

Anal Cleansing and Excreta Disposal Practices among Young Adults in Southeastern Nigeria

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ABSTRACT

Proper anal cleansing and excreta disposal practice is important in maintaining good sanitation and hygiene. The objective of this study was to investigate the anal cleansing and excreta disposal practices of young adults in tertiary institutions located in Southeastern Nigeria. A total of 1100 young adults comprising 430 (39.09%) males and 670 (60.91%) females participated in the study. Results showed that out of the 650 respondents in Universities, 407 representing 62.62% used tissue paper only for anal cleansing after defecation, 162 (24.92%) used water only, while 81 (12.46%) used water and soap for anal cleansing. Out of the 210 respondents in Polytechnics/Monotechnic, 138 representing 65.71% used tissue paper only for anal cleansing after defecation, 44 (20.95%) used water only while 28 (13.34%) of used water and soap for anal cleansing. Results also showed that out of the 240 young adults in Colleges of Education, 155 representing 64.58% used tissue paper only in their anal cleansing practice, 39 (16.25%) used water only, while 46 (19.16%) of the young adults used water and soap for anal cleansing after defecation. The use of toilet facility was most practiced among young adults in Southeastern Nigeria. Data analysis using the one way ANOVA for testing the significance of the difference in the excreta disposal practices among young adults in tertiary institutions of Southeastern Nigeria at 5% level of significance showed that the excreta disposal practices among the young adults was significantly

different among the institutions ($P < 0.05$). Adequate toilet facilities with running water in every tertiary institution were recommended.

Keywords: Anal cleansing, Excreta disposal, Hygiene, Sanitation, Hand washing

INTRODUCTION

Anal hygiene also known as anal cleansing refers to hygienic practices carried out shortly after defecation in order to remove remains of fecal matter from the anus of man. [1] Methods for cleansing the peri-anal region after defecation differ around the globe. Cleaning with tissue paper (dry cleaning) or washing with water (wet cleaning), make up two major methods among others, although it is still not certain as to which method is better. [2] For centuries, in South and South East Asia including India and Islamic societies, water was used for anal cleansing using the left hand. [2] In Western cultures, anal cleansing is generally done with toilet paper only. In some parts of developing countries and during camping trips, materials such as vegetable matter, mud, stones, sticks, newspaper, corn cobs and leaves are sometimes used for anal cleansing. [3] The absence of proper materials in households can, in some circumstances, be correlated to the number of diarrhea episodes per household. [1] Inadequate materials or

inappropriate practices for anal cleansing can lead to excessive fecal hand contamination, which may reduce the effectiveness of hand-washing. [4] A school toilet lacking toilet paper and hand-washing facilities could serve as the source of Hepatitis A outbreak, a conduit for viral gastroenteritis and a source of discomfort and toilet avoidance, which can lead to constipation and urinary tract infections. [4] If the anal area is not cleaned properly after a bowel movement, a small amount of stool may be left behind on the skin, causing the area to itch. [5] Anal cleansing practices are linked to defecation postures. It is assumed that 'sitters' generally wipe whereas squatters usually wash. [6] However, the anus can be hard to clean after a bowel movement, due to its shape, leading to the possibility of feces becoming trapped in the folds of skin around the anus. Whilst there is a significant amount of literature [7,8] on hand contamination as a result of cleaning the anus after defecation, there is very little evidence on the most effective method for cleaning the anus and buttocks after defecation. If the area isn't cleaned properly, fecal matter left behind on the skin can cause itch/irritation, it can result in smell and soiling of underwear/clothing.

According to WHO [9], safe disposal of excreta in a way that it does not contaminate the hands, food or fields, is necessary for a healthy environment and for protecting public health. Generally, the methods used for excreta disposal can be grouped into: non-sewerage (non-network) water independent methods; non-sewerage (non-network) water dependent methods; and sewerage (network) water dependent methods. [10] The non-sewerage water independent methods of excreta disposal do not involve the use of connected pipes (sewer) and also do not require water for it to be used. The non-sewerage water independent methods include Bush disposal method, Conservancy method (or Bucket latrine), Pit latrine, Compost latrine, Borehole and trench latrines. [10] The non-sewerage water dependent methods require

water for their operations; hence, they could be used where water is available. Examples are the pour flush latrine, aqua privy and septic tank. [11] The sewerage water dependent method is a system of disposing human excreta and other water-borne waste product from houses, streets, hotels and factories. These wastes are conveyed through sewers that are interconnected to sewage work where the sewage undergoes a series of treatments to be acceptable for discharge into rivers or the sea, according to various local laws. [12]

Inadequate excreta disposal constitutes a major public health threat due to the ever-increasing population without access to improved sanitation and hygiene facilities. Human feces contain a wide range of disease-causing organisms comprising viruses, bacteria and eggs or cysts of human parasites. These organisms are transmissible to man through flies, contaminated fingers, food and water, utensils and by direct contact with contaminated objects. [13] The objective of this study was to investigate the anal cleansing and excreta disposal practices of young adults in tertiary institutions located in Southeastern Nigeria.

