Report on Occupational Health and Safety (OHS): Coffee Plantation Workers

Literature Review

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1. COFFEE PLANTATIONS AND OHS

The UNGPs (GPs) are five years old and yet, the National Action Plans (NAP) has not Coffee is a major cash crop and an important source of export revenue for many developing countries. Brazil is the leading producer of coffee followed by Vietnam, with India being the 7th largest producer. About 125 million people worldwide depend on coffee for their livelihood, including 25 million smallholders (Fairtrade n.d).

Coffee farming involves a whole chain of processes, from soil preparation, sowing and transplanting, irrigation, weeding, pruning, pesticide application, picking and field processing. Field processing can be done in two ways: the wet method, and the more labour intensive dry method (ILO, 2004).

Coffee farms typically require a large number of workers during the harvest season, between the months of November and March. Hence, seasonal labour is usually the norm. Women and even children form a large proportion of the workforce in coffee plantations worldwide (ILO, 2004). To this day, India's Plantation Labour Act, 1951, permits the employment of people below 18 years of age provided they are certified as fit by a surgeon (MoL&E, 2014).

Workers in coffee plantations or farms face some occupational health and safety (OHS) issues. The most significant of these are injuries from cutting tools and machinery; hearing impairment from noisy machinery; musculoskeletal injuries; health problems from pesticide exposure; respiratory issues from coffee dust; high levels of sun exposure; snake and insect bites; long working hours and stress (ILO, 2004). Coffee plantations use agro-chemicals such as pesticides, insecticides, fungicides to control coffee rust and pests like coffee berry borer. Those widely used include chlorpyrifos, malathion, dimethoate, glyphosate, paraquat, carbendazim, chlorothalonil and triadimenol. While most of these pesticides are considered hazardous to a worker's health when used without proper personal protection equipment (Finnwatch, 2016), all are currently in use in India. Headaches, dizziness, sweating and tremors are some of the main symptoms of acute toxicity (Danwatch, 2016). Moreover, agro-chemicals such as glyphosate could possibly have long term implications on worker's' health due to its potential carcinogenicity (Cressey, 2015). Although not considered entirely foolproof, use of appropriate personal protection equipment (PPE) can minimise risks associated with pesticide spraying. But in developing countries like India, PPE usage is low because it can be expensive, may at times be unsuitable to wear in a tropical climate, and workers are not trained or have low levels of awareness (Finnwatch, 2016).

2. COFFEE PLANTATIONS AND OHS IN KARNATAKA

Indian-grown coffee constitutes 3.66% of the global production, and 70% of the produce is exported, mainly to Europe and Russia (Coffee Board of India, 2018). Coffee in India has generally been grown in the southern states of Karnataka, Kerala, Tamil Nadu and later expanded to Andhra Pradesh, Odisha and the North Eastern region. Both arabica and robusta varieties are grown. In Karnataka, coffee is mainly grown in the Western Ghats region of Kodagu, Chikmagalur, Hassan districts and to a lesser extent in Shimoga and Mysore districts. Karnataka is the leading producer of coffee in the country, accounting for 70.3% of the production, of which Kodagu region accounted for 54.05% in 2018. Small holdings of less than 10 hectares accounted for 74.6% of the area under coffee cultivation. In Karnataka, 97.20% of the holdings were smaller than 10 hectares. In the Kodagu region, this was 98.87%.

Workers in TATA Coffee

A total of 6, 59,865 workers were employed in the coffee plantation sector in the country, of whom 78% were employed in Karnataka alone and 2, 64,254 in Kodagu region (Coffee Board of India, 2018). Women constituted 61.27% of the workforce in Karnataka coffee plantation sector (MoL&E, 2013). There were permanent workers but the majority of them were temporary workers, who are largely employed during

the harvest season. In Kodagu, apart from local tribal as well as non-tribal workers, many workers employed during the harvest season are out-of-state migrant workers, predominantly from Assam (The Hindu, 2015). The current daily wages for plantation workers in Karnataka is approximately ₹314 (Coffee Board of India, 2018).

