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Research Article

Disclosure of HIV Status to Infected Children and Adolescents by Their Parents/Caregivers in a Tertiary Health Facility in Abuja, Nigeria

Okechukwu AA*, Offiong U and Ekop E
Department of Paediatrics, University of Abuja Teaching Hospital, Gwagwalada, Abuja, Nigeria

***Corresponding author:** Okechukwu AA, Department of Paediatrics, University of Abuja Teaching Hospital, Gwagwalada, Abuja, Nigeria

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Abstract

Background: Despite proven benefits of disclosure of HIV infection, many infected children and adolescents in most resource limited settings do not know their sero-status. This very vital information supposed to be provided by the parents/caregivers with the support of health care providers is never done timely in these areas. We therefore conduct this study to determine the time of disclosure of HIV sero-positive status to infected children and adolescents, assess the knowledge and attitude of parents/caregivers to disclosure, and determine factors influencing it in order to guide in the design of strategies for its improvement in our environment.

Methods: A cross sectional hospital based study was conducted among HIV-infected children and adolescent aged >6-18 years with their parents/ caregivers attending paediatric special treatment clinic of University of Abuja Teaching Hospital between February to May 2017 for the above objectives. A structured questionnaire was used to collect information of the children/ adolescents together with that of their parents/caregiver's characteristics and perception on disclosure using close and open-ended questions. The weight, height, body mass index, CD4cell count, and the viral loads of the children and adolescents were also done.

Results: Of a total of 218 children and adolescents recruited 126 (57.5%) were males, and of the 213 of parents/caregivers interviewed 170(79.8%) were females, 149(70.0%) were mothers and 163(76.5%) were HIV positive. HIV disclosure occurred in 63(29.6%) of children and adolescents, with main reason for disclosure being disease severity 30 (47.6%), while young age 81(54.0%) was their reason for not disclosing. 12-14 years was the ideal age suggested by 101(47.4%) of parents/caregivers as best time for disclosing. While statistical significant difference was seen with age (P=0.000), socio-economic status(p <0.001), maternal level of education, (p= 0.00), viral load (p=0.04), and degree of viral suppression (P=0.037) between the disclosed and the non-disclosed, age of the patients, (p=.000, OR 0.55, CI 0.44-0.66), sex of the caregiver, (p=0.041,OR 0.26, CI 0.07-0.95), and their socio-economic status (p=0.032, OR 0.086, CI 0.009-0.80) were predictors of disclosure in this study.

Conclusion: The low rate of disclosure was evidence in this study; its clinical benefits were also highlighted. The need to adopt age dependent, locally, and culturally-sensitive approach to assist in disclosure is desirable.

Keywords: Caregiver, parents, disclosure, HIV sero-status, infected, children, adolescents

Background

With successful and increasing assess to antiretroviral therapy (ART), most HIV infected children are surviving into young adults. Disclosing their sero-status to them remains one of the greatest psychosocial challenges their parents/ caregivers faces. Disclosure remains a controversial and emotionally issue for both the health care workers (HCW) and parents/caregivers [1]. It involve informing the child about potentially life threatening, stigmatized and transmissible illness that many parents/caregivers fear that such information maybe a source of emotional and physiological concern for the child [2]. It is also complex because of stigma attached to it, the social support involved, family relationship, parenting skills and concern about children's emotional and maturity ability to understand and cope with the nature of the illness [2]. For parents/caregivers, it is a starting step in the process of adjustment by the child, the caregivers and the community to an illness and the life challenges that it poses.

There is evidence of health benefits of disclosure of HIV infection to children, with little evidence of psychological or emotional harm. Apart from increase in adherence to treatment with reduced risk of death as the main benefit [3], others include: higher self-esteem,

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Table Ia: Characteristics of the Patients Population (n=218).

