

Health Status, Self-esteem and Participation: A Comparison Between Young Adults with Mobility Disability and Those Without Disability in a Nigerian Community

TALHATU K. HAMZAT* & OLUBUSAYO R. SEYI-ADEYEMO**

*College of Medicine, University College Hospital Ibadan, Nigeria; **Jericho Nursing Home, Ibadan Nigeria

ABSTRACT *The goal of rehabilitation for individuals with physical disability is to facilitate integration into society and to enhance their participation in family and community life activities. The objective of this study is to compare participation of Nigerians with mobility disability (the focus group) and their age-matched counterparts without any physical disability (control group). The influence of self-esteem and health status on participation was also investigated. A total of 90 individuals aged between 16 and 35 years, with 45 members in each group, took part in the study. Participation, self-esteem and health status were assessed in all participants using the Craig Handicap Assessment and Reporting Technique (CHART), the Rosenberg Self-Esteem Scale (RSES), and the Nottingham Health Profile, respectively. Participation and health scores were significantly lower in the focus group. Although their self-esteem score was high (19.56 ± 3.87), this was significantly lower than for the control group ($U = 720$; $p = 0.01$). Only the affected life areas ($\rho = 0.36$; $p = 0.01$) and sleep ($\rho = -0.23$; $p = 0.12$) influenced participation in the focus and control groups respectively. The results showed that individuals with mobility disability have lower self-esteem, health status and participation compared with their age-matched peers without physical disability. However, the mean score obtained by the focus group indicates that they have high self-esteem. The sampling technique and sample size are important limitations of this report.*

Introduction

Rehabilitation programmes for individuals with disabling conditions can be described as successful when such individuals are able to participate fully in family and community life activities. A useful conceptual framework for information that is applicable to personal health care, including prevention, health promotion and participation, is the International Classification of

Correspondence: T. K. Hamzat, Department of Physiotherapy, College of Medicine (UCH), University of Ibadan, PMB 5017 GPO Dugbe Ibadan, Nigeria. Tel: +234-28101995/8052457016. Email: tkhamzat@comui.edu.ng or talkzat@yahoo.com

Functioning, Disability and Health (ICF) framework of the World Health Organisation (WHO 2001). The ICF, which can be used to conceptualise the consequences of a disease, encompasses measures of the social aspect of disability, and provides a mechanism to document the impact of social and physical environment on a person's function (Kersten 2005).

Participation in activities is an important part of the ICF, and has been described as the context in which people form friendships, develop skills and competencies, express creativity, achievement and physical health, and determine meaning and purpose in life (Kinney & Coyle 1992). Forms of participation can include learning and application of knowledge, personal maintenance activities, mobility, social relationships, communication, leisure, domestic life, spirituality and community life (King, Law, Rosenbaum, Kertoy & Young 1999). Physical disability is an important factor that may have a negative impact on the participation of an individual. Any programme that helps people with physical disabilities participate in activities might therefore enhance their life fulfilment. The participation of people with a wide range of physical disability can be measured using the Craig Handicap Assessment and Reporting Technique (CHART) (Walker, Mellick, Brooks & Whiteneck 2003).

An individual's ability to enjoy high quality of life, maintain independence and participate fully in society can be influenced by health status (Krahn 2004). The health care needs of people with physical disabilities tend to be higher than those without physical disability living in the same community. Nottingham Health Profile is a reliable instrument for assessing the health status of people (Jekinson, Fitzpatrick & Argyle, 1988). This instrument assesses physical mobility, energy, pain, social activities, emotional reaction and affected life areas.

Self-esteem is a construct involving a person's perception about his or her own worth, and it affects the manner in which he or she deals with the environment (Irmo, Lee, John & Cheryl 1995). An earlier report indicated that participation in activities has a positive impact on a person's self-esteem (Ferron, Narring, Caudaray & Michaud 1999). Self esteem is reported to be one of the most important predictors of participation in young people (Bent, Jones, Molloy, Chamberlain & Tennant 2001).

As a result of factors such as improved health care in many communities and an enhanced understanding, on the part of both health care providers and the community in general, of the various conditions causing disabilities, many more people are overcoming childhood disability and growing into adulthood. However participation of children and young adults with disability decreases as they grow up (Dempsey 1991). This is a major risk factor for reduced life quality. It is therefore important that like other members of the community, people with physical disability should be enabled to participate fully in their community life activities.

