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Original Research Article

Quality of life and predictors of poor quality of life among children with heart disease in Lagos, Nigeria

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ABSTRACT

Background: Children with heart disease (HD) experience significant morbidity beyond cardiovascular complications, including impaired growth, recurrent hospitalizations, and reduced quality of life (QoL). While studies in Africa have examined caregivers' burden, limited data exist on QoL among children themselves, particularly those with acquired heart disease (AHD). The aim was to assess the QoL of children with HD in Lagos, Nigeria, and identify predictors of poor QoL.
Methods: A comparative cross-sectional study was conducted among 140 children aged 7–16 years: 70 with HD and 70 age-, sex-, and socio-economic status-matched healthy controls attending Lagos State University Teaching Hospital between February and August 2024. Data were collected using an interviewer-administered proforma and the Paediatric Quality of Life Inventory™ (PedsQL™ 4.0), both child- and parent-reported versions. A total score <70% was classified as poor QoL. Statistical analysis was performed with statistical package for the social sciences (SPSS) v24, using chi-square and logistic regression to identify independent predictors.
Results: Poor QoL was significantly more common among children with HD than controls (65.7% versus 4.3%, $p<0.001$). The most impaired domain was physical functioning. Children with AHD had the highest prevalence of poor QoL (90%), followed by cyanotic CHD. Absence of definitive cardiac surgery and multiple hospitalizations were identified as independent predictors of poor QoL. Anthropometric deficits and lower oxygen saturation were also associated with poorer scores.
Conclusion: Children with HD in Lagos experience a high burden of impaired QoL, particularly those with AHD and cyanotic CHD. Routine QoL assessment, timely surgical intervention, and integrated psychosocial support are recommended to improve holistic outcomes.

Keywords: Quality of life, Children, Heart disease, Lagos, Nigeria

INTRODUCTION

Children with heart disease face an increased risk of complications, including congestive heart failure, recurrent respiratory infections, growth failure, and mental health challenges, such as poor quality of life (QoL).[1-3] The World Health Organization (WHO) defines quality of life as an individual's perception of their position in life within their cultural context and value systems.[4]

Children with heart disease have been consistently reported to experience reduced performance across all QoL domains, including physical, emotional, social, and

academic functioning, as documented by Marino et al and Mahmoud et al identified a significant burden of poor quality of life among children with congenital heart disease in Egypt, with a prevalence rate of 61.8%.[5,6]

Most African studies have focused predominantly on congenital heart disease, with limited exploration of acquired heart disease (AHD). For example, Pillay et al reported lower health-related QoL among children with CHD in South Africa.[7] While studies in Western countries have examined the QoL of children with heart disease, local studies have largely focused on the caregivers' burden rather than the children's QoL. Chikezie et al, Duru et al, and Agbo et al highlighted the emotional and social strain on caregivers in Nigeria, leaving a significant knowledge gap regarding the QoL of the children themselves.[8-10]

Not all children with heart disease develop poor QoL; several predisposing factors influence these outcomes. Frequent hospitalizations, the severity of the heart defect, and the number of cardiac surgeries were among the most associated factors; these were particularly highlighted by Marino et al.[11] The Paediatric Quality of Life Inventory (PQoL) is a validated, reliable, and sensitive measure of quality of life.[12-14]

In high-income countries, the burden of reduced QoL in children with heart disease has been extensively studied, leading to the implementation of psychological interventions. Van der Mheen et al and Kibby et al reported improved outcomes following such interventions.[15,16] However, in resource-limited settings like Nigeria, the increased survival of children with heart disease due to advancements in medical care, especially as assessed from outside this country, has also increased their exposure to reduced QoL.[17-20]

Research questions

The research questions involved what is the quality of life of children with heart disease attending the outpatient clinic at the Lagos State University Teaching Hospital, Lagos? Is there a significant difference in the quality of life of children with heart disease attending the outpatient clinic at the Lagos State University Teaching Hospital, Lagos, compared to their apparently healthy matched controls? and are there risk factors associated with poor quality of life in children with heart disease attending the outpatient clinic at the Lagos State University Teaching Hospital, Lagos?

Research hypothesis

Null hypothesis

There was no statistically significant difference in the quality of life of children with heart disease attending the outpatient clinic of the Lagos State University Teaching Hospital, Lagos, compared with apparently healthy controls.

