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RESEARCH ARTICLE

SOCIO-DEMOGRAPHIC FACTORS MILITATING AGAINST SCREENING OF SIBLINGS OF HIV POSITIVE CHILDREN IN CALABAR, NIGERIA

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ABSTRACT

Background: Paediatric ART coverage is only 20%, leaving a gap of 80%. The household members of HIV-positive persons often are also infected, but unfortunately, are frequently unaware of their HIV status. Early diagnosis and treatment of paediatric HIV is key as mortality of untreated patients is very high in the first two years of life and reaches 80% by four years. **Methods:** This descriptive cross-sectional study was conducted in two principal health facilities offering PMTCT/Paediatric HIV services in Calabar, Cross- River state, Nigeria. A “sibling” here is defined as a child from the same biological parents as the index patient. A pre-tested questionnaire was used to collect the baseline data, which included socio-demography, relationship to the child, and reasons for non-screening for HIV test were obtained. **Results:** Of the 401 children studied, 367(91.5%) had been previously tested for HIV while 34(8.5%) never had HIV test. The reasons observed for not testing and receiving care were low perception of risk for HIV (36.0%), fear of disclosure (29.2%), fear of stigmatization (22.4%), ignorance (7.9%) and distance from health facility (4.5%). **Recommendations:** Focused awareness campaigns and advocacy, evidence-based approaches should be sustained; laws that aim to reduce stigma and discrimination against people living with HIV should be enforced.

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INTRODUCTION

Paediatric ART coverage is only 20% leaving a gap of 80% (Ahmed *et al.*, 2015). The households’ members of HIV-positive persons often are also infected, but unfortunately, are frequently unaware of their HIV status (UNAIDS, 2014); (Abatesi *et al.*, 2002). Case finding efforts for children especially outside PMTCT is also inadequate (Toronto Public Health. HIV in Toronto 2015). Proximity to testing facility and higher level of education have been noted to facilitate higher testing rates among both sexes (Mossdorf *et al.*, 2010). Other identified factors include low perceived risk for HIV infection and lack of access to free testing, general negative perceptions of test services, stigmatizing beliefs and fear of discrimination (Kalichman and Simbayi, 2003; Omoigberale *et al.*, 2006). Psychosocial factors play an important role in access to health care in resource poor settings with high HIV prevalence (Akpede *et al.*, 2002). Anecdotal reports (Kellerman and Essajee, 2010; Bateganya *et al.*, 2007) suggest that many parents may be apprehensive about subjecting their children to HIV tests, especially when they are unsure of their own HIV status. In other instances, parents may be concerned that taking a child for HIV testing will result in disclosing their own status to the child (Cohen *et al.*, 2015).

Early diagnosis and treatment of paediatric HIV is key as mortality of untreated patients is very high in the first two years of life and reaches 80% by four years (FMOH 2015). Healthcare workers may be discouraged to offer HIV testing and counseling (HTC) to children due to concerns about privacy and disclosure related to maternal HIV status. In addition, concerns of increased workload related to performing pre-test and post-test counseling, or lack of understanding or training in paediatric counseling and handling of paediatric blood specimens are barriers (Ahmed *et al.*, 2011). Central to providing treatment and support to families affected by HIV is knowledge of the HIV status of all family members and linkage to appropriate HIV prevention, treatment and care services. These have been shown to increase the uptake of these services (Matovu *et al.*, 2015). In view of the aforementioned, we decided to conduct this study with the aim to exactly determine the causes mitigating the access to health care facilities by siblings of HIV positive children in our region. Identification of these factors will enable health care providers give appropriate intervention measures to achieve and sustain the UNAIDS 90-90-90 target.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted in two principal health facilities offering PMTCT/Paediatric HIV

