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CULTURAL PREDICAMENT IN THE UTILIZATION OF ORAL HEALTHCARE AMONG KENYAN FEMALE CAREGIVERS OF CHILDREN WITH HIV/AIDS

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ABSTRACT

Objective: To determine the influence of cultural beliefs and practices among a cohort of female caregivers on the utilization of oral healthcare for children

Design: A hospital-based cross-sectional and exploratory study.

Setting: The out-patient HIV-facilities at Kenyatta National Hospital (KNH), Getrude Children's Hospital (GCH) and Mbagathi County Referral Hospital (MCRH) in Nairobi City County (NCC).

Subjects: Two hundred and twenty-one female caregivers of children with HIV/AIDS attending the HIV-facilities at KNH, GCH and MCRH.

Results: Caregivers had poor recognition of dental illnesses, and mainly attributed dental caries and discoloration of teeth to the use of anti-retroviral drugs (ARVs). They had diminished value for teeth, particularly the deciduous dentition, with tooth extraction being the preferred remedy for a painful tooth in a child. They had strong myths and folklore surrounding 'teething' in infants, including the belief that 'plastic' or 'nylon' teeth in infancy causes severe childhood illnesses. They were not averse to seeking traditional healing for dental conditions in infants and children.

Conclusion: Female caregivers of children with HIV/AIDS in NCC have systems of cultural beliefs and practices on oral health and illness management of infant and childhood conditions which are prejudicial to the timely utilization of oral healthcare for children.

INTRODUCTION

The way people perceive health influences how they define a health problem, determine its seriousness and decide on whether or not to seek care. Most cultures have systems of health beliefs to explain the causes of illnesses, how they can be treated and cured and who should be involved in the process. When passed down a group or society, adverse cultural practices can have profound effect on the health of a community and its utilization of healthcare. A low demand for healthcare and modern health interventions frequently derives from deep-rooted attitudes that reflect culture and social norms.

That health beliefs and cultural practices affect awareness and recognition of severity of illness and acceptability of service is well reported. In some African countries, such as Kenya and Malawi, cultural beliefs and practices oftentimes result in delay in treatment-seeking among women not only for their own health, but especially for their children's illnesses (1-3). It is also reported that the continued preferences for traditional over modern therapies in rural communities in Southern Mali often lead to self-care, use of home remedies and consultation with traditional healers (4). In several cultures, older family members and other relatives are respected and often consulted on important matters involving health and illness; for instance, in rural Guatemala, the advice of the older women in the house on matters of health is very instrumental and cannot be ignored (5). In Nigeria and Kenya, decision-making is often the prerogative of males and senior household members, especially about the seriousness of an illness, or the point at which to seek assistance beyond the home (6,7).

In some sub-populations, particularly those of poorer countries, negative oral practices influenced by culture include pre-chewing of food for infants, sharing utensils during feeding, or sucking pacifiers to "clean" them, which results in the transmission of highly cariogenic bacteria to babies and infants. Moreover, in many societies in the Eastern Africa region, socio-cultural practices include the removal of "plastic" canine tooth buds during infancy to protect the child from severe childhood illnesses. Even though race and ethnicity are considered markers for oral health status, being part of an ethnic group does not invariably lead a person to have poor oral health; underlying cultural beliefs and practices may influence the condition of the teeth and mouth through diet, care-seeking behaviors, and/or use of home remedies.

This article depicts cultural beliefs and practices on common infant and childhood dental conditions and illnesses, among a cohort of low-income female caregivers of children with HIV/AIDS. The information is useful in teasing out the influence of culture from other potentially confounding predictors of the utilization of oral healthcare among children.

Theoretical perspectives in healthcare utilization: The utilization of healthcare is a multifaceted phenomenon in which the use of health services relates to several factors that include culture, health beliefs and values, social structure, as well as cost and quality of services. Consequently, families who strongly believe in the efficacy of biomedical or dental healthcare might use more of the formal services than families with less faith in the results of these forms of healthcare. This study was guided by the Health Services Utilization Model. According to the model, an individual's access to, and use of health

services is a function of the individual's inclination to use available health services (predisposing), ability to access services (enabling) and their illness level (need factors). The model suggests a causal ordering in which the predisposing factors may be exogenous, some enabling resources are necessary but not sufficient conditions for use, and therefore, some need must be defined for use to actually take place. It is hypothesized that the predisposing, enabling and need factors have differential abilities to explain use depending on the type of services examined. For instance, hospital services received in response to more serious problems and conditions would primarily be explained by need and demographic characteristics; while other services like dental services, considered as more discretionary, would more likely be explained by social structure, beliefs and enabling factors.

