

Research Article

Occupational health hazards and causative factors of male adult bonded labourers of South India: a mixed method pilot study

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ABSTRACT

Background: Global slavery index estimates 35.9 million people in slavery today. There are no published studies that explore the various health issues faced by bonded laborers, their health seeking behavior, their access to healthcare facilities and healthcare providers.

Methods: From January 2008 to March 2008, we developed a 61-item questionnaire that captures information on: socio-demographic characteristics, anthropometry, debt/bondage, work culture, socio-economic conditions and health status of the bonded labourers. The questionnaire was field tested and revised. Simultaneously a topic guide was developed for in-depth interviewing of selected participants. From April 2008 to July 2008, a total of 50 male adult bonded labourers were purposively sampled and recruited through the international non-governmental organization in Tiruvallur and Chengalpattu districts of Tamilnadu and Nagiri on the border of Tamil Nadu- Andhra Pradesh. Participants were from more than 35 rice mills and brick kilns of Tamil Nadu and Andhra-Pradesh. Twenty participants were selected for in-depth interviewing to expand on and explain the quantitative findings by listening to the narratives and lived experiences of these participants supplemented by five interviews from key informants who closely worked with the bonded laborers.

Results: They face numerous health hazards owing to their slavery. It is observed that they do not have acceptable living conditions with very low salary, poor sanitary conditions, and inadequate knowledge of healthy life styles and low accessibility to health care providers.

Conclusions: Structural and institutional policies are required to address the health issues of these bonded labourers. More studies are necessary to gain more insight on the health hazards faced by the bonded labourers of other parts of the country.

Keywords: Bonded laborers, Mixed methods, Occupational health hazards, Tamil Nadu

INTRODUCTION

Global slavery index estimates 35.9 million people in slavery today (global slavery).¹ A 26% of them is represented by children (international labour organisation).² The largest number of slavery is in India, estimated between 10.7 and 12.7 million (Kara).³ Forced labour and slavery is marked by physical and sexual assault with documented cases of being beaten, gang raped, locked in tiny rooms, starved and even killed. There are cases of victims escaping but being tracked

down, beaten and returned to the facility. Most of them do not even try to run away as the owners use fear and deception tactics to trap them more strongly than physical bondage.

There are no published studies that explore the various health issues faced by bonded labourers, their health seeking behaviour, their access to healthcare facilities and healthcare providers. There are no studies or research undertaken in India that specifically addresses the health issues of the male adult bonded labourers. This calls

attention towards the need for a formative research that specifically captures the physical and psychological health status, atmosphere of their working conditions, their effect on health and future implications in providing comprehensive healthcare to this hard-to-reach population.

We used a sequential mixed methods approach to understand their health status, socio-economic conditions and explored various reasons behind their current health status and the connection with their socio-economic conditions.

METHODS

From January 2008 to March 2008, we interacted with the representatives of the released bonded labourers, government officials and an international NGO working with them. We developed a 61-item questionnaire that captures information on: socio-demographic characteristics, anthropometry, debt/bondage, work culture, socio-economic conditions and health status. The questionnaire was field tested and revised. Simultaneously a topic guide was developed for in-depth interviewing of selected participants. From April 2008 to July 2008, a total of 50 male adult bonded labourers were purposively sampled and recruited through the international non-governmental organization in Tiruvallur and Chengalpattu districts of Tamilnadu and Nagiri on the border of Tamil Nadu- Andhra Pradesh. All these people were released by the joint effort of the NGOs, police and legal Professionals. Participants were from more than 35 rice mills and brick kilns of Tamil Nadu and Andhra-Pradesh. Informed consent was obtained from the participants. After the administration of the questionnaire, 20 participants were selected for in-depth interviewing to expand on and explain the quantitative findings by listening to the narratives and lived experiences of these participants supplemented by five interviews from Key informants who closely worked with the bonded labourers. A professional translator was employed in places where Telugu was spoken. Quantitative surveys were analysed using Epi Info™ and the in-depth interviews were transcribed as extended notes, translated and were initially explored using focused coding and constant comparative method.^{4,5} Few emergent codes and categories were identified from the text and added to the existing codes gained from observational studies. Axial coding was done to develop connections between categories derived from all data. Themes were identified by looking for similarities, differences and relationships between categories.⁶

RESULTS

Participant characteristics

Quantitative survey: Tiruvallur (n=17, 34%) and Chengalpattu (n=16, 32%) districts of Tamilnadu and Nagiri (n=17, 34%).

Qualitative interviews

Table 1: Socio-demographic characteristics.