Many researchers have studied different aspects of disability in Nigeria. Tompsett, Yousafzai & Filteau (1999) evaluated the nutritional status of

disabled children in Nigeria compared with their non-disabled siblings and neighbours. They reported that disabled children with neurological impairments and consequent feeding difficulties were nutritionally at risk, and that others were no worse off than their non-disabled peers. Ologe & Akande (2003) noted that deafness was the most common disability in a residential school for the handicapped in a Nigerian city, and Oredugba & Sanu (2006) observed that very few Nigerian dentists have adequate knowledge of management of children with special needs. A study involving mothers of children with learning disability conducted in Lagos, Nigeria showed that these mothers were more prone to emotional and psychological disorders than mothers of non-disabled children (Abasiubong, Obembe & Ekpo 2006). Nwuga (1982) evaluated sexual adjustment among upper class Nigerian male paraplegics and tetraplegics, and reported that the younger the subjects, the better the chances for sexual adjustment, and that good sexual adjustment correlated with mobility, high morale, relative independence, ability to use aids to daily living and to perform role activities, and general satisfaction about life.

The health needs, self-esteem and participation of people with physical disabilities living in different societies would be different. This is because these constructs may be influenced by socio-cultural, religious and environmental factors. Generally, however, there is dearth of information on activity participation by people with physical disabilities in African societies like the Nigerian communities. Yet, according to Kassah (1998) and the Nigerian National Population Commission (1998), over one million Ghanaians and approximately nine million Nigerians have physical disabilities. The aim of this study was to compare participation by some Nigerian young adults with mobility disability living in Ibadan (the focus group) and their apparently healthy age-matched counterparts without any physical disability (control group). The influence of self-esteem and health status on their participation was also investigated.

Methods

Participants

A purposive sampling technique was used to recruit 90 individuals with mobility disability (the focus group) aged between 16 and 35 years and their age-matched peers without physical disability (control group). Focus group participants were recruited from among residents at the three public homes for individuals with physical challenges in Ibadan. These public homes are government-funded and managed special homes for people with physical disabilities. The control group members were recruited from among people who accompanied their relatives seeking medical care on out-patient basis at the University College Hospital, Ibadan, Nigeria. Individuals with visual, speech or hearing impairment and those with known history of mental impairment were excluded from the study.

Instruments

The Nottingham Health Profile was used to measure the health status of the participants. This is a quality of life instrument that gives a broad assessment of the perceived health status of individuals (McKenna & Payne 1989). The domains include physical mobility, energy, pain, social activity, emotional reaction, sleep, affected life area and care of the home.

The Rosenberg Self-Esteem Scale was used to measure the psychosocial status of the subjects. This is a uni-dimensional measure of global self-esteem. The score ranges from 10 to 30; a person who obtains above mean scores is said to have a high self-esteem while a person that scores below the mean is said to have a low self-esteem. It is reliable instrument with a Cronbach's alpha of between 0.77 and 0.88 (Blascovich & Tomaka 1993).

The Craig Handicap Assessment and Reporting Technique (CHART) was used to measure participation. This instrument is designed to measure how well people with disabilities and limitations are able to function as members of their household and to participate in their communities. It is a valid, reliable instrument and its correlation with other measures had been reported (Zhang, Abreu, Gonzales, Seale, Masel & Ottenbacher 2002).

Procedure

The joint University of Ibadan and University College Hospital (UI/UCH) Institutional Review Board approved the protocol for this study. The rationale for the study was explained to the participants before obtaining their informed consents. They were requested to complete the instrument comprising the following four sections:

- *Section A* contains questions to obtain information on socio-demographic profile of the participants;
- *Section B* is the Rosenberg Self-Esteem Scale;
- *Section C* contains the Nottingham Health Profile; and
- *Section D* is the Craig Handicap Assessment and Reporting Technique (CHART).

Data Analysis

Descriptive statistics of mean and standard deviation were used to summarize the data. Participation, self-esteem and health status were each compared between the individuals with mobility disability (focus group) and their age-matched counterparts with no physical disability (control group) using the Mann-Whitney statistic. Spearman rank order correlation test was used to investigate the correlation between participation and scores on each of health status indices and self-esteem. Participation was compared across age, academic qualification and occupation in each of the groups using the Kruskal-Wallis test. The alpha level was set at 0.05.

Results

A total of 90 young Nigerian adults, comprising 45 individuals with mobility disability (the focus group) and 45 age-matched peers without physical disability (control group), participated in this study. The male to female ratio was 22:23. The frequency distribution of the participants by gender, educational qualification and occupation is presented in Table 1.