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services in Calabar, Cross- River state, Nigeria. These facilities included the University of Calabar Teaching Hospital (UCTH) and General Hospital, Calabar, Cross Rivers state, Nigeria. The UCTH is a 600-bed tertiary health facility while General Hospital, Calabar is a secondary healthcare center with 100-bed capacity. The average number of HIV positive children in care in these two health facilities are 100 in UCTH and 145 General Hospital Calabar. Consecutive patients in the clinic register aged six weeks to 15 years in care in both facilities who have siblings were used as a point of contact to reach out to their families. A "sibling" here is defined as a child from the same biological parents as the index patient. Addresses and phone numbers were used to contact the parents /guardians and the siblings of our index patients. The purpose of the study was explained to them and a convenient time and date of home visit was scheduled. Parents/Guardians of the siblings of index patients were counseled on the purpose of the study. Parental consent and child assent were obtained. After obtaining consent from parents and verbal assent from the child if above 7 years, a detailed history was obtained through pretested-questionnaire. These included the child's biodata, past medical history, parental socioeconomic status, reasons for not doing the HIV test were obtained. General physical examination was conducted at either the home of the parents or at the health facility based on the parents' preference. Those who refused consent to participate in the study were not denied services. Ethical Clearance Certificates for the proposed study were obtained from the Health Research Ethics Committee of the University of Calabar Teaching Hospital and the Ministry of health, Cross-Rivers state in charge of the General Hospital. The data were analyzed using Statistical Package for Social Sciences (SPSS) version 21. Descriptive statistics was presented with frequencies and proportions. Categorical variables were compared using chi-square test and Fisher's exact test. The level of statistical significance was fixed at $p < 0.05$.

RESULTS

A total of 413 children were encountered from 212 families. Four hundred and one (401) children were recruited into the study, 12 other children were already receiving HIV treatment and care hence excluded. Those who accepted home testing were 371 while 30 were tested in a health facility. There were 192(47.9%) males and 209(52.1%) females giving a male to female ratio of 1:1.1. The overall mean age was 7.53 ± 4.12 years with those aged 5 years and below had the highest frequency. One hundred and seventy-seven (83.5%) households had at most four (4) children with a mean of 3.54 ± 1.8 per household. Of the 401 children studied, 367(91.5%) had been previously tested for HIV while 34(8.5%) never had HIV test. Among those that had a previous HIV test, 1(0.3%) tested positive while 366 (99.7%) tested negative. Eleven (11) that tested positive had been previously diagnosed with HIV infection before this study and ten (10) were on ART while one was not. Majority of the fathers 82(38.7%) were between 41- 45years followed by those greater than 45years 53(25%). Most of the mothers 83(39.2%) were between 36-40years and the least were those greater than 45years 10 (4.7%). The fathers 98(46.2%) had secondary education and 94(44.3%) had tertiary education. One hundred and sixteen (54.7%) mothers had secondary education, 56(26.4%) had tertiary education and four (1.9%) had no formal education. One hundred and eighty-two (85.8%) mothers were married, 25(11.8%) were widows while 3(1.4%) were divorced. Many of the fathers 91(42.9%)

were HIV negative while most of the mothers 189(89.2%) were HIV positive. Majority of the parents 90(42.5%) whose HIV status were known had discordant HIV test results (Table 1). Some of the reasons observed for not testing and receiving care were low perception of risk for HIV (36.0%), fear of disclosure (29.2%), fear of stigmatization (22.4%), ignorance (7.9%) and distance from health facility (4.5%) Figure 1.

Table 1. Characteristics of parents of children in the study

Variable	Frequency (N)	Percentage (%)
Fathers' age group/year		
26-30	6	1.5
31-35	35	8.5
36-40	126	30.5
41-45	106	25.7
>45	140	33.9
Mother's age group/years		
26-30	84	20.3
31-35	102	24.7
36-40	133	32.2
41-45	50	12.1
>45	17	4.1
Father's education		
Primary	41	9.9
Secondary	205	49.6
Tertiary	167	40.4
Father alive?		
Yes	362	87.7
No	51	12.3
Mother's education		
None	14	3.4
Primary	86	20.8
Secondary	203	49.2
Tertiary	110	26.6
Mother alive?		
Yes	376	91.0
No	37	9.6
Mother's marital status		
Single	4	1.0
Married	359	86.9
Separated	47	11.4
Widowed	3	0.7

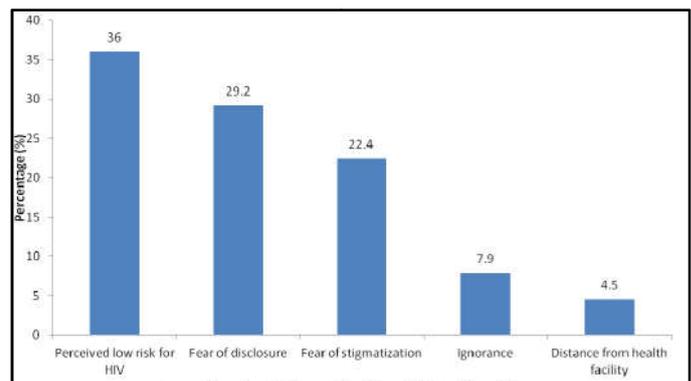


Fig. 1. Factors influencing HIV diagnosis in siblings of HIV positive children

DISCUSSION

Low perception of risk of HIV to children was the commonest reason why parents refused taking their children for testing. This is because the children may not appear ill and thus assumed unlikely to be HIV positive. Such beliefs are usually linked to poor knowledge about the HIV virus (Mohlabane *et al.*, 2016); (Buzdugan *et al.*, 2012). In some cases, the parents had a fair knowledge of the time of acquisition of their HIV infection and thus were convinced siblings born prior to acquisition of their own disease were unlikely to be positive.

