

Food Safety Practices among Street Food Vendors in Diplo, Sindh, Pakistan

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ABSTRACT

Diplo town lack food industry, market places coined with food streets. Vendors role to ascertain public health by conserving safety of food chain. Food can be contaminated like improper processing operations, lack of personal hygiene, dirt, dust, smokes, etc. among vendors.

Aim: The present study designed to know the level of alertness of food vendors to food safety and hygiene practices by observing and record the corona virus disruption of their business.

Materials and methods: For that, a random selection of 20 vendors from Diplo was done. A detailed questionnaire was used in order to obtain the data.

Results: It was found that majority approximately 80% of the vendors were of the age group 20-30 years and were unmarried, out of these about 45% (primary education) showing a dishonorable arrogance to food preparation and selling. Almost 95% not covered food while rest 5% were lacking sufficient covering arrangements and apparels. Hence, >85% of food shops were unprotected to insects (i.e. flies, mosquitoes,) regardless of the type of cart. The 99% vendors used water from bore wells and hand pumps for food preparation. However, about 80% of these vendors showed strong agreement that the food may be fouled with microbes, insects, dust particles, food coloring, as well as different spices used while preparations. Also, various malpractices and unhygienic conditions during the food preparation may lead to food borne outbreaks. Persistence of different food borne ailments result in morbidity and sudden mortality.

Conclusions: It is concluded that mostly vendors are unaware about the basic hygiene methods & personal hygiene of their own.

KEYWORDS: COVID-19, contamination, food safety, hygiene practices, street vendors

INTRODUCTION

With the advancement in life state of humans, street food vending trade has gained immense significance globally. As a result of furious growth in urban community the inclination of street food (SF) vending is also mushrooming at the globally level different technological advancement and alarmingly increasing hasty lifestyle is another big reason for these. Population now-a-days is very much inclined towards the consumption of ready to eat (RTE) foods in its place of fresh food home-based cooking. People find it easy as well as loving to order food from outsides, without even realizing the associated safety apprehensions. While extension of these activities being considered a gainful initiative because of minor wealth expenditure and tax-free incomes [8]. This may provide, benefits to country's economy [12], deliver little price & frequently healthful diets besides, similarly be accountable for service as well as suitable to people from low socio-economic sets [13]. These are likely causing why street selling wages a very noteworthy share to limited residents, business societies usually occupied as an inexpensive to diverse units of the populace [13]. It is also

projected that on a normal, approximately 2.5 billion people universally eat SFs daily. Separately, in Latin America, up to 30% of urban family procurements are made of SF material only [13]. In Southern Asian nations also, SFs are one of the vital servings of their desirability for diet [10]. But, the influence of this sudden and energetic change is so great, that many global establishments have been prudently planned a generally adequate terminology and elevated dissimilar meanings connected to the food vending corporate. For example, well-known organizations, WHO and FAO termed SFs as RTE food and beverages ready and sold by vendors particularly on the roads and other public spaces for prompt eating [17]. One more term "food handler (FH)" is the one who holders food regardless of whether self-organized or aided it.

SF protection is immensely reliant on the good management of raw food till cooking and consumption. There are different truths that most of the SF vendors own, deprived resident set-up in overall, absence of clean/disinfected services, dearth of appropriate guidance in respects of food hygiene,

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poor cleanliness as well as restricted information of individual hygiene [1]. Various trainings directed to control the superiority of SFs in numerous states represented that most of the times the food was not found up to the safety morals, and also, several are accountable for many food borne illnesses (FBIs) [9] & [11]. These are known to be the among utmost contests of the 21st era [2] Meanwhile, the last few periods, food vending on roads, occupation in Pakistan has received a substantial room like any other emerging country. Though, there are no responsiveness plans on food safety (FS) observes being started that could fight losses associated to FBIs. Countless un-desired creatures are found in SFs, e.g. reports exposed that the incidence of only campylobacter species in food (raw/undercooked) supplies in populated towns of Pakistan comprising Islamabad neighboring to Rawalpindi, Faisalabad and Lahore is largely important [5]. Hygienic performs amongst FHs in Outpost City area of Rawalpindi were also not improved [14]. In Rawalpindi, enormous food industry with big market places devoted only to food items, often invented as food streets. Vending stalls can be detected nearly ubiquitously, on roadsides, near to taxi stands, bus, and train stations, building sites, school as well as hospital locations. So, it is a keen matter to recognize the changing aspects of this exponentially rising business and its upcoming latent consequences on the civilization. A very imperfect info about safety of SFs is known in Rawalpindi. Hence, this study was planned to perceive the present position of FS awareness and allied does amid SF vendors in a small town of Tharparkar district, Sindh.