Variable	Quantitative (N=50)	Qualitative (N=20)
Age		
<20	3 (6%)	Mean age 27.2 years
20-30	19 (38%)	
31-40	16 (32%)	
41-50	8 (16%)	
>50	4 (8%)	
Mother tongue		
Tamil	6 (12%)	12 (60%)
Telugu	44 (88%)	8 (40%)
Education		
Uneducated	41 (82%)	9 (45%)
Primary	6 (12%)	8 (40%)
Middle	3 (6%)	3 (15%)
Occupation		
Unskilled worker	50 (100%)	20 (100%)
Income in INR/ month		
0-1000	17 (34%)	Mean income INR 2600
1001-2000	18 (36%)	
2001-3000	3 (6%)	
>3000	12 (24%)	
Marital status		
Single	6 (12%)	3 (15%)
Married	44 (88%)	17 (85%)
Children		
Have children	43 (86%)	They did not allow our kids to go to school. They gave work to my kids too. (Bonded laborer, Nagiri)
Children employed with them	31 (70%)	Some of the kids also work with the parents to pay off the debts. They know no schooling, no education. (NGO Director, Chennai)
The nature of job	Cleaning, sweeping, arranging the rooms, rice mills, etc.	The children are denied their basic rights; it is pathetic that these people do not even know such rights exist for them. (Government official, Tamilnadu)

Tiruvallur (n=6, 36%) and Chengalpattu (n=7, 32%) districts of Tamilnadu and Nagiri (n=7, 32%). Key informants include: two directors from the international NGO, one government official, one aftercare manager and one field officer. The sociodemographic characteristics of the participants are summarized in Table 1.

Table 2: Socio-economic conditions.

Variable	Quantitative finding	Qualitative finding
Amount of money that he owed		
	Unknown= 9 (18%) <5000= 7 (14%) 5001-10000=20 (40%)	I don't know how much money I had to pay... My father was working here and they made me work after him. (Bonded laborer, Chengalpattu)
	10001-15000=12(24%) >15000=2 (4%)	I borrowed only 5000 rupees. They told me to work for few months... it's been 6 years... still they are saying that I have to pay interests.... (Bonded laborer, Nagiri)
Reason for Borrowing		
Day to day expenses	45 (90%)	My wife was in hospital... I went to him (rice mill owner) for money...he took my finger prints in some papers... and they told that I have agreed to work for them to repay... it's been 8 years... (Bonded laborer, Tiruvallur)
Special events (marriages, wife delivery, death, getting back pawned jewels.)	40 (80%)	One month I did not have enough money,.. one man took me to him (Brick kiln owner)... he gave me money on high interest... one month later.. They brought us as a family here.... They said that we have to work for him to repay... it has been 2 years... (Bonded laborer, Nagiri)
Number of years as bonded labor	<1= 3 (6%) 1-5= 29 (58%) >5= 18 (36%)	-
Wages as a bonded laborer	Daily=31 (62%) Monthly=9 (18%) Never=10 (20%)	-
Daily wages (n=31)	<100/day= 21 (5-100) 101-200=7 201-300=1	-
Torture/Beaten up		
Torture	22 (44%)	Once I fought with my manager... they took hot iron rod and burnt my thighs....(Bonded laborer, Tiruvallur)
Beaten up	20 (40%)	In one argument.... They (mill owners)... raped my wife and beat me up...(Bonded laborer, Chengalpattu) Two days I was not given food and was beaten for trying to run away from the mill...(Bonded laborer, Nagiri)
Reasons for Going out		
Personal reasons like marriage, death, etc	22 (44%)	They allow us sometimes only in case of emergency like falling sick, someone's death, etc.(Bonded laborer, Nagiri)
Getting the basic necessities for living like buying vegetables, flour, and etc.	45 (90%)	They used to allow us to buy basic things... like milk... vegetables...etc...but we were not allowed to go very far. (Bonded labourer, Chengalpattu)
Never allowed	5 (10%)	I was never allowed outside... I could not even go to nearby villages....(Bonded labourer, Tiruvallur)
Food habits		
1 meal/day	11 (22%)	They gave only one meal in morning before work... and one meal after work at night.... (Bonded laborer, Nagiri)
2 meals/day	35 (70%)	It had rice... it wont be cooked properly... we had found worms once...(Bonded laborer, Chengalpattu)
3 meals/day	4 (8%)	Some time they gave pulses... but that I very rare... rice is what we eat...but low quality only....(Bonded laborer, Tiruvallur)
Water from Closed sources	34 (68%)	The water was from the local pond nearby... we used to get it from the pond ourselves... that water only we used for everything....(Bonded laborer, Tiruvallur)
Water from open sources	16 (32%)	There was a large tank inside the mill.... We used the water for