The Mann-Whitney test showed significantly lower overall participation score ($U=420.0$; $p=0.00$) and health status score ($U=492.2$; $p=0.00$) in the focus group than the control group. Only the occupation sub-domain did not show a significant difference between the two groups of participants on the CHART score (Table 2). There was no gender difference in participation in both the focus ($U=203.5$; $p=0.26$) and the control groups ($U=206.0$; $p=0.28$).

The outcome of the Mann-Whitney test comparing self-esteem and health status indices between the focus and the control groups is presented in Table 3. In terms of energy and sleep component of the health status scale, no significant difference was recorded between the two groups ($p>0.05$). Spearman's rank order correlation coefficient statistic showed no significant correlation between the health variables and participation in the focus group except in the affected life areas ($p<0.05$). The result, however, showed an inverse relationship between physical ability score and participation (Table 4). A similar comparison for the control group is shown in Table 5. Comparisons of participation across education, occupation and age factors in the focus and control groups are presented in Tables 6 and 7, respectively. The level of formal educational qualifications attained significantly influenced

Table 1. Sociodemographic characteristics of participants ($n=90$).

	Group			
Variable	Focus	Control	Total	% of <i>n</i>
<i>Gender</i>				
Male	22	22	44	48.9
Female	21	25	46	51.1
<i>Occupation</i>				
Schooling	29	31	60	66.7
Artisan	8	0	8	8.9
Civil service	6	8	14	15.6
Self-employed	1	5	6	6.7
Trading	1	1	2	2.2
<i>Educational level</i>				
None	8	0	8	8.9
Primary	27	11	38	42.2
Secondary	3	0	3	3.3
Tertiary	7	34	41	45.6

Table 2. Comparison of participation between the focus and the control group individuals ($n = 90$).

	Mean \pm SD	<i>U</i> -value	<i>p</i>
<i>Physical independence</i>			
Focus	79.04 \pm 25.65	189.5	0.00*
Control	99.82 \pm 1.19		
<i>Cognitive independence</i>			
Focus	62.93 \pm 22.11	590.00	0.00*
Control	78.87 \pm 26.40		
<i>Mobility</i>			
Focus	78.18 \pm 19.73	531.0	0.00*
Control	91.40 \pm 15.17		
<i>Occupation</i>			
Focus	79.53 \pm 22.97	71.5	0.72
Control	75.40 \pm 30.02		
<i>Social isolation</i>			
Focus	76.82 \pm 28.01	645.0	0.00*
Control	91.82 \pm 16.75		
<i>Economic self-sufficiency</i>			
Focus	46.67 \pm 20.37	684.0	0.00*
Control	59.44 \pm 20.15		

*Statistically significant U at $p \leq 0.05$.

participation in the focus group ($p = 0.01$) and age was the only factor that significantly influenced participation in the control group ($p = 0.05$).

Discussion

Many factors, including environmental and cultural practices, may influence activity participation, especially in those with disability. Individuals living with mobility disability in African communities such as those in Nigeria can face a myriad of challenges including poor health services, environmental barriers, low or no income, stigmatization and castigation, with resultant effects on their self-esteem, health and activity participation. In their study on wheelchair accessibility of public buildings in Ibadan, Nigeria, Hamzat and Dada (2005) observed a very low level of accessibility to public buildings by wheelchair users and concluded that this is an important factor that could limit opportunities for community integration of the wheelchair users. Disability constitutes economic burden on the affected person, family and society in Nigeria, partly because people with physical disabilities are often perceived not to be competent to earn a living. Employers are usually not willing to make adjustments in their organization or to make special provision for employment opportunities for those with physical disability. It is also a common phenomenon in Nigeria for others to see physical disability as a

Table 3. Comparison of the self-esteem and health status indices between the focus and the control group participants ($n=90$).

