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Full Length Research Paper

A comparative analysis of caregivers satisfaction with the waiting area of the paediatrics HIV clinic of a tertiary health institution, before and after establishment of a children's play area

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Patient satisfaction is an important indicator of quality of health care performance and is of particular importance for those with chronic illnesses that require lifelong treatment and care. The present study was therefore carried out to compare caregivers' satisfaction with the waiting area of the Paediatrics HIV clinic of the Niger Delta University Teaching Hospital before and after establishment of the children's play area with the aim of determining the impact of the play area on patient satisfaction as well as deriving useful information for future health care planning. Questionnaires designed to assess caregivers satisfaction with the waiting area of the Paediatric HIV clinic were administered to two groups of caregivers before and after establishment of the children's play area respectively. Test of significance among mean scores for each of the parameters assessed were ascertained. After establishment of the children's play area, there was significant improvement in caregivers rating of the comfort of the waiting area as well as its child friendliness, and overall physical environment. Significantly more of the caregivers interviewed after establishment of the children's play room were willing to return back to the clinic when compared to the group interviewed before. A high percentage of caregivers suggested that the cleanliness of the waiting area should be improved. In conclusion, there was significant improvement in overall satisfaction of the caregivers' with the waiting area of the Paediatric HIV clinic after establishment of the children's play area. There is need to incorporate the Patients experience into every stage of the health care planning process.

Keywords: caregivers' satisfaction, waiting area, Paediatric HIV clinic

INTRODUCTION

Satisfaction refers to a state of pleasure or contentment with an action, event or service, especially one that was previously desired (Hornsby and Crouther, 2000). From the health care perspective, Patient satisfaction is defined

as an assessment of the extent to which perceptions and expectations regarding health care have been met (Soh, 1991). Quality health care among other things should be patient centred (Institute of Medicine, 2001) and as such, Patient satisfaction is an important indicator of quality of health care performance (Cleary and McNeil, 1988; Vouri, 1987). The World Health organization has emphasized the importance of the patients' perspective in the evaluation of health care delivery (Murray and Frenk,

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2000). However, for patient populations with difficulty expressing their views directly, such as small children, views of caregivers take on increased importance (Ygge and Anertz, 2001).

There is a positive relationship between patient satisfaction and health care outcome (FitzPatrick, 1991; Larsen and Rootman, 1976) with satisfied patients being more likely to seek further medical advice, comply with treatment and maintain follow up care (Larsen and Rootman, 1976; Korsch et al., 1968; Ofili and Ofovwe, 2005). The influence of patient's satisfaction on continuity of care is particularly important in those with chronic illnesses like HIV who need lifelong care (Hill et al., 1992). In 2004, expanding access to treatment through free antiretroviral therapy (ART) was adopted as one of the measures which could extend and improve the quality of life of people living with HIV especially in low and middle income countries like Nigeria (Osungbade et al., 2013). This has brought live saving treatment to millions of HIV infected individuals (Ware et al., 2013). However, in order to continue to benefit from therapy, patients must remain in care (Ware et al., 2013) as lifelong ART adherence is necessary to achieve full and durable viral suppression (Paterson et al., 2000). Poole et al reported that most times, people living with HIV drop out of treatment because they are dissatisfied with some aspects of service provision. Therefore, continuous quality improvement is necessary to ensure Client retention and has been linked to the use of timely and useful feedback from Clients in HIV care (Poole et al., 2001).

