Health-Related Quality of life of people living with disabilities in Liberia

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Abstract

Background: The lack of tailored opportunities and resources to improve the livelihood of people living with disabilities is appalling. These grave conditions faced by people with disabilities hereby threaten the mental health and well-being of people living with disabilities. Objective: This research aimed to investigate the health-related quality of life (HRQoL) of people living with disabilities (PLWD) in Liberia. Method: This study was conducted among 97 PLWD in Montserrado County Liberia from January to June 2024. All participants were evaluated using questionnaires: the short version of the WHO quality of life scale and the attitude toward disability. self-designed questionnaire was used to ascertain participant's socio-demographic information. Results: The mean age of the participants was 34.57 years (range 22 to 76 years old). 53.6% was male while 46.4% was female. 46.4% of the participants were physically disabled, 22.7% visually impaired, 18.6% deaf and dumb, and 12.4% with cognitive disability. Participant's overall quality of life was measured using the first two items (i.e. 1. How would you rate your quality of life? And how satisfied are you with your health?). The mean scores of these two items were 1.63 and 1.44 respectively. Correlation analysis found a significant association between inclusion as a domain of attitude toward disability and the four domains of HRQoL at $p < 0.05$. Conclusion: The finding of the study suggests that the overall HRQoL of PLWD in Liberia was rated between very poor and poor. The findings about an individual's attitudes toward their disability showed better inclusion and less discrimination among PLWD.

Keywords: *Physical, Psychological, Social, Environmental, Inclusion, Discrimination, Gain, Prospect.*

1.0 Introduction

Quality of life is a great public health concern that is closely related to disabilities. It is a subjective indicator that is difficult to improve, requiring understanding of the intrinsic and extrinsic determinants[1]. There are many definitions of quality of life; however, this research acknowledge the WHO definition which states that "an individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns". Particularly, the perception of each individual quality of life in the context of daily living is valued by the WHO [2]. There are six domains which classified an individual quality of life (physical, psychological, level of independence, social relationships, environment and spirituality/personal belief) and these dimensions are determined by different criteria (e.g., limitations in activities of daily living [ADL], difficulty in engaging in work or social interactions, limited mobility etc.). HRQoL represents a key issue to be considered in the assessment and management of disability.

Disability has become a natural part of the human condition due to population ageing, the increase of chronic diseases, and medical advances that preserve and prolong life. Disability can be defined as difficulties confronted in functioning

because of impairment or activity limitations [3, 4] According to the world health organization report, the number of people with disabilities has been increasing and there are more than one billion people living with disabilities [5]. There are five categories of people with disability: visual, hearing and community, physical, cognitive, and psychological impairments [6]. Depending on the category of disability, people varies in adjusting to permanent disabilities. Some show negative adjustments leading to poor quality of life, while others respond positively by focusing on their abilities to live a productive life [7]. According to the UNCRPD, the interactions between persons with disabilities and the environment create a degree of inclusion and participation in all life spheres for this group. Inclusion of people with disabilities in societies is conceptualized as a process of identifying, understanding and breaking down the barriers to participation and belonging rather than a fixed state [8]. Therefore, it has come to the realization of nations that negative attitudes toward PWD affect the integration of disabled persons into the community [9, 10], which may incur the loss of a potential resource. Negative perceptions toward persons with disabilities can lead to lack of opportunities, low self-esteem and isolation, and consequently to stigmatization, marginalization, and recurring negative health outcomes that prolong their discomfort and diminishes their quality of life resulting into a social burden [7].

The quality of life of people living with disabilities is relatively low compare to their able-body counterpart [11]. Research has shown that the quality of life of people with disability is influence by several factors [12]. Psychological factor such as depression and poor cognitive performance was found to be high among people with hearing and vision impairment[13] also reported high level of distress related to participation in community life among people with mobility impairment[13]. In terms of employment opportunity among working age population (aged 15–64 years), it was reported that discrimination of disabled person increased the odds of psychological distress as well as poorer self-rated health. In addition to psychological factors as indicator of the quality of life, a range of socio-economic factors including education, employment, access to healthcare, housing vulnerability among others are found to have an association with decline in the social determinant of health among people with disabilities [14].