This finding of perceived low risk is comparable to that observed by (Akpede *et al.*, 2002) where perception of good health was a major reason given for refusing consent to testing. The finding in this study was also similar to a Zambian study, (Merten *et al.*, 2016) reported that child health status is a very important determinant of uptake of HIV testing in the family. In their study utilization of HIV testing services was found to be more common in children who are sick as compared to children in good health. Fear of disclosure of a caregiver's status to the spouse or to his/her other children was a major factor hindering HIV testing/diagnosis in children. Many of the parents of the children in this study had discordant HIV test results and had not previously disclosed their status to their spouses or their children considering the possibility of disharmony or even possible breakup of family associated with disclosure. This is more common with seropositive mothers with seronegative spouses (Akpede, 2002). In addition, many caregivers were afraid to test their child for fear of possible disclosure of their own HIV status. Similar studies (Dijk Van *et al.*, 2009; Yeap *et al.*, 2010; Kimani-murage *et al.*, 2013) had shown that there is fear and shame regarding disclosure of a child's status to the child. Fidelity and openness are recommended among couples as a panacea to the problem of disclosure. Fear of stigmatization accounted for 22.4% of reasons for non-testing of children by the caregivers. Some parents do not want their children tested due to deep-seated fears of stigma against their children or themselves (USAID 2017); (Kimani-murage *et al.*, 2013).

The findings of stigma in this study was similar to that of an Ethiopian study (USAID 2017), where all respondents mentioned fear of stigma and discrimination of their children as one of the most important deterrents to HIV testing. This finding is almost exclusively seen in families of discordant couples who fear that testing may eventually lead to disclosure of status to their spouses and children with attendant discrimination, rejection, gender-based violence or even divorce. Additionally, cultural belief and assumption that those diagnosed with HIV means the individual has been living in marital infidelity or promiscuity. Similarly, in a study on attitudes to Paediatric HIV testing done in Zimbabwe by Buzdugan *et al.* (2012), 42% of caregivers fear that if tested their children could be discriminated against by community members. Stigmatizing beliefs about AIDS and their associated fears of discrimination can influence decisions to seek HIV testing and treatment services, this remains a formidable challenge, hindering access to accurate information and services (Kalichman and Simbayi, 2003; USAID 2017). In view of highlighted challenges, it is pertinent to note that 90% of the children studied had been previously tested. This might be due to increased awareness and probably the introduction of PITC and there is need to sustain these activities. Distance to health facility is another reason hindering HIV testing in children. This finding was not a major factor in this study as it accounted for only 4.5% of the responses. This was due to availability of accessible outlets in our environment where HIV testing could be done within the locality. Most of the subjects in this study live in Calabar urban environment with easy access to health facilities. Conversely, in a Zambian study, (Dijk Van, 2009) 73% of caregivers reported problems accessing clinics, most often due to lack of money, transportation and poor road conditions, especially during the rainy season. Their study was done in rural area with poor coverage of health facilities and poor road network. Other studies (Ntuli A, Kabengula J, Msuya S 2011); Musheke M,

2013) also corroborated this finding that proximity to testing facility facilitate higher testing rates. A study in Uganda by Boender TS *et al.* (2012) revealed that poor referral from peripheral facilities, proximity to health facility, financial constraint and stigma were found to be major barriers that delayed initiation of treatment. They fear to come to the clinic because someone might see them and thus either knows their HIV status or that of their ward.

Conclusion

The factors influencing HIV diagnosis in siblings of HIV positive children in Calabar were low perception of risk for HIV (36.0%), followed by fear of disclosure (29.2%), fear of stigmatization (22.4%), ignorance (7.9%) and distance from health facility (4.5%).

Recommendations

- Efforts on focused awareness campaigns and advocacy on HIV screening in children should be strengthened.
- Evidence based approaches to address HIV disclosure in both children and adults with age appropriate support group guidelines should be developed.
- Laws that aim to reduce stigma and discrimination against people living with HIV should be enforced.

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