

Original Research Article

Common morbidities and felt needs of salt pan workers in a coastal area of Tamil Nadu, India

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ABSTRACT

Background: The occupational hazards faced by salt pan workers during their occupation are myriad, a fact compounded by the lack of basic amenities at their workplace and lack of awareness regarding usage of personal protection equipment.

Methods: This cross-sectional study was carried out among fifty-six salt pan workers in Marakkanam, Tamil Nadu to assess their common health problems and a qualitative component was added to assess their felt needs in work place and daily living. Data was collected using pre-designed data collection sheet for assessing the common morbidities. For the qualitative aspect of the study, in-depth interviews were conducted among twenty workers based on convenient sampling, using open ended questions. Data was collected after obtaining informed consent and steps were taken to ensure confidentiality at all stages.

Results: The most common health problem of the workers in present study area included dental caries (41.7%), skin conditions (38.1%) musculoskeletal problems (36.7%) and anemia (35.1%) being other significant health problems. The qualitative aspect of the study revealed that the felt needs were improvement of their working conditions and more social support from the Government and the employers. There was very little awareness among the workers regarding use of PPE and none of them used any form of PPE.

Conclusions: Salt pan workers had dental problems, dermatological problems and musculoskeletal problems as most common morbidities among them. Harsh working conditions, financial insecurity etc. are some of their work-related problems. Provision of housing facility and financial assistance during off- season by the government, basic amenities at the work place, paid leave in case of injuries, and insurance schemes for them by employer are their main felt needs. They also had no awareness regarding usage of personal protective equipment at the work place.

Keywords: Coastal Tamil Nadu, Common morbidity patterns, Felt needs, Salt workers

INTRODUCTION

India is one of the top salt producing countries in the world.¹ The growth of this industry post-independence has been exponential, with India emerging as a major player in the industry on a global level currently. On the domestic front, Gujarat, Rajasthan, Tamil Nadu, Maharashtra, Andhra Pradesh etc. are the top salt

producing states in the country.² Despite the fact that this industry is a major contributor to the country's economy, the workers involved in salt production continue to work in adverse conditions and live in poverty.

As salt panning is mostly an unorganized sector, workers are exploited, with the seasonal nature and lack of job security adding to their woes.

Objectives

This survey was conducted among salt pan workers and supervisors in a rural area of Marakkanam in Villupuram District in Tamil Nadu with the following objectives:

- To assess the common morbidities prevalent among the participants,
- To ascertain awareness regarding appropriate personal protective equipment (PPE) usage,
- To assess their felt needs regarding their working conditions and daily lives.

METHODS

The present study was conducted among salt pan workers involved in salt panning in a coastal hamlet in Marakkanam in Villupuram district in Tamil Nadu. This was a cross-sectional observational study to assess the morbidity pattern of the salt pan workers and it also had a qualitative component to assess the felt needs of the workers regarding their quality of life and working conditions. The study period was done during October 20 to 27, 2016 as part of training imparted to under-graduate students of our institution to assess occupational hazards. All the fifty-six workers present in the salt pans who consented were included for assessing the morbidity pattern whereas for the qualitative part which dealt with the felt needs of the workers, author included twenty workers and supervisors by convenient sampling.

Inclusion criteria

All workers above eighteen years of age who consented to be examined were included in the study.

Exclusion criteria

Workers who did not consent and those who were not able to be contacted even after two visits to the salt pan area during the study period were excluded from the study.

Data collection methods

The team was divided into 3 groups, each comprising of 6 students, with a post-graduate and faculty member supervising each group.

Data regarding common morbidities prevalent among the workers were collected using a pre-designed and pre-tested proforma. Socio-demographic details like their age, level of education, monthly income, anthropometric details like height and weight were also included in the proforma.

In-depth interviews were conducted among twenty workers to assess their felt needs regarding working conditions and daily living. In-depth interview guide was

used and open-ended questions were asked to the participants.

Statistical analysis

The quantitative data collected were entered in Microsoft excel and analyzed using SPSS version 20. Prevalence data is presented in the form of numbers, percentages and proportions in tables. Data collected during the in-depth interviews were organized under the main themes regarding

- Problems faced during their occupation,
- Felt needs of the workers on improving their quality of life and,
- Awareness of the workers regarding use of personal protective equipment.

