

Knowledge and attitude towards oral health among caretakers of children below 5 years at Masaka regional referral hospital, Masaka district. A cross-sectional study.

Mariam Katongole*, Stephen Oketcho
Kampala School of Health Sciences

Abstract

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Background:

Primary teeth not only lay down the foundation for permanent teeth but also play a key role in chewing, the development of speech, guiding the eruption of permanent teeth, and maintaining space. The aim of the study is to assess knowledge and attitude towards oral health among caretakers of children below 5 years at Masaka regional referral hospital, Masaka district.

Methodology:

A cross-sectional descriptive research design was used in this study. The group was composed of caretakers of children below 5 years in the Masaka regional referral hospital. A simple random sampling technique was used to select respondents from the source population.

Results:

Most of the respondents (52%) were within the age bracket of 24-29 years, (58%) knew that toothpaste contained fluoride, (54%) knew prevention of tooth decay as the role of fluoride in the toothpaste, (78%) knew tooth decay as the most common dental disease in children, (58%) knew the first milk tooth erupts after 6 months (68%) knew restricting sweets prevents tooth decay, (90%) agreed that cleaning the child's teeth should be done by caretakers, (80%) agreed that it's necessary to clean the child's teeth after every meal, (56%) disagreed that night-time bottle-feeding causes caries, (56%) disagreed that milk teeth do not require good care as it is going to fall anyway whereas minority (4%) uncertain.

Conclusion:

Participants had fairly pleasing knowledge of oral health in children below 5 years. Participants had a reasonable attitude towards oral health in children below 5 years.

Recommendations:

The Ministry of Health should promote health education of the masses on issues pertaining to oral health and hygiene to help the general public understand the different ways they can keep children's mouths healthy and how to prevent illnesses resulting from poor oral hygiene.

Keywords: Knowledge and attitude, Oral health, Caretakers of children below 5 years, Masaka Regional Referral Hospital.

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Corresponding Author: Mariam Katongole.

Email: Mariamkatongole53@gmail.com

Kampala School of Health Sciences.

Background

Oral health is an important aspect of general health in children as it impacts the quality of life and health outcomes (Patil et al, 2021). Primary teeth not only lay down the foundation for permanent teeth but also play a key role in chewing, the development of speech, guiding the eruption of permanent teeth, and maintaining space. Severe Early Childhood Caries is a specific form of rampant caries affecting the primary dentition of infants and preschool children. According to available data, ECC prevalence ranges from 14.9% in Nigeria to 86% in Gambia (Tantawi et al, 2022). In South Africa, it was shown that, according to the South African National Children's Oral Health Survey, 51% of children aged 4-5 years had active dental caries, and 46.6% of that caries was untreated in 2004 (Kolisa, 2016)

In Tanzania, a study among preschool children showed that children with poor oral hygiene had a statistically significantly higher prevalence of dental caries than their counterparts (Masumo et al, 2020). According to statistics, 80% of children in Uganda have tooth decay. The reason is

the lack of knowledge about checkups and treatment options (GIZ 2021). In Western Maharashtra, results showed that the knowledge regarding fluoride was poor, and the majority (62%) of parents were unaware of the positive anti-cariogenic effect of fluoridated toothpaste on dental health (Dhande et al, 2021). Most mothers knew that an infant's first tooth erupts around the age of 6-12months, only 13.5% mothers were aware of commercial tooth wipes, and about 58.6% knew when the infant's toothbrush should be

changed. Most of the mothers 42.3% did not know anything regarding the fluoride content of the toothpaste (Shinde et al, 2018). The aim of the study is to assess knowledge and attitude towards oral health among caretakers of children below 5 years at Masaka regional referral hospital, Masaka district.

Methodology

Study design

A cross-sectional descriptive research design was used in this study. The design was considered favourable because it enabled the researcher to use various survey methods to gather quantitative data within a reasonable period of time.