Alternate hypothesis

There was a statistically significant difference in the quality of life of children with heart disease attending the outpatient clinic of the Lagos State University Teaching Hospital, Lagos, compared with apparently healthy controls.

This study aims to address the critical gap in understanding by evaluating the QoL of children with heart disease and the associated risk factors in Nigeria, providing baseline data to inform effective interventions and integrate mental health care into the management of these children. This study describes the QoL of children living with heart disease in Nigeria.

METHODS

This cross-sectional correlation study was part of a large study conducted over seven months (February to August 2024) at the Paediatric Cardiology and General Outpatient Clinics of the Lagos State University Teaching Hospital (LASUTH), Ikeja, Lagos. The study population included children aged 7–16 years with previously diagnosed heart disease attending the cardiology clinic, and age, sex, and socio-economic status-matched healthy controls from the general paediatric outpatient clinic.

Children with other chronic illnesses or those on antidepressant/antipsychotic medications were excluded. A total of 140 participants were recruited, 70 with heart disease and 70 healthy controls. Ethical approval was obtained from the Health Research and Ethics Committee of LASUTH. Written informed consent and child assent were obtained before data collection.

Data collection involved an interviewer-administered pro forma and the Paediatric Quality of Life Inventory™ (PedsQL™ 4.0), both parent- and child-reported versions. The tool measures four QoL domains: physical, emotional, social, and school functioning. Responses were scored on a five-point scale, reverse-scored, and linearly transformed to a 0–100 scale (higher scores indicating better QoL). Psychosocial and total QoL scores were calculated as means of respective items. A score <70% was considered poor QoL.[21-23]

Data were analysed using statistical package for the social sciences (SPSS) version 24. Categorical variables were presented as frequencies and percentages; continuous variables (anthropometry, oxygen saturation) as means±SD; and PedsQL scores as medians with interquartile ranges. Group comparisons used t-tests or Mann-Whitney U tests as appropriate.

Chi-square tests were used to assess associations between QoL and disease status. Logistic regression identified factors associated with QoL. A $p<0.05$ was considered statistically significant.

RESULTS

A total of 140 children aged between 7years and 16 years with a M: F ratio of 1:1.12. The predominant age group was 10 to 12 years. The mean age for participants with heart disease and the comparison group was 10.47±2.7 years and 10.52±2.7 years, respectively (p=0.995). Parents or caregivers were aged 25–62 years. Most participants in this study had a middle socio-economic status; however, the social distribution did not differ significantly between those with heart disease and the controls (p=0.575). The distribution of participants by ethnicity in those with heart disease and the control group was comparable (p=0.711), with almost 7 out of 10 participants being of the Yoruba ethnicity, as shown in Tables 1 and 2.

Table 1: Socio-demographic characteristics of participants.

Socio-demographics	Heart disease (n=70), N (%)	Controls (n=70), N (%)	Total	χ^2	P value
Age group (years)					
7-9	25 (35.7)	25 (35.7)	50 (35.7)		
10-12	29 (41.4)	29 (41.4)	58 (41.4)	0.000	1.000
13-16	16 (22.9)	16 (22.9)	32 (22.9)		
Mean±SD	10.47±2.7	10.52±2.7		0.019	0.995
Sex					
Female	37 (52.9)	37 (52.9)	74 (52.9)	0.000	1.000
Male	33 (47.1)	33 (47.1)	66 (47.1)		
Ethnic group					
Yoruba	51 (72.9)	45 (64.3)	96 (68.6)		
Igbo	11 (15.7)	13 (18.6)	24 (17.1)	1.375	0.711
Hausa	5 (7.1)	7 (10.0)	12 (8.6)		
Others	3 (4.3)	5 (7.1)	8 (5.7)		

χ^2 - Chi square

Table 2: Socio-demographic characteristics of participants.

