RELATIONSHIP BETWEEN KNOWLEDGE ON DENTAL CARE AND UTILIZATION OF DENTAL SERVICES BY IIANI SECONDARY SCHOOL STUDENTS.

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ABBREVIATIONS

ANG - Acute Necrotising Gingivitis
B.D.S - Bachelor of Dental Surgery
BOHCP - Basic Oral Health Care Package
DMF-T - Decayed, Missing, Filled Teeth
FDS - Faculty of Dental Sciences
GoK - Government of Kenya
IPD - Ignorance, Poverty and Disease.
MOH - Ministry of Health
MPH - Master of Public Health
MSA - Mombasa
NBI - Nairobi
PCs - Presenting Complaints
PhD - Doctor of Philosophy
U.O.N. - University of Nairobi
UDH - University Dental Hospital
WHO - World Health Organization
# TABLE OF CONTENTS

Title of proposal..............................i
Abbreviations..................................ii
Table of contents..................................iii
Summary.........................................iv
Introduction....................................1
Literature Review..................................2
Justification......................................4
Objectives.......................................4
Hypotheses.......................................4
Variables.........................................4
Materials and Methods...........................5
  Study area.....................................5
  Study group/Population.........................5
  Study Design...................................5
  Sample Size...................................5
Sampling Criteria..................................5
  Inclusion Criteria..............................5
  Exclusion Criteria..............................5
Data collection, Instruments and techniques....5
Logistics.........................................6
Ethical considerations............................6
Data Analysis And Presentation...................6
Perceived benefits................................6
Budget............................................7
References.......................................8
Questionnaire....................................9
SUMMARY

Objective: the purpose of this study is to determine the relationship between knowledge of dental care and utilization of dental services by Iiani Secondary School students.

Design: a descriptive cross sectional study.

Sample and methods: secondary school students (n=162) chosen on convenience, aged 13-19 years from Iiani Secondary School will be studied. The student will fill structured questionnaires that will be pre-tested for reliability. The questionnaires will contain both open-ended and close-ended questions.

Data analysis: data will be manually analyzed.

Discussion: Results will be compared with other results obtained in other parts of the world by other researchers.

Recommendations: Recommendations will be made on whether more emphasis about knowledge on the dental care and utilization of dental services need to be put in place or not. However, since this study would cover a small sample, the investigation would like to encourage more research on the sample topic but covering a huge sample that would represent the group investigated, after which recommendations would be drawn and handed to the dental policy makers.
INTRODUCTION

Dental education, which forms the basis of dentistry, has a history that dates several years back world widely. Lesan W.R. (1) In Kenya, the history of dental education is fairly short, spanning over a period of three decades of which in millennium terms, this is a very short time. When Kenya gained independence, the government laid down three policies, which were to be effected – to eliminate ignorance, poverty and disease (IPD). Amongst the health problems known to exist was dental disease manifesting as periodontal disease and dental decay, which manifests as a chalky discoloration before cavitation and subsequent tooth loss (1,2).

The G.O.K realizes that a basic oral health care package (BOHCP) advocated by the WHO which could be incorporated into primary health services at sub-district level and in the school dental service would be most suitable to meet the oral health needs of the population (3). It has therefore, through the M.O.H been on the struggle to ensure adequate provision of health facilities and quality health services to all Kenyans. To achieve this, it has been trying to decentralize health facilities throughout the country. However, not all members of a society will utilize a health facility despite the fact that it may be available to them. Therefore, the oral health status of an individual within a community provided with the facility may not be as good as expected. Mulli T.K. showed that most dental patients visit a dentist only when experiencing pain or one of the acute symptoms. In case of a painless condition as it occurs in many forms of periodontal disease, the process may progress undeterred to cause tooth loss and the subsequent difficulties in chewing (4).

While some unknowledgeable individuals fail to seek dental treatment completely, some knowledgeable ones may take a little longer to do so and this affects the prognosis of the treatment-either gingivitis, periodontitis and/or caries would be so gross that conservative procedures would be impossible and thus premature tooth loss (extraction) would remain the only possible option (5).

