

Situational Analysis of Occupational Health Issues of Restaurant and Dhaba Workers

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Abstract

The wide-scale urbanization has affected every aspect of life. The dietary habits and pattern has also changed. To meet the ever-increasing demand for new cuisines, the catering industry in India is becoming more prominent day by day. In India, many restaurants are usually operated individually particularly the road side dhabas. The present study was conducted with the aim of mapping the hazards posed by dhabas workers, to observe the current workplace condition of roadside small sized dhaba and to understand the occupational health and safety provisions for these workers. To map the health hazards to these workers detailed literature survey was done. This was followed by walk through survey of dhabas to directly observe the health and safety issues at workplace and lastly communication with owners and workers was carried out regarding occupational health and safety provisions.

The first strategy revealed that these workers are at risk of developing morbid conditions like respiratory, dermatological, musculoskeletal, infections and injuries. The walk through survey suggested that the workers are mainly exposed to hazards like heat produced by stoves and tandoor, road side dust and smoke through vehicles plying on highways and poor illumination at the workplace.

Questionnaire survey of 50 subjects suggested that only 14% considered that their occupation poses health hazards while only 16% mentioned that they have provision for health care at their workplace. Majority (70%) of the workers were resorting to traditional methods in case of illness while only 30% said that they use a piece of cloth to prevent inhalation of smoke near stoves. Thus to conclude this study suggests that the dhaba workers are at risk of several occupational hazards which is further increased by the poor working conditions and lack of awareness about the protective measures.

Keywords: Restaurant; Dhaba; Infections

Introduction

Wide-scale urbanization has affected every aspect of life. The dietary habits and patterns have also changed. Dining in restaurants on weekends and other holidays, with family members and friends, has become a very popular concept in urban India. To meet the ever-increasing demand for new cuisines, the catering industry in India is becoming more prominent day by day.

In the current times, restaurants have taken over the task for social gatherings, offering novelty and convenience at the same time. There are a total of 1.5 million eating outlets in India and the number is expected to grow very rapidly in the near future [1]. The growth of the tourism industry has also been a positive factor behind the growth of restaurants in India. If this impetus of tourists visiting India continues to be, more restaurants are expected to mushroom across the country, even in the small towns [1]. Such a large number of restaurants employ a considerable proportion of workforce.

Restaurants constitute a large diversified labour intensive service industry made up predominantly of small enterprises. In India, restaurants are usually operated individually particularly the roadside dhabas. The majorities of the jobs are unskilled and provide low or minimal wages. Consequently they attract only workers with

minimum education and experience. Though the workers of big restaurants are covered under Employees State Insurance Scheme for the health and welfare activities, the small restaurants and dhabas particularly those located on highways are not covered and thereby the workers are devoid of the facilities for their health and welfare.

The health hazards vary according to the work place of the restaurant. If these workers do not follow proper hygienic measures they also pose hazard to the customers by serving as a reservoir of infection. Thus the present study was conducted with the aim of mapping the health hazards to the catering workers, to observe the current workplace condition of roadside small sized dhaba and to understand the occupational health provisions and need for these workers.

Study Methodology

The search strategy was a three pronged approach. To map the health hazards posed by these workers detailed literature survey was done. This was followed by walk through survey of dhabas to directly observe the health and safety issues at workplace and lastly communication with owners and workers regarding occupational health and safety needs and provisions.

For the first prong the internet search was conducted using the Google and PubMed search engines. A set of key words encompassing

various domains related to restaurant and dhaba workers was identified. The key words included dhaba workers, restaurant workers, cooking oil, hospitality workers, cooks and chefs. This was followed by a detailed literature review in both indexed and non-indexed journals in the field of occupational health of last two decades.

The second strategy comprised of walk through surveys of few dhabas situated on the highways and the restaurants in the Ahmedabad city jurisdiction. During the survey the presence of various workplace factors were documented on a predesigned checklist. All the processes such as cooking, serving and housekeeping were observed.

The third strategy included communication with the workers and owners. To understand the provision of health care and more specifically occupational health services to the workers a small sample of 50 workers were interviewed according to predesigned performa during the walk through survey itself.