Liberia is located on the west coast of Africa and it has boundary with three countries: Guinea on the north, Sierra Leone on the west, and Ivory Coast on the east. Liberia is the oldest independent African nation with a population of about five million two hundred thousand-forty eight, six hundred twenty one (5, 248, 621) [15]. Liberia experienced fourteen years of brutal civil crisis, which left many dead or disabled. Nevertheless, Liberia has made substantial improvement toward rebuilding the nation's economy, infrastructure, as well as human resource capacity. However, the burden of disease, lack of access to safe drinking water, sanitation and hygiene, proper nutrition, education and other basic social services remain a serious challenge for most of the population. The scarcity of resources in Liberia has led to unequal distribution of state resources and prioritization among citizens has become the new normal leaving persons with disabilities at the very least end of the spectrum. This bias and hostile situation has left many persons with disabilities no choice but to become beggars in traffic, market places and other public domains in order to survive. Living with disability in Liberia has become a serious threat to the livelihood of persons with disabilities and also to members of the family and society at large .Hence, a threat to livelihood is a threat to the fundamental principles of human existence, which is a core principle of the Universal Declaration of Human Right.

Quality of life is affected by different domains; however, this research investigate the psychological and socio-economical determinants of HRQoL. Hence, the aim of this research is to investigate the health-related quality of life of persons living with disabilities in Liberia. To fulfill the objective of this research, the following hypothesis was postulated. Firstly, we hypothesized that individual's attitude toward disability is associated with their quality of life. Considering the setting of this research is a low-income country, we also hypothesized that there exist a dose-response relationship between socio-economic factors and individual attitude toward disability. Lastly, we hypothesized that both socio-economic factors and individual attitude toward disability were potential predictors of health-related quality of life. See figure 1.

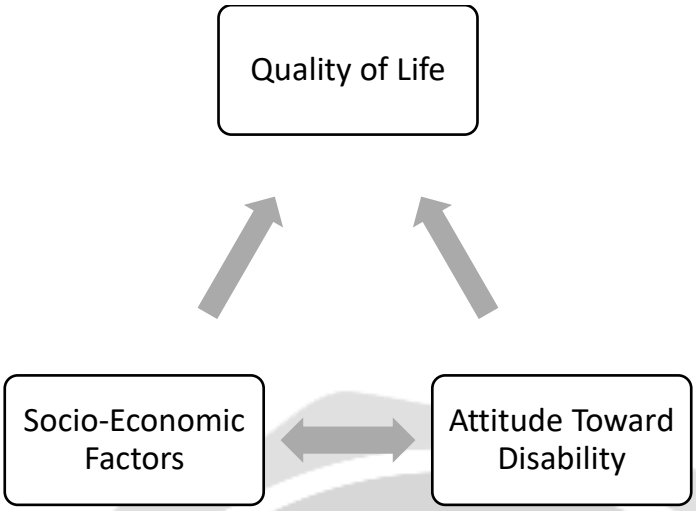

Figure 1. Hypothetical model of the relationships between Individual attitude toward disability, socio-economic factors, and quality of life

2.0 Method

2.1 Study Design and Sampling

This was a quantitative research with a cross-sectional design. The research used a purposive sampling method and questionnaires were used to assess participant's quality of life Eligibility criteria was persons with disability and above the age of 18. The questionnaire survey was administered by members of the research team all of whom that have relevant knowledge and experience in epidemiological research study. The purpose and importance of the study was explained to each participant to obtain their consent. The questionnaires was self-administered to respondents who had sufficient reading ability. And interviewer-assisted or interview-administered forms was used for those who were unable to read.

2.2 Study setting and Participants

This study was conducted in Montserrado County; this is the most populated county in Liberia with a population of about 2 million[16] It has two major cities and seventeen electoral districts, Monrovia the capital city of Liberia and the city of Paynesville. In Liberia, people with disabilities are mostly found within the communities; however, there are fewer government own facility that provide assistance to this vulnerable group. Hence, participants were recruited from those facilities as well as from within the communities.

2.3 Instruments

2.3.1Quality of Life scale for people with disability

This research used the short version of the WHO Quality of Life (WHOQoL-BREF) to measure the quality of life of persons with disability [17]. The WHOQoL-BREF consist of 26 items measuring four QoL domains. Physical health (pain, energy, sleep, mobility, activities, medication, work), Psychological (positive and negative feelings, cognitions, self-esteem, body image, spirituality), Social relationships (personal relationship, social support, sexual activities), Environment (safety and security, home environment, finances, health and care, information, leisure, physical environment, transport). Within the 26 items, two items are examined separately: question 1 asks about an individual's overall perception of quality of life and question 2 asks about an individual's overall perception of his or her health. All items are scale on a 5-points Liker scale (1 = very poor to 5 = very good). Domain scores are scaled in a positive

direction (i.e. higher scores denote higher quality of life). The mean score of items within each domain is used to calculate the domain score.