Creche at TATA Coffee Estate

Some of the regulations governing the safety, health and welfare of workers in the plantations' sector are the Plantation Labour Act, 1951; the Maternity Benefit Act, 1961; and, to a limited extent, the Workmen's Compensation Act, 1923. Chief among these is the Plantation Labour Act, 1951, which lays out, among others, provisions for health and welfare, hours of work, rest intervals, and annual leave with wages. It lists the facilities to be provided, like access to potable drinking water, adequate housing and sanitation, primary schools, hospitals with certified medical officers, crèches, canteens for every plantation and other basic amenities. In addition, it mandates that every plantation with over 300 workers appoint at least one welfare officer, and if more than 1200 workers are employed, additional officers must be appointed (MoL&E, 2014).

Specific to occupational health, the 2010 amendment to the Plantation Labour Act specifies safety provisions to protect workers who are handling pesticides, such as the provision of PPE, bathing and cloak room facilities, and periodic medical examination of these workers by the plantation management (MoL&E, 2010). However, the law is yet to address OHS in a comprehensive manner.

According to the Labour Ministry's report on the working of the Plantation Labour Act (MoL&E, 2014), despite constituting 33.11% of all the registered plantations under the Act, only 18.26% in Karnataka submitted their annual returns. The annual returns provide information on the number of workers employed, number of male and female workers, average number of hours worked per week, number of workers granted leave with wages, sickness and maternity benefits claimed, provision of medical

facilities, drinking water, sanitation facilities, educational facilities, recreational facilities, housing, canteens, and crèches. The report showed that Karnataka lagged behind both in implementation and enforcement of the Plantation Labour Act in comparison to other states.

3. STUDIES ON OHS IN COFFEE PLANTATIONS IN KARNATAKA

No major studies in the past have looked comprehensively into OHS in the coffee plantation sector in Karnataka.

Two studies, spaced over a decade, conducted by researchers from St. John's Medical College, Bangalore, looked into the records of a rural hospital that caters predominantly to plantation workers in Kodagu district. They found occupational accidents accounted for 42.08% in the year 2000 (Loli, Biju & Joseph, 2000) and 44.6% in the year 2013 (Naveen, Swaroop, Agarwal & Tirkey, 2013). In 2000, 60.8% of the occupational accidents were due to falls, while in 2013, it was lower at 50%. There was an increase in the incidence of occupational cut injuries from 13.6% to 24.2%. No occupational issues arising out of chemical exposure were reported.

Another study (Surwade, Jose & Surwade, 2014) found that among coffee plantation workers in Kodagu, 50.3% and 30.1% respondents used tobacco and alcohol respectively. However, the study did not highlight any link between alcohol and tobacco dependence and OHS.

A 2016 study conducted by Finnwatch in association with Cividep, chose to look at the working conditions and terms of employment in the TATA Coffee plantations in Kodagu (apart from plantations in Brazil and Honduras). Field researchers found it difficult to interview workers, but when they did, they found several violations of the Plantation Labour Act, specific to OHS. This included inadequate training regarding safety, and the lack of PPE. Workers complained that pesticide-spraying gave them headaches and caused dizziness. They alleged that the company did not carry out periodic medical examinations, and the workers were not aware of compensation for injuries. They did not get any rain gear to protect against seasonal rains. Temporary workers said they were not provided payment for sick leave. Toilets and drinking facilities were found to be inadequate. Workers were not aware of welfare officers in the plantation with whom they could raise such concerns.

Overall, it can be summarised that there are no major studies on OHS in coffee plantations in Karnataka/India. This is crucial to address OHS in comprehensive manner through better implementation of and stronger provisions in legislations such as the Plantation Labour Act, 1951. These neglected issues must be part of a broader strategy

to address overall labour concerns in the sector.

RESEARCH OBJECTIVE

This project is aimed at being an investigative study into the occupational health and safety (OHS) conditions in coffee plantations in Kodagu (Coorg), Karnataka. This study will document health and safety concerns of plantation workers by inquiring into the occupational hazards in the plantation sector, working conditions, access to protective equipment, and medical care.

METHODOLOGY

Study setting: Virajpet Taluk, Kodagu district

Study design: Qualitative study

SAMPLING TECHNIQUE

Purposive sampling: In-depth interviews were conducted with 17 coffee plantation workers, a trade union leader and a medical officer. The questionnaire also contained a set of closed questions to collect information such as the individual's demographic details, family details, income and housing.

