

The Level of Students' Awareness on Maintenance of Sewer Blockage in Male Student Hostel Abubakar Tafawa Balewa University Bauchi, Nigeria

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Abstract— *The high rate of reoccurrence of Sewer blockage in Nigeria University hostels has become disquieting, despite the existence of maintenance unit in the university. However, proper sewage maintenance could not be achieved without the users' (student) input. This paper assesses the level of students' awareness in terms of maintenance of sewage blockage in Abubakar Tafawa Balewa University Bauchi, Nigeria. Interview was used as a means of data collection. Twenty eight (n=28) students were randomly interviewed to capture their perception, opinion and general knowledge about maintenance of sewer blockage. The data was transcribed verbatim and analysed manually. The result reveals that many of the students are not much aware of sewage blockage maintenance which contributes much to the persistence of the problem. It is therefore, recommended that awareness campaign should be carried out among the students living in hostel. This can be achieved through proper orientation of the students on sewer blockage and proper implementation of blockage clearance practice and maintenance. Finally it is further recommended that the university authority should include a session on sewer blockage practice during the welcoming orientation of students in to the university, to increase the level of students' awareness about the sewer blockage and maintenance. This will assist to a great extent on the minimization of sewer blockage and the proper use of sanitary appliance by the students.*

Keyword— *awareness; maintenance; sewer blockages; students' hostel*

INTRODUCTION

Sewer is a large pipe, usually underground, that is used for carrying waste water and human waste away from buildings to a place where they can be safely disposed. Sewer also refers to an underground conduit for carrying off drainage water and waste matter (Fenner, 2000). Sewer can either be public or private; public sewer is a sewer that is being taken on by a sewerage undertaker because it collects drains from different households, usually the local water authority therefore taking full responsibility for it. Private sewer deals with a drain within a single unit of complex, which makes the occupants fully responsible for it {2}. Sewer blockage has been one of the major challenges faced in hostel building. It causes great deterioration of the building elements in terms of aesthetics and durability and also poses great risk to the health of the occupants and the environment. According to recent analysis, sewer blockage and overflow is responsible for causing 26% of malaria disease which is also the most common and deadly disease in Africa {3}.

Sewer blockages pose several problems to the functionality of the drainage system. This can include the loss of water closet (WC) facilities which are unable to discharge into the Sewer. The prevention of waste water removal because of a blockage can result in the emission of foul odours from surcharged manholes and yard gullies {4}. The continues hydraulic loading of a blocked sewer can result in the escape of sewage from manholes, inspection chambers or yard gullies and cause external flooding. This may result in contamination of garden or road areas which will require cleaning and disinfection following the event

{5}. External flooding can also result in pollution of natural water courses if an adequate pathway for sewage ingress into a water course exists. In the more extreme cases, sewer blockages can cause internal flooding of property. Aside from the distress and inconvenience caused to the household, this can also pose significant health risks through contamination by disease spreading pathogens {3}.

The main challenges to sustainable sewer system in story buildings, is something has to do with inability of authority to provide appropriately serviced sites for the multitude steaming {7}. Therefore certain guides should be developed to the occupants, to assist in minimizing the occurrence of blockages in sewer pipe lines and ways to handle blocked sewers.

The purpose of sewer system includes; flooding control, waste transport, water collection and recycling, often evolved through trial and error modification after the systems were initially constructed {6}. The causes of sewer system blockage may include; buildup of grease, debris or foreign object in the sewer lateral, sewer line collapse caused by old and deteriorated sewer pipe {5}, presence of debris entering the sewer system due to illegal pipe connection, partial or complete blockage caused by root intrusion into sewer pipe {8}.

Since the causes have been identified, the need for proper sewer disposal and safety orientation should emanate from the need to ensure that students occupying the hostel building can be able to identify a number of factors which are associated with the increased blockage likelihood so as to prevent the sewer system from complete or partial blockage. However in the same

manner, the management of Abubakar Tafawa Balewa University (ATBU) has set up mechanisms by which a number of precautions can be embarked on. This can only be achieved if the students are educated on that particular aspect. Therefore, this study would investigate on the students' level of awareness on the sewer blockage.

1.1 Management of Sewer blockage

Ideologically, a good management of sewer blockage is very essential so as to ensure that partial or complete blockage in the sewer system do not occur and in the case whereby any student in the hostel notice any sign of a partial blockage in the system, must quickly notify the management to take an immediate action so as to prevent the total collapse of the sewer system. Prevention of sewer system blockage saves cost at a long run and reduces the spread of pathogens [5].

