

Consumer Attitude on Vendor's Practices and Safety Aspects of Street Foods in Yangon

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Abstract

Street foods consumption is inevitable for city dwellers; yet a little has been known in Myanmar about the consumer's attitudes on this informal food sector from safety perspectives. The aim of this study is to explore street food consumers' attitude towards food handling practices and safety of street foods in Yangon, Myanmar. A total of one hundred and sixty seven (n=167) street foods consumers took part in this study. Demographic profiles of consumer respondents, their opinion in comparison with street foods and other food stalls, reasons for buying and commonly purchased items of street foods, their experience on street food safety, their attitude towards the vending practices of the vendors from safety aspects etc. were conducted in this study. Among other findings, this study found that more than 75 % thought that street food stalls should be under authority's control for safety. Most of them 65% had better impression on the sanitary condition of the stationary food shops if comparing with that of street food shops. Nearly 90% responded that they were not satisfied with the safety of street foods. Easy accessibility and saving time are the two main reasons for consumption of street foods. Very little study of this kind was conducted and this study could contribute policy makers and other researchers to figure out the consumers' attitude on safety and consumption of street foods in downtown Yangon.

Keywords: *food control, food safety, awareness, practice*

JEL classification: *Q 18, I 18, R19*

1. Introduction

Street food is an important component of the food supply chain, as it satisfies a vital need of the urban population (FAO/WHO,2003). Street food vending is the growing trade in many developing countries (Draper,1996).Street food is one of the attractions of Cities. Street food consumption is one of the important consumption patterns associated with urban life, predominantly in developing world. The busy life style also encourages the street food consumption. Street foods are a bargain for customers when the demands of time and costs of food, fuel, cooking equipment and transportation are taken into account (Winarno and Allain, 1991). However there is the risk of exposing food to unhygienic environments, contamination and adulteration in this sector. The widespread food borne diseases, the mushrooming of wayside food vendors who lack an adequate understanding of the basic food safety issues are important public health issue directly related with street foods and a great concern to everybody (Rane, 2011).Street foods consumption is inevitable for city dwellers; yet very little is known in Myanmar about the consumer's attitudes on this informal food sector from safety perspectives.

2. Literature Review

A range of personal, social, and environmental factors influence food handlers practices and that these factors need to be addressed in order to change food handlers' behavior (Gul, 2012). Consumers could be a great for changing vendors' behavior that is a vector of various contaminations (Barro et.al.2007).

Hands can be an important vehicle for transmitting microorganism to food due to poor personal hygiene (Tan, 2013). Poor hand washing practices of the food handlers often contributes to food borne-illness outbreaks, which indicates that improvement of food handler's hand washing practices is needed (Gul, 2012).

The facility-wide considerations such as proper hand washing, exclusion of ill-food handlers, no-bear hand contact with foods, proper cleaning of all food-contact-surfaces, etc. are important in order to prevent contamination in food production (FDA, 2006). Consumers who are attracted by convenience and low prices may overlook aspects of hygiene or sanitation or may lack of the understanding of proper practices and the potential for foodborne illness (Winarno and Allain, 1991).

Regulator or authority has a vital, multi-faceted role in consumer protection, although the ultimate responsibility of food safety lies on food producers (FDA, 2006). The role of consumer becomes prominent as an active group by taking part in risk communication of risk governance framework that formally institutes stakeholder consultation and dialogue through a transparent and accountable process (Cope and Frewer, 2010).

3. Methodology

3.1 Research Questions

The aim of this study is to explore street food consumers' attitude towards food handling practices, how they view street foods safety and what they expect from authority for safety of street foods in Yangon, Myanmar. Very few previous street foods study was found at the same study area from consumer point of view.

Demographic profiles of consumer respondents, their opinion in comparison with street foods and other food stalls, reasons for buying and commonly purchased items of street foods, their experience on street food safety aspects, their attitude towards the vending practices of the vendors from safety aspects etc. were conducted in this study.