MATERIALS AND METHODS

This study was a cross-sectional study of young adults who are students of 6 tertiary institutions located in Southeastern Nigeria. One thousand one hundred young adults between ages 18 and 28 years from six tertiary institutions were used for this study. They were interviewed using a well-structured questionnaire. The multi-stage sampling technique was used to select participants for the study. They all gave an informed consent to be part of the study. Tables were used to present data.

RESULTS

A total of 1100 young adults comprising 430 (39.09%) males and 670 (60.91%) females from six (6) tertiary institutions in Southeastern Nigeria participated in the study. Data presented in table 1 showed that out of the 650

respondents in Universities, 407 representing 62.62% used tissue paper only for anal cleansing after defecation, 162 (24.92%) used water only, while 81 (12.46%) used water and soap for anal cleansing. Similarly, out of the 210 respondents in Polytechnics/Monotechnic, 138 representing 65.71% used tissue paper only for anal cleansing after defecation, 44 (20.95%) used water only while 28 (13.34%) of used water and soap for anal cleansing. The Table also showed that out of the 240 young adults in Colleges of Education, 155 representing 64.58% used tissue paper only in their anal cleansing practice, 39 (16.25%) used water only, while 46 (19.16%) of the young adults used water and soap for anal cleansing after defecation. Table 2 presented the frequencies, percentages and means on how hygienic the excreta disposal practices common among young adults in Universities were. From the table, 172 representing 26.46% of the young adults in Universities very often used the provided toilet facilities to dispose excreta, 292 (44.92%) of the young adults often used the provided toilet facilities, 172 (26.46%) sometimes used it, while 14 (2.15%) of the young adults in the Universities rarely used the provided toilet facilities. The table also revealed that 66 (10.15%) very often threw their excreta into nearby bush, 185 (28.46%), 181 (27.85%) sometimes threw their excreta into the bush, whereas 218 (33.54%) rarely threw their excreta into nearby bush. Fifty-six (8.62%) respondents in the universities in Southeastern Nigeria very often threw their excreta into the waste bin, 157 (24.15%) often threw their excreta into the waste bin, 199 (30.62%) threw their excreta into waste bin, while 238 (36.62%) rarely threw their excreta into the waste bin. Finally, 8 respondents representing 1.23% very often threw their excreta into the water way/drainage, 234 (36.00%) young adults often threw into the water way/drainage, while 90 (13.85%) sometimes threw their excreta into water way/drainage and 318 (48.92%) rarely practised throwing their

excreta into the water way/drainage. The mean of 2.96 indicated that use of provided toilet facility was most practiced among young adults in Southeastern Nigeria.

Table 3 presented the frequencies, percentages and means on the excreta disposal practices common among young adults in Polytechnics/Monotechnic. From the table, the most common excreta disposal practice among young adults in Polytechnics/Monotechnic was via the provided toilet facilities. For this practice, 170 representing 80.95% out of the 210 young adults in Polytechnics/Monotechnic very often used the provided toilet facilities to dispose excreta, 19 (9.05%) of the young adults often used the provided toilet facilities. Furthermore, 4 (1.90%) of the young adults in the Polytechnics/Monotechnic very often throw their excreta into the water way/drainage, while 205 (97.62%) sometimes dispose their excreta into the water way/drainage. Finally, 2 (0.95%) of the young adults in Polytechnics/Monotechnic very often throw excreta into the nearby bush while 12 (5.71%) very often throw their excreta into the waste bin. The mean of 3.62 indicated that use of provided toilet facility was most popular in polytechnics/monotechnic.

Table 4 displayed the methods of excreta disposal common among young adults in Colleges of Education. The table showed that majority of the students responded very often and often to the methods of excreta disposal. This was seen as 131 (54.58%) and 54 (22.50%) students agreed that they use the provided toilet facility for their excreta disposal very often and often respectively. Also, 16 (6.67%) and 102 (42.50%) also agreed that they threw their excreta into nearby bush very often and often respectively, and 214 (89.17%) and 8 (3.33%) students also agreed that they threw their excreta into the waste bin very often and often respectively. The students' response to throwing it into the drainage indicated that majority of the students in the Colleges of Education rarely threw their excreta into the water

way/drainage system. This was revealed as 212 (88.33%) ticked rarely to the question. The mean of 3.78 indicated that throwing excreta into the waste bin was most practiced among young adults in colleges of education. Table 5 is the ANOVA F-ratio for testing the significance of the difference in the excreta disposal practices among young adults in tertiary institutions in Southeastern Nigeria which was not significantly different among the

institutions. Since the calculated F-ratio as indicated in the table is greater than the critical F-ratio ($267.896 > 3.00$) and p-value is less than the significance level of 0.05 ($0.000 < 0.05$), the null hypothesis is therefore rejected. Thus, excreta disposal practices among young adults in tertiary institutions in Southeastern Nigeria were significantly different among the institutions.