Variables	Male (%)	Female (%)	Total (%)	P values
	Mean ±SD	Mean ±SD	Mean ±SD	
For the Patients				
Sex	126(57.5)	92(40.2)	218(100)	0.82
Age (years)	10.97±2.9	11.06±3.1	11.00±2.1	0.824
Weight (kg)	31.8±1.0	35.3±1.3	33.3±0.9	0.029
Height (cm)	138.6±1.6	156.2±15.3	146.0±6.5	0.183
BMI (kg/m^2)	17.9±0.4	16.9±0.4	17.41±0.8	0.578
Systolic B/P (mmHg)	96.4±0.9	97.3±1.1	96.8±0.7	0.523
Diastolic BP (mmHg)	62.4±3.6	58.5±1.3	60.7±2.2	0.374
CD4 cell count (cells/ml)	847.976±37.1	921.036±54.9	878.81±31.6	0.254
Viral load (copies/ml)	17,347.94±8,916.40	7824.054±2,733.60	13,328.688±5281.5	0.374
WHO clinical stage				
1	110(57.6)	81 (42.4)	191(87.2)	
2	14(73.7)	5(26.3)	19(8.7)	
3	0(0)	2(100)	2(0.9)	
4	0(0)	1(100)	1(0.5)	

Table Ib: Characteristics of the Caregivers (n=213).

Variables	Total (%)	Variables	Total (%)
Sex		**Religion**	
Male	43 (20.2)	Christianity	141(66.2)
Female	170 (79.8)	Moslem	72 (33.8)
HIV Status		**Occupation of Caregiver**	
Positive	163(76.5)	Professional	28(13.1)
Negative	46(21.6)	Skilled worker	91 (42.7)
I don't know	4(1.9)	Semi-skilled	79(37.1)
Marital Status		**Unemployed**	**15(7.0)**
Single	0(0.0)	Relationship with Patients	
Married	164(77.0)	Mother	149(70.0)
Divorced	9(4.2)	Father	32(15.2)
Widowed	9(4.2)	Other (relatives) [aunties. grandmothers, sisters, brothers, uncles]	29(13.6)
Separated	31(14.6)	Others (non-relatives)	3(1.4)
SES of Caregiver			
Upper	43(20.2)	**Educational level of the mothers of the patients (n=149)**	
Middle	61(28.6)	No education	24(16.1)
Lower	109(51.2)	Primary	39(26.2)
Age of Caregiver (years)		Secondary	52(34.9)
20 -29	27(12.7)	Tertiary	34(22.8)
30-39	92(43.2)		
40-49	70(32.9)		
50-59	21(9.9)		
60 -69	3(1.4)		
>70	0(0.0)		

fewer symptoms of depression, higher CD4, better ability to seek for social support, improved coping skills, and practice of safer sexual to prevent secondary transmission [4-11]. However, some others studies did not report such benefits [12-15]. Stigmatization remains

Table II: Patients Knowledge about Their Illness.

Variables	Total
Do you know why you visit hospital regularly?	
I don't know	120(55.0)
I was told to come	3 (1.4)
To meet with other kids	0(0.0)
For my drug refill	65(29.8)
For investigations	6 (2.8)
Because you are sick	22(10.1)
Others	2 (0.9)
Will you want to know why you visit the hospital regularly?	
Yes	208(95.4)
No	10(4.6)
Do you know what your illness is called?	
Yes	33(15.1)
No	185(84.7)
Are you living with your parent(s)?	
Yes	190(87.2)
No	28(12.8)
Are you living in orphanage?	
Yes	4(1.8)
No	214(98.2)
Are you living with other relations?	
Yes	24(11.0)
No	194(89.0)
Are you supervised while taken your drugs?	
Yes	202(92.7)
No	16(7.3)
If yes by whom? (n=202)	
Mother	167(82.7)
Father	10 (5.0)
Aunty	11 (5.5)
Sister	2 (1.0)
Brother	3(1.5)
Uncle	2(1.0)
Grandmother	4(2.0)
Others	3(1.5)