2.3.2 Attitude to Disability Scale

The Attitude to Disability Scale (ADS) was used to assess the personal attitude of individuals towards their own disability [18]. The attitude toward disability was examine in four domains: Inclusion (relationship, inclusion, burden to society, burden to family), Discrimination (ridicule, exploitation, irritation, ignorance), Gains (emotional strength, maturity, determination, achievement), and Prospects (sexuality, underestimation, optimism, future prospect). All 16-item measure was scale on a 5 point Likert scale (1 = strongly disagree, 5 = strongly agree). And higher mean score of each domain were an indication of better inclusion, less discrimination, more gains and better prospects.

2.3.3 Socio-demographic Questionnaire

A Demographic and Personal Details Questionnaire was used to collect participant details, which included questions regarding age, disability life year, level of education, marital status, employment record among others. These variables were included because of their theoretical influence on quality of life.

2.4 Data Analysis

Data were entered using the Microsoft Excel (2016) and analyzed using SPSS version 23. The total of 120 participants were recruited for the study; however, after the data cleaning process, 23 participants excluded due to missing values. Hence, the total of 97 participant's data were used for the analysis. The mean score of items within each domain was used to calculate the domain score. Mean scores were then multiplied by 4 in order to make domain scores comparable with the scores used in the WHOQOL-100, and subsequently transformed to a 0-100 scale according to the WHOQOL-Brief guide [2]. The association between health-related quality of life and attitude toward disability was examine by correlation analysis.

3.0 Results

3.1 Sample Characteristics

Table 1 presents descriptive statistics of participant's socio-demographic characteristics and attitude to disability. The mean age of the participants was 34.57 years (range 22 to 76 years old). 53.6% was male while 46.4% was female. 46.4% of the participants were physically disable, 22.7% visually impaired, 18.6% deaf and dumb and 12.4% with cognitive disability. 84.5% of the study participants were single, 10.3% were married, and 5.1% were divorce/widow/separated. Of the total participants, 28.9% reported not having any form of education, 29.9% reported having primary level of education, 38.1% reported having secondary level of education, and 3.1% reported having tertiary level of education. 17.5% were comorbid with other health problems (arthritis, hypertension, dizziness and headache) and 82.5% were not comorbid. The mean scores of participant's attitude toward disability in each domain were (inclusion = 13.54, discrimination = 14.70, gains = 11.59, and prospect = 10.07) indicating good level of inclusion, less discrimination, moderate gains, and less prospects respectively.

Table 1 Descriptive statistics of participant's socio-demographic characteristics and attitude to disability (N = 97)

	Range	M (SD)	N (%)
Gender			
Male			52 (53.6)
Female			45 (46.4)
Age (In years)	22 -76	34.57 (10.83)	
Types of Disability			
Visual			22 (22.7)
Physical			45 (46.4)
Deaf and Dumb			18 (18.6)
Cognitive			12 (12.4)
Marital Status			
Single			82 (84.5)

Married			10 (10.3)
Divorce/widow/separated			5 (5.1)
Employment Status			
Employed			7 (7.2)
Self-employed			5 (5.2)
Unemployed			85 (87.6)
Duration of Disability (In years)	2 - 73	21.84 (1266)	
Level of Education			
None			28 (28.9)
Primary			29 (29.9)
Secondary			37 (38.1)
Tertiary			3 (3.1)
Comorbidity			
Yes			17 (17.5)
No			80 (82.5)
Attitude Toward Disability			
Inclusion	4 – 20	13.54 (4.48)	
Discrimination	4 – 20	14.70 (4.49)	
Gains	4 – 20	11.59 (4.42)	
Prospects	4 --20	10.07 (3.69)	

Table 2 presents the mean scores of each item within the WHOQOL-Brief (ranging from 1 = very poor to 5 = very good) and the overall domain scores (range from 0 to 100). Participant's overall quality of life was measure using the first two items (i.e. 1. How would you rate your quality of life? And how satisfied are you with your health?). The mean scores of these two items were 1.63 and 1.44 respectively. Furthermore, the overall domain scores of the four domains: physical, psychological, environmental, and social were 66.56, 69.63, 67.25, and 58.09 respectively.