MATERIALS AND METHODS

This was a hospital-based cross-sectional mixed - methods study carried out between February and June 2017. The study population comprised a cohort of low-income female caregivers attending HIV-facilities at three large, strategically located referral hospitals in NCC. The specific research sites were Kenyatta National Hospital (KNH), Getrude Children's Hospital (GCH), and Mbagathi County Referral Hospital (MCRH). The unit of analysis was the individual female caregiver; specifically, one that accompanied their child/children to the HIV-facility. Participants were selected purposively using the following inclusion criteria; (i) female adult 18 years and above, (ii) biological or foster mother or female kin of child/children with HIV/AIDS and (iii) female caregiver of child/children enrolled at the three hospitals.

Those that met the criteria were recruited into the study on a daily basis until the calculated sample size was attained.

In the first phase, a survey was conducted in face-to-face interviews with the respondents. A standardized pre-tested survey instrument that partially allowed the respondents to express constructs in their own words was used to collect socio-demographic and other quantitative data relevant to the research objectives. In the second phase, qualitative data was collected through focus group discussions (FGDs) with supplementary, randomly selected caregivers; the purpose being, to grant the researchers an opportunity to revisit emerging issues from the survey without going back to the same respondents. A total of six FGDs were held comprising of six to eight discussants, two at each respective hospital. Secondary sources and direct observations methods were employed throughout the study to improve exploration and validation of data through triangulation and cross-verification.

Ethical clearance was obtained from the Kenyatta National Hospital- University of Nairobi Ethical Review Committee (KNH-UON E.R.C- P631/10/2014), whilst permission to carry out the study was sought from the administration of KNH, GCH and MCRH. Informed, written consent was obtained from the participants after full explanation of the research objectives and expected activities. This was done in Kiswahili, the well-understood local language of the populace of study. Participation in the study was purely voluntary with no monetary benefits. Privacy for the respondents was ensured during interviewing by allocating numbers rather than names to participants' questionnaires. Consent was obtained to tape-record the FGDs, following which the tapes were transcribed and immediately erased.

Both sets of data were computer-assisted in analysis. Quantitative data was coded and entered into a micro-computer using MS Access and analyzed using the Statistical Package for the Social Sciences (SPSS), Version 19.0. Where applicable, cross-tabulation of variables was carried out and Chi square tests applied to determine significance of association. For qualitative data, the help of a statistician was enlisted to assist in labeling and keying-in data using codes assigned to open-ended questions, in order to generate themes, concepts and categories. ATLAS *ti* 8 for Windows computer software was used to assist in categorization and matching, content analysis and annotation of the important features and findings of study.

RESULTS

Socio-demographic characteristics of the respondents: A total of 221 respondents were recruited into the study; forty-five percent (45%) were drawn from KNH, 28% from Gertrude Children's Hospital, and 27% from MCRH. The distribution of respondents across the hospital categories was done proportionately to correlate with the number of children enrolled and active-in-care at the respective hospitals.

Respondents were mostly (76%), biological mothers of the children; others were related to the child and were grandmothers (17%), and aunts (5%), while the remaining 2% were unrelated and drawn from foster homes. The average age of the children was 9.64 years (\pm

6.46), whilst that of the respondents was 37.48 years ($SD \pm 26.48$). The highest percentage (41%) was in the age category of 34-41 years, followed by that of 26-33 years (27%). The category of those aged 42-49 years was 17%, while at the extremes ends were age categories of above 50 years (11%), and 18 -25 years (4%). More than half (59%) of the respondents were married and living with their spouses, 14% were widowed, 12% separated or divorced, and 15% were single mothers. The age difference and marital status of the respondents across the three hospitals was not significant ($p=0.522$ and $p=0.549$) respectively.

Forty three percent (43%) of respondents had only received rudimentary primary level education, 33% had secondary level education while those with post-secondary school, college or tertiary education were much fewer (18%); and 5% did not attend school at all. Merely 28% were in formal employment; others, 55% were engaged in non-formal activities whilst 17% stayed at home. About two-fifths (41.9%) lived on less than, or equal to KES 10,000 (\$100) monthly. There were no differences in the educational level and household incomes of respondents at the three hospitals ($p= 0.522$, $p=0.58$ respectively).

Respondents' perceptions of child's oral health status (OHS): Respondents mostly based their perceptions of "good" oral health on aesthetic appearance of the teeth rather than absence of disease. They did not perceive their children's OHS to be any worse than that of other children (Table1).