DATA COLLECTION METHOD

The interviews were conducted at a convenient place for the respondents in and around Virajpet taluk, Kodagu. Respondents were assured about confidentiality of data. The duration of each in-depth interview ranged between 20 to 40 minutes, and were conducted in a single session. All in-depth interviews were either noted down, or voice-recorded and transcribed. This served as the primary data for drawing inferences and conclusions. All study subjects are anonymised.

DATA ANALYSIS

Data analysis of the qualitative interviews included the following steps:

1. Transcribing the interviews

2. Reading through the data

3. Coding the data

4. Generating codes and categories

5. Interpreting the codes

WORKER PROFILE

The 17 workers interviewed for this study were between the ages of 20 to 60 years. Three of the workers were in the age group of 20 to 29 years. Seven were between 30 to 39 years old. Four workers were between 40 to 49 years old. Three workers were in the age group of 50 to 59 years.

Fourteen of the workers interviewed were female and three workers were male. Other than two workers who had worked for 5 to 10 years, all workers had worked in the plantations for over 10 years.

Nine workers were permanent and 8 workers were temporary. Seven workers had never been to school, while the rest had dropped out somewhere between Class 5 to Class 10.

1. Working Environment

a. Working Conditions

From the interviews with workers, the following information was gathered about their working conditions. Only those workers employed in large coffee plantations were paid ₹314 per day, the daily minimum wage stipulated by the state government of Karnataka. Workers employed on a temporary basis in other smaller coffee plantation earned anywhere from ₹250-310 per day. Women were paid lower wages compared to men, although they were employed in the same categories of work as men, except for climbing trees.

All the workers said that they worked from 8am to 4.30pm. There was usually one coffee break in the morning at around 10am and most workers took an hour's break for lunch. Overtime was paid only in big plantations; in smaller plantations, overtime was rare and men were given local alcohol as compensation. Only permanent workers in big plantations were covered under Employee State Insurance (ESI) scheme and Provident Fund (PF). Women workers, only those permanent, were covered under the Maternity Benefits Act, 2017. Seasonal workers were only given temporary First Aid in case of accidents in the plantations, and the extent of medical coverage depended on the plantation owner.

The trade unionist interviewed for this study said that there were several violations of the labour laws, by the small and big plantations such as Tata Coffee and Bombay Burmah Trading Corporation (BBTC). The labour department's failure to enforce these legislations, and lack of state support to plantation owners have made it difficult for

workers to claim their rights. In some areas, tribal workers were still paid abysmally low wages of ₹90 per day.

b. Work Environment

According to the workers, the working environment was harsh both during the summer and rainy seasons. In a region that normally experiences heavy rainfall, it was especially difficult to work without adequate protection. The work was intensive and the pressure high during the harvest season, between the months of November and March.

Additionally, workers did not have access to toilets and cleaning drinking water in both large and small plantations. They had to carry their own drinking water and relieve themselves in the bushes.

Due to the union's intervention, the plantation owners have of late taken a handful of steps towards workers' welfare. Most of the workers said they had adequate rest intervals and did not face much harassment from supervisors or plantation owners.

2. Worker's Health in the Coffee sector

a. General Health Issues

According to the medical officer interviewed, most women employed in the plantations were anemic. "We prescribe medications for the workers, but they do not use them. When women come to us complaining of fatigue and weakness, we prescribe a haemoglobin test and when the levels are low, we ask them to take iron supplements, which they do not. Due to irregular timings of meal consumption they face gastritis or acidity issues, which lower iron absorption and leads to anemia. The workers can take simple steps like consuming nutritious food and reducing the consumption of meat." Workers normally suffered from viral infections and cough during the rainy season.

However, the trade unionist pointed out that the workers consumed less nutritious food because they were paid very low wages. Sometimes, employers gave the men local alcohol to compensate for their wages. The unionist believed that this was also why most workers were of poor health. Besides, traditional beliefs sometimes prevented Adivasi workers from consulting doctors and use alcohol instead to ease any pain.

Alcohol consumption is both a matter of poverty, culture and habit in the region, and alcoholism among men is quiet common. The medical officer said that sensitisation camps by the National Rural Health Mission (NRHM) programme could have mitigated the problem, but these programmes does not seem to reach these areas. It is also a

common practice among women workers to chew tobacco.