According to [9] Students must have an understanding or knowledge of the severity of the sewer blockage observed or anticipated in their hostels. Unfortunately, however, lack of awareness among students remains a barrier to prompt notification of blockage as most students face difficulties in recognising the symptoms of even the most basic forms of sewer blockage [10]. The reporting delay time is the time which elapses between the detection/observance of a sewer blockage and report to the maintenance department by the students. This depends mainly on the inconvenience which the blockage causes the students and is not a measure of the seriousness of the sewer blockage [11]. Lack of maintenance of sewer blockage awareness precludes students from identifying in time the significance and urgency of a repair [12] and also manifests in the wrong notion that sewer blockage has no impact on students' level of performance. [7].

2 METHODOLOGY

Data and information was collected from interview conducted by the researchers. Respondents comprised of students living in Hall II hostel only, it also comprises of first year to final year students. 28 students were randomly interviewed to capture their perception, opinion and general knowledge. The occupants were approached with open-ended questions and in line with that, the respondents gave their in depth view about the subject matter. The Data was transcribed verbatim and later analysed manually.

In the course of the interview conducted, information on the profile of the respondents was asked. Some of the questions the students were asked include years of study in the university, period of stay in the hostels, and experiences with sewer blockage. Question was also asked on the level of sewer pipe maintenance by the school and Students' level of awareness on causes of sewer blockage and maintenance.

3 FINDINGS

3.1 Respondents Information

A total of 28 target respondents were interviewed, and all of them responded to the interview effectively, achieving a 99% response rate. The high response rate is

attributed to the manner of approach to respondents. The statistics of the respondents, with reference to their levels in the university, shows that 41% of the respondents were 1st year, 14% were 2nd year, 18% were 3rd year, 11% were 4th year while, 16 % were in their 5th years. Concerning how long the students stayed in the hostel, 12 of the respondent representing 38% had stayed in the hostel for 0-1 year, 10 of the respondents representing 31% had stayed for the period of 2-3 year, while 10 of the respondents representing 31% had stayed for 4-5 year. This result obtained was appropriate because about 66% of the respondents had stayed in the hostel for 2-5 years.

3.2 Causes of Sewer Blockage

About 80% of the students are not aware of some of these causes and therefore contributing to the problem of sewer blockage because of their ignorant towards the causes and maintenance of the sewer. This scenario is very dangerous, as lack of knowledge of these causes among some students in the hostel pose great risks in case of any sewer blockage and over flow

3.3 Dangers of Sewer Blockage

When asked about the danger of sewer blockage, the students affirmed their exposure to the danger. However, they did not attached much important to it as they always stay in the hostel while the sewer is overflow and continues for several week without repair. This shows that students are still exposing to all dangers due to their lack of knowledge of its causes and how to prevent it. It is obvious that the management of the hostel does not give much attention to issues regarding sewer blockage and as such the problem continue to persist and pose serious danger to the occupants of the hostel building.

3.4 Blockage clearance practice

The hostel management and the school management as a whole have the responsibility of clearing blocked sewers and also periodic inspection and clearance of various man hole chambers and sock away pits in the hostels and also maintain or change old and damaged sewer pipes. This maintenance schedule have been put in place by many organizations including some Tertiary institutions school but are not fully implemented due to lack of supervision. When the students were asked about the clearance of the sewer when it is blocked, 70% showed lack of concern and said that is not their responsibility as it is the management responsibility to attend to the problem. However, if the students were informed that this is everybody's responsibility, they may ensure that no solid waste is allowed into the sewer system through the sanitary appliance and if by any mistake falls, it should be removed immediately.

3.5 Sewer Blockage Awareness

Knowledge on possible ways to avoid the occurrence of sewer blockage: 13% of the respondents were aware and 29% are fairly aware of possible ways. The remaining 58% were not aware of such measures. The study indicates that awareness campaign i on the causes of blockage is necessity to all students living in the hostel building. Students' ignorance about the subject is very dangerous as

it can subject them to health hazard.

Periodic maintenance and clearance of sewer: 8% of the respondents were aware and 29% are fairly aware of maintenance and clearance of sewer. The remaining 63% were not aware. It is always important for the hostel management to do periodical maintenance and clearance of the sewer system to control or avoid possible blockage, some of this maintenance includes inspection and changing of old and damage pipes. The views of the respondent were sought on the possible number of time maintenance was carried out and also their role in sanitation, 90% of the respondents were not aware of periodic maintenance by the management and also their role in proper sanitation.

CONCLUSION

This study was undertaken to assess the level of awareness of students on sewer blockage in Hall II hostel ATBU Bauchi. In view of the information analyzed from the interview made during the survey it was evident that sewer blockage awareness is low amongst the students. Sewer blockage is clearly high and posing extreme danger to health, safety, general welfare and strength of the structure. It is evident that school management who are responsible for blockage clearance management and students' orientation on the causes and measure to minimize its reoccurrence are not given much attention to the maintenance aspect of the sewer. Finally it is acclaimed that the university authority should include a session on sewer blockage practice during the welcoming orientation of students in to the university. This will assist to a great extent to minimized sewer blockage and inappropriate use of sanitary appliance by the students.

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