Table 1
Respondent's rating of child's OHS

Rating of OHS	Frequency	Percentage
Among the nicest	36	16
Better than average	49	23
Average	65	29
Below average	48	22
Among the worst	16	7
Don't know	7	3
TOTAL	221	100

(Source: Survey data, 2017)

Illness recognition (Dental caries): Respondents mostly did not distinguish dental caries as an illness. They perceived the “blackish” or “discolored” teeth as normal occurrence among children with HIV/AIDS. More than half (58%) responses attributed the cause of

dental caries to the use of ARV drugs, 47% suggested it was a disease of taking sugar, 44% regarded the condition to be “ordinary” marks on teeth, while (42%) responses named it, indeed, as “rotting teeth”(Table2).

Table 2
Respondents' perceptions on dental caries

Beliefs	Frequency	Percentage
Comes from using ARV drugs	128	58
Occurs in families	66	30
Disease of taking sugar	104	47
Ordinary marks on the teeth	98	44
Dirty teeth	84	38
Rotting teeth	94	42
Teeth that want to come out	56	25
Common in children	64	29
Poor eating	24	11
Infection from other people	34	15
Don't know	46	21

*Percentage is more than 100% due to multiple responses

(Source: Survey data, 2017)

The ARV medication that our children take gives them bad breath, mouth sores and black colorations on their teeth. It is not a serious illness, so they don't require treatment (FGD, GCH).

Tooth extraction - the only remedy for a painful tooth: Caregivers strongly believe in extraction of teeth as the remedy for toothache for both adults and children. It

provided them with an “affordable” and “quick fix” treatment. They considered deciduous teeth particularly, to be temporary, and fell out with time; thus, having them treated was unnecessary and wasteful health expenditure. Similarly, permanent teeth were seen to increasingly undergo “natural ageing” and eventually wear out. The dentist, in effect was depicted as “a specialist doctor for extracting teeth”.

“Children’s teeth are temporary, and they stay in the mouth for only a short while, why then should we spend a lot of money to have them treated?” When the child gets a painful tooth, we buy a painkiller from the shop or kiosk, but if pain becomes severe we take them to the doctor to have an extraction” (Caregiver X, KNH).

The best treatment for a painful tooth is to have it extracted. If this is not done, the tooth will keep re-infecting the others. We don’t see the value of fillings for our children’s teeth, because from what we know, the pain continues even after the filling is done. Finally, the tooth must be removed (FGD, MCRH).

Traditional and home remedies: Traditional herbs or “mitishamba” were credited to providing relief of pain or healing of mouth sores and tooth infection. They were sourced from ‘known’ traditional herbalists and applied by smearing on the affected area or boiling and inhaling the steam. Since advice on their use was obtained from ‘trusted’ sources, caregivers considered them to be non-toxic, reliable, and relatively inexpensive. They also used salt and/or charcoal for tooth-brushing, as substitutes for toothpaste *albeit* with reduced usage among children.

Traditional medicines are recommended for relief of pain and swelling. We use them but for our children we are a bit more careful. When money is available, we buy them toothpaste; sometimes we use a little salt for them to rinse their mouths (FGD, MCRH).

“Nylon” teeth and other teething taboos:

There were strong myths and folklore surrounding teething in infancy. Fever and diarrhea was considered normal during teething, whilst severe childhood illnesses were often attributed to ‘plastic’ or ‘nylon’ teeth in some infants. For instance, Caregiver Y at GCH had this to say; “It is risky to leave such teeth in the baby’s mouth”. “If you notice them, you must act quickly and inform an older woman in the family, usually the mother-in law”. “She will arrange to take the infant to see special women who remove these teeth”. “If this is not done, the child will most likely die”.

Children always get diarrhea when teething. Some babies get nylon teeth which keep worms inside, often making the child very ill. When we visit the dentist, they don’t see anything wrong, so we take the baby to expert women who know how to extract these teeth with special knives. Mostly, our mothers or mothers-in-law help us (FGD, GCH).

There were other cleansing ceremonies carried out to dispel bad omen associated with a child born with a tooth/teeth in the mouth: “In our community, when such a baby is born, they are considered to be a bad omen for the family”. “The baby has to undergo a cleansing ceremony to remove the evil spirit; this is done by slaughtering a goat”. “Nowadays, most of us are Christians

so we don't practice this so often" (Caregiver Z, FGD, GCH). Traditional healers were also entrusted with other minor surgical operations in children such as excision of elongated uvulas to "prevent" excessive coughing and/or gagging. Frequent birthing was seen to cause the loss of calcium from the mother's teeth to the growing fetus, resulting in calcium deficiency and inevitable tooth loss in the mother during pregnancy.