According to the trade unionist, although it was necessary to do mandatory health check-ups periodically, this was seldom done or reports falsified. The plantation management officials often bribed the doctors to paper over the actual health problems of the workers, and they often simply prescribed pain killers to suppress any symptoms of occupation-related ill-health. Approaching the labour department has not changed the scenario.

b. Occupational Health Issues

The most common occupational health complaints from workers were ergonomical. Workers attributed these complaints to their old age or to lifting heavy loads. Most workers also pointed out that their work involved them having to stand all day, for nearly 8 hours. The most general complaint was body pain, but a few workers complained more specifically of back pain.

Major accidents were not common, but minor accidents occured on a regular basis. This was particularly so during the rainy season when slips and falls were the most likely cause for an accident, besides the cuts and bruises reported by most workers. A few workers reported injuries due to falls from trees, though they admitted this was not common.

The trade unionist reported that claiming compensation from small plantation owners was not easy and involved a long arduous process. Often, the only way to receive any compensation due for occupational health problems, is for the workers' unions to file legal complaints against the management.

The most common complaint among workers spraying chemicals, was a constant headache and dizziness. During our field interviews, we found that the chemicals generally used in a small coffee plantation included potash, polypropylene polymer, requal gold (nutrient spray), blossome (plant growth promoter, triacontanol), anucin, pracid (acetamiprid), tricyclazole (systemic fungicide), sprint (systemic fungicide), regna (spray nutrient) and Bharat lime. A combination of this can cause constant headaches. Less commonly mentioned were body rashes and stomach ache, usually attributed to accidental ingestion of these chemicals. The trade unionist also reported the use of the banned chemical endosulfan under a different brand name in many plantations. He also claimed that workers suffered from reproductive health issues and respiratory issues because of its usage. However, we could not independently verify this.

Leech bites were common during the rainy season, but the medical officer said that snake bites were rarely reported. Fungal infection was also common.

Worker in private estate

c. Women's Health

Not many women workers interviewed were open about their health problems. A few mentioned irregular periods. As mentioned earlier, most of them were anemic. According to the medical officer, white discharge and vaginal infections were common amongst women workers. Vaginal infections occurred due to low water consumption and lack of access to toilets in the plantations. This could be remedied in part by eating nutritious food and drinking plenty of water.

According to the medical officer, infant mortality rate (IMR) was low among local women workers. However, both IMR and Maternal Mortality Rate (MMR) were high among migrant women workers. The officer attributed this to a lack of awareness, and also the cultural barriers in local health workers reaching out to this migrant community.

Provisions from the Maternity Benefits Act were only made available to permanent workers in big plantations. But the trade unionist reported that often, women were not aware of these provisions and plantation management regularly denied them these benefits. The union has had to send several legal notices to managements in this regard.

None of the women workers interviewed reported sexual harassment in the plantations.

3. Safety Measures

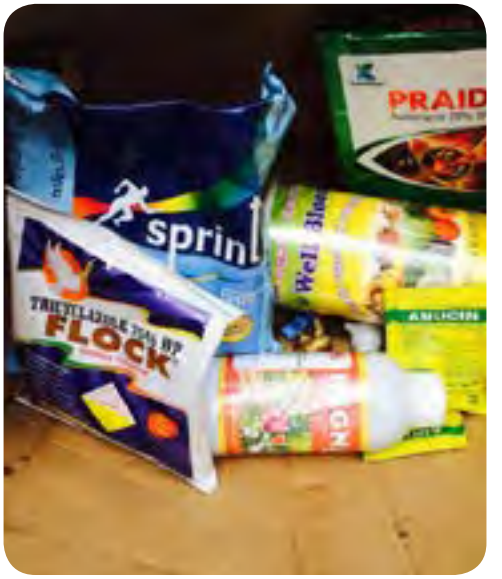
a. Safety Precautions at Workplace

Safety provisions were extremely rudimentary, most often resulting in workers not using them. They quoted discomfort in usage and climatic conditions as reasons. Many workers reported that they had to themselves purchase personal protection equipment such as gumboots. Even in large plantations where PPE was provided, the quality was considered low.