Socio-demographics	Heart disease (n=70), N (%)	Controls (n=70), N (%)	Total	χ^2	P value
Social economic status					
Lower	21 (20.0)	16 (22.9)	37 (26.4)		
Middle	44 (62.9)	47 (67.1)	91 (65.0)	1.108	0.575
Upper	5 (7.1)	7 (10.0)	12 (8.6)		
Living with parent					
Yes	63 (90.0)	60 (85.7)	123 (87.9)	0.603	0.438
No	7 (10.0)	10 (14.3)	17 (12.1)		
Previous abuse					
Yes	8 (11.4)	7 (10.0)	15 (10.7)	0.075	0.785
No	62 (88.6)	63 (90.0)	125 (89.3)		

χ^2 - Chi square

Clinical profile of participants

Figure 1 shows the classification of heart disease among subjects. The majority (80.7%) of them had congenital heart disease, out of which more than half were acyanotic CHD. Less than a fifth of the subjects had AHD.

Ventricular septal defect and TOF are the most common acyanotic and cyanotic CHD, respectively. Seven out of 10 participants had not yet undergone any surgical repair. Almost three-quarters of the participants with heart disease have had to be admitted to the hospital at least once in the past year.

The mean weight, BMI, WAZ, HAZ, BAZ, and pulse oximetry of the children with heart disease were significantly lower than those of the controls ($p<0.05$ in all cases), except for height (p=0.657).

Quality of life with quality-of-life assessment score among participants

The overall median QoL, as assessed by the child, was 50 points lower in children with heart disease than in controls. A similar pattern was observed using the parents' assessment, although the child's rating on school health functioning was higher than the parents'. A significant difference was observed across the domains, both in the

children's and parents' assessments, amongst children with heart disease and controls, as shown in Table 3.

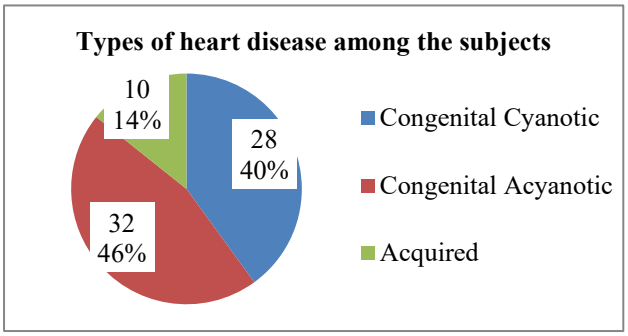

Figure 1: Classification of heart disease.

Proportion of poor quality of life among study participants

46 of 70 HD patients had poor QoL, giving a rate of 65.7% (Figure 2). The corresponding figures for the comparative group were 3 of 70 participants, for a rate of 4.3%. Thus, the proportion of participants with poor QoL was significantly higher in those with HD (p<0.001).

There is a 42.802 (95% CI=12.172-150.540) fold increase in the odds of having a poor quality of life among participants with HD compared to the comparative group.

Figures 3 and 4 illustrate the distribution of quality of life within the heart disease group, comparing CHD with AHD and acyanotic with cyanotic CHD participants, respectively.

Socio-demographic characteristics and associations with quality of life in children with heart disease

The number of children with poor QoL was highest among the 7-9-year age group, males, and the lower socio-economic status group; however, the finding was not statistically significant, as shown in Table 4.

Table 3: Quality of life score among participants.

Quality of life	Heart disease (n=70), median±IQR	Controls (n=70), median±IQR	U	P value
Child assessment				
Physical health	31.0 (0.0-88.0)	100.0 (100.0-100.0)	701.5	<0.001*
Emotional health	70.0 (35.0-95.0)	100.0 (95.0-100.0)	989.5	<0.001*
Social health	75.0 (45.0-100.0)	100.0 (100.0-100.0)	377.5	<0.001*
School health	70.0 (50.0-90.0)	100.0 (95.0-100.0)	849.0	<0.001*
Psychosocial health	67.5 (42.8-95.0)	100.0 (96.0-100.0)	829.5	<0.001*
Overall	50.0 (24.3-90.0)	100.0 (96.0-100.0)	706.0	<0.001*
Parent assessment				
Physical health	32.50 (0.0-86.3)	100.0 (100.0-100.0)	641.5	<0.001*
Emotional health	70.0 (35.0-95.0)	100.0 (95.0-100.0)	899.5	<0.001*
Social health	75.0 (45.0-100.0)	100.0 (100.0-100.0)	897.0	<0.001*
School health	67.5 (50.0-90.0)	100.0 (93.0-100.0)	835.5	<0.001*
Psychosocial health	67.50 (40.5-95.0)	100.0 (97.0-100.0)	770.5	<0.001*
Overall	50.0 (25.3-90.0)	100.0 (96.0-100.0)	665.5	<0.001*