Patient care includes all aspects of the Patient's encounter with the health care facility including his physical comfort as well as his educational, emotional and spiritual needs (Cleveland clinic office of patient experience 2010). Several studies (Mansour and Al-Osimy, 1993; Al-Faris et al., 996; Leppanen et al., 1997; Gregory et al., 2000) have shown that a comfortable physical environment is an important factor for patient satisfaction and increases their willingness to return thus enhancing continuity of care. A study (Larsen and Rootman, 1976) on patient satisfaction at Walter Reed Army Medical Centre, Washington DC USA, showed that patients were less satisfied with the physical environment of the clinic compared to the services rendered. Other studies in Nigeria (Ofili and Ofovwe, 2005; Megbelayin et al., 2013; Ogunfowokan and Mora, 2012) examined patients' satisfaction with health care services but to the knowledge of the Authors, none has been carried out on patients' satisfaction with the physical environment of outpatient clinics. The present study on patients' satisfaction with the physical environment of the Paediatric HIV clinic was therefore carried out with the aim of providing information that could influence future planning and improvement of the physical environment of the Paediatric outpatients' clinics of the Niger Delta

University Teaching Hospital (NDUTH) and other children outpatient clinics in Nigeria.

METHODOLOGY

Study centre

This was a comparative study carried out at the Paediatric Infectious Disease Clinic of the Niger Delta University Teaching Hospital (NDUTH) between the months of May and July 2013. The NDUTH is a tertiary hospital located in Okolobiri, a semi-urban community in Bayelsa State Nigeria. Patients attending the Paediatric Infectious Diseases Clinic comprise of HIV infected and HIV exposed children. NDUTH in collaboration with Global HIV/AIDS Initiative Nigeria (GHAIN) provides free HIV/AIDS care and support to enrolled people living with HIV/AIDS (PLWHAS). The clinic is run by a Consultant Paediatrician with special training in Paediatric HIV/AIDS treatment and care, a Paediatric Resident and two nurses/HIV counsellors. A total of 127 patients from 99 families were enrolled in the clinic at the time of the present study. The patients are seen monthly and treatment progress is monitored through clinical assessment, anthropometric measurements, treatment adherence counselling, six monthly CD4 count, liver function tests, renal function tests and full blood counts. A patient spends an average time of 2 to 3 hours from the point of retrieving his/her case note to collection of prescribed medication from the pharmacy.

Ethical consideration

Ethical approval was obtained from the research and ethics committee of the NDUTH. Informed consent was obtained from the respondents before they were asked to complete the questionnaires.

Sampling

A total of 88 caregivers (88.9% of caregivers attending the clinic) were interviewed in 2 groups comprising 44 caregivers respectively. The first group was interviewed before establishment of the children's play area while the second group was interviewed after.

The outpatient clinic initially comprised of the nursing station with a waiting area for patients and their caregivers equipped with chairs for sitting. After the first group of caregivers was interviewed, the wall of the entire waiting area of the clinic was painted with cartoon characters and a section was equipped with sitting chairs for children, television and DVD player with educational children videos and cartoons, toys with other educational

Table 1. Respondents rating of parameters in waiting area that remained the same after establishment of childrens' play area

Parameter	Mean score		T test	P value
	Before	After		
Accessibility of waiting area	3.523 ± 0.976	3.886 ± 1.017	1.71	0.091
Adequacy of seats	3.364 ± 1.102	3.773 ± 0.886	1.92	0.058
Cleanliness	3.114 ± 1.280	3.955 ± 0.806	3.86	0.000

materials and books.

Data was collected with the help of self-administered pre-tested questionnaires. Information on the questionnaires included general information about the patients like age, sex, duration of clinic attendance and relationship of Caregiver to the patient. Caregivers degree of satisfaction with the physical environment of the Paediatric Infectious diseases outpatient clinic was scored on a Likert-type scale (Barnett V, 2002) of 1 to 5 as follows; excellent = 5, very good = 4, good = 3, fair = 2, poor = 1. Parameters of the physical environment that were assessed include accessibility, availability of seats, cleanliness and comfort of waiting area. Respondents were also asked to assess the child friendliness of the outpatient clinic and overall physical environment. Mean scores were calculated for each parameter before and after the establishment of the children's play area and test of significance between means were calculated.