Study area

Masaka regional referral hospital is located in the Southern-central part of Uganda, in the city of Masaka, approximately 128 kilometres from Kampala. The hospital comprises the following clinics and departments: Eye, ART, Dental, Laboratory, Pharmacy, antenatal, inpatient and out-patient department, Accident and Emergency; Wards that include: medical, surgical, gynaecological and obstetrics, paediatrics, maternity, major and minor theatres, plus Nutrition department. The hospital acts as a referral unit to health centres like Nyendo Health Centre III, Kalisizo Hospital, Lwengo Health Centre III, Lwengo Health Centre IV, and others. The facility receives an average of 30 patients in the paediatrics OPD and every Thursday covers children with chronic conditions.

Study population

The study population refers to a large group of people possessing one or more characteristics in common on which a research study focuses. Therefore, the study targeted a population of caretakers of children below 5 years and present during the period of data collection in the pediatric ward and the paediatric OPD.

Sample size determination

Sample size determination is the number of items to be selected from the universe to constitute a sample. The sample size was calculated using Burton's formula (1905).

$S=2(QR)O$; where

S= required sample size

Q= number of days the researcher spent while collecting data

R= maximum number of people per day

O= maximum time the interviewer spent on each participant.

Therefore,

R= 10 respondents

Q= 5 days

O= 1 hour

$10 \times 5 \times 1 = 50$, therefore, the researcher will use 50 respondents.

Study variables

Dependent variables

The dependent variable in this study was oral health in children below 5 years.

Independent variables

Independent variables were knowledge and attitude towards oral health among caretakers.

Inclusion criteria

The inclusion group was composed of caretakers of children below 5 years in Masaka regional referral hospital present during the period of data collection and willing to consent to take part in carrying out the study.

Exclusion criteria

The exclusion group was composed of caretakers of children in Masaka regional referral hospital present during the period of data collection, and not willing to consent to take part in carrying out the study, and caretakers of children above 5 years of age.

Sampling technique

A simple random sampling technique was used to select respondents from the source population. This technique was preferred because it ensured freedom from human bias and each member of the target population had an equal and independent chance of being included.

Data collection method

A semi-structured questionnaire was designed and used by the researcher to collect data from respondents. The questionnaire was designed according to the specific objectives of the study with open and closed-ended questions, written in the English language and later translated into the local language (Luganda) for respondents who were not able to comprehend English. The questionnaire was preferred because it was suited to collect data from a larger sample, considering the nature of the study population.

Pre-testing of the questionnaire

For uniformity of the data collection, pretesting of the questionnaire was done among 15 caretakers of children below 5 years in Kalisizo general hospital, Kyotera district, in order to ensure that questions were easily understood by all the respondents, and the pre-tested instruments helped to identify questions that might have caused ambiguity and contradiction.

Data collection procedure

After approval of the research proposal, an introductory letter from Kampala School of Health Sciences' research committee to the study area seeking permission to carry out

the study was obtained. When the permission was granted, the researcher and two trained research assistants administered the questionnaire to the respondents through an interview in a local language (Luganda). The purpose of the study was explained to the participants, and data collection began with the signing of a consent form among the caretakers of children below 5 years at Maternal and Child’s clinics. The data collection process was done in a way that alphabet letters written on papers were given to the respondents to pick; those who picked letter “A” were interviewed first after consenting, and the process continued until the required sample size was attained. The respondents were asked questions following the designed questionnaire to avoid being biased.

After the interview, each respondent was thanked for participating in the study.

Quality control

The right respondents were selected through the inclusion and exclusion criteria.

All activities regarding data collection were under the monitoring and supervision of the research assistants.

The research team met after data collection to review the collected data and cross-check the filled questionnaires and completeness.

Standard operating procedures for coronavirus were followed and maintained for the purpose of protecting the

study participants and data collectors from risks of coronavirus.

Therefore, quality control was done to ensure the accuracy and validity of the data to be collected.

Data analysis and presentation

Data was analysed manually using tally sheets and entered into a computer using the Microsoft Excel computer program to generate tables, pie charts, and bar graphs for easy presentation of findings.