Table 1: Distribution of anal cleansing practices among young adults in the different tertiary institutions

Anal Cleansing practices	Universities		Polytechnics/Monotechnic		Colleges of Education	
	n	%	n	%	n	%
Tissue Paper Only	407	62.62	138	65.71	155	64.58
Water only	162	24.92	44	20.95	39	16.25
Water and Soap only	81	12.46	28	13.34	46	19.17
Total	650	100.00	210	100.00	240	100.00

Table 2: Distribution of methods of excreta disposal among young adults in Universities

Method of excreta disposal	Very Often		Often		Sometimes		Rarely		\bar{X}
	n	%	n	%	n	%	n	%	
Use the provided toilet facility	172	26.46	292	44.92	172	26.46	14	2.15	2.96
Throw it into nearby bush	66	10.15	185	28.46	181	27.85	218	33.54	2.15
Throw it into the waste bin	56	8.62	157	24.15	199	30.62	238	36.62	2.05
Throw it into the water way/drainage	8	1.23	234	36.00	90	13.85	318	48.92	1.90

Table 3: Distribution of methods of excreta disposal among young adults in Polytechnics/Monotechnic

Method of excreta disposal	Very Often		Often		Sometimes		Rarely		\bar{X}
	n	%	n	%	n	%	n	%	
Use the provided toilet facility	170	80.95	19	9.05	3	1.43	18	8.57	3.62
Throw it into nearby bush	2	0.95	0	0.00	4	1.90	204	97.14	1.05
Throw it into the waste bin	12	5.71	2	0.95	4	1.90	192	91.43	1.21
Throw it into the water way/drainage	4	1.90	1	0.48	0	0.00	205	97.62	1.07

Table 4: Distribution of methods of excreta disposal among young adults in Colleges of Education

Method of excreta disposal	Very Often		Often		Sometimes		Rarely		\bar{X}
	n	%	n	%	n	%	n	%	
Use the provided toilet facility	131	54.58	54	22.50	2	0.83	53	22.08	3.10
Throw it into nearby bush	16	6.67	102	42.50	110	45.83	12	5.00	2.51
Throw it into the waste bin	214	89.17	8	3.33	10	4.17	8	3.33	3.78
Throw it into the water way/drainage	18	7.50	10	4.17	0	0.00	212	88.33	1.31

Table 5: Summary ANOVA Table

F_{cal}	df_1	df_2	F_{crit}	p-value	α -level	Decision
267.9	2	549	3.00	0.000	0.05	Hypothesis rejected

DISCUSSION

Adequate cleaning of the anal area is very important for maintaining a healthy hygiene after using the toilet. The results of Table 1 are in line with the review article by Garg and Singh [14] which identified the use of toilet paper and washing with water as the two major methods for perianal cleaning after defecation. The results differ from the findings of McMahan et al. [4] in Kenya, where the study population used materials

like school paper, leaves, grasses, stones, corn-cobs and even their hands in anal cleansing. This could be for the fact that those were a much younger population (12 to 15years) than those used for this study (16 to 28years). After toilet usage, washing the anus with water ensures proper anal hygiene. Following this would be proper hand washing with soap and running water. The use of wet wipes as obtainable in America and Europe is also encouraged as it

combines the advantages of using tissue paper and washing with water. [14]

Proper handling of excreta is very critical in maintaining good hygiene and preventing germ infections. Among the university young adults, 26.46% admitted to using the provided toilet facility very often. The only mean value that fell above the criterion mean of 2.50 was the use of provided toilet facility with a mean value of 2.96. Results from the polytechnics / monotechnic revealed that 80.95% accepted using the provided toilet facility very often. Among respondents from the college of education, 54.58% admitted that they very often used the provided toilet facility. A study by Miner et al. [15] on the practice of sewage disposal revealed that 37.5% of respondents used pit toilets and 17.5% embarked on open defecation. Bora et al. [16] assessed the availability and utilization of sanitation facilities and reported that 61.1% of respondents who had pit latrine used it regularly and 38.9% did not use it at all. In as much as a good percentage of the respondents claimed that they used the provided toilet facility very often, on further probing, it was found out that most of the respondents had very small buckets that go by names such as 'magic poo', 'magic bucket' or 'shanty'. These small buckets were used for defecating (usually done outside their rooms, near the bathrooms/toilets areas or sometimes in the rooms), and subsequently washed into the provided toilets, or even into any nearby field/bush. This practice they claimed was to avoid contracting any infection from the toilets and also because the toilets were often very dirty. Toilet facilities with running water are very important, but it was observed that though there were toilet facilities in many of the hostels where the students resided, most of them were not functional. Some were blocked and others very dirty. There was no running water to effectively flush the few that were functional. Relevant studies [17,18] have advocated for adequate running water and pour flush toilets to encourage proper

excreta disposal and good sanitation and hygiene practices.

In conclusion, young adults in tertiary institutions of Southeastern Nigeria practiced good anal cleansing. It was also concluded from the findings of this research that excreta disposal practices among young adults in tertiary institutions of Southeastern Nigeria was unhygienic given the fact that any method of excreta disposal apart from consistent use of the provided toilet facility constitutes open defecation which is a very unhygienic practice. It was recommended that tertiary institutions should ensure that adequate toilet facilities with running water are available for students.

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