

Disposable Hand Glove And Hand Hygiene Compliance of Food Handlers in Hyderabad and Secunderabad

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Abstract- *Hand Hygiene practice is mostly poor among the food handlers. Effective hand hygiene can prevent associated food borne illness or infections. The knowledge and practices on the use of disposable gloves while handling ready to eat foods and the practice of hand washing among the 125 food handlers working in a random sample of 35 food service establishments which included food service outlets from organized, unorganized and institutional sector has shown that about 91 percent of the food handlers do not use gloves on the short order cook and 56 percent of them do not know appropriate use of the disposable gloves and were observed to handle bank notes and unwanted things. Thus it is concluded that the use of disposable gloves remains only as a matter of practice but do not account as an appropriate measure for the dispense of the food during its service as a safe measure and is Quite often overlooked due to barrier of economic burden to the food vendors.*

Keywords- Food handler, Hand Hygiene, Disposable gloves, bank notes, food vendor.

I. INTRODUCTION

Hands of food handlers are possibly the most unsafe serving equipment in the chain of infection in the entire food service operation. The hands of food handlers are in direct contact with food all the time, cross- contamination can occur and bacteria can be transferred to high risk foods. In addition to the normal flora on the skin, inadequate hand washing could cause accumulation of micro organisms usually found in the bowels or those which could have been picked up from raw contaminated foods. Hand washing should be done properly or it will not be effective.

Hand washing is a fundamental precautionary measure to protect against the spread of disease and is one of the primary practices to reduce the transfer of bacteria, whether from person to person, or from person to food contact surfaces.[1] The main reason for limiting contact between

ready-to-eat foods and people's hands is to prevent the transfer of viruses and bacteria that are already present in human bodies.[2].

Hands should be washed with plenty of soap and water and preferably rinsed in running water. Frequent hand washing with soap and hot water can make the skin crack causing roughness. This can be prevented by wearing gloves. Gloves are helpful as long as they are unbroken and cleaned well. The use of gloves is recommended while working with foods like sandwiches, cold cuts, pastries, and salads. Plastic gloves must be changes frequently [3].

Mandatory glove use can result in the decline of overall hygiene and misuse of gloves among food handlers [4, 5, 6,7]. Thus, it is important for employees to understand how to wear gloves properly, why it is important to do so, and when to wear them and change them.

Hand hygiene is required with glove use at the following times:

- Before putting on gloves
- Immediately after removing gloves
- Hand hygiene products should not be applied to gloves
- Prolonged and indiscriminate use of gloves should be avoided as it may cause adverse reactions and skin sensitivity

Gloves made from either latex, rubber and non-latex materials such as nitrile or vinyl are commonly used in the food industry and do offer added protection, but there are a number of variables that determine their effectiveness. Those who argue for gloves say they protect hands from harsh chemicals and hazardous situations; protect foods from direct hand contact; are easier to monitor, audit and enforce than hand washing thoroughness and frequency; can be used to

cover bandages; can improve grip; and are effective in preventing cross contamination.

Those who argue against glove use point out that they can limit finger dexterity; can contaminate foods if not used properly; provide a false sense of security, encouraging poor hygiene practices; are known to have pinhole leaks which permit bacteria to migrate from our hands onto foods; can cause skin irritations which discourage proper glove use; and can fall apart, introducing foreign matter which may not be detected by conventional methods.[8].

The educational level of food handlers could significantly improve personal practice of food handler [9, 10 11]. Significant knowledge on good personal hygiene, did not always translate into good practices. Food handlers may have basic knowledge on good personal hygiene, but most of them do not grasp the essential aspects of hygiene such as hand washing procedure, and some cannot link the values of glove use with contamination or bare hand contact with foods. Hence the the good hand washing practices among food handlers require strict attention. [12]. In light of this a study to understand the knowledge and practices of food handlers on the use of gloves while handling ready to eat foods and hand washing frequency has been conducted..

II. MATERIALS & METHODS

A stratified purposive sample of 35 food service outlets which supplies meals and Tiffin's in the Hyderabad and Secunderabad areas have been chosen. In the first phase all the food outlets which cater to foodservice among organised , unorganised and Institutional sectors has been prepared based on the willingness of the management . A subsample of 35 outlets has been chosen under the study taking the approachability of the vendor and convenience of the study. A personal interview was held with the handlers to note their verbal response on the hand hygiene practices, and an observational checklist is used to record and assess the knowledge and practice of the food handlers who were involved in serving ready to eat foods. The observational checklist constituted of about10 statements stating proper use of gloves and the observations pertaining to the practices of the personnel are recorded.

III. RESULTS & DISCUSSION

The Table 1 shows the distribution of the food handlers among the food service establishments chosen from organized and unorganized and institutional sectors.