Ethical considerations

Ethical considerations in the conduct of research were followed to prevent ethical dilemmas. To ensure ethical conduct of the study, a letter of introduction was obtained from Kampala School of Health Sciences and addressed to the medical director of Masaka Regional Referral Hospital, Masaka district, requesting permission to conduct the study. When permission was granted, consent was obtained from each participant, and respondents were assured of utmost confidentiality. The respondents were assured of anonymity and the ability to withdraw from the study at any time. No names will be written in the questionnaire. The questionnaires were kept separate from consent forms to avoid association of the two.

Results

Demographic data

Table 1: Shows the distribution of respondents according to demographic data

Response	Frequency (f)	Percentage (%)
Age		
18-23 years	7	14
24-29 years	26	52
30-39 years	11	22
≥40 years	6	12
Total	50	100
Education level		
Never went to school	5	10
Primary	14	28
Secondary	21	42
Tertiary institution/ University	10	20
Total	50	100
Religion		
Protestant	11	22
Muslim	12	24

Catholic	26	56
Others	4	8
Total	50	100
Tribe		
Muganda	37	74
Munyankole	10	20
Musoga	3	6
Others	0	0
Total	50	100
Marital status		
Single	7	14
Married	29	58
Separated	11	22
Widow	3	6
Total	50	100
Occupation		
Un employed	28	56
Employed	12	24
Self employed	10	20
Total	50	100

Table 1, most of the respondents (52%) were within the age bracket of 24-29 years, whereas the least (12%) were within the age bracket of 40-45 years. As regards education levels, almost half of the respondents (42%) had attained a secondary level of education, whereas the least (10%) had never gone to school. The study further revealed that half of the respondents (52%) were Catholics by religion, whereas the least (22%) were Protestants by religion. The study

revealed that most of the respondents (74%) were Baganda by tribe, whereas the least (6%) were Basoga by tribe. Findings obtained from 50 respondents showed that the majority of the respondents (58%) were married, whereas the minority (6%) were widows. Based on the study findings, most of the respondents (56%) were unemployed, whereas the least (20%) were self-employed.

Knowledge towards oral health among caretakers of children below 5 years

Figure 1: Distribution of respondents according to whether they had knowledge of the number of milk teeth in the child's mouth. (N=50)

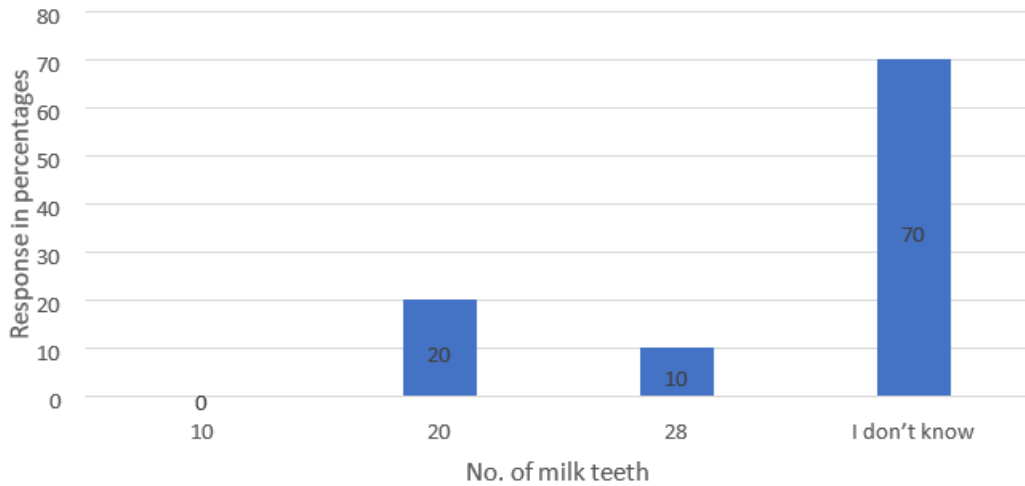


Figure 1: The majority of the respondents (70%) didn't know the number of milk teeth in the child's mouth, whereas only 20% of the respondents knew the exact number of milk teeth in the child's mouth.