IQR- interquartile range, U-value= Mann Whitney U test; *significant

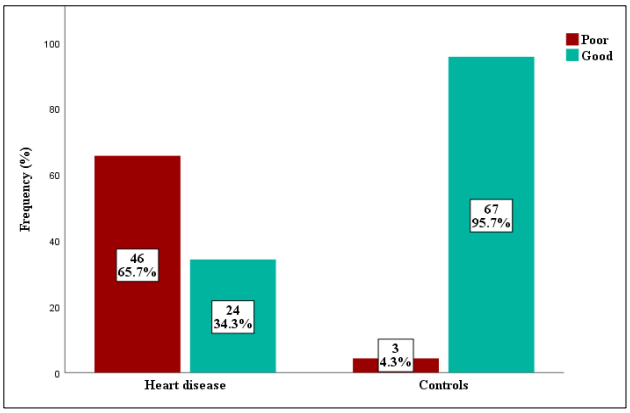

Figure 2: Proportion of poor quality of life in children with heart disease compared with an apparently healthy comparative group.

χ^2=58.053; p<0.001*

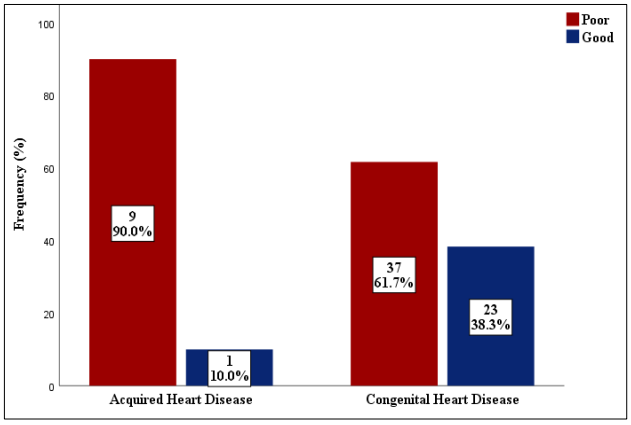

Figure 3: Proportion of poor quality of life in children with acquired heart disease compared with congenital heart disease.

χ^2=3.054; p=0.081

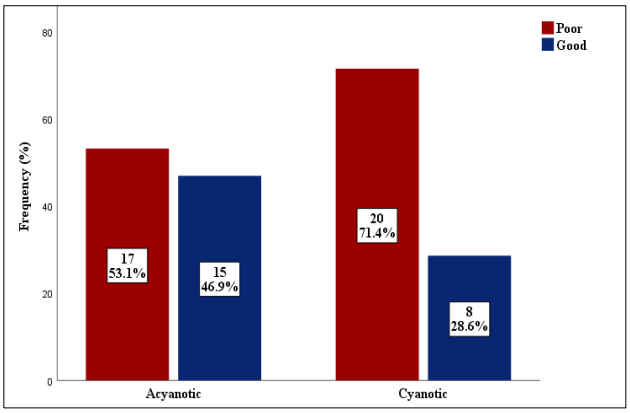

Figure 4: Proportion of poor quality of life in children with acyanotic congenital heart disease compared with cyanotic congenital heart disease.

χ^2=2.116; p=0.146

Relationship between specific clinical histories of heart disease and quality of life

The association between quality of life and the clinical history of heart disease. A statistically significantly higher proportion of participants with heart disease who had not yet had definitive cardiac surgical repair had poor quality (p<0.001). About four-fifths (11, 84%) of children with HD who had been admitted to the hospital twice in the last year had poor quality of life (p=0.024). Acquired heart disease did not have statistically significant poor QoL, compared to CHD, as the p>0.05.

Relationship between anthropometry, pulse oximetry and quality of life among subjects

There was a statistically significant relationship between poor QoL and weight among subjects with lower weight z scores (p=0.004) but there was none as regards to the height (p=0.391).

Similarly, there was statically significant relationship between lower QoL and BMI in subjects with lower BMI (p=0.02). The mean pulse oximetry was significantly lower amongst those with poor quality of life (p<0.001).