Food borne-diseases:

It is of special concern that WHO (WHO, 2007) stated that 1.8 million persons expired from looseness of FBIs in the year 2005. For this motive, FBIs have gained population awareness on the global level, recently. Centre Disease [18] Control and Prevention (CDC, 2000) recognized five hazard issues of food handling that improve to FBIs which elaborate inappropriate cooking methods, temperature spoilage throughout storage, hygiene and cleanliness subjects by FHs, cross contamination between raw and fresh RTE foods. FBI can be credited to a varied of microbes i.e. virus, bacteria,

and parasites, observed universally that cause human sickness (Scott and Sockett, 1998; Tauxe, 1998; WHO, 1998)[15]. The condition of consuming contaminated food (with microorganisms, inadequate storage methods, unhygienic food handling, cross-contamination from food contact surfaces, or from persons with poor hygiene) results in food poisoning. Unhygienic practices, improper handling and storage of food stuff leads to the transmission of disease-causing organisms such as bacteria, viruses, and other food-borne microorganisms. Additionally, increased FBIs have been attributed to careless food hygiene practices in big kitchens [3]

To offer guarantee of FS, Food trades must device an active Food Safety Management System (FSMS) created on Hazard Analysis and Critical Control Point (HACCP) and appropriate pre-mandatory curricula by vigorously governing dangers thru the food chain initial from food production to last ingestion.

Materials and Methods

Study Area: A city was selected for present study from district Tharparkar i.e. Taluka Diplo. The criteria for selection of location was based on food poisoning issues and major restriction due to fear of COVID-19 and strict enforcement. Diplo is located at 24°28'0N 69°35'0E with an altitude of 26 meters (85 feet). Taluka Diplo is one of the oldest towns of Sindh and is 40 kilometers away from Mithi.

Study population:

The survey was conducted during July 2020, with a group of 20 respondents. Respondents were selected in a random manner from the proposed taluka i.e. Diplo. The general population i.e. vendors, workers and others were selected for interviews.

The study was conducted using a descriptive and structured questionnaire face to face. The questionnaire was used to elicit information about their demographic distribution and awareness about FS attitudes and hygiene practices. These questions specifically dealt with respondent's knowledge on personal hygiene, cross contamination, FBIs, microorganisms, temperature control and hygienic practices.

Results and discussions

A. Demographics

The respondents' demographics are depicted in "Table 1", results showed that all of respondents were male i.e. 20 (100%) in Diplo. Among these 16 (80%) were in the age group of 20-30 years, 16 (80%) were unmarried and only 09 (45%) has acquired primary education.

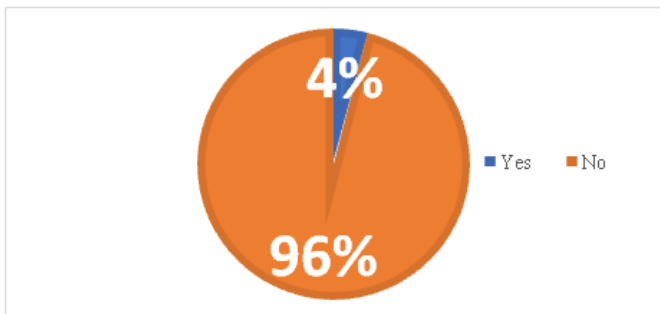
Table 1. Demographics of respondents from Diplo City Tharparkar

Demographic	Variables (%)	Frequency
Gender		
Male	100	20
Female	00	00
Age		
20-30	80	16
31- Above	20	04
Marital status		
Married	20	04
Unmarried	80	16
Education level		
Illiterate	35	07
Primary	45	09
Secondary	10	02
Matric	10	02
Intermediate	00	00

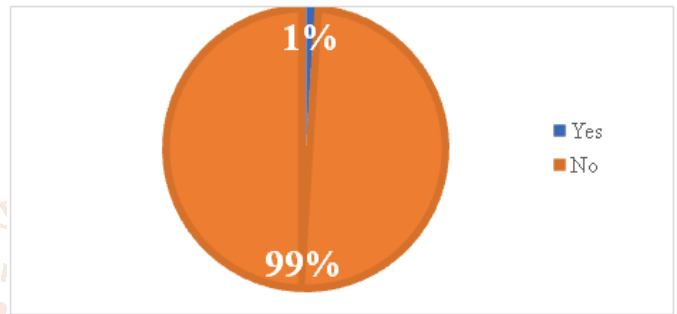
The alertness of such imperative sanitary actions by common official food-handlers in this study is very suitable. This is as the hands of food-handlers can help as routes in the feast of FBIs due to underprivileged own cleanness or cross-contamination. Good hand wash by food-handlers has been described to meaningfully cut the danger of diarrhetic illness and can consequently be stimulated as it might likewise assist to diminish the hazard of looseness and other FBIs in analogous organizations.

