

Hygiene practices and food safety knowledge among street food vendors in Kashmir.



Home Science

KEYWORDS :

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ABSTRACT

Harm caused by foodborne illnesses underscore the global threats posed by unsafe foods. World Health Day celebrated on 7 April 2015, with WHO highlighted the challenges and opportunities associated with food safety under the slogan "From farm to plate, make food safe." Street foods have become an important part of changing dietary pattern. People consume street foods without paying attention on hygiene and sanitation. Vendors of street food constitute a major source of health risk, especially through oro-faecal transmission of pathogens, and vendor related risk is particularly high in poor resource community. For this reason the study was conducted to document the hygiene practices and food safety knowledge among street food vendors in Kashmir. Pretested semi structured questionnaires were used to interview food handlers. Food vendors were randomly selected. Various parameters were assessed including personal hygiene, acquisition of cooking skills, handling of food, food contamination knowledge, location, utensils used, care of equipment and other practices were recorded through an observation. The SPSS program version 11 and Microsoft excel were used for all analyses. The study revealed that majority of street food vendors were men (86.6%) who fell into the average age group of 41-50 years. Around (56.1 %) had not received any education indicating majority of them were illiterate, (92.3%) street vendors admitted that they washed food before cooking. It was marked that 80% of the vendors used same surface for cooking the food more than twice. Only (19.04%) vendors used aprons and cent percent served food with bare hands. The study found that 73.3% of the vendors blew air into the packing back. Data obtained from the street food vendors showed that many wrong practices (intentional or unintentional) followed by them which can pose a serious health risk to the consumers. The study concluded that street food vendors in Kashmir did not had correct knowledge of handling the food necessitating the importance of organising training workshops for them.

Introduction:

Unsafe food is linked to the deaths of an estimated 2 million people annually including many children. Food containing harmful bacteria, viruses, parasites or chemical substances is responsible for more than 200 diseases, ranging from diarrhoea to cancers.

Food safety is an area of public health action to protect consumers from the risks of food poisoning and foodborne diseases, acute or chronic. Unsafe food can lead to a range of health problems: diarrhoeal disease, viral disease, reproductive and developmental problems, cancers. Keeping the relevance of food safety in mind WHO has made "FOOD SAFETY" as theme of world health day 2015, a theme of high relevance to all people on the planet, and multiple stakeholders, including government, civil society, the private sector, and intergovernmental agencies (WHO; 2015).

Street foods are sold by hawkers on the street from pushcarts or baskets or balance pole, or from shops having fewer than four permanent walls. (FDA; 2007). The other public places include schools, markets and motor parks (Muleta and Ashnefi 2001).

Street food vending has become an important public health issue and a great concern to everybody this is due to widespread food borne diseases, due to mushrooming of wayside food vendors who lack an adequate understanding of the basic food safety issues (Sharmila, R, 2011)

Street vended food types greatly differ between countries and cultures (Muinde, A. & M kuria, E; 2005). A total of 2.5 billion people all over the world eat street foods every day (FAO, 2010).

Evidently street food have shown epidemiological links with ill-

ness (El-sherbeeney, 2005). certain street vended foods can pose significant risk to consumer due to microbiological contamination.

The risk is dependent primarily on the type of food, the method of preparation, and the manner in which it is held before consumption (WHO, 1996).

Safe food hygiene can be difficult to practice at street level where resources are scarce and surroundings are of low environmental and sanitary standards and there is disregard of GMPs and GHPs. Food handlers have a prime role to play in food businesses, and that is no guarantee that meals served are hygienic for consumption. Conscious or inadvertent contamination of such food places consumers at risk of suffering from food borne illnesses. (G. Amponsah et al 2011). There is a noticeable increase of food vendors in rural and

Urban areas of Kashmir also. Kashmir is famous for its non-veg cuisines and most of these preparations are also sold in the market as vended foods. (Y. Hafeez). and other vegetarian street foods are also relished very popularly. Very little is known about the health and hygiene practices of street food vendors in Kashmir.

Keeping in view the above statement, the present study was undertaken to highlight and throw discussions on the hygiene practices and food safety knowledge among street food vendors in Kashmir.

Material and methods:

The study involved a field survey to extract answers to questionnaire concerning the current status of food hygiene and sanitation practiced by street food vendors in Kashmir. Pretested semi structured questionnaires were used to interview food handlers

in the sampled food businesses and observation method to evaluate the food hygiene and sanitation practiced by them.

A sample of 105 food vendors were randomly selected in the areas of Hazratbal, Lal chowk, Natipora, Chanapora, Nishat ,Beerwah, Magaam, and Narbal of Kashmir operating near bus yards ,offices, hospitals ,shrines. Various parameters were assessed including personal hygiene, acquisition of cooking skills, handling of food ,food contamination knowledge, location, utensils used, care of equipment and other practices were recorded through an observation .The SPSS program version 11 and Microsoft excel were used for all analyses.