Impact of heart disease type on the quality of life

The overall QoL score was significantly lowest among participants with AHD, followed by those with cyanotic CHD, and then acyanotic CHD, based on both child and parent assessments (p=0.013 and p=0.015, respectively). This pattern was consistent across most QoL domains, except for the child social health domain, child psychosocial health domain, parent social health domain, parent school functioning domain, and overall psychosocial health domain (p>0.05), where differences were not statistically significant, as shown in Table 5 and 6.

Table 4: Overall quality of life and socio-demographic characteristics, gender, living with parents and previous abuse among participants with heart disease.

Demographics	Quality of life		χ^2	P value
	Good (n=24)	Poor (n=46)		
Age group (years)				
7-9	8 (32.0)	17 (68.0)	3.202	0.202
10-12	13 (44.8)	16 (55.2)		
13-16	3 (18.8)	13 (81.3)		
Gender				
Male	10 (30.3)	23 (69.7)	0.440	0.507
Female	14 (37.8)	23 (62.2)		
Social economic status				
Lower	4 (19.0)	17 (81.0)	4.001	0.135
Middle	17 (38.6)	27 (61.4)		
Upper	3 (60.0)	2 (40.0)		
Living with parent				
Yes	21 (33.3)	42 (66.7)	0.254	0.615
No	3 (42.9)	4 (57.1)		
Previous abuse				
Yes	2 (25.0)	6 (75.0)	0.346	0.557
No	22 (35.5)	40 (64.5)		

*Significant; χ^2=Chi square test; **Fisher exact test

Risk factors/predictors of poor quality of life

Table 7 summarizes the multiple logistic regression analysis used to identify independent predictors of poor QoL among children with heart disease. Variables with significant bivariate associations: BMI-for-age z-score, weight-for-age z-score, pulse oximetry, absence of cardiac surgical repair, multiple hospital admissions, and oxygen saturation were included in the model.

Table 5: Impact of heart disease type on quality of life.

Child assessment	Congenital cyanotic, median±IQR (n=28)	Congenital acyanotic, median±IQR (n=32)	Acquired heart disease, median±IQR (n=10)	K	P value
Physical health	20.5 (0.0-75.0)	50.0 (29.5-100.0)	3.0 (0.0-50.0)	11.105	0.004*
Emotional health	57.5 (27.5-85.0)	85.0 (50.0-100.0)	50.0 (25.0-75.0)	6.767	0.034*
Social health	67.5 (40.0-80.0)	85.0 (60.0-100.0)	57.5 (45.0-70.0)	5.656	0.059
School health	67.5 (50.0-80.0	87.5 (57.5-97.5)	50.0 (25.0-65.0)	6.413	0.040*
Psychosocial health	61.5 (37.5-78.5)	79.0 (49.5-97.5)	47.5 (40.0-70.0)	5.413	0.067
Overall	43.0 (19.0-75.0)	66.0 (38.5-98.0)	27.5 (20.0-50.0)	8.684	0.013*

IQR-interquartile range, K-value=Kruskal Wallis test: *significant

Table 6: Impact of heart disease type on quality of life.

Parent assessment	Congenital cyanotic, median±IQR (n=28)	Congenital acyanotic, median±IQR (n=32)	Acquired, median±IQR (n=10)	K	P value
Physical health	20.5 (0.0-75.0)	62.5 (29.5-100.0)	3.0 (0.0-50.0)	11.036	0.004*
Emotional health	55.0 (27.5-85.0)	85.0 (50.0-100.0)	50.0 (25.0-75.0)	7.068	0.029*
Social health	67.5 (40.0-80.0)	85.0 (60.0-100.0)	57.5 (45.0-70.0)	5.659	0.059
School health	67.5 (50.0-80.0)	87.5 (52.5-97.5)	50.0 (25.0-65.0)	5.525	0.063
Psychosocial health	57.5 (37.5-78.5)	79.0 (49.5-97.5)	47.5 (40.0-70.0)	4.963	0.084*
Overall	41.5 (21.0-75.0)	73.5 (38.0-98.0)	27.5 (20.0-50.0)	8.345	0.015*

IQR-interquartile range, K-value=Kruskal Wallis test: *significant

Table 7: Multivariate logistic regressions showing independent predictor of poor QoL.