Hand-washing performs should be highlighted to FHs as the hands essential to be washed wisely earlier stirring food or any kind and chiefly after handling uncooked food constituent, which will announce bacteria every day to the kitchen and before ongoing with Hobbs BC, 1993. So, basic training about FS guidelines should be arranged for FHs [18] Through the data received it was observed that majority of the working staff would gladly like to be a part of food hygiene training program. The program can be conducted among the entire team of managing staff based on the importance of food hygiene, personal hygiene, cross contamination, and safer temperatures of cooking, serving and storage of foods.

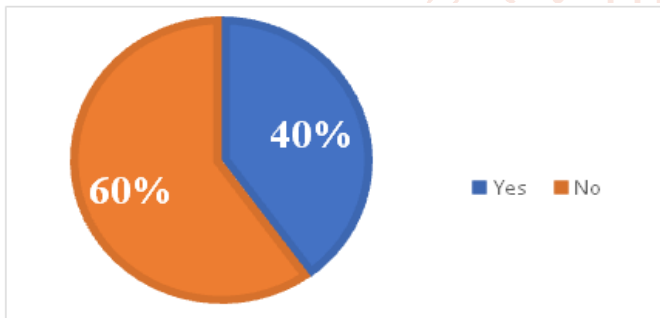
On completion of training duration, a test should be conducted from the FHs about their perception towards FS. The use of good-looking and obvious photograph form presentations in workshops is reflected to be operative way of prompting FHs of numerous features of FS [18]. Moreover, the responses from the vendors of Diplo city were recorded properly that are shown in "Figures 1-10".



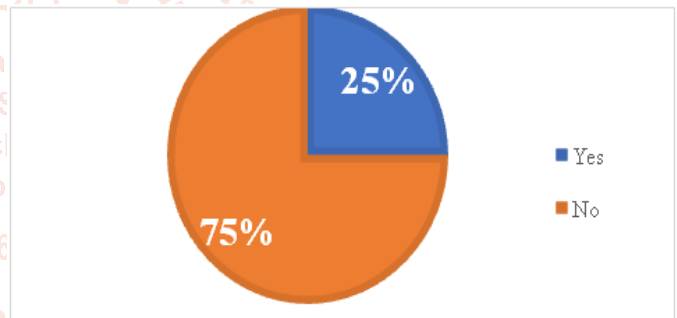
1. Personal hygiene



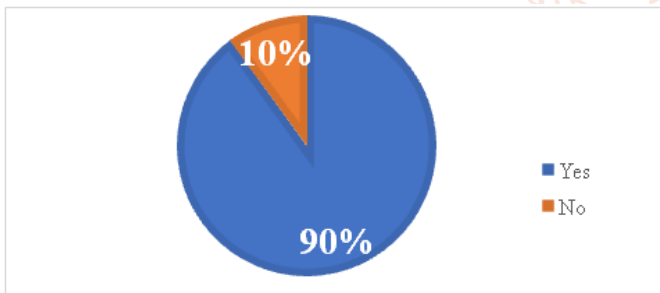
5. License Issued From Food Departments



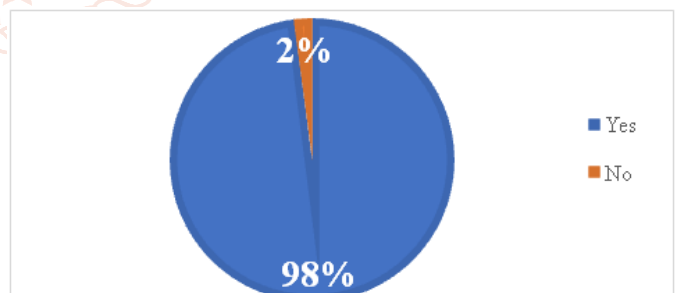
2. Washing Hands before and after food preparation