Respondents were asked about their willingness to return back to the clinic on a 3 point scale of very willing to come back, slightly willing to come back and not willing to come back. They were also asked to write suggestions on ways the clinic can be improved in their own words. The questionnaires were administered and completed by one of the Paediatric Residents working at the Paediatric HIV clinic who had received prior training by one of the investigators on administration and completion of the questionnaires. Simple English or Pidgin English where necessary, was used in communicating with the respondents.

Data analysis

Data was retrieved from the questionnaires unto excel 2010 with which data was initially analyzed. Data was presented in form of tables. Test of significance between means and percentages was analyzed using T test and Chi-square tests respectively with p values of less than 0.05 considered statistically significant at a 95% confidence interval.

RESULTS

A total of 88 parents or caregivers of patients attending the Paediatric HIV clinic were interviewed. Seventy two

(81.8%) of the respondents were mothers, 15 (17.0%) were fathers while 1 (1.1%) was the paternal uncle of the Patient.

The patients comprised of 46 males and 42 females, with a male to female ratio of 1.1:1. Their ages ranged from 6 days to 192 months, with a mean age of 44.24 ± 49.30 months. Sixty two (70.5%) of the patients had been attending the clinic for less than one year, 18 (20.5%) for one to two years, 5 (5.7%) for three to four years, while 3 (3.4%) had been attending for greater than 5 years.

On the day of completing the questionnaire, 27 (30.7%) of the respondents rated their child's state of health as excellent, 22 (25.0%) as very good, 27 (30.7%) good, 10 (11.4%) fair and 2 (2.3%) rated their child's state of health as poor.

Respondents rating of parameters in waiting area that remained the same after establishment of children's play area

The mean score for accessibility of waiting area of the clinic increased from 3.523 ± 0.976 before establishment of the children's playroom to 3.886 ± 1.017 after the playroom was established. This difference was not statistically significant (t = 1.71, p = 0.091, 95% CI -0.0594 -0.7854).

The mean score for adequacy of patients' seats increased from 3.364 ± 1.102 to 3.773 ± 0.886 after establishment of the children's play area. This difference was also not statistically significant (t = 1.92, p = 0.058, 95% CI -0.0148-0.8328).

The rating of cleanliness of the clinic waiting area was awarded a mean score of 3.114 ± 1.280 which improved to 3.955 ± 0.806 after establishment of the childrens' play area. This difference was statistically significant (t = 3.86, p = 0.000, 95% CI 0.4277-1.3343)

Respondents rating of parameters of waiting area that were improved upon with establishment of the children's play area

The rating of the comfort of the waiting area improved from a mean score of 3.500 ± 1.045 before to 4.136 ± 0.795 after establishment of the children's play area. This

Table 2. Respondents rating of parameters of waiting area that were improved upon

Parameter	Mean score		T test	P value
	Before	After		
Comfort of waiting area	3.500 ± 1.045	4.136 ± 0.795	3.21	0.002
Child friendliness of facility	3.614 ± 1.061	4.114 ± 0.841	2.45	0.016
Overall physical environment	3.614 ± 1.083	4.091 ± 0.802	2.35	0.021

Table 3. Respondents willingness to come back to out-patient clinic

	Waiting area makes me?				$\chi^2(p)$
	Before		After		
	No	%	No	%	
Very willing to come back	33	75.0	42	95.5	7.31(0.007)
Slightly willing to come back	11	22.7	2	4.5	6.18(0.013)
Not willing to come back	1	2.3	0	0	-
Total	44	100	44	100	-

Table 4. Respondents suggestions on ways to improve the waiting area of the clinic (before establishment of children's play area)

Comment	No	%
Waiting area should be kept clean	16	36.4
Better patient/staff relationship	5	11.4
More seats for patients	4	9.1
Play toys for children	4	9.1
Reduction of waiting time	2	4.5
Provision of drinking water	2	4.5
Fumigation against mosquitoes	2	4.5

difference was statistically significant ($t = -3.21$, $p = 0.002$, 95% CI 0.2425-1.0295).