Independent variables	Odds ratio	95% CI	P value
Surgery type			
Definitive surgery	1		
Palliative surgery	7.948	0.204-14.695	0.471
None	10.891	5.834-21.842	0.001*
Number of admissions in the last one year			
None	1		
Once	4.241	0.592-30.401	0.150
Twice	5.712	3.070-8.941	0.004*
Three or more	12.452	1.484-38.584	0.025*
BAZ score	0.833	0.459-1.884	0.100
WAZ score	0.409	0.148-1.132	0.085
Pulse oximetry	0.921	0.882-1.982	0.067

BAZ: BMI for age Z score, WAZ: weight for age Z score; SD: CI=confidence interval; *statistically significant

Independent predictors of poor QoL were absence of cardiac surgical repair, and two or more hospital admissions. Children without prior cardiac surgery had significantly higher odds of poor QoL (AOR=10.891; 95% CI: 5.834–21.842; p=0.001). Those with two or more hospital admissions had five- to twelve-fold increased odds compared to those with one or none (AOR=5.712 and 12.452; 95% CI: 3.070–8.941 and 1.484–38.584; p=0.004 and 0.025, respectively).

DISCUSSION

This study assessed the quality of life of children with heart disease and compared the outcomes with those of children without heart disease. It also identified factors independently associated with poor outcomes.

Demographic findings

Most participants in the current study were aged 10–12 years, with a mean age of 10.5±2.7 years. This study reveals a slight predominance of females over males; however, global consensus remains elusive, as significant gender variations are observed within specific heart disease subgroups.[24] Most participants in this study had a middle socioeconomic status. The predominance of middle-class participants in both groups likely reflects the broader economic demographics of the population accessing care at the study site, which serves both public

and privately referred patients. Additionally, it may be indicative of the country's shifting economic landscape, where a substantial portion of the population falls within the middle-income bracket due to changing income levels, urbanization, and increased access to education and healthcare.[25]

Quality of life outcomes

This study demonstrates that a significantly higher proportion of children with heart disease (65.7%) experience poor quality of life compared with their healthy peers (4.3%). Based on these findings, the alternate hypothesis is supported, indicating that there is a significant difference in the quality of life of children with heart disease attending the outpatient clinic of Lagos State University Teaching Hospital compared with apparently healthy controls.

This marked disparity may be due to the long-term effects of a high prevalence of unrepaired cardiac defects among the study population, compounded by the lack of structured mental health assessment and care in the region. A similar study conducted in North Africa reported a slightly lower prevalence of poor quality of life (61.8%) among children with heart disease.[6] Nonetheless, both findings highlight the considerable burden of impaired quality of life in this vulnerable group.

Among the quality-of-life domains assessed, physical functioning emerged as the most impaired. This underscores the significant impact of heart disease on the physical well-being of affected children. Adequate physical activity is essential for growth and development during childhood, and its restriction poses critical challenges to their formative years.[26] This finding aligns with the results reported by Pillay et al.[7]

Risk factors for poor quality of life

The current study found that poor quality of life tended to increase with age, although this finding was not statistically significant. These heart conditions can adversely affect brain development in individuals with HD by reducing cerebral blood flow, brain volumes, and potentially contributing to neurocognitive decline.[27] Jaschinski et al also reported lower QoL in older age groups.[28] However, earlier studies in children with heart disease found no significant association between age and QoL.[2] The association of poorer QoL among older participants with HD observed in this study aligns with findings in adult populations.[29] This may be attributed to the cumulative complications of heart disease, such as heart failure, arrhythmia, hypertension, and coronary heart disease.