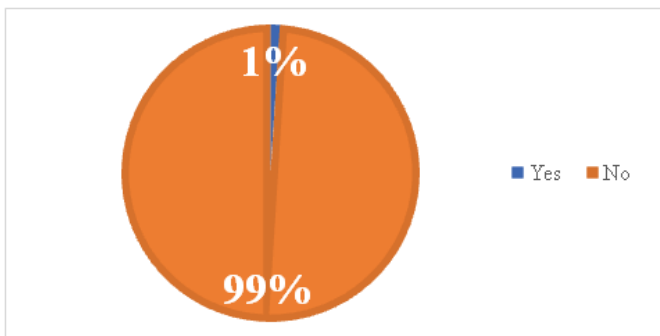
6. Knowledge About Expiry Date Of Food Items Prepared



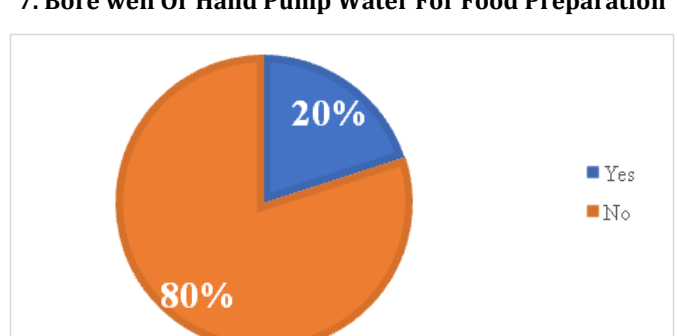
3. Willing To Join Food Safety Trainings



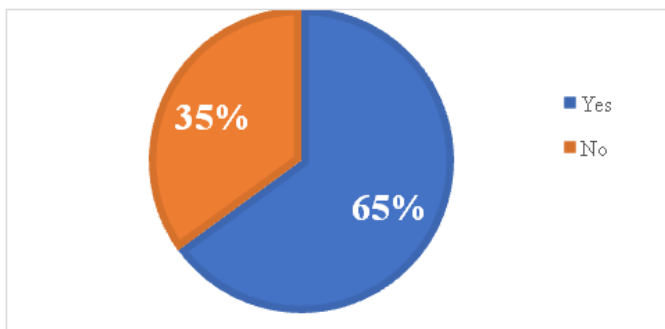
7. Bore well Or Hand Pump Water For Food Preparation



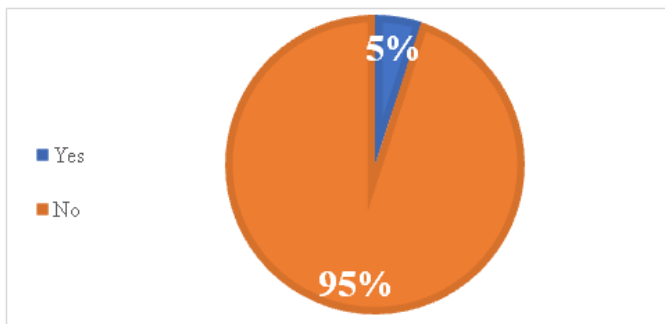
4. Wear Gloves, Apron during Cooking



8. Prevent attack of flies



9. Staff Worker Allowed To Work If Ill



10. Pest control measure

CONCLUSION

From the study undertaken, it is concluded that greater portion of the food vendors in Diplo is unaware of the ground level hygiene practices, personal hygiene of the staff and sanitation of preparation and selling area, pest control measures. Certain care should be assumed to the standing of time and temperature switch, individual cleanliness, cross uncleanness, bases of pollution and the aspects defining the existence and development of pathogenic creatures in food (WHO, 1988b & Merican, I. 1997). A major portion of vendors have not undergone any kind of food safety training program but are willing join such sessions, if made available.

Recommendations

The study suggests that even though practice level of vendors was satisfactory. Continuous education and training should be organized in order to bring about awareness as well as strengthen, food vendors knowledge in all the required areas.

The following recommendations are advised [6]

- The primary step is the Food vendors' education. The vendors should be properly educated about the relation between the food and disease transmission as well as on principles of personnel hygiene.
- On the legal level, major authorities may issue the licenses to the SF vendors only once they fulfil the basic and essential FS and hygiene principles.
- A routine health examination and analysis, of the FHs must be carried out by the health officers to keep a check and maintain the hygienic conditions at the food stalls.
- Periodic trainings need to be organized for these vendors, creating awareness regarding good hygiene, personal cleanliness, and many other related terms.

Authors Contributions:

Parkash Meghwar shared idea, designed questionnaire and collected the data. Dileep Kumar formatted the manuscript.