Results:

Shows that majority of street food vendors were men (86.6%) who fell into the average age group of 41-50 years, majority (56.1 %) of them had not received any education indicating majority of them were illiterate, whereas (16.1%) had received only primary education, (17.1%) of vendors were college going selling mutton & fish tikka in evening as part time, (80%) of the vendors had mobile (carts/ baskets/basins) food stalls.

Table 1: Features of street food vendors in Kashmir

Parameters	frequency n=105	Age:
21-30	16	15.2%
31-40	19	18%
41-50	33	35.2%
51-60	37	31.4%

Sex:

Male	91	86.6%
Female	14	13.3%

Education:

None	59	56.1%
Primary	17	16.1%
Secondary	11	10.47%
College	18	17.1%

Nature of work:

Part time	26	24.76%
Full time	89	84.76%

Vending type:

Stationary	45	42.8%
Mobile (Cart/phoet/dull/basin)	60	57.14%

Among the 105 sampled vendors (50.4 %) had wooden cart,(23.8%) had canopy and (17.1%) sold food in the container (phoet/basin).only 49.6%vendors prepared food at the stall whereas rest either prepared food at home or had semi cooked food .Only (39.4%) vendors were dynastic professionals and none of the them had received any formal training.

Table 2: Features of vending sites

Parameter	Frequency: (n=105)	Type of vending site:
Wooden cart	62	50.04%
Canopy	25	23.8%
Container Basket (Phoet) /basin (dull)	18	17.1%

Place of preparation of food:

At home	29	27.6%
At stall	49	49.6%
Semi-cooked	27	25.71%

Acquisition of skills:

Observation	18	17.4%
Formal training	0	0
Apprenticeship	19	18.04%
Self-taught	27	25.7%
Dynastic profession	41	39.04%

Shows the food handling practices of the street food vendors. Majority (92.3%) street vendors admitted that they washed food before cooking .(45.7%)used to heat food before serving while some foods like Masala,pani puri ,doel aanchari,bhelpuri & kulfi needed no heat treatment before serving. Only (30.4%) of vendors admitted that they repeatedly reused the oil for frying. It was marked that 80%of the vendors used same surface for cooking the food more than twice. Only (19.04%) vendors used aprons and cent percent served food with bare hands. 44.76% surveyed vendors had long nails and only 13.3% covered their head (women only as customary practice).it was observed that 81.9%of vendors surveyed handled money while serving food.,68.57%of them also wore jewellery while serving food. The study found that 73.3% of the vendors blew air into the packing bag. Mostly steel plates (47.6%) were used to serve the food, (17.1%) of vendors served food on leaves of old newspapers or magazines. Plastic bags though banned (16.0%) were used to pack foods. Food was kept and stored in open (65.71%), while as only (34.2%) covered food with net cloth, glass jars and lids.

Table 3: Food handling practices

Food handling practices: Frequency (n=105)

Wash food before cooking	97	92.3%
Prepared on same surface more than twice	84	80%
Food heating before serving	48	45.74%
Repeated reuse of oil for frying	32	30.4%

Personal hygiene:

use of apron	20	19.04%
Handles food with bare hands.	105	100%
Has long finger nails	47	44.76%
Hair covering	14	13.3%
Handling money while serving food	86	81.9%
Wears jewellery	72	68.57%
Blows air into polythene bag	77	73.3%

Serving food:

Steel plates	50	47.6%
Plastic plates	20	19.04%
Plastic bags	17	16.1%
Old newspapers /magazine pages	18	17.1%

Food storage:

Open	69	65.71
Covered	36	34.2%

This table highlights the care of equipment practiced by the vendors. Most of the vendors(39.04%) cleaned the equipment and plates with plain water only. Warm soapy water was used by(26.6%) while as (34.2%) used cold soapy water for washing the utensils(59.04%)of the vendors only dunked plates in the water. While as (28.57%) put water on plate only. The environment around the food stalls was mostly dirty (65.71%). Majority (84.76%) of the vendors disposed waste in the bin and only 15.2% dumped the waste near any bush or heap. The study indicated that (76.19%) vendors used nearby water supply

Table 4: care of equipment

Care of equipment:

Wash with warm soapy water	28	26.6%
With cold soapy water	36	34.2%
Plain water	41	39.04%

Cleaning of utensils:

By dunking in bucket of water	62	59.04%
Water put on plate	30	28.57%
Basin	13	12.38%

Table: 5 Surroundings

Environment:

Clean	36	34.2%
Dirty	69	65.71%

Waste disposal:

bush /nearby heap	16	15.2%
Waste bin	89	84.76%

Water supply:

From home	25	24.76%
Nearby supply	80	76.19%

Out of 105 food stalls surveyed for safety and hygiene practices (23.8%) of the stalls sold monji goel/halwa paratha followed by mutton/chicken/fish tikka (16.1%).