Figure 2: Distribution of respondents according to whether they knew toothpaste contains fluoride. (N=50)

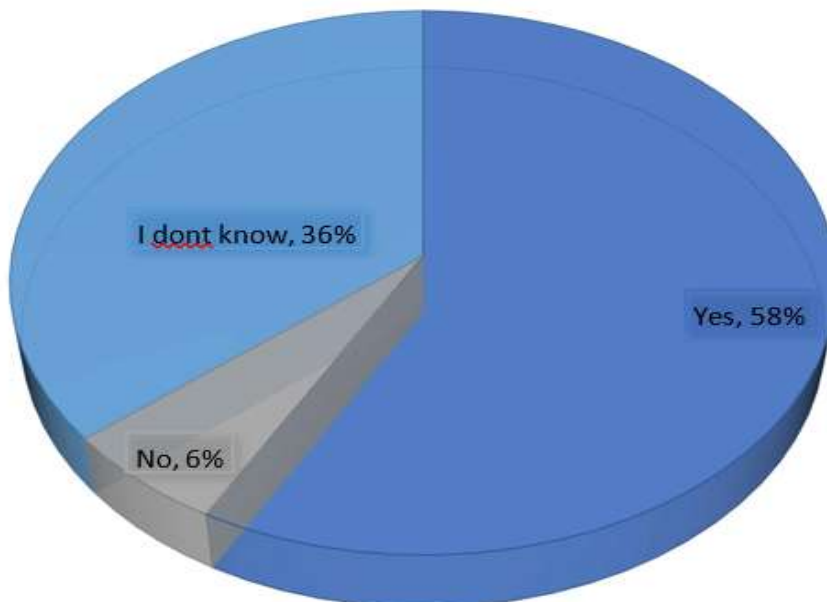


Figure 2, more than half of the respondents (58%) knew that toothpaste contained fluoride, whereas the least (6%) knew it didn't contain fluoride.

Table 2: Shows the distribution of respondents according to the role of fluoride in the toothpaste.

Response	Frequency (f)	Percentage (%)
Prevents tooth decay	27	54
Gives fresh-ups	2	4
Prevents gum problems	1	2
I don't know	20	40

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Table 2, most of the respondents (54%) knew prevention of tooth decay as the role of fluoride in the toothpaste, whereas the least (2%) knew prevention of gum problems as the role of fluoride in the toothpaste.

Table 3: Shows the distribution of respondents according to the most common dental disease in children.

Response	Frequency (f)	Percentage (%)
Tooth decay	39	78
Discolored tooth	2	4
Bleeding gums	4	8
I don't know	5	10

Table 3, the majority of the respondents (78%) knew tooth decay as the most common dental disease in children, whereas the least (4%) knew discolored teeth as the most common dental disease in children.

Table 4: Shows the distribution of respondents according to their knowledge of when the first tooth erupts in a child's mouth.

Response	Frequency (f)	Percentage (%)
Before 6 months	6	12
After 6months	29	58
After 1 year	14	28
Don't know	1	2

Table 4, the majority of the respondents (58%) knew the first milk tooth erupts after 6 months, whereas the minority (2%) did not know when the first milk tooth erupts.

Table 5: Shows the distribution of respondents according to their knowledge of the prevention of tooth decay.

Response	Frequency (f)	Percentage (%)
Restricting sweets	34	68
Tooth brushing	10	20
Regular dental visits	2	4
Fluoridated toothpaste	4	8

Table 5, most of the respondents (68%) knew restricting sweets prevents tooth decay, whereas the least (4%) knew regular dental visits prevent tooth decay.