Key notes were taken and probing was done wherever required and were analyzed by manual descriptive content analysis. Notes taken were transcribed and translated to English and major themes and subthemes were identified. The sub-themes under the main themes were as follows: adverse working conditions, financial insecurity, felt - needs regarding Governmental support to the workers and their families, felt needs regarding employee benefits to be given by the employer, health problems and awareness regarding use of PPE.

Ethical considerations

Informed consent was obtained from all study participants prior to the study and confidentiality was maintained during all stages of the study.

RESULTS

In the current study, 56 salt pan workers were included and interviewed. The socio-demographic details of the study participants are listed out in Table 1. Table 2 shows the morbidity pattern prevalent among the study participants at the time of our study. Some of the workers had more than one type of morbidity present, therefore the percentages depicted add up to more than one hundred percent.

Qualitative component

In-depth interviews were conducted among twenty workers and the major themes were categorized as, (1) Problems faced by the workers during their occupation, (2) Felt needs by the workers for improving their quality of life and (3) Awareness regarding PPE. Sub-themes which emerged were categorized as follows.

Problems faced while working as a salt-pan worker

- Adverse working conditions,
- Financial insecurity.

Felt needs by the workers for improving their quality of life

- Felt - needs regarding Governmental support to the workers and their families.
- Felt needs regarding employee benefits to be given by the employer.

Table 1: Socio demographic characteristics of the study participants (n=56).

Characteristics	Category	Number (%)
Gender	Male	40 (71.4%)
	Female	16 (28.5%)
Age (in years)	30- 35	4 (7.1%)
	35- 40	12 (21.4%)
	40- 45	17 (30.3%)
	45- 50	13 (23.2%)
	50- 55	7 (12.5%)
	55- 60	3 (5.4%)
Socio economic classification of the participants (Modified B J. Prasad) ³	Class V	7 (12.5%)
	Class IV	49 (87.5%)
	Class III	0 (0%)
	Class II	0 (0%)
	Class I	0 (0%)
Educational level of the participants	Illiterate	36 (64.2%)
	Primary school	16 (28.5%)
	Middle school	4 (7.1%)
	Lower secondary	0 (0%)
	Higher secondary	0 (0%)

Table 2: Morbidity patterns of the study participants (n=56).

Type of morbidity	Percentage
Dental caries	41.7%
Dermatological conditions	38.1%
Musculoskeletal problems	36.7%
Anemia	35.1%
Others	32.6%
Hypertension	23.3%
Ocular morbidities	20.1 %

Occupational hazards and use of personal protective equipment (PPE)

- Health problems
- Awareness regarding use of PPE

Given below are the results of the qualitative component of this study which have been compiled based on the in-depth interviews.

Problems faced by workers during their occupation

Adverse working conditions

Difficult nature of work

All of the workers interviewed expressed their dissatisfaction with the harsh working conditions. The work is physically draining, with workers typically starting work in the wee hours of the day prior to sunrise and work till noon when the heat becomes unbearable. They then resume work in the early evening till about six pm every day. A typical day involves at least six to eight hours of hard physical labor. The salt pans are prepared manually and the salt is raked once the water has evaporated and heaped and later loaded manually in bags for transport to factories for further processing. Thus, work in the salt pans is very labor intensive.

Lack of basic amenities at the work site

Many workers complained that there are no basic amenities on- site with no provision for safe drinking water, food, or sanitary facilities. One of them quoted “Please look around- there is no shelter for us to even sit for five minutes when the heat becomes intolerable. We also have no drinking water facilities or a place to sit and have food. There is not even a temporary toilet facility. It is very difficult for us, especially the women.” The workers were justified in this felt need as there were no basic facilities in the salt - pan which was a vast open area with the salt pans stretching as far as the eyes could see. The conditions under which the workers were working were very harsh and physically draining.

Financial insecurity

Lack of job security and seasonal nature of work affecting the workers’ lives

Many of the workers felt that their lives were miserable due to the poor wages they receive which was not commensurate with the efforts put in. “We are employed as daily wage workers by the contractor who takes the salt pans on lease. We get paid only if we come for work. There is no work during the rainy season and as it is, we don’t have savings, so we are forced to borrow money to survive. It is very difficult.” The workers are employed as casual laborers only and thus, lack of job security is stressful for them and this fact was highlighted by many. Also, salt panning is stopped during the rainy seasons, during which time the workers find themselves in financial crisis and are forced to take debts.

