



Is Cleft Lip a Spiritual Thing? – A Pilot Study of Beliefs and Attitudes amongst Some Future Primary Health Care Workers in Ibadan Metropolis, Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author KKK designed the study and collected the data. Authors AGA and KKK performed the statistical analysis. Authors KKK and ORA managed the literature searches. Authors KKK and EOO wrote the first draft of the manuscript. Authors KKK, ORA and EOO wrote the subsequent drafts. Authors AOS and FOF reviewed the manuscript. All authors read and approved the final manuscript.

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ABSTRACT

Background: The birth of a baby with cleft lip is regarded as evil in many Nigerian communities. Cleft lip babies tend to suffer from social neglect or infanticide due to superstitious beliefs associated with their births. This study aimed to explore the awareness, beliefs, and attitudes of students in primary health care-related diploma programmes in Ibadan, Nigeria, towards babies born with cleft lip.

Methodology: A pilot study was conducted among 88 students of primary health care-related diploma programmes in three conveniently selected schools in Ibadan, Nigeria. Information on their bio-data, awareness, beliefs and attitudes towards of cleft lip babies were obtained through the use of a self-administered questionnaire. All administered questionnaires were returned filled, 5 were discarded due to incomplete data. Data analysis was done using the SPSS version 16 Software.

Results: The mean age (\pm SD) of the 83 respondents was 35.32 (\pm 10.22) years, 72.3% were females, 69.9% were Yorubas, and 60.2% were married. Forty-six respondents (55.4%) had never seen a baby with cleft lip before, while the rest had seen at least one baby with such deformity. The majority (\geq 61.5%) did not believe that cleft lip could be caused by witchcraft, curses, God, evil spirits, and bad luck. Less than 60% of the respondents believed that excessive alcohol consumption, viral infection, genetic factors, cigarette smoking, irradiation, and drugs are potential risk factors for cleft lip formation. The majority (\geq 78.3%) showed positive attitude towards delivering health care services to cleft lip babies.

Conclusion: The majority of the students of primary health care-related diploma programmes in this study were not superstitious about cleft lip. However, their knowledge of its risk factors is inadequate. There exists the need to educate them on the risk factors/aetiologies of cleft lip.

Keywords: Beliefs; attitude; primary health care; student; cleft lip; Ibadan.

1. INTRODUCTION

Cleft lip is a congenital orofacial deformity caused by the failure of complete union of the two medial nasal prominences during intra-uterine life; this is characterized by the discontinuity of the upper lip at birth [1]. Cleft lip can be either unilateral or bilateral in its anatomic description. Cleft lip can occur either as an isolated cleft or in combination with a palatal cleft [1,2].

Cleft lip is one of the most common congenital orofacial deformities, and its global incidence varies from about 1:500 to 1:1000 live births [3]. However, the national incidence rate of cleft lip in Nigeria is yet to be ascertained [4], but different studies had reported several hospital cases of cleft lip patients [4-6].

Literatures had it documented that exposure of foetus, during the first trimester of intrauterine life, to teratogenic drugs (e.g. anticonvulsants, retinoic acid), excessive alcohol, tobacco, viral infection, and irradiation can induce cleft lip formation in them [1,2]. Superstitious beliefs concerning the aetiologies/risk factors of cleft lip are highly prevalent in the Nigerian society, particularly among those living in the rural

communities [7-10]. Many are of the belief that cleft lip is caused by spiritual forces, and some of the babies with cleft lip had suffered from neglect, and even infanticides, due to associated societal stigma [8-10].

This research was a pilot study conducted among students of primary health care-related diploma programmes in Ibadan, Nigeria, with the aims of exploring their awareness, beliefs, and attitudes toward babies with cleft lip. Conducting this study among such a population group of future primary health care officers is of high significance, as our findings will provide information on how they perceived babies with cleft lip.

2. METHODOLOGY

2.1 Study Design

This research is a descriptive cross-sectional pilot study.

2.2 Study Setting

This study was conducted among the students of primary health care-related diploma programmes in three conveniently selected schools in the

metropolitan city of Ibadan. Ibadan is the largest city in Nigeria, and she is located in the south-western geopolitical zone of Nigeria. The three institutions that were selected for this survey were the School of Health Information Management (SHIM), the School of Community Health Training Programme (SCHTP), and the Federal Training Centre for Teachers of Health Sciences (FTCTHS). The FTCTHS is the only school of its kind in the entire south-western geopolitical zone of Nigeria, and the diploma programmes offered by this school include the Primary Health Care Tutors' programme, and the Nursing/Midwifery/Public Health Nursing Tutors' programme. Only three schools are running the Health Information Management, and the Community Health Training diploma programmes in Ibadan, of which the SHIM and the SCHTP were the two out of the three participating schools that were selected for this study.