Therefore, considering the effort by our government to provide adequate and quality oral health services to all, maximum utilization of the services should also be guaranteed. Otherwise, it would be a great waste of resources if the services would be under-utilized or not utilized at all -by the communities to which they are offered.

In this respect, this project was designed to establish the relationship between the knowledge on dental care and the utilization of dental services by secondary school students.
LITERATURE REVIEW

Although all age groups are subjected to dental related problems, different age groups have different standards of knowledge on the same. It therefore, follows that these age groups approach dental problems differently. Benigeri M et al showed that adolescents know the importance of tooth brushing and dental services utilization for dental caries prevention \(^6\). However, their knowledge about dental sealant and fluoride is inadequate. Teenagers believe that they have a significant role to play in the prevention of dental diseases although many adolescents consider tooth loss to be a normal consequence of age. The desire to attain and maintain dental aesthetics among adolescents leads to good oral health among them.

Watson M.R. et al showed that the economic status has an important role to play on the utilisation of preventive dental service. Although the poor and the near poor households do not register any significant difference in the distribution of their preventive dental visits, the percentage distribution of such visits for children and adolescents with higher income is significantly differently from that for those in the lower income groups \(^7\).

Orthodontic treatment, the treatment modality of malocclusion, is one of the forms of dental treatment offered in a dental health services’ institution. Kerusuo H. et al showed that the majority of young adults were satisfied with their dental appearance regardless of objective treatment need of various degrees. More still, some of those individuals who begin their orthodontic treatment discontinue before they complete it \(^8\).

According to Antoft P. et al showed that increasing the numbers of dental health service providers and establishing dental health service institutions (like public schools dental health services) close to the people influences, to some degree the levels of dental awareness and utilization of the services by the involved society. He showed markedly decreased average in caries experience and an increased utilization of dental services among the advantaged society against highest average caries experience and the lowest rate of utilisation of regular dental care among the least privileged social groups \(^9\).

An individual’s oral health status depends on their previous dental history. Jalevik B. et al showed that those adolescent who had a history of attending routine oral diagnosis and treatment measures gathering had less caries experience; and that non-attendance and late cancellation are partial risk factors to developing caries \(^10\). However, Wanek V. et al showed that such history results from the conditions and influences prevailing in the family of origin during childhood and adolescent. In a research work which involved 642 young men between 18 and 24 years, an average number of DMF-T teeth of 5.7 was realized where 15% of subjects were caries-free. The main level of restoration in those with a history of caries was 79.2%. The prevalence of caries and the level of restoration were strongly associated with the level of education and the socio-economic status of the family of origin. Parental working time, number of siblings, structural deficiencies in the family, parental preventive education and training with regard to dental care, frequency of brushing the teeth, belief in success of preventive health measures and prevalence of fissure sealings were significantly associated with DMF-T. Frequency of dental visits showed an association with the level of restorations. The average number of DMF-T in the nine-year elementary school graduates exceeded those of the high school graduates (“seniors”) by 88%.

More than 40% of the differences in the prevalence of caries among subjects of different educational level were due to risk factors of social origin, preventive dental behaviour, and
utilization of dental services, all of these being less favourable in elementary school or secondary school graduates compared to high school graduates \(^{(11)}\).
STUDY JUSTIFICATION

No research has ever been carried out (or published) to establish the relationship between knowledge on dental care and the utilization of dental facilities by secondary school students in this country.

OBJECTIVES

Main Objectives: The research will be carried out to establish the relationship between knowledge on dental care and the utilization of dental services by Iiani secondary school students.

Specific Objectives: 1. To establish the knowledge on dental care by Iiani secondary school Students.
   2. To establish the utilization of dental services by Iiani secondary school students.