a major barrier to HIV disclosure, and often delays the decision to disclosure [16]. As a result of this, significant numbers of children and adolescents in most developing nations of the world on antiretroviral treatment are not fully informed about their HIV status [16,17]. The American Academy of Pediatrics (AAP) recommended counselling to the caregiver to be provided by HCW, and such counseling to be individualized putting into consideration the child's cognitive developmental stage, and should be an on-going process [18]. The recommendation also highlighted the need for adolescents to know and well informed of their HIV status, in order to appreciate the consequences of unprotected sexual behaviors and poor adherence

Table III: Caregivers and Disclosure (n=213).

Have you disclosed the child status to him/her?	Total (%)
Yes	63 (29.6)
No	150(70.4)
If no, will you like to disclose to the child? (n=150)	
Yes	69(46.0)
No	81(54.0)
If yes, what type of disclosure? (n=63)	
Complete (single event)	40(63.5)
Complete (gradual process)	9(14.3)
Partial	14(22.2)
What was your reason for non-disclosure? (n=150)	
Child will be angry	36(24.0)
Child will blame the parent	3(2.0)
Child too young to understand	81(54.0)
Child will disclose to others	22(14.7)
Don't know how to disclose	8(5.3)
What was your reason for disclosure? (n=63)	
Suspicious of regular hospital visits	18(28.6)
Child enquiring about the illness	13(20.6)
Need for the child to understand the problem	1(1.6)
Child's right to know	1(1.6)
Child very sick	30(47.6)
Have you disclosed child status to any other person? (n=213)	
Yes	64(30.0)
No	149(70.0)
If yes, to whom? (n=64)	
Father	2(3.1)
Grandmother	29(45.3)
Aunty	18(28.1)
Brother and sister	13(20.3)
Others	2(3.1)
Have you disclosed your own status to the child? (n=213)	
Yes	59(27.6)
No	154(72.4)
Who should disclosure to the child (213)	
Parents	148 (67.6)
Health workers	29 (13.2)
Both	25 (11.4)
What is ideal age for disclosure?(n=213)	
6-8	6(2.8)
9-11	48(22.5)
12-14	101(47.4)
15-17	52(24.4)
>17 years	6(2.8)

to treatment [18]. The levels of disclosure vary widely with countries and regions of the world. Values as low as 9%, and as high as 95% were reported in most developing and developed nations of the world with an average of 29% [19-21]. Time of disclosure also varies with age, with older children above 10 years being more likely to be told of their HIV status as compared to those less than 10 years [19-21], and as many as 82.6% of school-age children not knowing their HIV status in most developing nations of the world [19-22]. We therefore conduct this study in our health facility to determine the time of disclosure of HIV sero-positive status to infected children, assess the knowledge and attitude of parents/caregivers towards disclosure, and determine factors influencing it in order to guide in the design of strategies for its improvement.

Material and Methods

The study was a cross sectional hospital based survey conducted at the paediatric out-patient special treatment clinic (POSTC) of the university of Abuja teaching hospital (UATH) over a 5 months period of February to May 2017. POSTC is an out-patient clinical service area where HIV infected children and exposed babies are followed up for treatment, care and monitoring. It has consulting rooms for the doctors, nurses, and adherence counselors. Record clerks, pharmacists, and nutritionists were also at their disposal on week days (Monday-Friday, from 7.30 am to 4 pm.). UATH is a 350 bed capacity referral hospital, sub-serving the people of Federal Capital Territory (FCT) Abuja and five neighbouring states. Is one of the first centers to start offering free HIV/AIDS services in the country, through the President Emergency Plan for AIDs Relief (PEPFAR) since 2005 and Federal Government of Nigeria (FGN).

