

Socio-Demographic Determinants Of Utilization Of Dental Services Among Secondary School Students

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ABSTRACT

Objective: This study evaluated the socio demographic determinants of utilization of dental services among secondary school students.

Method: A cross-sectional study of secondary school students attending schools in the immediate vicinity of a tertiary health facility that provides dental services. The analysis was done using frequency distribution, logistic regression, cross tabulations and test of significance with chi square. $P < 0.05$ was considered statistically significant.

Results: A total of 741 students participated in the study with 207 (27.9%) reporting dental visits mainly when they had dental problems. There was statistically significant association between the type of student, class and utilization of oral health services. Logistic regression showed no socio demographic factor was predictive of utilization of oral health services.

Conclusion: Although knowledge of who a dentist is was high, utilization of dental services was poor with no socio demographic factor being a predictor of utilization of dental services.

Keywords: Utilization, Dental Services, Students

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INTRODUCTION

Oral health care may be divided into two general types of attention: curative and/or rehabilitative and preventive services (1). Oral health is a part of overall health in adolescence. Oral health care is the most common type of unmet health care need in adolescence (2,3). Adolescents are defined very broadly as youths between the ages of 10 to 18, with the adolescent patient being recognized as having distinctive needs (4,5) due to factors such as a potentially high caries rate, increased risk for traumatic injury and periodontal disease, a tendency for poor nutritional habits, an increased esthetic desire and awareness, complexity of combined orthodontic and restorative care (eg, congenitally

missing teeth), dental phobia, potential use of tobacco, alcohol, and other drugs, pregnancy, eating disorders, and unique social and psychological needs (6,7).

The health care utilization of a population is dependent on their health seeking behavior which may be determined by physical, political, socio economic and socio cultural factors (8). Although there is no standard definition of "adolescent" (8), Lack of utilization of dental services among the young have been attributed to age (1,9), gender (1, 9-17), socioeconomic position (18), ethnic background,(9,16,17) oral health related behavior,(10) smoking habits (11) and poor perceived oral health status (16,19). Fear of dentist (20) and dental

injection,(21) cost of treatment,(21) fear of contracting infection,(21) no access to dentists,(21) dissatisfaction with previous dental treatment (20) and transportation problems (21) have also been reported in Nigeria.

Health insurance and family income have been reported to be the most consistently related socio demographic factor related to adolescents' use of preventive medical and dental care (22). It has also been observed that the quality of dental care, reasonable fees for dental services and close location of dental clinics to students' homes were encouraging factors for utilization of dental services (23). Furthermore a study by Lopez and Baelum (10) associated socioeconomic and behavioral factors as independently associated with the frequency of utilization of dental services. They also noted that the reasons for dental visits among the adolescent population were strongly associated with self-perceived poor oral health status and infrequent dental visits and symptoms.

It has been reported that the reason for utilization of oral health services is often related to the presence of symptoms (2,20,21) with the utilization of curative and/or rehabilitative services during adolescence often driven by the presence of pain (1). Girls were more likely to visit the dentist frequently than boys because of symptoms in Chile (2).

The availability and accessibility of oral health services are seriously constrained and the provision of essential oral care is limited in sub-Saharan Africa (24). Level of utilization of dental services is very low in Nigeria,(18,20,21) with the advocacy for urgent need on systematic studies of the utilization of oral health services and the factors involved in seeking health care to enable development of oral health programs to match the population needs, this study was designed to evaluate the socio demographic determinants of

utilization of dental services among secondary school students and also analyze factors responsible for utilization and non-utilization of dental services among this group.

MATERIALS AND METHOD

This study was a cross-sectional study of secondary school students attending schools in the immediate vicinity of a tertiary health facility that provides dental services. A multi-stage sampling method was used to pick the 2 schools (one boarding and one day school) out of the four identified and then to pick participants from the schools for the study. Ethical approval was sought from the College of Medicine, Ethics and Research Committee of the University of Benin. Permission was sought from the head of the school and informed consent was sought from the parents/ guardians of the respondents before administration of the questionnaire. The research tool was a pre-tested self-administered questionnaire with Cronbach's alpha of 0.85..

The questionnaire elicited information on demographic characteristics, estimation of utilization of dental services, reasons for utilization and non-utilization of oral health services. The data so obtained was analyzed using Statistical Package for Social Sciences (SPSS) version 17.0. The analysis was done using frequency distribution, logistic regression, cross tabulations and test of significance with chi square. $P < 0.05$ was considered statistically significant.