2.3 Sample Size Determination

This research was a pilot study; a convenient sample of 80 students was considered appropriate for the study.

2.4 Ethical Considerations

Approval to conduct this study was obtained from the Ministry of Education, Science, and Technology, Ibadan, Nigeria (Ref: C.2415/241). Only those that were willing to participate were recruited for this study, and their identities were kept anonymous.

2.5 Study Tool

The tool used for the data collection in this study was a well-structured anonymous questionnaire. The questionnaire had three sections: sections A; B; and C. Section A obtained information on the demographic characteristics of each participant. Section B first described cleft lip to the participants using an illustration of a baby with cleft lip before it obtained information on: the total number of cleft lip babies ever seen by each participant; and the belief of each participant on the aetiologies/risk factors for cleft lip. Section C obtained information on the attitude of each participant towards delivering health care services to babies with cleft lip. This questionnaire quantitatively measured the belief and attitude of the participants using a four-point Likert scale: point 1=strongly believe/agree; 2=belief/agree; 3=disbelieve/disagree; and 4=strongly disbelieve/disagree.

2.6 Participant Selection

Only those students that had completed more than half of the duration of their training programme were purposively considered eligible to participate in this study. This was because they had been taught at least half of their academic curricular content; hence they were considered to have an average knowledge about their diploma programmes.

2.7 Data Collection and Analysis

The students were approached in their various classrooms. The aims and objectives of the study were clearly explained to them. Eighty-eight students were recruited to participate in the study. Each participant was given a questionnaire to fill and return; all questionnaires were returned back. During data cleaning, 5 questionnaires were discarded due to incomplete data. Data of 83 respondents were statistically analysed using the SPSS version 16 (SPSS Inc, USA). Frequency distributions of all variables were determined and illustrated using frequency tables, and charts. Tests of association between the variables were done using the Chi-square test and a p-value of <0.05 was considered to be statistically significant.

3. RESULTS

The mean age (\pm SD) of the 83 respondents was 35.32 (\pm 10.22) years, and 60 (72.3%) were females. Fifty-eight (69.9%) were Yorubas, 3 (3.6%) were Hausas, 5 (6.0%) were Igbos, while the remaining 17 (20.5%) were from other minor Nigerian tribes. Seventy-two (86.7%) were Christians, 10 (10.2%) were Muslims, while only one respondent did not specify his/her religious status. Fifty (60.2%) respondents were married, 31 (37.3%) were single, while only 2 (2.4%) respondents did not specify their marital status. Thirty one respondents (37.3%) were students of the SHIM, 21 (25.3%) were students of the SCHTP, while the remaining 31 (37.3%) were students of the FTCTHS.

Forty-six respondents (55.4%) had not seen any baby with cleft lip before, 12 (14.5%) had seen just one baby with cleft lip, 11(13.3%) had seen two, 2 (2.4%) had seen three, 6 (7.2%) had seen four, 4 (4.8%) had seen five, while the remaining 2 (2.4%) respondents had seen more than five babies with cleft lip.

Table 1 illustrates the frequency distribution of the responses of the respondents on their beliefs on the risk factors/aetiologies of cleft lip. The majority (≥61.5%) of them did not ascribe cleft lip to bad luck, evil spirit, curses, God, and witchcraft.

Table 2 compares the relationship between the respondents' beliefs on the risk factors/aetiologies of cleft lip and their marital status, gender, and exposure to cleft lip babies respectively. There exists no statistically significant relationship between the respondents' beliefs on the risk factors/aetiologies of cleft lip

and their gender or prior exposure to such babies (p-value >0.05). However, there exist statistically significant relationships between the respondents' marital status and their beliefs on some cleft lip risk factors/ aetiologies (p-value <0.05).

Table 3 provides information on the attitudes of the respondents toward babies with cleft lip. The majority of the respondents (≥78.3%) indicated that they could play with babies with cleft, visit the family of a cleft lip baby without any fear, or conveniently attend to the parents of a cleft lip baby without any fear.