Variable	Mean \pm SD	U-value	p-value
<i>Self-esteem</i>			
Focus	19.56 \pm 3.87	720	0.01*
Control	21.84 \pm 4.55		
<i>Health status: energy</i>			
Focus	27.40 \pm 27.78	808	0.07
Control	15.55 \pm 22.02		
<i>Health status: pain</i>			
Focus	24.22 \pm 21.92	423.5	0.00*
Control	5.00 \pm 11.73		
<i>Health status: emotional reaction</i>			
Focus	20.55 \pm 19.49	757.5	0.03*
Control	16.51 \pm 25.82		
<i>Health status: sleep</i>			
Focus	19.11 \pm 18.07	954.5	0.61
Control	19.11 \pm 22.55		
<i>Health status: social isolation</i>			
Focus	22.33 \pm 24.21	767.0	0.03*
Control	13.78 \pm 25.52		
<i>Health status: physical ability</i>			
Focus	27.78 \pm 21.30	348.5	0.00*
Control	6.57 \pm 16.17		
<i>Health status: affected life areas</i>			
Focus	22.55 \pm 22.48	626.5	0.00*
Control	11.69 \pm 24.31		

*Statistically significant U at $p \leq 0.05$.**Table 4.** Correlation between participation and each of self-esteem and the health indices in the focus group ($n=45$).

Variables	rho-value	p-value
Self-esteem	0.06	0.70
Energy	0.23	0.13
Pain	-0.05	0.75
Emotional reaction	0.06	0.70
Sleep	-0.17	0.26
Social isolation	-0.22	0.14
Physical ability	-0.26	0.08
Affected life areas	-0.37	0.01*

*Statistically significant rho at $p \leq 0.05$.

Table 5. Correlation between participation and each of self-esteem and the health indices in the control group ($n=45$).

Variables	rho-value	<i>p</i> -value
Self-esteem	0.384	0.00*
Energy	-0.459	0.00*
Pain	-0.477	0.00*
Emotional reaction	-0.416	0.00*
Sleep	-0.233	0.12
Social isolation	-0.357	0.01*
Physical ability	-0.479	0.00*
Affected life area	-0.377	0.01*

*Statistically significant rho at $p \leq 0.05$.

punishment to the affected person or his family for transgressions or evils committed. Such beliefs invariably lead to stigmatization and/or social rejection. Furthermore many Nigerians are unable to access affordable health care services, as there are too few well-equipped and well-staffed health centres in the country and individuals usually have to cover the costs themselves as many are not insured. This situation poses a greater challenge to those with physical disabilities, who are mostly unemployed and have no special provision made for their health needs by the government.

Unlike for some other countries, especially outside the African continent, where several studies have been carried out on participation by individuals with physical disability, there is a paucity of information in this field about Nigerians

Table 6. Participation across age, education and occupation in the focus group ($n=45$).

	Kruskall-Wallis (KW)	<i>p</i>
<i>Occupation</i>		
Schooling		
Artisan	9.02	0.06
Civil servant		
Self-employed		
Trading		
<i>Educational level</i>		
None		
Primary		
Secondary	11.22	0.01*
Tertiary		
<i>Age group (years)</i>		
16-20		
21-25	5.48	0.14
26-30		
31-35		

*Statistically significant KW at $p \leq 0.05$.

Table 7. Participation across age, education and occupation in the control group ($n=45$).

	Kruskall-Wallis (KW)	p
<i>Occupation</i>		
Schooling		
Artisan		
Civil servant		
Self-employed	3.19	0.36
Trading		
<i>Educational level</i>		
None		
Primary	2.04	0.15
Secondary		
Tertiary		
<i>Age group (years)</i>		
16–20		
21–25	7.64	0.05*
26–30		
31–35		

*Statistically significant KW at $p \leq 0.05$.

(see Rimmer, Riley, Wang & Rauworth 2004, Blomquist 2006, Smeltzer & Zimmerman 2005). For this reason, in this study, the health status, self-esteem and participation of Nigerians resident in Ibadan, with mobility disability aged 16 to 35 years, and their age-matched counterparts without physical disability, were compared.

This study found a significant difference in the occupational and educational status of the two groups of participants, with the control group recording better indices. The lowest academic qualification obtained was primary school in the control group while some of the focus group participants had no form of formal education. This trend may be a reflection of the fact that parents in this community often do not appreciate the need to offer a child with physical disability the opportunity of schooling. Often such children are viewed as potentially “destitute”, and on whom meagre resources should not be “wasted” by sending them to school. Lack of special provision by the government for education of children with disabilities is also an important contributory factor to the low educational status of these persons in Nigeria. In some instances when their parents or caregivers decide to enrol them in schools, they are often confronted with problems of lack of physical accessibility to the school and a poor transportation system that does not cater for the special needs of this group of children. This may eventually be the cause for school drop-out by such children.