RESULTS

A total of 741 students participated in the study with a response rate of 99%. The respondents' age ranged from 9 to 18 years with a mean age of 12.8 ± 1.8 years and a male female ratio of 1:1.5. More than half (61.9%) were in junior secondary school and 38.1% were in senior secondary school while 282 (38.1%) were boarders and 459 (61.9%) were day students. Less than a quarter (22.7%) were from upper so-

cioeconomic class families while 67.3% and 10.0% were from the middle and lower socioeconomic class families. Most of the respondents (85.8) were from the monogamous setting with 31.1% being the first child of their family (Table 1).

Majority (97.7%) knew who a dentist is while only 207 (27.9%) had been to a dentist. Among those who had visited a dentist only 16.9% had visited in the last 6 months while 40.6% and 32.8% had visited in the last year and last 5 years respectively. The remaining 9.7% had their last visit over 5 years ago. Most of the respondents (72.0) who had visited a dentist only visited when they had oral health problems while 15.5% and 12.5% visiting once and twice a year respectively.

Table 1: Socio demographic characteristics of respondents

Characteristics	Frequency n	Percent %
Age (years)		
9-12	363	49.0
12-18	378	51.0
Gender		
Male	298	40.2
Female	443	59.8
Class		
Junior secondary	459	61.9
Senior secondary	282	38.1
Type of student		
Boarder	282	38.1
Day	459	61.9
Type of family		
Monogamous	636	85.8
Polygamous	105	14.2
Socioeconomic class		
Upper class	168	22.7
Middle class	499	67.3
Lower class	74	10.0
Position in family		
First child	231	31.1
Last child	142	19.1
Other birth positions	368	49.8
Total	741	100.0

Table 2: Association between Socio demographic characteristics of the respondents and utilization of oral health services

Demographic characteristics	Been to a dentist		Total n (%)
	Yes n (%)	No n (%)	
Age			p=0.4
9-12	106 (29.2)	257 (70.8)	363 (100.0)
12-18	101 (26.7)	277 (73.3)	378 (100.0)
Gender			p=0.07
Female	113 (25.5)	330 (74.5)	443 (100.0)
Male	94 (31.5)	204 (68.5)	298 (100.0)
Class			p=0.04
Junior secondary	140 (30.5)	319 (69.8)	459 (100.0)
Senior secondary	67 (23.8)	215 (76.2)	282 (100.0)
Type of student			p=0.005
Boarder	62 (22.1)	219 (77.9)	281 (100.0)
Day	145 (31.5)	315 (68.5)	460 (100.0)
Type of family			p=0.4
Monogamous	174 (27.4)	462 (72.6)	636 (100.0)
Polygamous	33 (31.4)	72 (68.6)	105 (100.0)
Socioeconomic class			p=0.9
Upper class	48 (28.7)	119 (71.3)	167 (100.0)
Middle class	138 (27.5)	363 (72.5)	501 (100.0)
Lower class	21 (28.8)	52 (71.2)	73 (100.0)
Position in family			p=0.4
First child	61 (26.4)	170 (73.6)	231 (100.0)
Last child	46 (32.4)	96 (67.6)	142 (100.0)
Other birth positions	100 (27.2)	268 (72.8)	368 (100.0)

Evaluation of the relationship between the various socio demographic characteristics and utilization of oral health services showed statistically significant relationship between the type of student (boarder or day student), class (junior or senior secondary) and utili-

zation of oral health services (Table 2) Logistic regression showed that age, sex, type of family, socio economic status of the family, class and position of birth in the family were not predictive of utilization of oral health services among the study population.

Table 3: Reason for visiting the dentist among the respondents

Reason	Frequency n	Percent %
Pain	93	45.0
Hole in teeth	64	30.9
Mouth odour	12	5.8
Accompanied someone	3	1.4
All of the above	2	1.0
Other reasons	33	15.9
Total	207	100.0

Table 4: Treatment received during dental treatment among the respondents

Reason	Frequency n	Percent %
Filling	47	22.7
Cleaning	72	34.8
Extraction	78	37.7
Denture	3	1.4
Couldn't remember	7	3.4
Total	207	100.0

Those who had visited a dentist visited for several reasons with 44.0% visiting because of pain (Table 3) Different treatment were rendered to those who had visited a dentist (Table 4) with 164 (79.2%) of them satisfied with the treatment they received while 43 (20.8%) were not satisfied. Painful treatment was the reason for dissatisfaction with treatment in 12 (27.9%) while 11 (25.6%) felt they waited too long to be treated and 3 (7.0%) reported that their appointment was not convenient.

Non utilization of dental services was reported by 534 (72.1%) and several reasons were adduced for this (Table 4). The most common reason reported by the respondents was they did not have any dental problem.

