar. The survey revealed that the workers who work in the experimental salt mine live in the vicinity of the salt manufacturing unit. As a result, because their home

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settlement is built in the nearby working zone, they are at risk of double exposure both at work and at home. However, some workers who work in the salt production area live in the village, which is located 10 kilometres away from the zone. Such cases were exposed to their work environment for 10 hours per day in wink zone cases. Furthermore, some workers are immigrants with no permanent settlement. In addition, a walk-through survey of the work setting revealed that there are more female workers as compared to the male workers. All the workers are seasonal.

The majority of workers were laborers, while a few had 15 years of experience and were thus classified as semi-skilled. The majority of workers had no formal education and worked as con-laborers on an hourly basis. The summer season, which lasts from the end of March to mid-July before the monsoon, is when salt production peaks. Salt workers work in extreme heat and require strenuous manual labor. They work in various operational sections. Preparing salt beds, extracting salt, storing on platforms, stacking heaps, and loading into waggons or any waggon or motor Stage workers are involved in the initial staging. The workers formulate brine in salt pans where seawater cliffshinto reservoir is collected. Evaporation of brine depends on climatic conditions. Salt pans 5-6 at least 5-6 are kinvolvedk involve preparation in pans. They and their extremely harsh conditions, as well as the vast majority of barefooted people, Later stage mature brine is transferred to the main pans where salt is produced.

The pilot survey included 37 workers, both male and female. The vital signs of Bhavnagar College's college doctor were used to conduct a health examination. The pilot survey revealed that almost all workers had an abusive oral habit. The majority of the salt workers had musculoskeletal disorders (joint, knee, and shoulder pain). Ophthalmic issues such as blurred vision, refractory error, eye watering, and poor vision were common among the workers. General signs of anaemia were present among women workers. Furthermore, female workers also complained of abdominal pain and cramps, as well as recurrent urinary tract problems. Workers are unaware of occupational health illnesses, despite the fact that they are provided

with personal protective equipment (safety boots, goggles, and hand gloves), and they do not use any safety equipment while at work.

Conclusion

Salt workers are seasonal workers with a marginal source of income. There is a lack of social and health security for salt workers. They are exposed to hazardous work-environmental factors and work in extreme climatic conditions. Workers also suffer from different occupational health conditions, and due to a lack of education and awareness, they pay no attention to these occupationally hazardous conditions. There is a lack of motivation towards the use of personal protective equipment.

All the workers have abusive oral habits and poor personal hygiene. There are salt workers' settlements that lack basic amenities like portable drinking water, toilets, and waste management systems. The government and local non-governmental organisations should pay attention to the health and socioeconomic status of salt workers. They should be enrolling in various skill development programmes and exploring alternate modes of livelihood.

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Conflict of interest

The author declares no conflict of interest.

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