Self-esteem is a personal construct that may, however, be significantly influenced by both personal factors (e.g. health, psychological disposition, presence of deformity and disability), and external factors (such as socio-

cultural beliefs, attitudes and practices). Self-esteem was observed to be high among individuals with mobility disability (the focus group) in this study, although their mean values were lower than for their counterparts without physical disability (control group). This attitude may be responsible for the trend of high self-esteem scores recorded by the focus group members. In spite of their disability they have good self worth like their non-disabled counterparts in this study. Furthermore, the high self-esteem observed in the focus group may have been due to those who were educated and employed among them. This assertion is based on the fact that academic qualifications and employment are important social-economic status symbols in this African community, and these two constructs may impact positively on an individual's self-esteem. An earlier study by Kohl and Hobbs (1998) had indicated that both educational attainment and socio-economic status can influence participation. Also, whereas no significant difference was observed in the occupation sub-domain of the participation scale (CHART) between the two groups, it is remarkable that the focus group obtained a higher mean score for this variable. In spite of this important observation however, the control group recorded significantly higher values on the economic self-sufficiency sub-scale of CHART. This contradiction may be explained by the differences in the types and relative profitability of the occupations engaged in by the participants. The focus group members are largely artisans and petty traders – two occupations that fall essentially in the low income earners stratum in Nigeria.

On the health scale, both groups of participants were matched in the sleep and energy sub-domains, but the focus group recorded significantly higher pain, affected life area and emotional reaction scores. In this community, perceptions of persons with physical disability are usually expressed in words and actions, and are often negative in nature. The socio-cultural beliefs and negative attitudes of others towards people who have mobility disability in this community could be the reason why the focus group members recorded significantly higher emotional reaction and affected life area scores than their control group counterparts. The poor locomotor functions, musculoskeletal discomforts caused by paralysed or paretic muscles, soft tissue tightness and contractures, and physiological cost of using walking aids could account for the higher pain scores in the focus group members, who have mobility disability. However, the number of hours of sleep, and the amount of energy an individual possesses, may not be determined solely by the presence or absence of physical disability, but rather by other systemic illnesses which are not specifically covered by the instrument used to measure health status in this study. It may therefore be impossible solely to associate differences in sleep hours and energy by the two groups to the fact that one group had disability while the other did not.

Participation was significantly correlated with affected life areas on the health status scale in the focus group, where significant difference in participation was also observed across the academic qualifications. Other factors, such as energy, pain, emotional reaction, sleep, social isolation, physical ability, self-esteem, age, sex and occupation, did not correlate

significantly with participation in the focus group, a trend similar to that reported by Heller, Ying, Rimmer and Marks (2002), who observed that the health status of adults with cerebral palsy did not influence their participation in exercise. This trend contrasted with the pattern in the control group, where sleep was the only factor that did not correlate with participation.

The results from this study showed that there was no significant gender difference in participation by the two group members. In a typical Nigerian setting, males tend to partake in societal activities more than their female counterparts, the latter being stereotypically assigned the role of "homemakers", including carrying out chores and taking care of the children and other members of the family. The males are typically the primary or sole income earners and the heads of their families. They usually engage in community and extended family activities, socialize and also have more time for recreational activities and peer association than their female counterparts. The fact that there was no gender difference in participation within each group in this study, which is contrary to the typical Nigerian pattern, may be a result of the sampling technique employed in this study. The recruitment sites may also have resulted in a biased selection of subjects. Age did not have a significant influence on participation in the focus group, a trend that might be due to the fact that the participants were young adults and the age range was relatively narrow. In contrast, a group of researchers has indicated that gender differences in activity participation exist, with males participating more in activities than females (Trost, Pate, Dowda, Saunders, Wards & Felton 1996).

Conclusion

This study has shown that although the young Nigerians with mobility disability had high self-esteem, this is lower than their age-matched peers without physical disability. Both health status and participation were significantly lower among individuals with mobility disability. Whereas self-esteem was generally not related to participation by those with disability, the affected life areas of their health status had significant influence on their participation.

This study's findings indicate that further research is required, to provide a base for development of a programme aimed at addressing the needs and concerns of people with mobility disability in this community, and their integration into the society. Such a programme may include new legislation to be promulgated by the government, a public enlightenment programme and support groups to confront the stigmatization, discrimination and social rejection being faced by people with physical disabilities in this community.

The limitations of this study include the small sample size and narrow age range of the subjects, and the fact that selection of the participants may have been biased due to how they were recruited. Nonetheless the outcome of this study has contributed to the scarce information on the subject of participation by individuals with physical disabilities in this environment.

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