Results

The first strategy revealed that there are no studies carried out on occupational health problems of dhaba workers. Thus to map the occupational health hazards among these workers, analogous studies on catering or restaurant workers were included. This depicted that by virtue of their workplace exposure they are at risk of developing morbid conditions like respiratory, dermatological, musculoskeletal, cancer, infections and injuries.

The result of the walk through survey is shown in Table 1.

Parameter	Status
Physical Environment	
Exposure to Heat	Stoves/Tandoors were the important sources
Illumination	Poor illumination with 2-3 bulbs of 40-60 W
Exposure to Dust	Road side dust exposure present
Exposure to Extreme weather	Roof is usually made up of tin or asbestos sheet and thus do not provide enough protection against extreme whether
Chemical Hazards	
Name of the chemical	Kerosene oil, cooking oil fumes
MSDS	Not available
Premises	
Housekeeping	Though inside housekeeping was average the outside premises were unhealthy and unhygienic
Waste disposal	Few dustbins were there but that too open providing opportunity for breeding of insects
Roof	Tin or asbestos sheets
Floor	Cemented but had cracks and crevices
Fire Prevention	Absent in most of the places

Ergonomics	
Lifting	Frequent lifting of bags of grains, vegetables, etc. measuring up to 50-60 kilograms
Hazardous Postures	Long term standing
Working surfaces	Not appropriate.
Welfare Facilities	
Toilets	Open air
Drinking water	Mostly through well water and bore-wells
Work Organisation/Health Promotion	
Personal Protective equipment	None. Workers using their handkerchief as mask in few instances
Work/Rest Cycles	Dependent on the inflow of customers
Training	None has received any training on Occupational health and safety
First Aid	Expect at two places not present in other dhabas

Table 1: The observations made on walk through survey for presence of hazards in dhaba.

It can be observed from the table that the workers are mainly exposed to physical and chemical factors at their workplace. The main physical factors included heat produced by stoves and tandoor, road side dust and smoke through vehicles plying on highways and poor illumination at the workplace.

The response of the owners and workers regarding health care provisions are depicted in Table 2.

Questions	Response (%)
Occupation poses health hazards	7(14%)
Have any provision for health services at workplace	8(16%)
What you do in case to suffer from any health problem	13(26%)
Visit private practitioner	35 (70%)
Traditional treatment	2 (4%)
Do not know	
Personal protective equipments provided	0
Use any measure to protect against hazards	15(30%)
Provision of first aid at workplace	2(4%)
Trained person in first aid at workplace	1(4%)

Table 2: Response to basic health and safety facilities.

It can be observed that only 14% considered that their work poses occupational health hazards while only 16% mentioned that they have provision for health care at their workplace. In fact these 16% were from the two dhabas having first aid box at their workplace. They might have mistaken first aid facility for provision of health care facility. Majority (70%) of the workers were resorting to traditional

methods in case of illness while only 30% said that they use a piece of cloth to prevent inhalation of smoke near stoves.

Discussion

The literature search suggested the workers are at risk of developing morbid conditions like respiratory, dermatological, musculoskeletal disorders, infections and injuries. Workers working in the kitchen are exposed to fumes from the cooking fuels and also from the cooked food. In dhabas, which are usually small sized, many time the fuel used for cooking is coal or wood. These liberate many toxic substances, which are known to cause several health manifestations particularly the respiratory health effects. In addition to these the kitchen in these dhabas are poorly ventilated. Analogous studies have reported significant increases in respiratory symptoms and decreased pulmonary function in restaurant and workers [2,3].

Most of the activities carried out in restaurant are manual in nature and thus expose the workers to variety of factors like fire, heat, cold and food ingredients having widespread chemical composition. Skin is the organ of maximum insult suffering from burns, scalds and contact and allergic dermatitis. Wet work or frequent hand washing is a significant factor in the development of irritant contact dermatitis. A study reported 19% prevalence of occupational dermatitis or burns in 335 workers studied [4].

WHO report [5] has also reported that a substantial proportion of occupational burns occur among restaurant workers-often affecting adolescents working in fast-food establishments. Other dermatoses reported are work-related calluses, paronychia, heat rash and allergic contact urticaria to prawn and lobster [4]. Though occupational allergic contact dermatitis from spices is relatively rare, but needs to be taken into consideration in patients who have hand dermatitis, and work with spices and foods [6]. Restaurant-related major burns are a frequent occurrence, particularly scald injuries [7].