Table 2 Items and domain score of the WHOQOL-Brief within the study participant

Items and Domain	Mean	SD	Overall Domain Scores
How would you rate your quality of life?	1.63		
How satisfied are you with your health?	1.44		
Physical domain			66.36
To what extend do you feel that (physical) pain prevents you from doing what you need to do?	2.85	1.28	
How much do you need any medical treatment to function in your daily life?	2.30	1.17	
Do you have enough energy for everyday life?	2.84	1.28	
How well are you able to get around?	2.48	1.30	
How satisfied are you with your sleep?	3.12	1.24	
How satisfied are you with your ability to perform your daily living activities?	2.46	1.20	
How satisfied are you with your capacity for work?	2.53	1.32	
Psychological domain			69.63
How much do you enjoy life?	2.27	1.20	
To what extend do you feel your life to be meaningful?	2.99	1.25	
How well are you able to concentrate?	3.10	1.21	
Are you able to accept your bodily appearance?	2.64	1.47	
How satisfied are you with yourself?	2.77	1.35	
How often do you have negative feelings such as blue mood, despair, anxiety, depression?	2.94	1.22	
Social Relationship domain			67.25
How satisfied are you with your personal relationships?	2.76	1.35	
How satisfied are you with your sex life?	2.33	1.29	

How satisfied are you with the support you get from your friends?	2.98	1.24	
Environment domain			58.09
How safe do you feel in your daily life?	2.34	1.12	
How healthy is your physical environment?	2.47	1.28	
Have you enough money to meet your needs?	1.76	1.07	
How available to you is the information that you need in your day-to-day life?	2.44	1.16	
To what extent do you have the opportunity for leisure activities?	2.46	1.17	
How satisfied are you with the conditions of your living place?	2.69	1.23	
How satisfied are you with your access to health services?	2.31	1.24	
How satisfied are you with your transport?	2.12	1.22	

Table 3 shows the correlation analyses between the four domains of HRQOL and the domain of attitude to disability. Significant association were found among inclusion and physical (0.36; p<0.01), inclusion and psychological (0.49; p < 0.01), inclusion and social (0.33; p < 0.01), inclusion and environment (0.23; p < 0.05), discrimination and psychological (0.18; p < 0.05), gains and psychological (0.24; p < 0.01), gains and social (0.15; p < 0.05), gains and environment (0.16; p < 0.05), and prospects and psychological (-0.16; p < 0.05).

Table 3 Correlation analyses between the four domains of HRQOL and the domain of attitude to disability

	Attitude To Disability				Quality of Life			
	INC	DISC	GAI	PRO	PHY	PSY	SOC	ENV
Attitude To Disability								
INC	-							
DISC	0.52**	-						
GAI	-0.01	0.15	-					
PRO	0.29**	0.21*	0.19	-				
Quality of Life								
PHY	0.36**	-0.11	0.02	-0.08	-			
PSY	0.49**	-0.18**	0.24**	-0.16*	0.65**	-		
SOC	0.33**	-0.12	0.15*	-0.05	0.50**	0.52**	-	
ENV	0.23*	-0.08	0.16*	-0.05	0.57**	0.57**	0.47**	-

INC: Inclusion; DISC: Discrimination; GAI: Gain; PRO: Prospect; PHY: Physical; PSY: Psychological; SOC: Social; ENV: Environment. * P < 0.05, ** p < 0.01; *** p < 0.001

4.0 Discussion

This study aimed to investigate the quality of life of persons living with disability in Liberia. The study examined the overall health-related quality of life as well as its domains (i.e. physical psychological, social, and environmental). It also examine how an individual attitude towards his/her disability and socio-economic status influence their quality of life. The finding of the study suggests the following: Firstly, in terms of the overall health-related quality of life, the average score shows that HRQoL of persons living with disability rated between very poor and poor. This explain the level of distress PLWD experience with their health conditions. Undoubtedly, this study is the first to examine the HRQoL of PLWD in Liberia; hence, we compare the results with similar study from other countries and found that the results from this study was worse than those of the develop countries [19, {Zheng, 2014 #7]. A potential reason could be that Liberia is a low income country, with a high rate of poverty, for which majority of PLWD are living below the poverty line. Intervention target toward reducing poverty rate among this population is key to improving their QoL.

In further examination of the domains of QoL, the results show that the worse domain of QoL was the environmental domain. PLWD express dissatisfaction about the conditions of their living places, their means of transportation and the fact that most public and private facilities lack a pathway for persons with disability. This affects the way in which PLWD interact with the environment contributing negatively to the overall quality of life. Additionally, it was found that majority of PLWD express dissatisfaction about their safety within the environment in terms of food security,

welfare and other social support that would enable them lead a better life. This shows a different results among persons living with disabilities from studies done in other countries primarily because in those countries, the governments of those country establish institutions that recruit and provide care for PLWD [19),{Lindgren Westlund, 2022 #11]}. Unlike Liberia, the trigger down effect of these institution are not felt by PLWD thereby leaving this vulnerable population no choice but to labor for themselves. Meanwhile, the rate of employment among people with disability is very low with about 87.6% of the study participant reporting that they were unemployed despite having a basic skill set. This high unemployment rate among PLWD is a challenge for the government of Liberia, considering the high unemployment rate among the able-body population not to mention about PLWD. Therefore, the need for welfare programs and facilities for PLWD to avoid being place in harm's way by risking their lives daily to provide for themselves should be prioritizes.