HYPOTHESES

1. More than 50% of the students of Iiani Secondary School Students know about dental care.
2. More than 50% of Iiani Secondary School Students do not utilize dental services.

VARIABLES

I. Socio-demographic variables:
   1. Age.
   2. Sex.

II. Independent variables:
   1. Knowledge on dental care.
      a) Dental diseases.
      b) Treatment modalities.

III. Dependent variables:
     Utilization of dental services.
MATERIALS AND METHODS

STUDY AREA
A study area has been chosen through a multistage sampling method whereby only one secondary school was to be selected from Makueni District. This study will be carried out in Iiani (an Harambee, mixed day and boarding secondary school). The school lies to the North of Tsavo West National Park, to the East of Chyullu Ranges and to the West of Nairobi-Mombasa Highway. A murram road that leads to the school joins the Highway at Kambu market Center. The school is about 10km from the market center.

STUDY GROUP
The study group comprises of all the bonafide students of the school. This forms a study group of one hundred and sixty-two (162) students. More than 98% of the students hail from the school neighborhood and a few from other provinces.

STUDY DESIGN
The study will be a descriptive cross-sectional study.

SAMPLE SIZE
The whole student population of the school has been chosen to form the sample size for the study. This forms a sample size of 162 students. The sample size has been chosen on convenience.

SAMPLING CRITERIA
Inclusion criteria
- All the current bonafide students of Iiani sec. sch (as at 2002)
- All students who consent to this study.

Exclusion criteria
- Those students who do not consent to this study.
- Those students who will be absent on the day of data collection.

DATA COLLECTION INSTRUMENTS AND TECHNIQUES
Questionnaires will be used to collect the data. The questionnaires will be structured and will comprise of both open-ended and closed-ended questions. Before the administration of the questionnaires, they will be pre-tested for reliability after which any appropriate changes will be done. The questionnaires will be self-administered. This will be done on single day’s visit to the school whereby the filled questionnaires will be collected on the same day.
LOGISTICS
- Funds are limited.
- The research has to be carried out within a short period of time.
- Questionnaires may get lost or torn if students are allowed to keep them for some time before collection.
- The school authorities have to give permission for the research.

ETHICAL CONSIDERATIONS
- Information given by the students will be confidential.
- There will be no free gifts to lure students to consent to this study.
- A dental awareness talk will be given after data collection.

DATA ANALYSIS AND PRESENTATION
Data analysis will be done manually.
The collected data will be presented in the form of tables, pie charts and bar graphs.

PERCEIVED BENEFITS
1. Recommendations will be made about the relationship between knowledge on dental care and the utilization of dental services by secondary school students (depending on the outcome of the study)
2. Partial fulfillment for the award of a B.D.S. degree of the U.O.N.
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REFERENCES


QUESTIONNAIRE

RELATIONSHIP BETWEEN KNOWLEDGE ON DENTAL CARE AND UTILIZATION OF DENTAL SERVICES BY IIANI SECONDARY SCHOOL STUDENTS.

You are kindly requested to answer the following questions to the best of your knowledge. All answers should be truthful and given without any influence whatsoever.
NB: Any information given will be confidential. Tick the box given against the most appropriate answer(s). A question can have more than one answer.

1. Diseases that affect teeth are classified as
   (a) Dental caries □  (c) Gingivitis □
   (b) Dental disease □  (d) I don’t know □

2. The disease that causes holes/cavities in teeth is
   (a) Gingivitis □  (c) I don’t know □
   (b) Dental caries □

3. The disease that causes the gum to swell is
   (a) Gingivitis □  (c) I don’t know □
   (b) Dental caries □

4. Teeth with holes become painful when
   (a) Enamel alone is affected □  (c) I don’t know □
   (b) Dentine is affected □

5. Gingivitis is also associated with
   (a) Bleeding gums □  (c) Dental caries □
   (b) Brown teeth □  (d) I don’t know □