Separate water for drinking and ablution purposes	11 (22%)	cooking.. Drinking... washing... everything...(Bonded laborer, Chengalpattu)
Working hours		They used to wake up in the morning... before the rooster crows.... Then we had to work all day... and only after sunset.. we stop working and eat and sleep...(Bonded laborer, Chengalpattu)
8-10 hours/day	1 (2%)	
>10 hours/day	49 (98%)	Even when I was sick once... they did not allow me to rest...(Bonded laborer, Tiruvallur)
Sleeping hours		We were always working.... They will not allow us to sleep... I was beaten once for taking a nap....” (Bonded laborer, Nagiri)
<8	40 (80%)	
8-10	8 (16%)	My mill owner told me that I have to work a lot if I have to repay the amount... he used to wake me up very early morning... even when we are tired... they scold us...(Bonded laborer, Chengalpattu)
>10	2 (4%)	
Major health problems reported	34 (68%)	We get hurt very often... sometimes due to heavy work... but sometimes because our supervisors beat us up... especially when we question them...(Bonded laborer, Tiruvallur)
Physical injury	16 (32%)	We all fall sick very often... we don't even go to a doctor... one of my friends died because he had TB... but did not get treated on time....(Bonded laborer, Chengalpattu)
Diseases		
Sanitary conditions	Good 1= 4 (8%) Acceptable 2=20 (40%)	We did not have any clean places... our toilets were close to our homes... sometimes the septic tanks will be very smelly...(Bonded labourer, Nagiri)
	Bad 3=2 (4%) Poor 4=6 (12%) Worse 5=18 (36%)	We had lot of mice and bugs... it used to be stinky... the mice bite all our things....(Bonded labourer, Tiruvallur)
Type of house	60% individual rooms 72% very small 60% 4-8 ppl in each room	We were 7 in our family... all of us stayed in that single small room.... (Bonded laborer, Chengalpattu) Each room had two to three families staying together... it was not at all private (Bonded laborer, Nagiri)
Ventilation		We had a thatched roof... it had no lighting... no window... nothing...(Bonded laborer, Tiruvallur)
No fan at all	48 (96%)	
No window at all	39 (78%)	We did not even have fans.... We used hand fans... but it was not at all enough (Bonded laborer, Chengalpattu)
Lighting	76% poor	We usually eat and sleep after sunset.... But even during day.... Light was very scarce...(Bonded laborer, Tiruvallur) There is very little light... We had only a kundu bulb (small bulb)....(Bonded laborer, Nagiri)
Social Recreation		We did not have any sort of recreation... we talk among ourselves... apart from that we had nothing...(Bonded laborer, Tiruvallur)
Never	28 (56%)	
At times	22 (44%)	We were allowed to watch TV which was there in a common hall...movies were never allowed....(Bonded laborer, Chengalpattu)
History of caging	8 (16%)	Once I fought with my supervisor... he put me in a cage... and no food was given for five days... then I begged them... they released me with warning....(Bonded laborer, Tiruvallur)
Number of days of being caged	14% > 2 weeks	-

The participants got bonded through various means. Most of them borrowing money for personal and family reasons. They were put in crowded rooms with poor ventilation and light. The food and sanitation is also not adequate from the perspective of the participants. Table 2 summarizes the socio economic conditions and illustrative quotes that expand on the quantitative findings.

Their health hazards largely depends on their working conditions, number of years as bonded labour, food and water, working hours, accommodation and their family size. They are totally deprived of the medical services. Sometimes they are forced to work even when they are ill. Only when the condition worsens, they allow them to go to hospital and that too in loss of pay. 92% of them are not at all aware of hypertension or diabetes mellitus. Table 3 summarizes the incidence of diseases or disorders of various systems.

Table 3: Incidence of ailments among the released bonded labourers.

System	N=50 (in %)
Height <150 cm	36 (n=18)
Weight <50 kg	70 (n=35)
BMI <19	32 (n=16)
Diabetes mellitus/ Hypertension	n=3, 6%
Skin, hair & nail	n=10, 20%
Visual problems	n=15, 30%
Respiratory problems	n=14, 28%
Mental health problems	n=1, 2%
Cardiovascular problems	n=9, 18%
Nervous system disorders	n=12, 24%
Gastrointestinal disorders	n=21, 42%
Sexually transmitted infections	n=2, 4%