Preeti Dhanker edited revised and review manuscript. Mukesh Kumar provided funding resources for this study.

Conflicts of Interest: The authors have no conflicts of interest for this designed study.

Limitations:

There are limited studies being carried out on food safety practices among vendors in Tharparkar.

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References

- [1] Atter, H. O., Anyebuno, G. A., Amoo-Gyasi, M., & Amoa-Awua, W. K. (2015). "Safety of a street vender traditional maize beverage, ice-kenkey, in Ghana," *Food Control*, vol. 55, pp. 200-205.
- [2] Amponsah-Doku, F., Obiri-Danso, K., Abaidoo, R., Drechsel, P., & Kondrasen, F. (2010). "Bacterial contamination of lettuce and associated risk factors at production sites, markets and street food restaurants in urban and peri-urban Kumasi, Ghana," *Scientific Research and Essays*, vol. 5, pp. 217-223.
- [3] Hobbs, B. C & Roberts, D. (1993). *Food poisoning and food hygiene*, 6th ed. London: St Edmundsbury Press.
- [4] <https://www.fssai.gov.in/home/aboutus/introduction.html>.
- [5] Hussain, M. Mahmood, S., Akhtar, M., & Khan, A. (2007). "Prevalence of Campylobacter species in meat, milk and other food commodities in Pakistan," *Food Microbiology*, vol. 24, pp. 219-222.
- [6] Kumari, M., Nasreen, B., Sarah, J., Suroorunnisa & Sahina, P. (2019). "Food Sanitation and Hygiene Practices among Food Handlers in Food Joints in Hyderabad" Published in *International Journal Trend in Scientific Research Development (ijtsrd)*, ISSN: 24566470, Volume-3 | Issue-4, June 2019, pp.755-760, URL: <https://www.ijtsrd.com/papers/ijtsrd23421.pdf>
- [7] Merican, I. (1997). Typhoid fever: present and future. *Medical Journal of Malaysia* 52: 299-309.
- [8] Dipeolu, O., Akinbode, O., & Okuneye, A. (2007). "Income generating potentials of street food vending businesses in Ogun State, Nigeria," *ASSET: An International Journal (Series C)*, vol. 2, pp. 180-189.
- [9] Aluko, O. O., Ojeremi, T. T., Olaleke, D. A., & Ajidagba, E. B. (2014). "Evaluation of food safety and sanitary practices among food vendors at car parks in Ile Ife, southwestern Nigeria," *Food Control*, vol. 40, pp. 165-171.
- [10] Proietti, C. Frazzoli, & Mantovani, A. (2014). "Identification and management of toxicological hazards of street foods in developing countries," *Food and chemical Toxicology* vol. 63, pp. 143-152.
- [11] Da Silva, S. A., Cardoso, R. d. C. V., Góes, J. Â. W., Santos, J. N., Ramos, F. P. & De Jesus, R. B. (2014). "Street food on the coast of Salvador, Bahia, Brazil: A study from the socioeconomic and food safety perspectives," *Food Control*, vol. 40, pp. 78-84.

- [12] Bhowmik, S. K. (2005). "Street vendors in Asia: a review," *Economic and Political Weekly*, pp. 2256-2264.
- [13] Samapundo, S., Climat, R., Xhaferi, R. & Devlieghere, F. (2015). "Food safety knowledge, attitudes and practices of street food vendors and consumers in Port-au-Prince, Haiti," *Food Control*, vol. 50, pp. 457-466,
- [14] Awan, S. A. & Tehseen, I. (2013). "Sanitation practices among food handlers working in street restaurants in Rawalpindi, Pakistan," *Rawal Medical Journal*. vol. 38.
- [15] Tauxe, R. V. (1998). Food-borne illnesses: Strategies for surveillance and prevention. National Center for Infectious Diseases, *Centers for Disease Control and Prevention*, Atlanta. Lancet. 352 (suppl review)
- [16] WHO/FAO. (2010). "Basic steps to improve safety of street-vended food," ed: *International Food Safety Authorities Network (INFOSAN)*.
- [17] World Health Organization. (1996). "Food safety Issues: Essential safety requirements for street vended food," W. H. Organization., Ed., Revised edition ed. 1996.
- [18] World Health Organization. (1998a). Life in the 21st century. A vision for all. The World Health Report. Geneva: World Health Organization.
- [19] World Health Organization. (1988b). Report of a WHO Consultation, Health surveillance and management procedures for food-handling personnel. Geneva: World Health Organization.