Attitude towards oral health among caretakers of children below 5 years

Figure 3: Distribution of respondents according to whether they think taking the child for regular dental visits is necessary. (N=50)

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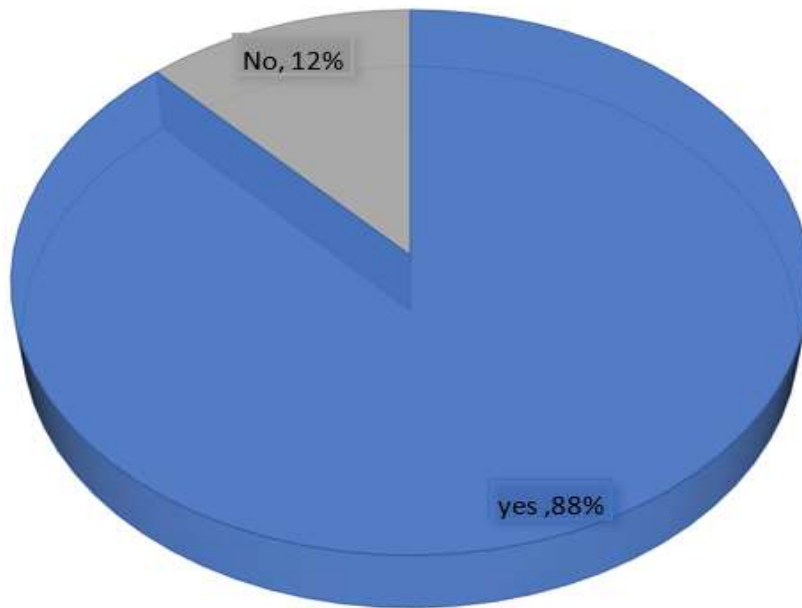


Figure 3, the majority of the respondents agreed that taking the child for regular dental visits is necessary, whereas the least (12%) disagreed.

Figure 4: Distribution of respondents according to whether they think cleaning of the child’s teeth should be done by the caretakers.

(N=50)