Table 5: Type of food

Types of food sold at stalls:

Munj gul/halwa paratha	25	23.8%
Seekh tujh	17	16.1%
Masala	13	12.3%
Fried fish	07	6.6%
Bread/tea	15	14.2%
Gushtaba/rista	05	4.76%
Bhelpuri	07	6.6%
Paanipuri	05	4.76%
Aanchari	05	4.76%
Kulfi	06	5.71%

Discussion:

Street foods are ready-to-eat foods prepared and/or sold by vendors and hawkers, especially in streets and other similar public places (codex 1996). Street foods or ready to eat foods are an important component of the food supply chain (Rhienslander. T.et al 2010). New threats to food safety are constantly emerging. Changes in food production, distribution and consumption; changes to the environment; new and emerging pathogens; antimicrobial resistance - all pose challenges to national food safety systems. Increases in travel and trade enhance the likelihood of contamination that can spread internationally .Laboratory analysis of samples of certain street vended foods have shown a high level of total coliform and in some cases the presence of pathogenic bacteria such as salmonella spp; staphylococcus aureus, C. Perfringes and vibrio cholera (Hanashiro et al 2005) and presence of standard strains of bacillus cereus. (H. yasir et al). Multiple lines of evidence reveal that foods exposed for sale on the roadsides may become contaminated either by spoilage or pathogenic microorganisms. (Bryan et al 1992, Ashenafi1995; WHO, 1984).According to studies done in Africa on street foods, their tremendous unlimited and unregulated growth has placed a severe strain on city resources such as water, sewage systems and interference with the city plans through congestions and littering adversely affecting daily life. (Comfort O.Chukeuzi, 2010). there are significant reports of health problems that have been associated with these street foods Mensah et al (2002) and Omemu and Aderoju (2008).Chukuezi (2010) found that women

made up 66.67% of vendors while males made up 33.33%, the street food vendors were mainly found to be women(Mensah et al 2002) which is in contrast with the findings in our study, women constituted only 13.3% while as men were 86.6%.Educationally 56.1% of the vendors had never gone to school 17.1% of them were college going boys who sold tikka as part time in the evening to make money .The study showed that 64.76%of the vendors had the food stalls as part time venture therefore paying less attention to the maintainence.The study depicted that (59.04%) had wooden carts (Munji goel,kulfi, tea stalls, gush-taba ,rista,(23.8%) had canopies(fish tikka/mutton tikka/kulfi) 17.1% sold food in either in the basket (phoit) or basin (doel) (aanchari,masala).Omemu et al (2008) in Nigeria and ,cheukuzi (2010) in Nigeria reported that only (12%)and(23.81%) of vendors received formal training respectively ,as per our study none of the vendors had received any formal training similar findings were reported by Kilungu (2003) .From the collected sample(39.04%) were dynastic food sellers,(25.71%)were self-taught and (18%) had learnt the skill by self-observation, similar findings were reported by Muinde and Kuria (2005).FAO (1997) argues that food handlers should have the necessary knowledge and skills to ensure safe food o the consumers.it was observed that food was unhygienic ally prepared as also reported by Muinde and Kuria (2005) Bhatt and Waghra (2000),however some researchers ,Martins(2006) and Makhoane (2006) in South Africa ,Azanza (2000) Philippines have found that most of the food vendors maintained a high hygiene standard during cooking and vending. Despite these observations in South Africa and Philippines street food still remains source of health problem globally Cheukuzi (2010).Oil was repeatedly reused (30.4%) personal hygiene too was poor .Muinde et al reported that 81.3% of vendors did not use aprons similarly in this study very little percentage(19.04%)wore apron while cooking or vending food .Food was served bare handed (88.57%),only 13% used head scarves ,even that percentage was only used by women ,since head covering is part of the dress for women.73.3%blew air into the poly-thene bag, and 81.9%vendors handled money while serving food. Jewellery was worn by 68.57%vendors 65.7% vendors kept food open and getting contaminated from dust and smoke from vehicles Muinde et al (2005).the study emphasised that utensils and equipment too were not taken well care of utensils were mostly washed by dunking in plain water (59.04%)and then reused. Only (26.6%) of the vendors used warm soapy water. Most of the places the surrounding environment was dirty (65.71%), however 84.76%used dust bins.

Recommendations:

- Flow of water from taps is not regular for hand and dish-washing, regular supply should be ensured.
- Waste disposal system should be provided in the street food industry, covered waste bins (with lids) should be provided at all sites.
- Street food business provided employment and livelihood to many, however encroachments should be checked.
- Government (SMC) should devise hygiene policies.
- Public health interventions within the street food sector should be prioritised. Hygiene behaviour should be promoted.
- Continuous monitoring is essential.
- Food parks and streets be promoted.
- Training of street food vendors is crucial for minimizing food borne illnesses.

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