

Knowledge and Attitude Toward NOMA Preventive strategies among Dentists in a Nigerian Tertiary Hospital

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INTRODUCTION

Noma is a quickly progressing, destructive, disfiguring, necrotizing disease affecting the orofacial tissues (Enwonwu et al. 2000). Noma is the most brutal face of poverty and malnutrition in children and thus gives rise to some of the worst violations of the rights of the child (United Nations General Assembly, 2012). The rights to food, water and sanitation, The right to health, The right to education, The right to life, Equality and non-discrimination

It is a non-contagious disease that starts in the mouth as an oral lesion but can quickly develop into extensive facial destruction and lead to death if not treated in time. It has one of the highest mortality rates (80-90%) However it is established that full onset of Noma is preventable and inexpensive to treat. Yet, the majority of children do not receive medical attention or receive it too late to save their faces and often their lives. A case of Noma anywhere in the world signals neglect and presses a big scar of failure on humanity. Failure of humanity to feed, care, protect, ensure health and maintain the rights of offspring (Azodo & Odai, 2021). Dentists can

champion the prevention and total eradication of Noma since it starts as acute necrotizing ulcerative gingivitis. They are healthcare professionals positioned to detect this and can possibly advocate with other healthcare professionals for national/State policies that can reduce/eliminate Noma risk factors. It is important therefore to assess the Knowledge and attitude toward NOMA Preventive strategies among Dentists as a major stakeholder in prevention, screening, early diagnosis, treatment and rehabilitation. The objective of this study was to assess the knowledge and attitude toward Noma preventive strategies among Dentists in a Nigerian Tertiary Hospital

MATERIALS AND METHODS

Study Setting/Design/Population/Period: This cross-sectional study was conducted among all categories of dentist working in dental center of University of Benin Teaching hospital, Benin City between September and October, 2022.

Sample size: The calculated minimum sample size was 82 using Cochran formula calculation of sample size for epidemiological studies with p being 5.6%

obtained from a study of Azodo et al (2010) among doctors

Data Collection Tool: A 33-item, self-administered questionnaire developed from WHO Noma training of health workers assessment tool and literature was the data collection tool. The questionnaire assessed the demographic characteristics, knowledge (nature, transmissibility, risk factors, vulnerable group, diagnosis, impact on human right, stages of the disease, treatment and prevention of Noma). 13-items in the questionnaire assessed the attitude toward Noma preventive strategies among the participants. The response is Likert scale of strongly disagree (1), disagree (2), agree (3) and strongly agree (4).

Ethical consideration & Data analysis: Informed consent was obtained from all participant. Data was subjected to analysis using SPSS version 23.0.

RESULTS

Out of 100 dentists studied, 84 of them returned the questionnaire giving 84.0% response rate, about one-quarter (23.8%) of the participants were 21-30 years old. Male: female ratio is 1.7:1. Consultants made up 14.3% of the participants The role of twice daily teeth cleaning in Noma prevention 81(96.4%) and reconstructive surgery as treatment of final

stage of Noma 80 (95.2%) were the leading aspects of Noma knowledge reported by the participants followed Knowledge that Noma shares similar characteristics with neglected tropical diseases 75 (89.3%) and non-transmissibility of Noma from person to person? 74 (88.1%) (Table 1). The most ranked preventive strategies among the participants were conducting oral examinations on children at risk of developing Noma, even if they do not have oral health issues in Health centres and hospitals (3.56±0.07), followed by a participatory disease surveillance system (3.49±0.06), educating religious leaders on Noma (3.43±0.07), introducing first time dental visit at preschool age will help prevent Noma (3.36±0.06), giving financial aid to villages to organise their own activities to increase awareness about Noma (3.36±0.07). The least attitudinal score is for deworming children in community will help in Noma reduction (2.46±0.11) followed by the usage of latrines which would reduce the risk of water contamination and thus decrease the risk of developing Noma (2.77±0.11) (Table 2). More than three-quarters of the participants reported that a combination of more research, advocacy and funding would reduce the burden of Noma in Nigeria (Figure 1).