Table 1. Frequency distribution of the responses of our respondents concerning their beliefs on the risk factors/aetiologies of cleft lip

Risk factors	SD (%)	D (%)	B (%)	SB (%)	NR (%)	Total (%)
Drugs (e.g. retinoic acid)	10 (12.0)	7 (8.4)	40 (48.2)**	19 (22.9)	7 (8.4)	83 (100.0)
Excessive alcohol	9 (10.8)	31 (37.3)**	25 (30.1)	11 (13.3)	7 (8.4)	83 (100.0)
Excessive smoking	8 (9.6)	28 (33.7)	29 (34.9)**	10 (12.0)	8 (9.6)	83 (100.0)
Viral infection	9 (10.8)	20 (24.1)	36 (43.4)**	10 (12.0)	8 (9.6)	83 (100.0)
Parent's gene	13 (15.7)	28 (33.7)**	24 (28.9)	8 (9.6)	10 (12.0)	83 (100.0)
Irradiation	7 (8.4)	13 (15.7)	42 (50.6)**	12 (14.5)	9 (10.8)	83 (100.0)
Curses	36 (43.4)**	30 (36.1)	7 (8.4)	2 (2.4)	8 (9.6)	83 (100.0)
Will of God	35 (42.2)**	16 (19.3)	22 (26.5)	7 (8.4)	3 (3.6)	83 (100.0)
Evil spirits	44 (53.0)**	26 (31.3)	8 (9.6)	1 (1.2)	4 (4.8)	83 (100.0)
Bad luck	44 (53.0)**	22 (26.5)	11 (13.3)	4 (4.8)	2 (2.4)	83 (100.0)

**response with the highest frequency in each row

SD=strongly disbelieve; D=disbelieve; B=believe; SB=strongly believe; NR=no response

Table 2. Comparisons between respondents' beliefs on the risk factors/aetiologies of cleft lip and marital status, gender, and exposure to cleft lip babies

Risk factor**	Had seen cleft lip before? ^{1,2}			Marital status ^{1,2}			Gender ^{1,2}		
	Yes	No	p-value	Single	Married	p-value	Male	Female	p-value
Drugs (e.g. retinoic acid)	2.9 (3)	2.8 (3)	1.46	2.9 (3)	2.8 (3)	0.711	2.9 (3)	2.7 (3)	0.600
Excessive alcohol	2.5 (2)	2.6 (2)	0.612	2.4 (2)	2.6 (2)	0.557	2.8 (3)	2.4 (2)	0.133
Excessive smoking	2.5 (3)	2.4 (2)	0.687	2.5 (2)	2.7 (3)	0.460	2.8 (3)	2.5 (2)	0.225
Viral infection	2.7 (3)	2.6 (3)	0.440	2.9 (3)	2.0 (3)	0.073	2.7 (3)	2.6 (3)	0.619
Parent's gene	2.5 (3)	2.3 (2)	0.684	2.6 (2)	2.2 (2)	0.047	2.6 (3)	2.3 (2)	0.203
Irradiation	2.8 (3)	2.9 (3)	0.807	2.8 (3)	2.8 (3)	0.819	2.9 (3)	2.8 (3)	0.281
Witchcraft	1.5 (1)	1.8 (2)	0.173	1.7 (2)	1.4 (1)	0.067	1.6 (1)	1.6 (1)	0.824
Curses	1.6 (1)	1.7 (1)	0.995	1.8 (2)	1.9 (1)	0.475	1.6 (1,2)	1.7 (1)	0.776
Will of God	1.9 (1)	1.8 (2)	0.327	2.0 (2)	1.5 (1)	0.030	1.9 (1)	1.9 (2)	0.211
Evil spirits	1.6 (1)	1.6 (1)	0.958	1.9 (2)	1.3 (1)	0.006	1.5 (1)	1.7 (1)	0.601
Bad luck	1.7 (1)	1.5 (1)	0.351	1.9 (1,2)	1.4 (1)	0.045	1.5 (1)	1.7 (1)	0.598

**df=3, X² test

¹missing values were not analysed

²values are presented as mean Likert scores, with the corresponding modal scores in parenthesis (a score of: 1 depicts "strongly disbelieve"; 2 depicts "disbelieve"; 3 depicts "believe"; while 4 depicts "strongly believe")

Table 3. Frequency distribution of the responses of our respondents concerning their attitudes toward babies with cleft lip

Situations	SD (%)	D (%)	A (%)	SA (%)	NR (%)	Total (%)
S1	3 (3.6)	5 (6.0)	35 (42.2)**	30 (36.1)	10 (12.0)	83 (100.0)
S2	2 (2.4)	4 (4.8)	36 (43.4)**	32 (38.6)	9 (10.8)	83 (100.0)
S3	2 (2.4)	1 (1.2)	42 (50.6)**	29 (34.9)	9 (10.8)	83 (100.0)

**response with the highest frequency in each row,

^{S1}I can conveniently attend to the parent of a baby with cleft lip in the health care centre without any fear,

^{S2}I can play with a baby with cleft lip without any fear,

^{S3}I can visit the family of a baby with cleft lip if my duty calls for it as an health officer