Results from the investigation of individual's attitude toward their disability showed better inclusion and less discrimination among persons living with disability. This result is contrary to what was reported in similar study done within the Chinese population. Unlike China, where they believe that having disability is a punishment for misdoing in previous life [7]; there is no cultural or traditional believe about disability within the Liberian society. Thereby, discrimination against PLWD is highly frown upon by members of the Liberian society; therefore, the level of stigmatization is low, allowing PLWD to freely interact with others and participate in community activities. On the other hand, the results show that gain and prospects were the worse domains of attitude toward disability. PLWD believe that they made less gains in their daily lives and subsequently have less to gain in their lifetime. This believe negatively influence the self-confidence of PLWD preventing them from being determine and perseverant. As a result, there are limited thoughts of prospects in the minds of PLWD; hence, they agreed that because of their disability people should not expect too much from them, they are not hopeful about the future, and they have less to look forward to than able-body people. The reason for this perhaps could be attributed to the economic condition of the country, which made the government unable to create more opportunity for its citizens. This result is inconsistent with previous studies from develop countries, which show more gain and better prospect among persons with disability. The lack of effective skills empowerment and others human capacity building programs tailor toward PLWD is key to ensure economic reliance and sustainability.

The association between individual's attitude to disability and health –related quality of life was also examined; the results showed a positive association between inclusion as a domain of attitude to disability and all the domains of HRQoL. This implies that improving the QoL of a person with disability is significantly related to how inclusive such person is believe to be in society. The impact of inclusion within all aspect of QoL is enormous; therefore, it is recommended that preference be given to persons with disabilities. Because the more a person is included the less they see their disability as a challenge. Moreover, this will minimize believe and sentiment among PLWD that they are more of a burden to family and society. This result can be compare to similar study that found similar association between inclusion and all aspects of HRQoL. There was also a positive relationship found between gain and other domains (psychological, social, and environmental) of QoL. It is evident within the health believe model that a person's believe about his/her health condition contributes significantly to the outcome of their wellbeing. Therefore, a person who is optimistic about achieving their goals despite their condition as being disable will equally experience better QoL in these aspects (psychological, social, and within the environment).

Additionally, we found that discrimination had a negative associated with the psychological domain of QoL. In other words, the extent to which a person experience discrimination will either improve or derail the psychological well-being of such person (i.e. less discrimination better psychological health and vice versa). This is because, living with disability is an existing burden for most people; hence, discrimination against within the society, regardless of the magnitude (whether mild, moderate or severe), they tend to experience some negative feelings such as blue mood, despair, anxiety, depression. Meanwhile, there were positive associations between gain as a domain of attitude toward disability and three domains of HRQoL (psychological, social and environmental).

4.1 Implication and Conclusion

The finding of this study provides a vivid understanding about the health-related quality of life that people with disabilities in Liberia are experiencing. This study identifies critical aspects about the quality of life lived by people with disability, which warrant immediate intervention. In this literature, we provide existential evidence that document how unique these health-related challenges are to persons with disability. On the overall, this research points out how the psychological well-being of persons with disability is affected by different aspect of health. And how being psychologically unstable equally affects the goal of a healthy living. Also, the finding from this study highlight the

importance of the role of the sick in managing their health conditions as explain by Michael Burry[20]. Firstly, it is important that persons with disability accept and cope with the effect of disability to maintain a sense of self-worth; take action to mitigate the effect of their condition; and they should change their response to environmental, social, and economical challenges. It is important that given every circumstances, we are to be optimistic about our health status no matter how devastating it might be. This research showed that an important factor that contribute significantly to the quality of life is how individual perceived their health condition. One of the most critical issues identify by this research as it relates to individual attitude toward disabilities, is the dependency syndrome. Most persons with disability agree that they depend on others for support; whether partially or fully, they admit that this dependency contribute to their overall poor attitude toward their disable condition. Therefore, this study recommend counselling and more specialized psychotherapies seek to change behaviors, thoughts, emotions, and how persons with disability see and understand situations.

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