Table 1: Knowledge of Noma among the participants

Knowledge	Response n(%)
Do you think that Noma shares similar characteristics with neglected tropical diseases? Yes	75 (89.3)
Do you think that Noma is a regional disease that is restricted to some areas in Africa? No []	15(17.9)
Do you think that Noma transmission occurs from person to person? No[]	74 (88.1)
Which of the following group of people is the most vulnerable to Noma? Children []	57 (67.9)
Which of the following risk factors are not related to Noma?: Chemical intoxication[]	49 (58.3)
What is the initial stage in detecting Noma? Acute necrotizing gingivitis [60(71.4)
Systemic antibiotics is one of the main treatment for early-stage Noma is: True[62 (73.8)
What do you think can be used to debride Noma wound? Hydrogen peroxide[61 (72.6)
The main treatment for Noma in its final stages is reconstructive surgery: True[]	80 (95.2)
The diagnosis of Noma is based on a point-of-care diagnostic test: False	19(22.6)
The United Nations Human Rights Council Advisory Committee and subsequent research have highlighted that the human rights denied to individuals affected by Noma are: All of the above []	38(45.2)
Twice daily teeth cleaning is an important preventive aspect of Noma: True[81(96.4)
Noma is reversible at which stage? oedema stage[]	61(72.6)
Emergency treatment is required at the early stage of Noma: True[]	66(78.6)
Noma could be fatal in its acute phase: True[]	59 70.2)

Table 2: Attitude to Noma preventive strategies among the participants

Attitude	Score (mean±SEM)
Educating traditional healers on Noma would be a good idea.	3.14±0.11
Educating religious leaders on Noma would be a good idea.	3.43±0.07
Deworming children in community will help in Noma reduction.	2.46±0.11
Health centres and hospitals should conduct more oral examinations on children at risk of developing Noma, even if they do not have oral health issues.	3.56±0.07
Giving financial aid to villages to organise their own activities to increase awareness about Noma would be a good idea to spread knowledge.	3.36±0.07
Introducing first time dental visit at preschool age will help prevent Noma.	3.36±0.06
Vaccination against childhood disease can help prevent Noma.	3.16±0.07
The usage of latrines would reduce the risk of water contamination and thus decrease the risk of developing Noma.	2.77±0.11
Public school feeding programme can help prevent Noma.	3.05±0.07
Poverty alleviation programme can help prevent Noma.	3.24±0.08
Family planning programme can help prevent Noma.	3.10±0.08
Smoking ban policy can help prevent Noma.	3.04±0.10
A participatory disease surveillance system can eliminate Noma in Nigeria	3.49±0.06

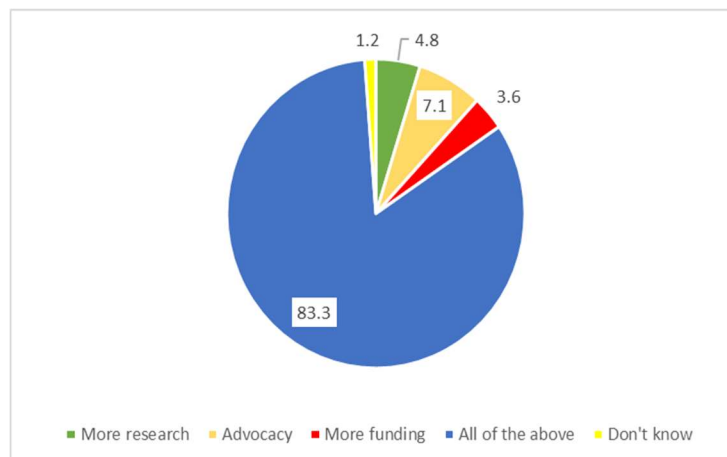


Figure 1: Recommended Methods to reduce Noma burden in Nigeria among the participants

CONCLUSION

Although gaps in knowledge about Noma were detected, their ranking of Noma preventive strategies may form success-oriented guide in the control of Noma. For instance, if Health centres and hospitals can conduct more oral examinations on children at risk of developing Noma, even if they do not have oral health issues. (Suggestion-Dentists being part of Paediatric unit of hospitals and health center as oral health is included in primary healthcare in Nigeria). A participatory disease surveillance system can eliminate Noma in Nigeria. Educating

religious leaders on Noma will help them advise members properly. Introducing first time dental visit at preschool age will help prevent Noma by detecting it, early. A combination of Advocacy, more research and more funding as reported by the participants may serve a model to reduce noma burden in Nigeria should be looked into. Further nationwide studies are recommended and possible implementation of study findings.

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