6. Holes/cavities in the teeth result from
   (a) Bacterial acids □  (c) I don’t know □
   (b) Sugary foods □

7. Untreated gingivitis is most likely to cause
   (a) loose teeth □  (c) Dental caries □
   (b) Exposed roots □  (d) I don’t know □

8. Untreated holes/cavities lead to
   (a) Pulpits □  (c) Retained roots (without crowns) □
   (b) Dental abscess □  (d) I don’t know □

9. The best way to prevent dental disease is by
   (a) Brushing teeth after meals □  (c) Eating sugary foods □
   (b) Visiting a dentist □  (d) Rinsing your mouth with warm water after meals □

10. Tooth brushing is
    (a) Important □  (c) Boring □
    (b) Unimportant □  (d) Able to cause gum bleeding □
11. What should you do if you notice blood on your teeth or toothbrush?
   (a) Stop brushing  □  (c) See your dentist □
   (b) Change the toothbrush □  (d) I don't know □

12. The following cause dental caries
   (a) Sweets □  (c) Both □
   (b) Biscuits □  (d) I don't know □

13. ‘Rusty’ teeth are caused by
   (a) Drinking water (with high fluoride) □  (c) I don’t know □
   (b) Lack of brushing □

14. The following cause black or brown stains on teeth
   (a) Tobacco □  (c) Cigarette smoking □
   (b) Miraa □  (d) Tea □

15. Teeth are essential in
   (a) Young children □  (c) Adults □
   (b) Adolescents □  (d) The very old □

16. Other conditions that affect teeth include:—
   (a) Accidents that cause jaw breakage/fractures □
   (b) Fights that cause tooth loss □
   (c) Cultural practices that involve tooth removal or carving □
   (d) I don’t know

17. A painful tooth that has a small cavity should be
   (a) Filled □  (c) Left untreated □
   (b) Removed / extracted □  (d) I don't know

18. Teeth that have been stained by substances used by the person should be
   (a) Removed / extracted □  (c) I don’t know □
   (b) Polished □

19. Hard deposits / calculus / tartar that forms on tooth surfaces (above and below gum-line) should be
   (a) Removed / scaled out □  (c) Polished smooth □
   (b) Left untreated □  (d) I don’t know □

20. All shaky / loose teeth
   (a) should be removed □  (c) I don't know □
   (b) treated appropriately □

21. All retained roots should be
   (a) Removed □  (c) I don’t know □
   (b) Treated appropriately □

22. All ‘rusty’ teeth should be
   (a) removed / extracted □  (c) I don’t know □
23. When teeth are removed/extracted
   (a) They can be replaced (b) Gaps/spaces created should remain throughout the person's life
   (c) I don't know (d) Treated depending on the severity

24. Complete tooth loss is common in
   (a) Young children (b) Adolescents (c) Adults (d) The very old

25. Paying regular visits to your dentist is
   (a) Important (b) Unimportant (c) Uneconomical (d) Others (specify)...

26. Have you ever visited a dentist before
   (a) Yes (b) No

(If no, answer question 27 and 32 only, but if yes continue from Question 28)

27. Why haven't you visited a dentist before?
   (a) None is available (b) Dentists offer expensive services (c) I am ever busy
   (d) Lack of transport means (e) I don't know what they treat

28. How many times?
   (a) Once (b) Twice (c) I can't remember (d) Others (specify)...

If (a) is the correct answer, proceed to Question 29 otherwise go to Question 30

29. What kind of treatment did you receive?
   (a) Tooth removal/extraction(s) (b) Permanent filling (c) Scaling (d) Others (specify)...

30. When did you make the first visit?
   (a) As a child (b) This year (c) More than a year ago

31. When did you make the last visit?
   (a) As a child (b) This year (c) More than a year ago

32. With your knowledge in the cause and problems of dental disease, would you like to utilize more the facilities offered for dental health care?
   (a) Yes (b) No
33. Where do you obtain your dental treatment?
(a) Dispensary □   (b) Traditional dentists □
(c) Private clinic □   (d) District hospital □