The restaurant workers working in the kitchen are exposed to smoke from multiple sources. The second hand smoke exposes these workers to the risk of premature death. In a study it was reported that levels of environmental tobacco smoke in restaurants were approximately 1.6 to 2.0 times higher than in office workplaces of other businesses and 1.5 times higher than in residences with at least one smoker [8]. In another study it was found that 59% of 435 bar staff, waiters, and bar and eating-place managers and owners in Wellington during the 1999-2000 summer were exposed to second hand smoke. More than half of those exposed to workplace smoke reported irritation from second hand smoke to their throat or lungs [9].

COFs are complex mixtures that contain a large number of polycyclic aromatic hydrocarbons (PAHs), aldehydes, heterocyclic amines (HCAs), fat aerosols and particulate matters (PM), all of which contain human carcinogenic and mutagenic substances [10]. These are formed and released into the environment when food is cooked at high temperature. So, the workers are also exposed to the emissions from high temperature frying that have been classified as potential group 2A carcinogens for humans by the International Agency for Research on Cancer (IARC) [11]. Also in vitro studies [12] have indicated that a higher risk of lung cancer may be associated with exposure to COFs. Further exposure to COFs led to increased oxidative damage in kitchen workers [13].

The restaurant workers have to work for long hours in standing postures. In addition the smaller restaurants or eateries have small

kitchen fully packed with raw material where the cooks have to work in awkward posture with exposure to hot workplace environment. Such working postures may result in work related musculoskeletal disorders specifically aches and pains, soreness, or numbness like joint pains [14] and carpal tunnel syndrome [15]. Further frequent heavy lifting may also result in sprains and strains. In a recent Indian study among highway restaurant workers, musculo-skeletal symptoms such as low back pain, fatigue, bodyache and pain in limbs were present in 18 (14.2%) of the workers [16].

Several studies have also highlighted the presence of different microbiological organisms in restaurant workers or food handlers. The organisms commonly studied in restaurant workers include hepatitis A [17], *Staphylococcus aureus* [18,19], *Escherichia coli*, *Klebsiella* sp., and coliform bacteria [19]. The principal reason for such high prevalence has been attributed to the poor level of personal hygiene in these workers [17]. This is important as such organisms not only affect the health of the workers but also act a reservoir for the spread of infections to the customers. Studies in other part of world also reported a higher prevalence of infectious and parasitic diseases [18,20].

The common causes of accidents are slippery floor due to spillage, cut and burn in kitchen area and due to awkward postures for prolonged periods. In a Danish study, among women restaurant workers a significantly elevated risk was found for injuries in the lower extremities, injuries in the upper extremities and head injuries, and among men restaurant workers a high risk was found for head injuries [21]. Similarly another study revealed a higher hospitalization rate due to injuries by female restaurant workers [22]. Secondly, in the middle and small sized restaurants the housekeeping is usually very substandard. This makes the floor slippery, damp and greasy due to spillage of water, oil and foodstuffs. Thus there is always susceptibility for slips falls and injuries. In one prospective study the overall rate was 0.44 slips per 40 work hours. The highest numbers of slips were reported in the sink and fryer areas [23].

Other workplace risk factors specific to restaurant industry contributing to the incidence of injuries include hot equipment and substances, sharp objects, exposure to cleaning solutions, heavy lifting, and awkward positions. Additionally, unsafe work practices by co-workers have been associated with fatal injuries of young workers.

The walk through survey of dhabas also revealed that due to the poor working conditions the workers of highway side dhabas are exposed to almost all the hazards reported for the restaurant workers in literature. In most of the dhabas, it was found that the kitchen place was open thereby exposing even the customers to the hazards. The surroundings of these eating places was not clean and are breeding site of several arthropods thereby acting as a source of communicable diseases. Except for one or two places, the safety measures such as provision of first aid box and fire extinguishers were completely missing in these highway dhabas.

Thus to conclude, this study suggests that the dhaba workers are exposed to several occupational hazards. The poor working conditions and lack of awareness about the protective measures further increases their risk. There is a need to have concerted efforts such as increasing awareness about preventable nature of hazards and protective measures available, inclusion in any social security scheme to provide health and welfare facilities and provision for regular medical surveillance to early detect the morbid conditions.

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