Participants from lower socio-economic backgrounds were found to have a poorer quality of life than those from higher socio-economic groups, although the difference was not statistically significant. This finding may be attributed to greater financial challenges faced by families in lower socio-economic strata, which often hinder access to cardiac surgery when indicated and limit the ability to maintain regular use of essential heart medications. These difficulties are further exacerbated by the extremely low health insurance coverage in the country, resulting in a reliance on out-of-pocket payments for healthcare.[9] This finding is consistent with the work of Didsbury et al who reported that children with chronic illnesses from lower SESs generally exhibit poorer QoL than their counterparts from more affluent families.[20]

Poor quality of life was particularly evident in children with cyanotic CHD compared to those with acyanotic CHD. This is likely attributable to the more pronounced and prolonged hypoxemia associated with cyanotic defects, which can adversely affect neurodevelopment and mental well-being.[30] Previous studies by Maya et al have also documented the high prevalence of poor QoL among children with cyanotic CHD.[31] Unlike prior studies, this current research assessed not only congenital heart disease but also acquired heart disease, documenting a lower QoL among patients with AHD compared to those with CHD. However, this difference was not statistically significant.

The lower QoL observed in AHD and cyanotic CHD is likely attributable to higher treatment costs, inadequate funding, and the scarcity of specialized facilities and expertise in Nigeria.[32] These factors prolong the duration children live with cardiac defects, increasing the risk of complications.

In this study, QoL was significantly higher among children who had undergone definitive cardiac surgical repair compared to those who had not (83.3% versus 18.4%). In a resource-constrained environment, such as the study location, children with heart disease face significant barriers to timely cardiac repair, which may accentuate the perceived benefits of surgery in these populations.[33] This observation is consistent with earlier studies on children with heart disease. Conversely, Noori et al reported that surgery did not significantly improve QoL among CHD patients in their study.[34] The disparity may be explained by differences in healthcare access; in high-income settings, a larger proportion of children benefit from timely surgical interventions.

This study identified an inverse relationship between the quality of life of children with heart disease and the frequency of hospital admissions. Increased frequency or duration of hospitalizations for chronic conditions progressively impairs a child's overall health, as prolonged separation from the nurturing family environment detracts from their natural growth and development.[35] This finding aligns with an earlier multicenter study among children with heart disease.[11]

Anthropometric measurements were consistently lower among children with heart disease and correlated with poorer QoL compared to children without heart disease.

Malnutrition, as indicated by suboptimal anthropometric indices, may hinder physical activity and adversely affect the physical domain of QoL by reducing body composition, agility, and stamina.[36] This observation is consistent with findings from Maya et al, who reported even lower QoL, particularly in children with cyanotic congenital heart defects.[31]

Children with heart disease are at heightened risk of malnutrition, poor growth, and developmental delays resulting from impaired cardiac output or chronic hypoxia, depending on the type of defect.[37] Notably, oxygen saturation levels in this study were lower among children with poor QoL compared to those with better QoL.

The identified independent predictors of poor QoL in this study were the absence of cardiac surgical repair and multiple hospital admissions. A logical link can be drawn between delays in accessing definitive cardiac surgery, common in the study's setting, and the increased frequency of hospital admissions for symptomatic management.[39] These repeated admissions may act as chronic stressors, contributing to the deterioration of the child's mental health. These findings align with those reported by Serana et al and Marino et al, further emphasizing the importance of timely surgical intervention in improving outcomes.[2,11]

Although most studies on quality of life in children with heart disease, particularly in the context of cardiac surgery in developed countries, focus on correlations with the number of surgeries performed rather than on whether surgery has been performed at all.[11,40] This underscores a critical disparity; access to even a single cardiac surgery remains a significant challenge in resource-limited settings due to inadequate healthcare funding.

The current study has the following limitations: The single-center design may limit its applicability to other Nigerian children with heart disease. Children's mental health and quality of life may be affected by regional differences in healthcare infrastructure, socioeconomic conditions, and cardiac conditions hence extrapolating these results beyond the Lagos clinical setting requires caution. The generic paediatric quality of life inventory used, may have limited the assessment's sensitivity in capturing condition-specific challenges; the use of a cardiac-specific module might have provided a more nuanced understanding of the quality of life among children with heart disease.

CONCLUSION

In the current study, most of the children with heart disease had a poor quality of life, below the PedsQL ™ threshold. The highest prevalence of poor QoL was among those with acquired heart disease, suggesting that these conditions strongly impact daily functioning and well-being in this study. Frequent hospitalizations and the absence of cardiac surgical repair were identified as independent predictors of poor quality of life. Routine evaluation of children with heart disease should include a comprehensive assessment of quality of life to identify potential impairments and guide holistic care. Measures to improve access to cardiac surgery might improve QoL.

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