DISCUSSION

This study gives an insight to the utilization of dental services among adolescents in Benin City taking into cognizance their proximity to a tertiary institution which offers dental services. The expectation of this study was to gather self-reported information on dental service utilization among this group.

Though other studies have reported a low level of dental awareness as a barrier to utilization of dental services (24-26), knowledge of a dentist in this

Table 5: Reason for non-utilization of oral health services among the respondents

Reason	Frequency n	Percent %
No dental problem	398	74.5
No time	13	2.4
Don't know where to find a dentist	6	1.1
Afraid of dentists	5	1.0
My parents have not taken me	102	19.0
No money	5	1.0
I can't be bordered	5	1.0
Total	534	100.0

study population was high as 97.7% knew who a dentist was, this may be attributed to their proximity to a major healthcare facility and probably may have benefitted from school health outreaches, or may be part of their educational curriculum which may have enlightened them about different health professionals.

Utilization of dental services was poor as only 27.9% had been to a dentist this is comparable to other Nigerian studies which reported 14% and 26% utilization of dental services (27-29) and in contrast to another study which reported a 75% utilization of dental services (30). The reason for this may be the location of administration of this questionnaire which was done in schools as opposed to the other studies which were hospital based. Also the low turnout of adolescents in utilizing dental services maybe due to their dependence on parents and guardians to take them to the hospital when needed or due to constraints on these parents or guardians who may only deem it necessary when the adolescent is in pain or when they feel or adjudge the dental complaint is serious enough to warrant seeing a dentist.

Age, sex, type of family, socioeconomic class, type of school (boarding or day) and position in family were not predictive of utilization of oral health services among this study population. This reveals that no matter the socio-demographic status of a child it does not translate to utilization of oral health services. Thus, this may be a reflection of what is seen in the adult population and their attitude to oral health care that plays a major role in the utilization of these services in the study population.

Statistically significant relationship between the type of student whether a boarder or day student and utilization of oral health services can be explained by the fact that the boarders are confined during the school session in the school hostels while the day students

return home daily to their parents/guardians. The day students have greater tendency to visit the dentist if they have problems while the boarders may be treated or seen at the school's infirmary where they may get emergency treatment and subsequently fail to visit a dentist during the holidays if the symptoms don't recur.

Statistically significant relationship between the class whether junior or senior secondary and utilization of oral health services shows that the more of those in junior classed tend to utilize dental services. This may be explained by the fact that most of those who sought dental treatment did it because of pain and the children in the younger class may have a low pain threshold and will tend to nag their parents/guardian into finding solution to their pain. Among those who had visited a dentist 44.8% presented for dental treatment due to pain, this is similar to other studies (55.8%- 63%) which reported pain to be the most prominent reason for seeking dental treatment (20, 30). This may be because the presence of pain may indicate a more serious problem and usually a motivating factor to seek treatment and thus the need for emergency dental treatment as reported by Ekanayake et al (31). Of those who had been to a dentist 79.2% of them were satisfied with the treatment given them, though this study did not assess the level of satisfaction and reasons for satisfaction this may be the focus for another study, but this may be encouraging for adolescents to want to come back for dental treatment.

Majority of study participants (74.7%) reported that their reason for non-attendance to a dental clinic was because they did not have any dental problem, this may also be attributed to the fact that pain was the main motivating factor for seeking dental treatment thus accounting for the low rate of patients of patients seeking preventive dental care (31). The second commonest reason reported by the respondents

was that their parents had not taken them to see a dentist. Children are not solely responsible for taking decisions regarding seeking health care, they are the responsibility of their parents and guardians and if they do not see a need to take their wards to the dentist these wards are unable to access or utilize dental services. A study (30) reported that one third of its study participants though able to afford dental treatment did not seek it as they were complacent and attached less importance to their oral health. This may reflect also on children and adolescents who are in proximity to these adults and also learn similar attitudes.

CONCLUSION

This study revealed that the knowledge of a dentist was high in this study population, but utilization of dental services was poor even though proximity to a dental service provider was not a barrier. Among those who had visited a dentist the most common reason was due to pain and majority of those who were given dental treatment were satisfied with the treatment they received. Majority of the study participants felt the only reason for visiting a dentist was when there was a problem. Age, sex, socio-economic status, type of family did not play an important role in predicting utilization of dental services in this study population. There is a need for oral health awareness and promotion with emphasis placed on preventive oral health care.

RECOMMENDATION

Oral health awareness and the importance of preventive oral care must be emphasized to children as well as parents/guardians.

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