The subjects were paediatric HIV infected patients from 6-18 years of age on ARV therapy and their parents/caregivers. Consecutively eligible children and their parents/caregivers attending the POSTC were recruited and enrolled into the study after caregivers provided written informed consent and children 7 years and above provide written inform assent. Inclusion criteria for the study included: HIV infected children and adolescents from 6 to 18 years of age, their parents/caregiver, parents/caregiver accepting to be part of the study, older children assenting to be part of the study also. Exclusion criteria included were those parent/caregivers, older children, adolescent unwilling to participate in the study, children less than 6 years of age, mentally deranged, and physical handicapped children/adolescents. A structured pretested questionnaire was used to collect information on the children and their caregiver's characteristics and perception on disclosure. Close-ended questions and a set of open-ended questions were asked. Close-ended questions captured information about the child and parents/caregiver demographic characteristics, whether the child should be told about their HIV status, the appropriate age of disclosure, and who else to be disclosed to. The open-ended questions captured information on parents/caregiver's views on why it was important to disclose to infected children, why caregivers delay disclosure, their role in disclosure, etc. Children were asked whether they know why they come to hospital regularly, optional responses were: 'I don't know, I am told to come, for drug refill, for investigations, etc. Other sample question was 'What is your illness called? Optional responses were: 'I don't know, is called HIV, name any other illness. All questionnaires were administered by the same principal investigator. To avoid inadvertent disclosure of child's status, children were interviewed in the presence of their parents/caregivers and the caregivers interviewed in the absence of their children. Complete disclosure means that the child knows his/her HIV-status and has been given disease specific information, while partial disclosure means that the child knows that he/she is sick but not knowing that it is HIV infected. In addition to the close-ended questions, the weight, height, body mass index (BMI), CD4cell count, and the viral loads (VL) of the children and adolescents were also collected. CD4 cell count was measured using automated Partec

Table IV: Characteristics of Disclosed Vs Non-Disclosed Patients.

Variables	Disclosed [n=68]	Non-Disclosed ([=150]	X^2	P value
	(%)	(%)		
Disease Severity				
WHO	62(29.1)	129(60.6)	4.14	0.25
1	4(1.9)	15(7.4)		
2	0(0)	2(0.9)		
3	1(0.9)	0(0)		
4				
Religion				
Christian	47(22.1)	96(45.1)	0.303	0.582
Muslim	21(9.9)	51(23.9)		
Sex of the Patient				
Male	39(18.3)	87(40.8)	0.008	0.929
Female	29(13.6)	63(29.6)		
Age of the Patient				
<10 years	7(3.2)	94(43.1)	37.96	0
>10years	56(25.7)	56(25.7)		
Sex of the Caregiver				
Male	19(8.7)	29(13.6)	2.019	0.155
Female	49(23.0)	121(56.8)		
SES				
Upper	23(10.8)	25(11.7)	14.07	0.001
Middle	19(8.9)	47(22.1)		
Low	36(16.9)	78 (36.1)		
Maternal Education				
No education	4(1.9)	20(9.4)	9.294	0.007
Primary	6(2.8)	33(15.5)		
Secondary	12(5.6)	40(18.7)		
Tertiary	13(6.1)	21(9.9)		
Anthropometry				
Wt (kg)	41.6	29.5		0
BMI (kg/m^2)	17.9	17.2		0.65
CD4 cell count and VL				
CD4 (cells/ml)	811.3	909.4		0.173
Viral load (copies/ml)	6,221.90	16550.4		0.04
Viral load <20 (copies/ml)	54(79.4)	61(40.6)		0.037

Cyflow easy count kit (Partec code no. 05-8401 Western Germany), VL measurement was with (Roche Smp /prep /cobs Taqman 96, USA), and Seca beam weighing scale accurate to the nearest 0.01kg was used for measuring their weight, while the height was measured by Roche standiometer.