3.2 Data

A total of one hundred and sixty seven (n=167) street foods consumers took part in this study. The study was conducted during August-September, 2013, in Yangon, Myanmar. Simple random sampling technique was used and having the experience of street foods consumption is one and only condition required in selection of respondents who stayed in Yangon during the study period. Consumers' respondents were requested to take part in surveys with the structured questionnaires.

For the sake of the respondents' convenience, majority of the questions are designed just to select from a given set of options, except some demographic facts. No incentive was provided for being taken part in this survey. Revision of the questionnaires was made until it could be answered clearly. Pre-testing was performed randomly with some consumer respondents. No previous study of this kind was found in the same study area and that limits in comparison with other study for further discussion.

3.3 Statistical Analysis

Information and secondary data were collected since April 2013. The collected data were examined during and after collection. Only fully answered sheets were entered in computer for analysis. SPSS Statistical package for Social Science, version 16 was used to carry out the analysis. Simple descriptive analysis was employed to analyze frequency, percentage and standard deviation. Face to face interviews were carried out to get in depth knowledge.

4. Results and Discussion

4.1 Demographic of study population

Nearly 60% of the street food consumer-respondents were women¹. More than half of them were single and more than half 40% possessed education level of up to university. The age-ranges of respondents spread across all ranges with more or less 20%.

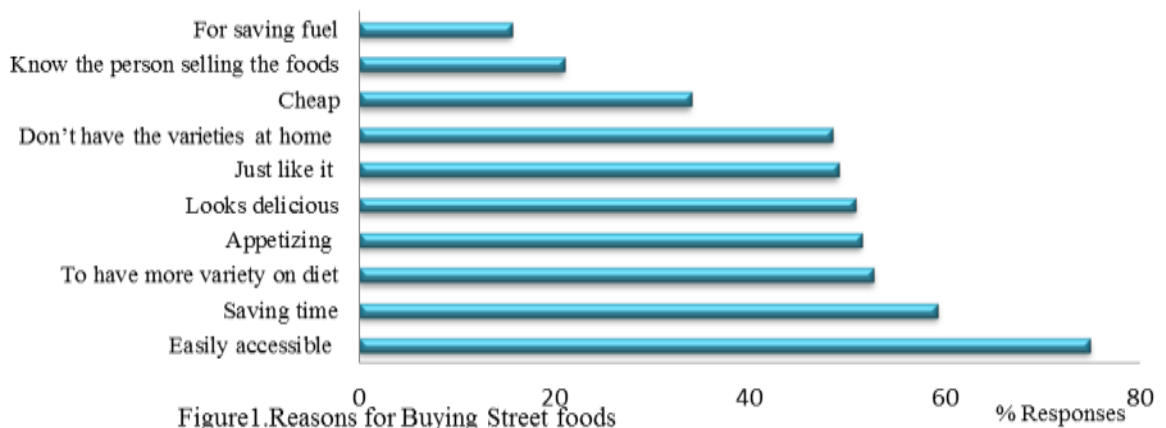
¹ The sex ratio is 98.9males per 100 females at national level (Aye et.al.2010)

Table 1: Demographics of Consumer-respondents

Variables	n	%
Sex (167)		
Males	68	40.7
Females	99	59.3
Household-size (167)		
1	13	7.8
2-4	96	57.5
5-7	46	27.5
more than 7 persons	12	7.2
Marital Status(167)		
Single	98	58.7
Married	69	41.3
Age years (167)		
< 20	29	17.4
21-30	44	26.3
31-40	26	15.6
41-50	36	21.6
>50	32	19.2
Education (167)		
up to Elementary Level	13	7.8
up to Secondary Level	26	11.83
up to High School Level	50	33.67
up to University Level	67	40.1
Higher than University Graduate	11	6.6

4.2 Reasons for Buying Street

The most cited reason for buying street foods is the easy accessibility with 74.9 percent. This finding is in accordance with other results of Barro et.al. (2002b), Mensah et.al.(2002), Collins(1997). They mentioned that the consumers who depend on such food are more interested in easy accessibility (Barro et. al.,2007). Patel et.al., also discussed that consumer decisions to purchase street food is due to its convenience that in relation with their busy schedules (2013). The second reason is for saving time (59.3%) and the third one is for having more variety on diet (52.7%), according to figure (1).



