

# The sanitary condition of food and drink establishments in Awash-Sebat Kilo town, Afar Region, Ethiopia

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## Abstract

This study was aimed to explore the status and factors affecting food hygiene practice among food and drink establishments using a descriptive cross-sectional study among all existing food establishments in Awash Sebat Kilo, Afar Region, in the month of December 2003. A total of 66 were studied, among which fifty (76%) of them were involved in rendering food and drink services. Sixty (91%) were found to use public water taps at the time of the study, while 52 (81%) were found to have some kind of latrines. Basic sanitary practices in liquid and refuse management, soiled dish and drinking cups washing were grossly inadequate in at least 25% of them. Personal hygiene of food handlers was observed in very poor status. It is concluded that the sanitary conditions of studied subjects required strict follow up for the provisions of sanitary codes. [*Ethiop.J.Health Dev.* 2006;20(3):201-203]

## Introduction

A sanitary condition in the urban centers of Ethiopia is generally in a poor condition. Safe water supply and the provision of latrine services are estimated to be 80% and 60% or less, respectively (1-2). The few local studies available on food establishments indicate that food handlers with observable infections (such as skin and respiratory infections) handle and prepare foods (3). These snapshots also show the presence of gross insanitary conditions with reference to the inadequacy of sanitary facilities (hand washing, latrines, water supply systems, kitchen lay outs, etc), poor dish washing practices, and poor personal hygiene among food handlers.

Awash Sebat kilo is a small town located in heavy traffic routes along the main road to Djibouti. The hot climate of the locality favors the quick decomposition of organic food remains, which also facilitates intensive fly breeding. This study aims to explore the sanitary status of food establishments in this particular town.

## Methods

A cross-sectional study design was used to assess the sanitary condition of food establishments and explore major factors affecting food hygiene practice in Awash-Sebat kilo town in the month of December 2003. The town is located at 220 kms from Addis Ababa on the road to Djibouti. Awash-Sebat kilo is the center of Fentale Wereda in Afar Regional State. According to the local authority the town has an estimated population of about 19000 in the year of study.

The study units were all food establishments operating at the time of the study regardless of their licensing status. Four senior medical students who attended an attachment on the Rural Community Health Training Programme used structured and pre-tested questionnaires for data collection. The questionnaire was initially prepared in English and translated in to Amharic. Back translation

into English was also done to check the content validity of the original version. The local Authorities in the town were informed about the study and were requested permission for gaining access to the study units. Type of establishments, sanitary facilities, waste management, and the personal hygiene of food handlers were the main variables used. Definitions for the qualification of various types of food establishments were used in reference to a study made in Zeway town (4).

The quality of data collection was ensured through daily on the spot-checking of the questionnaires for errors and by holding daily discussions among data collectors. Privacy and confidentiality of data was maintained at all stages of the study.

EPI INFO version 6.04 statistical package was used for data entry, cleaning, and analysis. Descriptive statistics, such as frequency distribution, mean, and percentages were employed for the analysis

## Results

### Characteristics of establishments

A total of 66 food and drink establishments were identified in the study. Fifty one (77.3%) were involved in rendering more than one service (food, alcohol, beverages), while 30 (45.5%) were engaged in rendering bed room renting services, other than food and drinks. Fifty (75.8%) were involved in rendering meals daily (breakfast, lunch and dinner). The majority of the establishments, 54 (81.8%), have rendered services for less than or equal to 10 years. Fifty seven (86.4%) of the establishments were operating with formal licensing.

Nearly all the establishments, 60 (90.9%), had piped drinking water supply, while 52 (79%) had latrines, of which 49 (94%) were traditional pit latrines. Forty (82%) dry pit latrines did not have vents for odor removal, while 39 (80%) of them were observed to be clean at the time of the study. The source of water supply was Awash

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River, which was supplied only after sedimentation with out any chemical treatment. Only three establishments used either septic tank or latrine as a means of final disposal for liquid waste that are generated from kitchens and shower facilities. Twelve (18.2%) of the establishments used seepages for handling liquid waste coming from clients' hand washing. Proper refuse bins were found in only 19 (29%) of the establishments (Table 1).