TABLE 1: SECTOR WISE DISTRIBUTION OF FOOD OUTLETS AND FOOD HANDLERS

Category	Food Outlets	No of Food Handlers
Organized (n= 135)	14	47
Unorganized (n=111)	11	42
Unorganized (n=111)	10	36
Total (n=350)	35	125

Among the food handlers majority (n=72) are men and hence it is evident from that men chose the food service as a mode of occupation more than women. Maximum Food handlers in the organized sector work on part-time basis and mostly pursuing studies while the service staff in the institutional sector are mostly women and are also involved in other activates of cleaning and other preliminary preparation operations and are employed on full time basis

TABLE 2: GENDER WISE DISTRIBUTION OF FOOD HANDLERS

	Male	Female
Organized(n=47)	35	12
Unorganized(n=42)	28	14
Institutional(n=36)	9	27
Total(n=125)	72	53

Table 3 reveals that among the food handlers under the study most of them are in the age group of 20 and 50 years

TABLE 3: AGE WISE DISTRIBUTION OF FOOD HANDLERS

Age in Years	<20	20-30	30-40	40-50	>50
Organized (n=47)	6	13	11	2	5
Unorganized (n=42)	9	17	7	6	3
Institutional (n=36)	7	12	8	4	5

While the educational status of the food handlers shows that 16 out of 42 food handlers are illiterate while in 35 food handlers among 47 in the organized sector have pursued secondary or intermediate education and 23 food handlers among 36 in the institutional sector have pursued basic or secondary education

TABLE 4: EDUCATION WISE DISTRIBUTION OF FOOD HANDLERS

	No formal	Basic	SSC	Inter	Degree
Organized (n=47)	2	3	21	14	7
Unorganized (n=42)	16	1	6	5	4
Institutional (n=36)	8	1	13	2	3

Table 5 shows their verbal response on the hand hygiene practices. 34 food handlers working in the organized sector responded that they keep their nails trim while only 69 percent of them practice from the unorganized and 64 percent of them from the Institutional sector. While less percent of food handlers (55 percent) of them working in the organized sector wash hands using soap and water after visiting toilet, while maximum of the handlers that is 78 percent of them are from Institutional sector, around 90 percent of the food handlers from unorganized has responded positively stating

washing of hands before and after handling food, while 92 percent of food handlers covers their cuts and burns which is due to the associated medical help availability in most of the institutional sector.

TABLE 5: VERBAL RESPONSE OF FOOD HANDLERS ABOUT THEIR PERSONAL HYGIENE PRACTICES

S.No	Proper Practices	organized	Unorganized	Institutional	Total
1	Hand Hygiene Practices	Yes	Yes	Yes	Yes
1	Keep nails trim	34	29	23	86
2	Wash of hands with soap and water after visiting toilet	26	21	28	75
3	Wash hands before and after handling food	37	38	21	96
4	Cover the cuts and burns immediately	34	29	33	99

The use of glove is instructed by their out let manager or the owner but they were not imparted any formal training for the hygienic handling and use of disposable gloves. Quite often the use of the glove is overlooked or improper handling of the gloves is noticed due to its barrier of economic burden or due to its added cost to the food vendors. Among the 125 food handlers included in the study hand glove hygiene practices observed among 125 food handlers who were involved in handling and serving of ready to eat foods. The food service boys or stewards who handle ready to eat foods are directed by the managers or their management to use disposable hand gloves while handling foods, but the instances or programs held to impart knowledge or the orientation programs conducted on the hygienic handling and use of the disposable gloves shows that only 77 percent of the handlers wear disposable hand gloves while handling or serving the ready eat foods. It is observed that none of the food handlers follow the good hand glove hygiene rules , most of the handlers (91 percent) do not use the gloves if it a short order cook or remove the glove and keep it aside on in the food container for the use on next order, almost all the handlers are not aware of the fact to change the gloves once in 3 hours , they only if it is soiled or torn , and the fresh pair sets of gloves are also not stored as per the in appropriate place so the contamination of the hand glove can be possible before it is used for food handling, 56 percent of the food handlers were found to handle even the bank notes while serving the food. In fact they wear the gloves and use the other serving utensils to handle the curries or gravies, but handle other eatables likewise cut pieces of fruits and vegetables with the same gloves. 26 percent of the food handlers do not wash the hands while changing the gloves between the tasks like wise handling the raw foods or while handling the cooked foods etc.

TABLE 6: FOOD HANDLERS WITH PROPER HAND GLOVE HYGIENE PRACTICES

	Proper Practices	Org	Un org	Inst	Total
		(n=47)	(n=42)	(n=36)	(n=125)
1	Use while serving/ handling ready to eat foods	40	29	27	96
2	Wash hands before the use and after the use of gloves	18	5	9	32
3	Use of bank notes or personal or wanted things	30	16	24	70
4	Store the new pairs of gloves as intended	15	21	27	63
5	change the gloves while shifting between the tasks	14	5	4	23
6	Change the gloves while using raw foods	18	16	8	42
7	Use separate gloves to handle cooked foods	10	4	9	23
8	Change the gloves if soiled or torn	43	37	34	114
9	On short order cook s keep the gloves aside for next use or do not use	37	41	36	114
10	Change of gloves once in 3 hours on continuous use	30	16	20	66

Org- Organized Sector; Unorg: Unorganized sector; Inst: Institutional Sector

IV. CONCLUSION

The food handler's verbal response on their hand hygiene practices is compared against hand hygiene checklist among 125 Food service personnel working in about 35 outlets in Hyderabad and Secunderabad. The results has shown that the verbal response for proper hygiene practices is good among institutional sector followed by the organized and the least in unorganized sector while the observational checklist revealed most of the practices among the food handlers working in organized sector are appropriate than those working in the institutional sector. Hence the study concludes that the education or knowledge of the food handler play only a little role in maintaining good hygiene practices in comparison to the enabling resources.

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