4.3 Opinions on price, appearance, taste of Street-foods

68.9% responded that street foods price was affordable and nearly 30% said it was cheap. More than half (52.1%) said home-made has better taste meanwhile nearly one fifth (21.6%) responded that street food taste was not better than other foods and have same taste like other foods. Only 8.45 said street food taste is better.

In terms of appearance, 6% replied that street foods looked clean and only 3.6% said they could not resist buying whenever going past the street-foods. 30.5 % had opinion that street foods appearance was no difference with other foods.

Table 2: Opinions on price, appearance, taste of Street-foods (n = 167)

Aspects	frequency	% of responses
Price		
- Expensive	3	1.8
- Affordable	115	68.9
- Cheap	49	29.3
Taste		
- Better taste	14	8.4
- Same as other	36	21.6
- Home-cook is better	87	52.1
- I don't know	30	18
Appearance		
- Appetizing	64	38.3
- Seems clean	10	6
- Can't help buying	6	3.6
- No difference with other foods	51	30.5
- I don't know	36	21.6

4.4 Awareness and Occurances of Food-borne illnesses after Street-foods consumption

The majority of respondents 93.4% were aware of that food borne illness can be transmitted through consumption of (unclean) foods. More than half (53.3%) were often concern over food safety issues of street foods. Patel et. al., discussed that consumers from all socioeconomic backgrounds are concerned with health and food safety issues (2013). 33.7% of respondents experienced some symptoms such as Diarrhea, vomiting, stomach crump after eating Street-foods, at least once in their life.

Table 3: Awareness and Occurances of Food-borne illnesses after Street-foods consumption

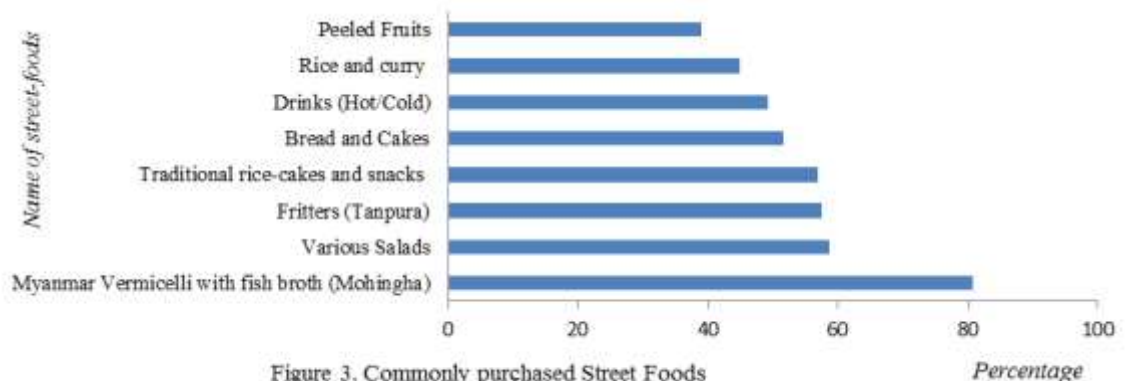
Questions	frequency	% of responses
Are you aware that food-borne illnesses/ diseases can be transmitted through consumption of (unclean) foods?		
- Yes	156	93.4
- No	11	6.6
Are you concern over food safety issues of street food?		
- Very much	71	42.5
- Often	89	53.3
- Sometimes	7	4.2

Are you satisfied with street-foods from safety perspectives?		
- Yes, I am	9	5.4
- No, I'm not	145	86.8
- I have no idea	13	7.8
Have you ever experienced any symptoms such as Diarrhea, vomiting, stomach crump after eating Street-foods?		
- Yes	58	34.7
- No	109	65.3

More than half of them (52.1%) were not aware that Yangon City Development Council-YCDC is controlling stationary restaurants' food safety in voluntary basic. Most (65.3%) thought that stationary restaurants' food safety is better than street foods: but 13.8% still thought that both would have the same level of food safety. Approximately three fourth (75.4%) of them thought that street food shop should be under control of YCDC. Whitehead mentioned that consumer expects the setting of acceptable levels of risk and monitoring of safer food supply from authority concerned (1995). Moreover, consumers are taking unprecedented interest in the way food is produced, processed and marketed, and are increasingly calling for their Governments to accept greater responsibility for food safety and consumer protection (FAO/ WHO, 2003).