Fifty five of the food establishments served both meals and snacks every day. Local types of hand washing facilities, mostly the "barrel tap" type, was used by the majority, in 53 (96.4%) of the establishments. Forty eight establishments had kitchens, of which only 26 (54.2%) had three compartments for washing greased

dishes. Among all the establishments, 54 (82%) had two compartments or more for washing used drinking cups and glasses. Washing materials used in most cases were deep movable bowls (Table 1).

Forty-nine (74%) of the establishments that had kitchens had food handlers with an average number of 2 per establishment ranging from 1 to 7 per establishment. Personal hygiene of observed food handlers was not complete to satisfy sanitary norms. Visible skin infections were observed on two food handlers and ear infections were also found on another couple of food handlers, raising the infection rate to about 8.2% in establishments that had kitchens. Only 18 (36.7%) of the establishments with kitchens had some kind of working gowns for their food handlers.

**Table 1: Status of sanitary facilities in food and drink establishments, Awash Sebat kilo, December 2003.**

Sanitary facilities	Number of establishments	Percent
<b>Drinking water supply (n=66)</b>		
Piped public water stand	60	90.9
Piped private	6	9.1
<b>Latrine availability (n=66)</b>		
Flush type	3	4.5
Dry pit	49	74.2
Not available	14	21.2
<b>Liquid waste final disposal facility (n=66)</b>		
Septic tank	2	3.0
Latrine pit	1	1.5
Open ditch	63	95.5
<b>Refuse storage (n=66)</b>		
Any type available	47	71.2
Not observed	19	28.8
<b>Hand washing facilities (n=55)</b>		
Wash basin, standard ceramic stands	2	3.6
Barrel type (local)	53	96.4
<b>Dish washing facilities (n=48)</b>		
One compartment	4	8.3
Two compartments	18	37.5
Three compartments	26	51.2
<b>Type of glass washing facility (n=66)</b>		
One compartment	12	18.2
Two compartments	31	47.0
Three compartments	23	34.0
<b>Food handler's physical check up (n=49)</b>		
Fingers/nails cut short	36	73.5
Finger ornaments worn	20	40.8
Head cover having	17	34.7
Presence of separate shower meant for food handlers	12	24.5

## Discussion

A license rate of 86.4% in the study area was found to be better than similar studies done in Zeway and Awassa, which were 49.7% & 70.9%, respectively (3,5). This may be due to the strict procedures followed by the town municipality for licensing. The very limited number of informal sectors in Awash Sebat Kilo as compared to the

previously studied towns could also contribute to the high rate of licensed establishments. The smaller size of the town also allows for an easy recognition of any establishment that works informally. The engagement of most establishments in rendering multi-purpose services was consistent with similar studies done (3,5,6).

The supply of unchlorinated water at the time of the study was unusual given that the town is under the jurisdiction of the municipality. The availability of any type of latrine for use by clients among 79% of the establishments was far greater than that of a study done in Zeway, but less than another study done in Awassa town (3,5). The present practice in liquid waste management was not found to be environmentally friendly among 96% of establishments, which is likely to favor insect breeding and the generation of bad odour. The same situation was observed for refuse management practice. The poor standard of food hygiene practice in soiled dish and glass washing facilities was significant and comparable with similar studies done elsewhere (3,5,6).

Although the practice of trimming finger nails was observed among the majority, the presence of finger ornaments in working hands in one - third of the establishments is believed to hide dirt that cannot be washed easily. Furthermore, the presence of infections among food handlers, although a few in number, shows that the authorities need to have closer inspection and to impose strict restriction on working on infected food handles from working in these establishments. It was found by this study that the poor hygiene of food handlers and the violation of standard food hygiene practice are the major sources of infections as the food handlers themselves might be infected or become carriers of pathogenic micro-organisms (7,8).

Although the sample size seems to be smaller, it could be generally concluded from this study that there exist gross insanitary practices in food hygiene among the study units, which is consistent with similar studies conducted locally. In particular, soiled dish and hand washing practices, liquid waste and refuse management, and the poor health of food handlers require strict attention. The relevant authorities are thus advised for strict the enforcement of food hygiene provisions.

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