Olusanya et al, 23 two factor index, husband's occupation and mother's level of education was used to group the subjects according to their socio-economic background. Accordingly, scores of 3,2,1 were assigned to husband's occupation: 3 points for unskilled workers, 2 points for middle level bureaucrats, technicians, skilled artisans, and well to do traders, and 1 point score for professionals, top civil servants, politicians and businessmen. For maternal level of education: zero point was assigned to university education, 1 point for those who completed secondary or post-secondary schools and two point score for those who had only primary education or received no education at all. The scores were summed up and the total score was used as follows: I and II [upper socio-economic status (SES)], III [middle SES], and IV and V [lower SES].

Ethics clearance was obtained from the ethics committee of the hospital before the commencement of the study.

Data analysis was conducted using Statistical Package for Social Sciences (SPSS) version 22.0 that produced frequencies, percentages, means, and standard deviations. The tests for associations and differences was done with student T-test, logistic regression was performed to assess the relationship between study variables. A p value of ≤ 0.05 was considered significant.

Results

The characteristics of the patients were shown in Table Ia. A total of 218 children and adolescents were recruited into the study. There were 126 (57.5%) boys, and 92 (40.2%) girls, with mean age and weight of 11.0±2.1 years, and 33.3±0.9 kg. They had a mean body mass index (BMI), systolic and diastolic blood pressure, CD4 cell count, and viral load (VL) of 17.41±0.8 kg/m2, 96.8±0.7 mmHg, 60.7±2.2 mmHg, 878.8±31.6 cells/ml, and13, 328.688±5281.5 copies/ml respectively. Most were in WHO stage 1 [191 (87.2%)] disease, only 1(0.5%) in stage 4.

The characteristics of the parents/caregivers were shown in Table Ib. There were a total of 213 parents/caregiver: 1 parent had two of her kids on ART, while the other had 3 kids on medication. Their mean age was 37.8±9.4 years. More of the parents/caregivers were females170 (79.8%), positive for HIV infection 163 (76.5%), Christians 141(66.2%), married 164 (77.0%), from low socio-economic class [SEC] 109 (51.2%), mothers of the patients 149 (70.0%), and had secondary level of education 52(34.9%), Table Ib.

Table II depicts what the children and adolescents know about their illness. While120 (55.0%) of the patients (children and adolescents) reported not knowing why they come to the hospital regularly, most 208 (95.4%) were keen on knowing the reason(s) for the regular hospital visits. Most children 190 (87.2%) were living with their parent(s), 24 (11.0%) were living with the other relations, while only 4(1.8%) were living in orphanages. 202(92.7%) were supervised while taken their drugs, and 167(76.6%) of the supervision was by their mothers.

Table V: Predictors of HIV-status disclosure.

Variables	OR	P value	CI
Age of the Patients	**0.546**	0	.443-.674
Sex of Caregiver	**0.259**	0.041	.071-.945
Occupation of the Caregiver	**1.368**	0.431	.626-2.990
Education of the mother	**0.421**	0.133	.136-1.303
Socio-economic status	**0.086**	0.031	.009-.797

Information on caregiver's disclosure was shown in Table III. Only 63 (29.6%) of the caregivers had disclosed their child's HIV status to him or her, 150 (70.4%) were yet to do so. Of the 150 yet to disclose, 69 (46.0%) showed interest in disclosing, and of the 63 that disclosed only 49 (77.8%) had shown complete disclosure, 40(63.5) was complete single event, while 9(14.3) was a gradual complete process. Common reason(s) for non-disclosure was that the child is too young to understand 81(54.0%), child will be angry with them 36(24.0%), and child will disclose to others 22(14.7%). Common reasons for disclosing were: child was very sick 30 (47.6%), child was suspicious of regular hospital visits 18 (28.6%), and child enquiring about the illness 13(20.6%). 149 (70.0%) of the parents/caregivers have not disclosed the child status to anybody, those who disclosed were mainly to the grandmothers 29(45.3%) of the child, aunties 18(28.1%), and brothers and sisters 13(20.3%) respectively. 118 (72.4%) have not disclosed their own status to the child, and 148 (67.6%) felt the disclosure of the child's status should be done by the parents themselves and not by the health care worker. Most 101 (47.4%) advocated the age range of 12-14 years as the ideal age for disclosure to take place with a mean age of 10.7±2.8 years,

Characteristics of disclosed and non-disclosed group were shown in Table IV. There was statistical significant difference in age at disclosure (p=0.000), socio-economic status (SES) p =0.001, maternal level of education, p= 0.007, weight, p=0.00, VL, p=0.04, and VL <20 copies/ml between the disclosed and the non-disclosed group.