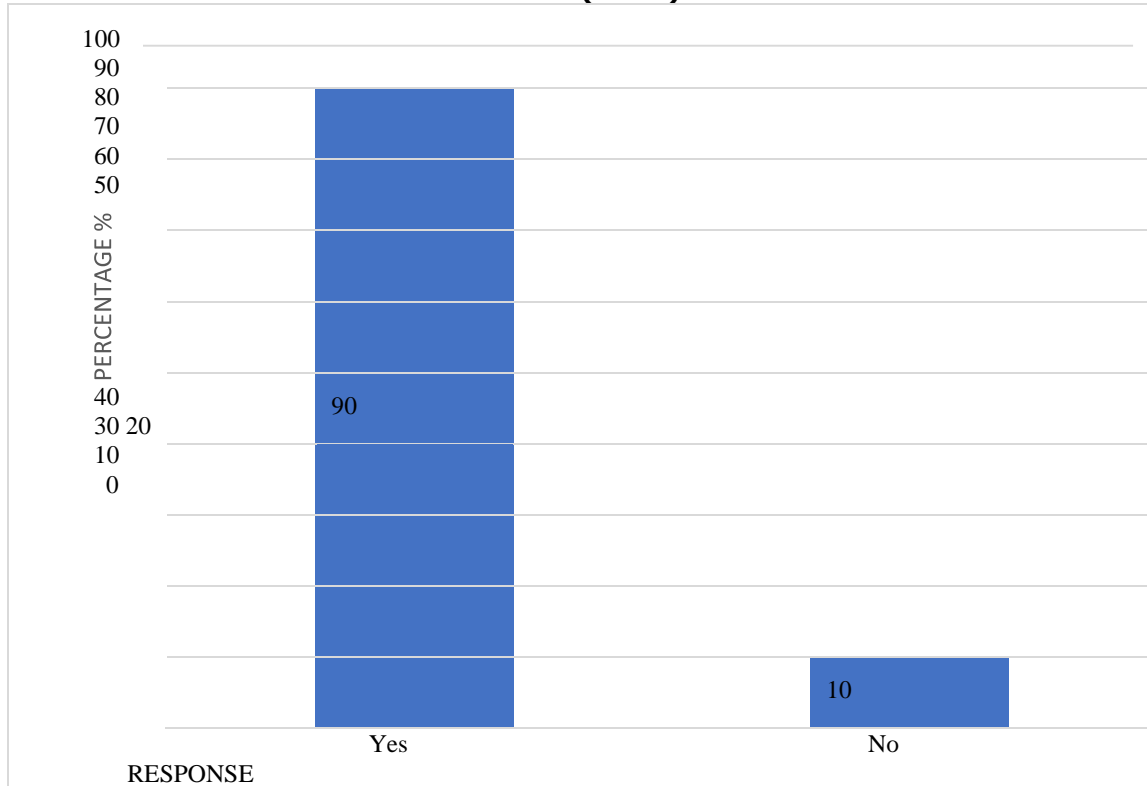


Figure 4, almost all the respondents (90%) agreed that cleaning the child’s teeth should be done by caretakers, whereas the least (10%) disagreed.

Table 6: Shows the distribution of respondents according to whether they think it’s necessary to clean the child’s teeth after every meal.

Response	Frequency (f)	Percentage (%)
Agree	40	80
Disagree	9	18
Uncertain	1	2

Table 6, the majority of the respondents (80%) agreed that it’s necessary to clean the child’s teeth after every meal, whereas the least (2%) were uncertain.

Table 7: Distribution of respondents according to whether they think night-time bottle-feeding causes caries.

Response	Frequency (f)	Percentage (%)
Agree	16	32
Disagree	28	56
Uncertain	6	12

Table 7, the majority of the respondents (56%) disagreed that night-time bottle-feeding causes caries, whereas the minorities (12%) were uncertain.

Figure 5: Distribution of respondents according to whether they think milk teeth do not require good care. (N=50)

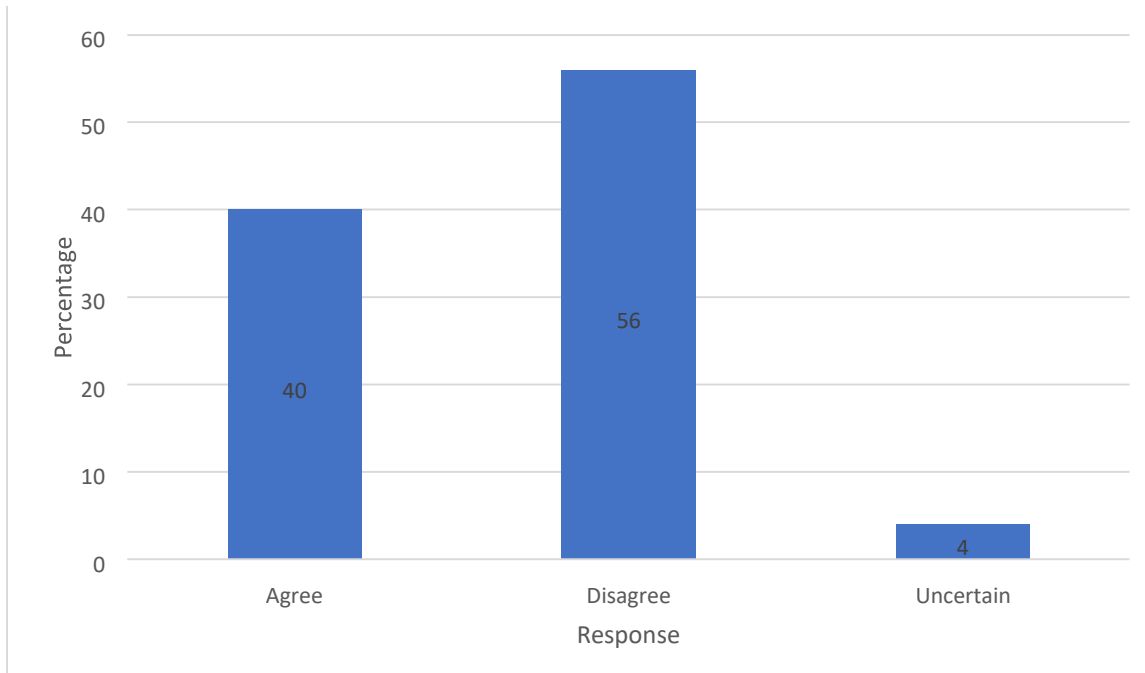


Figure 5, almost half of the respondents (56%) disagreed that milk teeth do not require good care as they are going to fall anyway, whereas a minority (4%) was uncertain.