Poor financial returns from the work

“We work every day in such difficult conditions, but the wages are insufficient- we can eat only if we work every day, there is not enough for savings. It is very difficult to manage when we fall ill and are not able to work.” The women workers are paid around Rs.150-200 for every three hours of work and men are paid around Rs.400 for the same duration. The workers expressed dissatisfaction at these wages and felt that they were underpaid for the amount of work extracted.

Felt needs by the workers for improving their Quality of life

Felt - needs regarding Governmental support to the workers and their families

The salt workers felt that more Governmental schemes should be forthcoming to them, including housing and working facilities, economic support or alternate means of livelihood during the off-season, government pension schemes etc. One worker expressed his anguish saying, "The Government has built the Tsunami Quarters for the fishermen; we too can be given some quarters like that. We still live in very poor housing conditions."

Felt needs regarding employee benefits to be given by the employer

The workers felt that more should be done by the employer to improve the working conditions, including construction of a shelter, provision of drinking water and toilet facilities, better wages, and health insurance schemes as these were lacking currently at the salt pans where they work. "It will be good if there is at least a good thatched temporary shelter for us and drinking water facilities." "Toilet facilities will be very useful for us as we don't have privacy of any sort now to attend nature's call. We should also be given wages on par with other factory workers and like other workers get many benefits like health insurance, paid leave in case of injury etc." said one of the workers.

Occupational hazards and use of personal protective equipment (PPE)

Occupation adversely affecting health of workers

The workers were asked if they were aware of any health hazards that they faced while doing their work to which they said myalgia, skin problems like infections, cracked heels and sun burn were the most common problems they faced as salt workers.

Awareness regarding use of PPE

None of the workers when we visited the salt pans were found to be using any sort of PPE. We asked them what they were different types of PPE that could be used by them and none of them were aware of the same. When asked if they felt if PPE like boots and gloves could prevent skin problems, they were not sure and said it might aggravate the problems due to excessive sweating of the palms and feet if used.

DISCUSSION

The inhuman work conditions which salt workers across the country face on an everyday basis, high prevalence of health problems, the economic hardships faced by them etc. have been highlighted in many articles and reports

that have appeared in various print media in the past.⁴⁻⁸ The current study on salt workers in Marakkanam also brings to light the fact that these workers too face similar problems in their daily lives, similar to other salt workers in other parts of the nation. A study on work related health problems among the salt workers in Rajasthan by Sachdev R et al, found that ophthalmic problems was the most common disorder followed by dermatological problems.⁹ Similar findings were reported by Durairaj et al, in a study of health hazards of salt workers in coastal Tamil Nadu.¹⁰ Cherian J et al, in their study on salt pan workers in Marakkanam observed the most common morbidities were clinical pallor (44.4%) followed by ocular morbidities (42%) and caries teeth (41.7%).¹¹ These findings are almost similar to present study, where we found dental caries to be the most common morbidity, followed by dermatological conditions like ulcers, hyperkeratosis etc. and musculoskeletal disorders due to adverse ergonomic conditions to be the most common disorders. Thus, the prevalence of morbidities among salt pan workers is high, an issue which needs to be addressed by stake holders at every level.

Problems faced while working as a salt-pan worker

Adverse working conditions and financial insecurity are the main problems in the lives of the salt pan workers which they face in their everyday lives. The work is very labor- intensive and physically draining, with no provision for using machines in their day- to -day work, unlike agriculture which has undergone a revolution of sorts by use of machines like tractors, harvesting and threshing machines etc. The salt-pans too come under the purview of the Factories Act, 1948 and thus, the employers should provide basic amenities to the workers by law as outlined in the Act.¹² When we visited the salt-pans, we found an absolute dearth of basic amenities including sanitary facilities, drinking water, shelters etc, contrary to the provisions of the Factories Act , 1948.¹² There is also financial insecurity, as, most of the laborers are employed on a contractual basis only and get paid on a daily basis. Salt panning is also stopped during the rainy season of October- December, and consequently, workers find themselves out of work for a quarter of the year during which time, they are forced to seek alternate means of livelihood. Also, poor financial returns from the work means that most of the workers have no savings and in the event of any crisis like major illness or functions, they are forced to borrow money from the local money-lenders at exorbitant rates, a fact which push them deeper into financial crisis.