SD=strongly disagree; D=disagree; A=agree; SA=strongly agree; NR=no response

Table 4. Comparisons between our respondents' attitude with their marital status, gender, and exposure to babies with cleft lip

Situations	Had seen cleft lip before?			Marital status			Gender		
	Yes	No	p-value	Single	Married	p-value	Male	Female	p-value
S1	3.5 (4)	2.9 (3)	0.008	3.2 (3)	3.3 (4)	0.759	3.3 (3)	3.2 (3)	0.576
S2	3.5 (3)	3.1 (3)	0.027	3.3 (3)	3.36 (4)	0.303	3.4 (3)	3.3 (3,4)	0.350
S3	3.6 (4)	3.0 (3)	0.030	3.2 (3)	3.3 (3)	0.808	3.4 (3)	3.3 (3)	0.661

df=3, X² test,

^{S1}I can conveniently attend to the parent of a baby with cleft lip in the health care centre without any fear,

^{S2}I can play with a baby with cleft lip without any fear,

^{S3}I can visit the family of a baby with cleft lip if my duty calls for it as an health officer,

(A score of: 1 depicts strong disagreement; 2 depicts disagreement; 3 depicts agreement; while 4 depicts strong agreement)

Table 4 compares the respondents' attitudes toward cleft lip babies with their marital status, gender, and exposure to cleft lip babies respectively. The mean and modal Likert scores of the respondents' attitudes are ≥3 and 3 respectively. In addition, the mean and modal Likert scores of the attitudes of the respondents that have seen cleft lip babies were equal to, or higher than, those that have not seen such babies, and these comparisons were statistically significant (p-values >0.05).

4. DISCUSSION

The primary health care workers play important roles in disease prevention through their various participatory roles in community health promotion and education programmes [11]. Their beliefs on disease risk factors/aetiologies as well as their attitudes toward disease prevention are strong determinants of their effectiveness in health promotion and education programmes [12]. In this research, we explored the beliefs and attitudes of potential primary health care workers in Ibadan, Nigeria, toward babies with cleft lip.

Cleft lip is one of the most prevalent orofacial deformities [2-5]. Many (44.6%) respondents in this present study reported to have seen at least one baby with cleft lip; this confirms that births of babies with cleft lip are in no way a rare occurrence in the Nigerian society.

Superstitious beliefs on cleft lip is highly prevalent in Africa [7], with no exclusion to the Nigerian cultural settings [8,9], and these beliefs were found to be more predominant among those in the low socioeconomic class [7,13]. We found out that some respondents in this study were superstitious about cleft lip (Table 1), despite their level of knowledge in health sciences. This reveals that superstitious belief is deeply rooted among some of them.

It is also noteworthy that just <60% of the respondents in this study could associate cleft lip with medical risk factors such as alcohol, tobacco, irradiation, drugs, and hereditary factors. This indicates that the knowledge of many of them on the risk factors/aetiology of cleft lip is inadequate. This calls for the need to educate them on this congenital deformity.

A significant relationship exists between the marital status of a respondent and his/her belief on the risk factors/aetiologies of cleft lip. The singles tend to be relatively more superstitious than those that were married.

We also observed that those that had ever seen babies with cleft lip have higher tendencies to be friendly with such babies and their family at subsequent encounters with them (Table 3).

We noted that the majority of the respondents in this study showed positive attitude towards delivering health care services to cleft lip babies. They had positive disposition towards visiting cleft lip babies, being friendly with their families, as well as paying attention to the health needs of such babies (Table 2). This reveals that most of them, in future, will be willing to offer help to such babies as health officers, particularly in the poor local Nigerian communities.

5. LIMITATIONS OF THE STUDY

This study has some few limitations. This study only assessed the attitudes and beliefs of the study participants using quantitative methods, it did not deeply explore their beliefs and attitudes, unlike for a qualitative method. This study is a pilot study; hence the need for a bigger study in this field of interest.

6. RECOMMENDATIONS

The authors recommend that students of primary health-care related diploma programmes in Ibadan should be educated on cleft lip. This will be helpful in disabusing the mind of some of them about superstitions on cleft lip, as well as enlighten them on the risk factors/aetiologies of cleft lip. Public awareness creation is also needed to curb the abuse of cleft lip babies in the society.

7. CONCLUSIONS

The knowledge of the majority of the respondents in this present study on the risk factors of cleft lip is inadequate. However, the majority of them showed positive attitudes toward babies with cleft lip. This study population will be good advocates for the protection and

care of such babies if properly educated on cleft lip.

CONSENT

Informed consent was obtained from each participant in this study.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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