Discussion

Knowledge towards oral health among caretakers of children below 5 years.

Findings obtained from a sample of 50 respondents showed that less than half of the respondents (20%) knew the number of milk teeth in the child's mouth. This specifies that an outstanding number of the study participants were unresponsive about the study background. The current study results were in line with Noura et al (2017), where results regarding oral health knowledge showed that only 22% had knowledge of the number of milk teeth in a child's mouth.

Additionally, most of the respondents (58%) knew that toothpaste contained fluoride. This is attributed to the many adverts for toothpaste on different television and radio stations, and the probability of being the most considerable source was expected.

The study further revealed that more than half of the respondents (54%) knew prevention of Tooth decay and the role of fluoride in toothpaste. This could be as a result of the fact that it's the most mentioned

benefit from the adverts on toothpaste. Findings were consistent with Chala et al (2018), where findings regarding knowledge on oral health among mothers revealed that 60.9% of the mothers were aware that fluoride has a beneficial effect in the prevention of caries.

In regard to the most common dental disease in children, most of the respondents (78%) knew tooth decay as the most common dental disease in children. This signifies a direct relationship between the caretaker's sources of information and general awareness about the study context. The study results were consistent with Noura et al (2017), where results showed that 73.6% of mothers knew of the common dental problems.

More than half of the respondents (58%) knew that the first tooth erupts after 6 months. This could be attributed to the attention caretakers give to the different developmental milestones in a baby.

In view of the study findings, the majority of the respondents (68%) knew that restricting sweets prevents tooth decay. This showed that respondents were aware of the side effects of sweets and sweetened products.

Attitude towards oral health among caretakers of children below 5 years.

The study discovered that the majority of respondents (88%) agree that taking the child for regular dental visits is necessary, and therefore, this denotes that an outstanding number of study participants had perceived vital reasons as to why they should take their children for regular dental visits. Study findings were consistent with Dhande et al (2021), where results showed that 92% of mothers felt it was necessary to take a child for a regular dental visit.

Almost all the respondents (90%) agreed that cleaning the child's teeth should be done by caretakers. Such perception clearly divulges that a significant number of study participants had a favorable attitude towards the prevention of dental caries.

Based on study findings, most of the respondents (80%) agreed that it's necessary to clean the child's teeth after every meal. This clearly indicates that a substantial number of participants were aware of the risks of not cleaning the child's mouth after every meal. The study results were in line with Dhande et al (2021), where findings showed that 91% of mothers felt it was essential to clean their child's teeth after every meal.

The study revealed that more than half of the respondents (56%) disagreed that night-time bottlefeeding causes caries. This could be attributed to the fact that most of the study participants didn't perceive nighttime bottle feeding to be of great importance. Study results were in line with Dhull et al (2018), where findings showed that 53% of mothers did not agree that nighttime bottle feeding causes dental caries. More than half of the respondents (56%) disagreed that milk teeth do not require good care, as they are going to fall anyway. This implies that most of the study participants were oriented about the use of milk teeth in a child's mouth. Study results were in line with Mubeen et al (2015), where results revealed that 63.3% mothers expressed that primary teeth (milk teeth) need care.

Conclusion

Participants had fairly pleasing knowledge of oral health in children below 5 years. Participants had a reasonable attitude towards oral health in children below 5 years.

Recommendations

The Ministry of Health should promote health education of the masses on issues pertaining to oral health and hygiene to help the general public understand the different ways they can keep children's mouths healthy and how to prevent illnesses resulting from poor oral hygiene.

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LIST OF ABBREVIATIONS

ART	:	Anti-Retroviral Therapy
ECC	:	Early Childhood Caries

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The study was not funded.

Conflict of interest

The author did not declare any conflict of interest.

Data availability

Data is available upon request.

Author biography

Mariam Katongole is a student of clinical medicine and community health at Kampala School of Health Sciences. Stephen Oketcho is a tutor at Kampala School of Health Sciences

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