The child friendliness of the waiting area of the clinic was initially given a mean score of 3.614 ± 1.061 but this increased to 4.114 ± 0.841 after establishment of the children's play room. This difference was also statistically significant ($t = 2.45$, $p = 0.016$, 95% CI 0.0943-0.9057).

The rating of the overall physical environment increased from 3.614 ± 1.083 before to 4.091 ± 0.802 after establishment of the children's play area respectively. This difference was statistically significant ($t = 2.35$, $p = 0.021$, 95% CI 0.0731-0.8809).

Willingness to come back to out-patient clinic

Seventy five percent of the respondents were very willing to come back to the Paediatric Infectious disease clinic before the children's play area was established but this increased to 75% after establishment of the play area.

This difference was statistically significant ($\chi^2 = 7.31$, p value = 0.007). The percentage of respondents that were slightly willing to return back to the clinic decreased from 22.7% before to 4.5% after establishment of the children's play area. This difference was also statistically significant ($\chi^2 = 6.18$, p value = 0.013).

Suggestions on ways to improve the waiting area of the clinic (before establishment of children's play area)

Before establishment of the children's play area, the highest percentage (36.4%) of the respondents suggested that the waiting area of the Paediatric Infectious diseases clinic should be kept clean, followed by 11.4% who suggested that there should be better patient/staff relationship and 9.1% who suggested that toys should be provided for children and waiting time should be reduced respectively.

Table 5. Respondents suggestions on ways to improve the waiting area of the clinic (after establishment of the children's play area)

Comment	No	%
Waiting area should be kept clean	7	15.9
Satisfied with waiting area	5	11.4
More seats for patients	4	9.1
Better patient/staff relationship	4	9.1
Provision of drinking water	2	4.5
Clear surrounding area	2	4.5
Waiting area is excellent	2	4.5

Suggestions on ways to improve the waiting area of the clinic (after establishment of the children's play area)

After establishment of the children's play area, the highest percentage (15.9%) of the respondents suggested that the children's play area should be kept clean followed by 11.4% who said they were satisfied with the waiting area and 9.1% who suggested that more seats should be provided for patients and the Patient /Staff relationship should be improved upon respectively.

DISCUSSION

The importance of patient retention in HIV/AIDS treatment and care programmes is extremely important for optimal long term health (Ware et al., 2013). However, this has proved challenging in resource scarce settings (Fox and Rosen, 2010), Nigeria inclusive. Most times, patients drop out of treatment because they are dissatisfied with some aspects of service provision (Poole et al., 2001). Previous research by Geng et al showed that approximately one in six patients on anti-retroviral therapy was no longer in care after six years. Even if a patient is doing well clinically, he/she may be dissatisfied with his or her health care programme as a result of the inconvenience of frequent hospital visits, missed school days for the child and work days for the parents, long waiting time and discomfort of frequent needle pricks for laboratory investigations (Poole et al., 2001). Regular attendance of outpatient clinics by the child who is almost always accompanied by an adult caregiver clearly has the potential to impact a large interruption on the daily life of the child and parent (Gray and Huddart, 2011). Even if treatment is free at the health care centre, the parents still incur extra transport costs and loose income from lost time from work (Gray and Huddart, 2011).

As demonstrated in the present study, caregivers were generally satisfied with the physical environment of the Paediatric HIV clinic of the NDUTH but the group interviewed after establishment of the children's play centre expressed a higher degree of satisfaction

compared to the group interviewed before. Caregivers rating of the accessibility of the clinic, though not statistically significant, was higher in the second group. Accessibility has been demonstrated to be an important factor in clinic attendance (Bankole and Taiwo, 2013). Meng et al (Meng et al 1997) reported that accessibility is the strongest predictor of overall satisfaction with quality of health care. According to Al Emadi et al (Al Emadi 2009), accessibility includes distance to health centre, appropriate chairs in waiting area, proper waiting time, proper working hours and availability of parking areas. The higher rating of accessibility by the second group can therefore be due to the influence of improvement in some components like availability of chairs. The caregivers in the second group may have had more chairs as chairs were provided for children in the play area indirectly making more chairs available for accompanying caregivers.