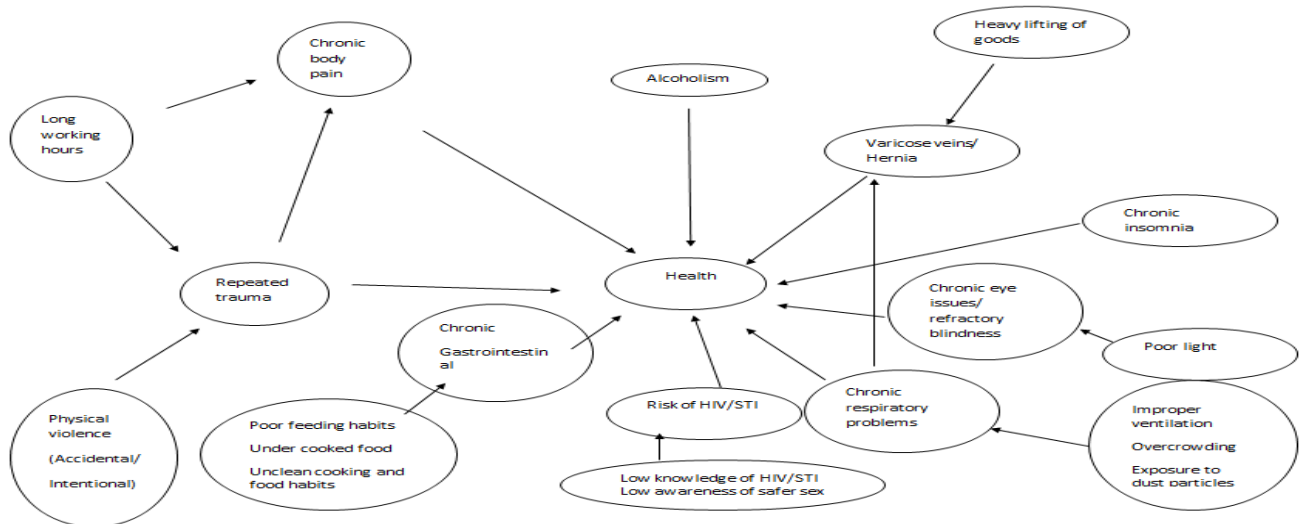


Figure 1: The various causative factors to their health.

DISCUSSION

Bonded labourers are a hard to reach population (Benach).⁷ They face numerous health hazards owing to their slavery (Muntaner).⁸ It is observed that they do not have acceptable living conditions with very low salary, poor sanitary conditions, and inadequate knowledge of healthy life styles and in access to health care providers (Benach).⁹ The health hazards depends upon the age, number of years as bonded labour, type of place of work (rice mill or brick kiln), knowledge about health services and access to health services. The pattern of age group distribution with high frequency between the ages 20 to 40 years is because the people who keep them bonded target the working population to get the maximum productivity from them. Moreover the people who take money from the owners tend to take it for family purposes like wife s pregnancy, children’s studies, etc.

The income pattern largely depends upon the work they are engaged in. most of them work as sack lifters; wood cutters and construction workers post release.

A holistic approach was taken to cover up all the systems. Figure 1 shows the various causative factors to their health. The underlying problem of these people is in the access to health services. Even if they have any nearby government hospital or public health center, most of them do not go there due to lack of facilities, unethical treatment, etc.

Though they do not report much about skin, hair and nail disturbances, almost all of them are invariably affected by one or the other type of skin and hair disturbances. The skin diseases usually consist of eruptions and papules which can be attributed to the pond water which these people use for washing their genitals and taking bath. Usually this is an endemic.

Comparing various variables, it is found that the relaxation of the terms of bondage is not at all related to their number of years as bonded labour. It largely depends on the nature of the owners.

The number of gastrointestinal problems is associated more with people who drink water from closed sources like tanks, drums, etc. It can be largely due to the unclean conditions of water storage.

The number of people who complained of worse ventilation had more incidences of respiratory diseases. This is augmented by overcrowding and absence of accessory ventilating systems like fans, etc.

The visual impairment is more with people who have been bonded for more years which recorded 8 cases for people who had worked for more than 5 years.

There is an indirect relationship between the family size and the health hazards. Having a large family meant that he has a heavier burden on him. So the debts would be more and the amount that can be repaid would be comparatively less than a person who has a smaller family. Secondly, whatever the size of the family may be, the size of the rooms was always the same. So a person who has a larger family would be having an overcrowded room, less food, poor ventilation, etc. Gastrointestinal problems have a higher incidence followed by the visual disturbances, respiratory complaints, nervous system problems and cardiovascular complaints. Most of them are not aware of Diabetes mellitus and blood pressure. All of them invariably have poor oral hygiene.

But their post release life has improved a lot. First of all, all of them have a great psychological sense of freedom. Secondly, the improved life style must have resolved the acute self-limiting illnesses. The health status of the women may be very poor compared to their counterparts which when documented would give a better about their occupation related health issues. Figure 1 shows the various causative factors to their health.

CONCLUSION

Structural and institutional policies are required to address the health issues of these bonded laborers. More studies are necessary to gain more insight on the health hazards faced by the bonded laborers of other parts of the country.

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