4.5 Commonly purchased street foods

The commonly purchased street foods identified by respondents are (1) Mohingha-80.8%, (2) various salads 58.7%, (3) fritters (Tenpura) (57.5%), (4) traditional rice cakes and snacks (56.9%), (5) bread and cakes (51.5%), (6) drinks (49.1%), (7) rice and curry (44.9%) and peeled fruits (38.9%). Maung et.al. mentioned that Mohingha and salads are two of the favorites foods of Myanmar people (2012).



4.6 Consumers attitude on street foods vending practices

The three levels (agree, not sure, disagree) of attitude were employed in consumer street foods questionnaires. They are mainly divided into seven principles as shown in table 4 and results are as follows:

- (1) Results show that great majority of the consumer respondents agreed with the hand washing principle: only 12 % was not sure that hand washing is necessary after touching money.
- (2) As regard with the temporary halt of vending for the exclusion of ill-food handlers, only 44% of respondents agreed that vending should be stopped when one of the family members is sick and 17.4% disagreed and more than one third (34.5%) were not sure about that. More than two third (>70%) agreed that vendors should stop their business temporarily, when they suffer from cough and cold, diarrhea, stomach cramps, typhoid, hepatitis, food poisoning, helminthiasis and communicable diseases.
- (3) The majority of consumer respondents (>88%) agreed with all the facts concerning with the parameters to be considered by vendors in buying raw materials.
- (4) More than 92% agreed with the facts about proper handling of foods and adequate cooking.
- (5) Most of the respondents (>92%) agreed that vendors should discard the contaminated foods, if facing with the (mentioned) three possible contaminant-causing conditions.
- (6) More than 95% agreed that vendors should use soap and water in cleansing of utensils. 22.8% was not sure that rinsing with hot-warm water should be followed after cleansing utensils and 26.3% was not sure that rubbing with clean clothes should be followed in the last step of cleaning.
- (7) More than 88% thought vendors should wear hair restraint and 86% of respondents also thought that vendors should wear apron. However, nearly 25% of respondents were not sure that vendors should not wear jewelries in their hands and arms as a possible source of contaminants. FAO suggested that watches, bracelets and rings prevent the thorough cleaning of hands and forearms.

Table 4: Attitude on street foods vending practices (n=167)

Detailed statements	Attitude Level (%)			Mean	S.D
	Agree	Not sure	Disagree		
(1) <u>Hand washing is necessary</u>					
-After handling raw materials	164(98.2%)	3((1.8%)	-	1.0180	0.01031
-After handling garbage	145(86.8%)	20(12.0%)	2(1.2%)	1.1437	0.02976
-After touching money	147(88.0%)	20(12.0%)	-	1.1198	0.02520
-After using toilet	163(97.6%)	4(2.4%)	-	1.0240	0.01187
-After blowing nose	160(95.8%)	7(4.2%)	-	1.0419	0.01555
-After having meals	159(95.2%)	7(4.2%)	1(0.6%)	1.0539	0.01948