A plantation worker mixes pesticides

Gloves and masks

Liquid pesticides before spraying



Various pesticides used on site.

b. Chemical Handling

Many of the workers interviewed did not know much about the chemicals they were handling. None of them were trained in handling the chemicals and no one knew about the health risks. Safety provisions such PPE while handling the chemicals were minimal. Most often they were provided with gloves, mask and a hat. The PPE provided

were not effective barriers, due to their poor quality and general lack of awareness on the importance of their usage.

4. Grievances

When they had grievances, the workers said they mainly approached their immediate in-charge or his supervisor. Large plantations seemed to have a women officer appointed for dealing with cases of sexual harassment. Workers in big plantations knew of unions, and although few were members, they were aware that they could approach the union for addressing some grievances. However, they considered the process of resolution dauntingly slow. Workers in small plantations, on the other hand, lacked any avenue to air their grievances and most were not members of any unions.

4. DISCUSSION

From the interviews, it was clear that both small and large coffee plantations in Kodagu district regularly violated several provisions of the Plantation Labour Act, 1951. A majority of the workers interviewed did not have access to facilities such as potable drinking water, adequate housing and sanitation, primary schools, hospitals with certified medical officers, crèches, canteens for every plantation and other basic amenities. Some of these provisions were only partially met in large plantations.

Major physical hazards faced by workers are heat, cold and heavy rain without protection during the summer and monsoon season. Although there are no comparable studies available amongst coffee plantation workers in India, physical hazards have been documented amongst tea garden workers who face similar working conditions (Borgohain, 2013).

Mechanical hazards faced by workers included cuts, injuries, sprains and body pain. Occupational accidents mostly included superficial injuries like cuts and sprains. Major accidents such as falls from trees were limited, both according to workers and a medical officer. This is similar to findings from other studies that found cuts, sprain, injuries and chronic body pain as the major physical hazards faced by plantation workers (Borgohain, 2013; Naveen, Swaroop, Agarwal & Tirkey, 2013).

Most of the workers complained of constant headache, dizziness and a few of them complained of allergic reactions and stomach ache due to chemicals. No study in India has looked into chemical hazards in coffee plantations in India. International studies have attributed some of these health effects to acute toxicity caused by the use of pesticides and fungicides (Danwatch, 2016). Among the chemicals being used, tricyclazole is considered moderately toxic by inhalation or ingestion, and is an eye irritant. It is not approved for use in the European Union (Tricyclazole n.d.). Acetamiprid

is known to be a skin irritant and considered toxic in high doses (Acetamiprid n.d.). For sprint fungicide brand (mancozeb 50% + carbendazim 25%), no human health risk data was found. But mancozeb is known to affect reproductive health in women and has developmental effects on the foetus. It is also considered a possible thyroid toxicant and probable human carcinogen (Mancozeb n.d.). Carbendazim is also known to have developmental effects on the foetus, is a possible liver toxicant, and is considered a possible human carcinogen by the US Environmental Protection Agency. It is not approved for use in the European Union either (Carbendazim n.d.).

As reported by the earlier Finnwatch study (2016), workers were either denied personal protection equipment (as was the case in smaller plantations) or when given, were of very poor quality (as was the case in large plantations). Workers were neither instructed in the safe handling of chemicals nor were they told about the health risks. Most of the workers were not aware of the chemicals being used.

5. CONCLUSION

The results of this study reveal that musculoskeletal issues, health problems from chemical exposure, physical hazards from weather conditions, and minor cuts and accidental injuries, were the main occupational health problems identified by workers. However, lack of existing data and knowledge of the chemicals used made it hard to assess the long-term health implications arising from chemical exposure.

Owners of both large and small plantations did not see the health and safety of their workers as a priority.

The labour rights of workers and occupational health hazards are neglected both by the labour department or the government. Only workers in large plantations were unionised enough to bargain for better working conditions or accident compensation. Migrant workers, especially women, remain further marginalised due to the seasonal nature of their work and socio-cultural barriers.

6. RECOMMENDATIONS

- Periodic monitoring and reporting of the occupational health issues faced by plantation sector workers by the concerned authorities, i.e. the labour and health departments.

- The Ministry of Labour and Employment (MoL&E) should restart publishing its annual 'Report on the Working of the Plantations Labour Act, 1951', which was stopped in the year 2014.

- Evaluation of the chemicals being used in the coffee plantation sector in order to determine the health risks to workers. There is a need for longitudinal studies to determine effects due to long term exposure.

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