DISCUSSION

Self-perceptions of health are important constructs in influencing health decisions and healthcare utilization patterns. Such constructs are key elements of social contexts in the patterned process of people making sense of their world, and the assumptions, expectations and practices they call upon in doing so. The measure of oral health needs that creates the demand to utilize oral healthcare is most likely based on an individual's perceptions of his severity of the dental illness. Kleinman's theory of explanatory models (8), postulates that individuals and groups can have vastly different notions of health and disease. Thus, in one cultural setting, a painful tooth may be enough to motivate care-seeking; whilst in another, bleeding, swelling or fever may be necessary before care is sought.

The caregivers in this study perceived white, evenly placed teeth to be akin to good oral health. Despite the black marks and discolorations in their children's teeth synonymous with dental caries, they did not identify this to be an illness that required intervention; neither did they deem the oral health status of their children to be any worse than that of their peers. When a group of people banded together is in poor health, this becomes the norm and illness may not be

easily recognized; the unfortunate outcome is continued tolerance of illness and disease. The study findings also recount the phenomenon of lay referral network described by medical social workers regarding the handling of health information. With certain illnesses people may not always consult the doctor; instead, consultation patterns are influenced by a range of social and psychological factors. People think and explain to themselves in their own way- which they share with others- the misfortunes that happen to them, the ailments which affect their bodies, and the disorders that enter their lives. Ultimately, these thoughts influence the decision not to seek a doctor's advice and/or utilize healthcare (9).

A caregiver's perception of their child's OHS is an important needs factor that possibly determines whether the child is likely or not, to visit the dentist. When caregivers have poor perception of oral health, they are *less* likely to brush their children's teeth and/or seek dental care. In this study, caregivers diminished the value of teeth particularly, the deciduous dentition, giving low priority to the use of oral healthcare for young children. Such fatalistic attitudes towards oral health for children are not unique and have been reported elsewhere (10-13). Indeed, the utilization of oral healthcare for children with HIV/AIDS in NCC is reported to be *ad hoc*, problem-oriented, and precludes the use of preventive and/ or interceptive oral healthcare (14). This article argues that the caregivers' attitudes and health beliefs played a large part in shaping the poor utilization of oral healthcare among the children.

Having febrile illnesses in infancy during the teething period is thought to be coincidental, occurring as a result of diminution of circulatory maternal humoral immunity, at which time infants and young

children become vulnerable to a myriad of viral infections. That notwithstanding, caregivers were fixated on direct causal relationship with teething. Dental parlance describes the practice of traditional removal of “nylon” or “millet” teeth as Infant Oral Mutilation (IOM), described by several workers in sub-Saharan Africa (15-18). Included, is the removal of natal and/or neonatal teeth which results in loss of normal teeth of the deciduous series. The practice is done clandestinely, using razor blades or other home-made crude instruments. Caregivers, who carry out this practice, whilst believing they are protecting their children from fatal illnesses, are seemingly not mindful of the severe pain inflicted on the infant during the process of extraction and the delay in life-saving care for the child’s biomedical illness occasioned by visiting the traditional healers. The methods used could also lead to medical complications such as excessive bleeding, septicemia, aspiration pneumonia, and/or the risk of blood-borne disease; and lastly, there is the risk of exposing the child to enamel defects and/or hypodontia of underlying permanent teeth as a result of iatrogenic injury during extraction (19). These practices among the caregivers demonstrate that certain beliefs when rooted in a populace become difficult to change; instead, perpetuating the vicious cycle through generations.

The use of traditional remedies arises from the sum total of knowledge, skills and practices based on theories, beliefs and experiences indigenous to a culture. In spite of urban dwelling and the likely influence of modern medicines, there was substantive use of traditional and home remedies among caregivers. This is not unlike many cultures in the African region; for instance, Ngilisho *et al.* (20) reported that dental patients in Tanzania

habitually seek oral healthcare from traditional healers who use local herbs for treatment, despite establishment of modern emergency oral healthcare services in the region. Since culture is not inviolable to socioeconomic factors, the low socioeconomic status of the caregivers in the study may have had some influence on this option of oral healthcare. When health services are not affordable to people who need them, other factors such as existing cultural beliefs and practices can lead them to use home remedies while others may choose to use traditional healers.

CONCLUSION

Female caregivers of children with HIV/AIDS in NCC have systems of health beliefs and cultural practices on illness management of common infant and childhood dental conditions which are holistic and intricately woven in the social and cultural fabric of their daily lives. In the backdrop of other societal contexts, these beliefs and practices militate against timely consumption of oral healthcare for infants and children.

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