Though there was no change in waiting time, establishment of the play area may have had an indirect influence on Caregivers perception of waiting time. Waiting time in outpatient clinics in Nigeria have been reported to be long due to a lack of time specific appointment system (Bamgboye and Jarallah, 1994; Ajayi et al., 2005; Umar et al., 2011; Ajayi, 2002). When waiting time is prolonged in Paediatric outpatient clinics, parents become impatient and children become restless and may exhibit decreased level of compliance during treatment (Bankole and Taiwo, 2013). However when delays are inevitable, it may help to occupy and entertain the children while they wait. Time spent before seeing the Doctor can be made useful if patients are engaged in activities which reduce boredom (Umar et al., 2011). Strategies to decrease patients' perception of waiting time have been shown to be effective in tempering the dissatisfaction due to lengthy waiting time (Dansky and Miles, 1997). Presence of waiting room distractions such as television and children's play area have been found to reduce patient anxiety (Cheng, 2004; Tivorsak et al., 2004; Merriman et al., 2002). It is not surprising therefore that whereas 9.1% of the first group of Caregivers interviewed in the present study suggested that patient waiting time should be reduced, none made this

suggestion after establishment of the children's play area.

It is interesting to note that 9.1% of caregivers interviewed in the first group suggested that toys should be provided for children while they waited to be seen. This is similar to reports by Bankole and Taiwo in the Paediatric Dental Clinic of the University College Hospital Ibadan. Cleanliness has been associated with higher patient satisfaction (Tsai et al., 2007). Though the cleaning of the waiting area of the clinic remained the same when both groups of Caregivers were interviewed, there was a significant improvement in Caregivers rating of the cleanliness of the waiting area of the Paediatric HIV outpatient clinic in the group interviewed after establishment of the children's play area. This may be explained by the fact that the Caregivers perception of cleanliness may have changed as a result of the improved physical attractiveness of the clinic. This was further demonstrated in Caregivers suggestions which showed a decrease from 36.4% to 15.9% in the number who thought the cleaning of the waiting area of the clinic needed to be improved upon before and after establishment of the children's play area respectively. Sanitation was also identified as an area of need in a study (Ofili and Ofovwe, 2005) on Patient satisfaction with outpatient services carried out at the University of Benin Teaching Hospital. Patients attending the outpatient clinics of Federal Medical Centre Umuahia however, expressed satisfaction with the cleanliness of the clinic (Iloh et al., 2013).

After the establishment of the children's play area, there was a significant increase in Caregivers rating of the comfort of the waiting area, its child friendliness and overall physical environment. Further studies on the effect of improvement of the physical environment on Patient retention in Paediatric HIV care and treatment programme in the NDUTH need to be done in the future as several other studies have demonstrated that a comfortable physical environment increases Patient willingness to return for treatment and care thereby enhancing continuity of care.

Whereas no caregiver expressed satisfaction with the waiting area in the first group interviewed, 11.4% said they were satisfied with the waiting area while 4.5% said the waiting area was excellent after establishment of the children's play area. This is not surprising as clinic waiting areas with higher physical attractiveness have been associated with higher degree of patient satisfaction with associated reduced anxiety, higher perception of quality of care and perceived shorter waiting time (Becker and Douglass, 2008). This is highlighted in the present study which showed a significant increase from 75.0% to 95.5% in the number of Caregivers that were very willing to return back to the Paediatric HIV outpatient clinic after establishment of a children's play area which made the waiting area more attractive.

CONCLUSION

There was a significant improvement in patient satisfaction with the waiting area of the Paediatric HIV clinic of the NDUTH after the establishment of the children's play area. There is need to incorporate the Patients experience into every stage of health care planning process as only they can authentically report their perception of health care processes and outcome.

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