Predictors of disclosure in this study were shown in Table V. Age of the patients and SES were more predictive of disclosure (p=0.00, OR .545, CI .443-.674, and p=0.031, OR 0.086, CI 0.009-.797) than the other variables

Discussion

The disclosure rate of HIV infection to children and adolescents in this study was 29.6%. This was in consistence with report from other resource limited settings: 30.3% from Thailand [22], 31.8% from Zambia [24] and 29% from Uganda [25]. It was however higher than 22.3% recorded in Tanzania study, [26], 21% in Ghana [20], 13.5% in Nigeria [27], 18% in Europe [28], and 19.2% in Kenya [29]. A much higher rate of 56% was documented also in Kenya [29], 75% and 64% from USA studies [4,30], and 100% from Puerto Rico [6]. The wide variation in disclosure rate of HIV infection in children and adolescents in most studies across the globe might not be unconnected to the diverse cultural non-uniformity in the level of cognitive and developmental understanding in children. Those studies with higher disclosure rate appeared to have started the process of disclosure at an earlier age than those with lower rate [4,6,20,26-30]. In addition to cultural differences, restricted sample size of most studies did not provide enough subjects for better statistical inferences. Disclosure

not only helps HIV infected children to understand their illness better, but also in improving adherence to treatment [13]. Thus, this low rate as documented in this study, and in most studies in resource limited settings will not only reverse the gains of global initiative for ARV scale-up in these areas, but can also create a negative effect on adherence, and sexual behaviors in adolescents.

Disclosure can be complete, partial or non-disclosure [20]. In complete disclosure, which can also be a single event, or a process, the child is told that he/she has HIV and is given specific information about the disease [20]. In single event complete disclosure, there is provision of the diagnosis of HIV or AIDS to an individual with all relevant information on the infection [28], while in complete disclosure as a process, is a process undertaken to disclose to the child from the perceptive of a caregiver, or information received from the child [28]. In partial disclosure, the child will be told that he/she has an illness without specifically knowing that it is HIV infection, while in non-disclosure, the child has not been told anything about the illness. Complete disclosure of HIV status has been associated with improved adherence to ART, while partial and non-disclosure can not only strain relationship between the caregiver and the child, but also result in poor adherence to treatment from frequent forcing and persuasion [3,25]. Force and persuasion are often used to get the child to take his/her medications, a practice that may end up in rebellion and non-adherence to ARV by the child [25]. In the present study, 150 (70.4%) of the children and adolescents were not disclosed of their status, and 40 (63.5%) of those disclosed had a complete single event form of disclosure. Going by this high rate of non-disclosure in this study, and according to Bikaako-Kajura et al [25], this practice will not only strain relationship between the children and their caregivers from frequent forcing/ persuasion before medication, but also adversely affect their adherence to their medications, a key to successful ART [25]. Again, single event complete form of disclosure was the commonly seen type of complete disclosure in this study as opposed to an on-going process as advocated by the AAP [18]. In this form of disclosure, the ability of a child to cognitively and emotionally absorb information in one session is highly limited by his/her developmental limitations and magical thinking [32]. On-going disclosure over time at different stages of development will provide a forum for better understanding of the disease, and should be encouraged.