(2) <u>Vendors should temporarily stop from vending or cooking if suffering from</u>					
-Cough and colds	123(73.7%)	36(21.6%)	8(4.8%)	1.3140	0.43230
-Diarrhea	145(86.8%)	15(9.0%)	7(4.2%)	1.1737	0.03701
-Stomach cramps	146(87.4%)	14(8.4%)	7(4.2%)	1.1677	0.36680
-Typhoid	131(78.4%)	30(18.0%)	6(3.6%)	1.2515	0.03958
-Hepatitis	131(78.4%)	28(16.6%)	8(4.8%)	1.2635	0.04179
-Food poisoning	128(76.6%)	31(18.6%)	8(4.8%)	1.2814	0.42370
-Helminthiasis	128(76.6%)	33(19.8%)	6(3.6%)	1.2695	0.40230
-Communicable diseases	139(83.2%)	22(13.2%)	6(3.6%)	1.2036	0.03755
-Sick members of family	74(44.3%)	64(38.3%)	29(17.4%)	1.7305	0.05725
(3) <u>Vendors should consider some parameters in buying raw(to be cooked for vending)</u>					
-Price	164(98.2%)	3(1.8%)	-	1.0180	0.01031
-Freshness	158(94.6%)	9(5.4%)	-	1.0539	0.01753
-Sold by reputable wholesaler	141(84.4%)	23(13.8%)	1(0.6%)	1.2216	0.06656
-Quality Aspects	147(88.0%)	19(11.4%)	1(0.6%)	1.1257	0.02720
-Expiration date	156(93.4%)	10(6.0%)	1(0.6%)	1.0719	0.02177
(4) <u>Vendors should</u>					
-Thorough washing of food(raw) to be cooked	164(98.2%)	3(1.8%)	-	1.0180	0.01031
-Use of safe water for cooking	159(95.2%)	8(4.8%)	-	1.0479	0.01658
-Use of fresh ingredient /raw to be cooked	161(96.4%)	6(3.6%)	-	1.0359	0.01445
-Use of food covers to protect cooked food from dust and insects	162(97.0%)	5(3.0%)	-	1.0299	0.01323
-Adequate cooking of food (time and temperature)	155(92.8%)	11(6.6%)	1(0.6%)	1.0778	0.02246
(5) <u>Vendors should discard foods if food is contaminated with</u>					
-That has been exposed to pests like rats ,cockroaches and flies even if there is no visible evident of gnawed parts or pest larvae	157(94%)	4(2.4%)	6(3.6%)	1.0958	0.39930
-Which come in contact with dirty surface	156(93.4%)	5(3.0%)	6(3.6%)	1.1018	0.40531
-Found containing hairs or staple wire provided these were removed prior to consumption	153(91.6)	7(4.2%)	1(0.6%)	1.1737	0.87110
(6) <u>Methods employed in cleaning utensils needed in food preparing and vending</u>					
-Washing with soap and water	159(95.2%)	7(4.2%)	1(0.6%)	1.0539	0.25168
-Rinsing with hot-warm water	124(74.2%)	38(22.8%)	5(3.0%)	1.2874	0.51603
-Drying with clean clothes	117(70.1%)	44(26.3%)	6(3.6%)	1.3353	0.54453
(7) <u>I think Street food vendors</u>					
-Should wear hair restraint	148(88.6%)	16(9.6%)	3(1.8%)	1.1317	0.38886
-Should wear apron	144(86.2%)	21(12.6%)	2(1.2%)	1.1497	0.39007
-Should not wear jewelries in their hands and arms as a possible source of contaminants	122(73.1%)	40(24.0%)	5(3.0%)	1.2994	0.52083

The consumers-respondents agreed with the good practices, as regard with the attitude of the street food vending practices but a few of them were still not sure of some detailed facts of utensils cleaning and wearing jewelries.

The constraints cited by the respondents include (1) weak in food-safety knowledge of vendors (93.4%), (2) lack of availability of clean water source (92.8%),(3) lack of timely support for garbage disposal system (91.0%), lack of access to clean toilet facilities (90.4%),(5) lack of price competency and (6) due to lack of good practices awareness (86.2%) and(7) due to high mobility (81.4%).

5. Conclusions and Recommendations

This study found that the street foods consumers wanted to be protected by the concerned authority by controlling safety and sanitary condition of street foods. Even though they preferred the home-made foods, they bought street foods for being easy accessibility and for saving time. The causes of the food borne illnesses were well understood but some of them experienced it after trying street foods. Consequently, they thought that the concerned authority YCDC should monitor and control the sanitary condition of street foods production. They saw the weakness of vendors' food safety knowledge and the lack of availability of clean water as the two main constraints which could be corrected and provided by the concerned authority. This study could contribute policy makers in supporting the safety of street foods in downtown Yangon.

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