Felt needs by the workers for improving their quality of life

The salt-pan workers feel that more needs to be done for improving their quality of life from the side of both, the Government and the employers. The workers felt that more special schemes for improving their lot needs to be forthcoming from the Government, as, they feel that the

existing benefits were insufficient. They feel that they should be given housing and other benefits either monetary or assured employment schemes, especially to tide them over the periods of unemployment. They feel that the employers should do more to improve their working conditions like having a lunch-shed or toilets as, currently, none of these are available at the work -site.

Occupational hazards and use of personal protective equipment (PPE)

The workers, we found were totally unaware of the need for PPE at work place and they do not use any sort of PPE. They felt that using PPE like gloves and boots might aggravate their skin problems due to excess sweating. As per the Factory Act, the employers should provide the workers with a safe working environment and to minimize risks to the employees in the line of work, a fact which is definitely overlooked in the case of the salt pan workers.

Strengths and limitations

The present study conducted among the salt pan workers is unique in that it has qualitatively explored the felt needs of the workers and the problems faced by them during work while attempting to identify the common morbidities prevalent among the workers also simultaneously. This study highlights the hardship and felt needs of salt pan workers of a particular area only, and hence findings cannot be generalized.

CONCLUSION

Salt pan workers had dental problems, skin problems and musculoskeletal problems as common morbidities among them. Harsh working conditions, financial insecurity are some of their work related problems while they expect some benefits like provision of housing facility and financial assistance during off season by the government. Also, they expect the employers to provide basic amenities at the work place and paid leave in case of injuries and insurance schemes for them. They had no awareness regarding personal protective equipments.

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REFERENCES

1. Salt Industry In India. Saltcomindia.gov.in. Available at: http://saltcomindia.gov.in/industry_india.html?tp=Salt. Accessed 6 June 2018.
2. Salt Production. Pib.nic.in. 2018 Available at: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=103387>. Accessed 6 June 2018.
3. Vasudevan J, Mishra AK, Singh Z. An update on BG Prasad's socioeconomic scale: May 2016. Int J Res Med Sci. 2016 Sep;4(9):4183-6.
4. Madhurkar U. The wounds of salt. India Today. 2008. Available at: <http://indiatoday.intoday.in/story/The+wounds+of+salt/1/5452.html>. Accessed 6 June 2018.
5. Thiagarajan K. The Lives of the Salt Harvesters of Thoothukudi in a Warming World - The Wire, 2017. Available at: <https://thewire.in/169743/salt-pans-thoothukudi-dehydration-groundwater-climate-change/>. Accessed 6 June 2018.
6. The Hindu. Salt pan workers of the Rann of Kutch. 2013. Available at: <http://www.thehindu.com/todays-paper/tp-in-school/salt-pan-workers-of-the-rann-of-kutch/article4355337.ece>. Accessed 6 June 2018.
7. Ramnath RL. Investigation of Salt Workers in Tamil Nadu. Indianmba.com. 2010. Available at: http://www.indianmba.com/Faculty_Column/FC1259/fc1259.html. Accessed 6 June 2018.
8. Kalyanasundaram A. All that's white is salt. The New Indian Express. 2017. Available at: <http://www.newindianexpress.com/cities/chennai/2017/aug/02/all-thats-white-is-salt-1637383--1.html>. Accessed 6 June 2018.
9. Sachdev R, Mathur ML, Haldiya KR, Saiyed HN. Work-related health problems in salt workers of Rajasthan, India. Ind J Occup Env Med. 2006;10:62.
10. Durairaj D, Murugan S. A study on health hazard of salt workers in Tamil Nadu costal areas. Int J Pharmaceut Sci Rev Res. 2016;40(2):137-141.
11. Cherian J, Singh Z, Bazroy J, Purty A, Natesan M, Chavada V. Study of Morbidity Pattern Among Salt Workers in Marakkanam, Tamil Nadu, India. J Clin Diag Res. 2015;9(4).
12. The Factories Act, 1948. (1948). Government of India. Available at: <https://labour.gov.in/sites/default/files/TheFactoriesAct1948.pdf>. Accessed 13 February 2018.

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