A suppressed VL of less than <20 copies/ml is an indicator of good adherence to medication. Though the mean VL of (6,221.9 Vs. 16,550.4 copies/ml, p=0.04) for the disclosed and the un-disclosed did not show good viral suppression in this study, it however recorded statistically significant difference among the two groups, a finding that indicates better adherence to medication for the disclosed than the un-disclosed. The degree of good viral suppression (VL <20 copies/ml) was also significant between the two groups (79.4% Vs 40.6%, for the disclosed and the non-disclosed, p=0.037). This finding which also buttress the clinical benefit of disclosure, was in keeping with findings from other studies [3,25]. Statistically significant weight differences (41.6 kg Vs 29.5 kg, p= 0.00) was also seen between the disclosed and the non-disclosed group in this study probably because of the age difference between the two groups, as disclosure occurred at older age in the present study.

The normal absolute CD4 count of children and adolescents lies between the ranges of 500 to 1600 cells/ mm3 of blood. In the present study, though the mean CD4 cell count of the disclosed and the non-disclosed (811.3 Vs 909.4 cells/ml) were within the normal limit, there was however no statistically significantly different (p=0.173) between the two probably because CD4 cell count may also have been affected by other clinical conditions like intercurrent illnesses/infections, corticosteroid therapy, and medical conditions in the groups which were outside the scope of this study. In the course of HIV treatment failure, VL is the first to fail, followed several years by fall in CD4 count, and lastly the clinical failure. Immunological failure is yet to appear in the two groups (disclosed and the non-disclosed) in this study, which is also in support of the fact that virological failure occurs much earlier ever before CD4 cell count starts dropping.

HIV positive caregivers 118 (72.4%) have not disclosed their own HIV status to their children, while 149 (70.0%) have also not disclosed the child status to anybody. This finding and reports from other resource constrain countries [21-26]; is depicting the degree of secrecy associated with HIV infection in our environment because of stigmatization, discrimination, and perceived parental guilt associated with it. This attitude has to, and must be discouraged if we are to have a better and positive control of HIV in our environment.

The disclosure rate remains low in most resource limited countries despite its growing benefits. Reasons cited by most for non-disclosure include; the young age of the child to understand, fear of stigmatization, parental sense of guilt, and fear of the child disclosing to others [4, 6, 20, 26-31]. In the present study, the reasons given by most parents/caregivers for not disclosing were; the young age of the child to understand 81(54.0%), parental guilt 36(24.0%), and fear of disclosing to others 22(14.7%), while reasons for disclosing were disease severity 30 (47.6%), suspicion from frequent hospital visits 18 (28.6), and child inquiring about the illness 13 (20.6%). These findings were also in consistent with findings in other studies [1-4, 6, 26-30], and may suggest the need to adopt an intervention that is locally and culturally acceptable to both parents/caregivers and HCW if successful disclose is to be achieved.

Variables found to be predict disclosure in this study were not different from reports from other places [1,13,34-36], and include: age of the patient (p =.000, OR 0.55, CI 0.44-0.66), sex of the caregiver (p= 0.041,OR 0.26, CI 0.07-0.95), and SES (p= 0.032, OR 0.086, CI 0.009-0.80). Age is single most predictor of disclosure in many studies [1, 13]. Caregivers believe that children less than five years of age are too young both emotionally and cognitively to understand their illness and its implications. They are equally concerned that the child cannot not keep their diagnosis private to minimize subsequent stigmatization of the family, hence most caregivers are more likely to disclose to children at the older age of 12 years and over [1,13,36,37]. Similar age range of 12- 14 years was also reported in this study. This is therefore suggesting an age dependent disclosure intervention to be put in place in this environment.

Conclusion

The low rate of disclosure was evidence in this study; its clinical benefits were also highlighted. We are therefore advocating age dependent, on-going, locally, and culturally sensitive disclosure interventions to be put in place in other to improve disclosure in our environment.

Recommendation

Disclosure from the age of 12 years will appear more appropriate and locally/culturally acceptable in our environment.

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