



## QUALITY OF LIFE AMONG PHYSICALLY DISABLED PERSONS AFTER ASSISTIVE DEVICE USE

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### ABSTRACT

**Introduction:** The quality of life among individuals with physical disabilities has greatly improved during the past two decades as a result of well-planned intervention programmes. Assistive devices can enable them to carry out daily activities and participate actively and productively in social life. This study attempts to assess the quality of life among physically disabled persons at six months of assistive device use.

**Materials and Methods:** This study was conducted in South India among 57 disabled persons at six months of assistive device use. WHO BREF questionnaire was used to assess quality of life among the study participants after taking informed consent.

**Results:** The mean age of the respondents was  $23.77 \pm 17.4$  years. Minimum and maximum age of the respondents was 2 and 70 years respectively. The mean of standard living index was  $22.72 \pm 5.7$ . The quality of life in the social domain among the respondents were relatively poor on comparing with other domains. The Quality of Life under the social domain among the respondents in the age group of >60 years showed significant improvement while comparing with respondents of <19 years. Significant positive correlation was present between environmental domain and Standard of living index.

**Conclusion:** QOL was found to be poor among the respondents in social domain. Efforts need to be directed towards empowering them with knowledge on various social protection schemes and health education programmes which plays a facilitative role so that it can be accessed easily without difficulty.

**KEYWORDS :** Quality of Life, BREF Questionnaire, Disability, assistive devices

### INTRODUCTION

According to WHO, Health is defined as a state of complete physical, mental and social well-being and not merely the absence of the disease or infirmity. This concept has more extended to include the health related quality of life (1). Disability is part of the human condition. Almost everyone will be temporarily or permanently impaired at some point in life, and those who survive to old age will experience increasing difficulties in functioning. Most extended families have a disabled member, and many non-disabled people take responsibility for supporting and caring for their relatives and friends with disabilities (2-4). Lack of disabled friendly environment is making the life of disabled persons in misery.

The International Classification of Functioning, Disability and Health (ICF) describes the human functioning in terms of body structures, body functions, activities, and participation (5). Assistive technology has improved the quality of life in physically disabled persons. An assistive device is commonly defined as 'any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain and improve functional capabilities of individuals with disabilities' (6).

The quality of life of disabled people has been studied in developed countries. As the various health indicators of population are improving in developing countries, attention now shift to improve quality of life of different groups from the perspective of health. Disabled people are more likely to face considerable problems in the absence of disabled friendly environment. They are less likely to be educated, employed, or rehabilitated. Social segregation of disabled persons is extremely widespread (7). The National Policy for Persons with Disabilities (2006) recognizes that Persons with Disabilities are valuable human resource for the country and seeks to create an environment that provides equal opportunities, protection of their rights and full participation in the society (8).

Disabled Population in India as per census 2011 (2016 updated) – In India out of the 121 Crore population, 2.68 Crore persons are disabled which is 2.21% of the total population. Among the disabled population 56% (1.5 Crore) are males and 44% (1.18 Crore) are females. In the total population, the male and female population are

51% and 49% respectively. Majority (69%) of the disabled population resided in rural areas (1.86 Crore disabled persons in rural areas and 0.81 Crore in urban areas). (9)

WHO recognizes disability as a global public health issue, a human rights issue and a development priority. Disability is a global public health issue because people with disability, throughout the life course, face widespread barriers in accessing health and related services, such as rehabilitation, and have worse health outcomes than people without disability. It is also a human rights issue because adults, adolescents and children with disability experience stigmatization, discrimination and inequalities; they are subject to multiple violations of their rights including their dignity. It may also lead to a lower standard of living and poverty through lack of access to education and employment, and through increased expenditure related to disability (10)

Quality of life is about having a life that is meaningful to each individual. As the quality of life is improving in developing countries, the quality of life of persons with disability who is marginalised and underprivileged group, must be made to improve. The use of assistive devices to assist in daily activities is an essential component of successful interventions for physically disabled persons. There are many factors that can influence and determine the quality of life among physically disabled persons. This study illustrates the potential of assistive devices on the quality of life under various domains.

### METHODOLOGY AND METHODS

A descriptive study was conducted in South India among 57 physically disabled persons. The list of disabled persons was obtained from Health Management Information System (HMIS) data of the area. All disabled persons who can use any kind of assistive device were selected by community health workers (CHW). The Operational definition for physical disability (a) Persons having loco motor disability (b) loss or absence or inactivity of whole or part of hand or leg or both due to amputation, paralysis, deformity or dysfunction of joints which affected his/her "normal ability to move self or objects" (c) those with physical deformities in the body other than limbs such as, hunch back, deformed spine. Dwarfs and

persons with stiff neck of permanent nature who generally did not have difficulty in the normal movement of body and limbs were also treated as disabled. (11)

The interview schedule was divided into two parts. Socio demographic data was collected. Standard of living index scale was used to assess socioeconomic status of study participants. WHO BREF questionnaire (12) was used to assess Quality of life (QOL) of the study participants. The interview schedule was translated to the local language for better understanding of the participants. Written informed consent was obtained from each respondent prior to the interview. WHO BREF scale had 26 questions, which were divided under four main domains namely: Physical, psychological, social and environmental. WHO BREF QOL questionnaire was administered on disabled persons after six months of assistive device delivery. All of them were given basic training in the use of these devices and continued motivation sessions were organized. Various assistive devices were given free of cost according to the requirement of the persons. SPSS version 16.0 was used to analyse the data.

## RESULTS

The mean age of the respondents was  $23.77 \pm 17.4$  years. Minimum and maximum age of the respondents was 2 and 70 years respectively. Of all 26 (45.6%) were males which was depicted in Table 1. Among the total 57 respondents, 55 (96.5%) were Hindus and rest of them were Muslims by religion. More than half of the respondents, 32 (56.1%) belonged to middle socio economic status, while 21 (36.8%) were in high socioeconomic status group according to standard of living index.

**Table 1 depicts the age and gender distribution (N=57)**

AGE[IN YRS]	Sex-Male	Sex-Female	Total
0-19	13(46.4%)	15(53.6%)	28(49.1%)
20-39	9(53%)	8(47%)	17(29.8%)
40-59	2(25%)	6(75%)	8(14%)
>60	2(50%)	2(50%)	4(7.1%)
Total	26(45.6%)	31(54.4)	57(100%)

The assistive devices offered to physically disabled persons were mostly special slippers, callipers, wheel chairs and gutters. Table 2 shows the mean quality of life in the social domain is relatively low while comparing with mean of other domains.

**Table 2 depicts the mean of different domains**

Domains	Mean	Std. deviation
Physical	12.209	3.936
Psychological	12.636	3.179
Social	11.524	3.490
Environmental	14.676	1.941

Table 3 depicts the difference in the domains among different age groups. This shows that QOL under the social domain among respondents >60 years, showed significant improvement while comparing with respondents <19 yrs.

**Table 3 depicts domains among the age groups**

Age	Physical	Psychological	Social	Environmental
0-19	12.357+4.134	11.833+3.012	9.952+2.100	14.357+1.943
20-39	12.303+3.939	13.035+3.406	12.157+3.855	14.765+1.897
40-59	11.214+3.574	13.833+2.563	14.500+3.855	15.313+1.963
>60	12.952+4.619	14.667+4.163	14.667+3.528	15.500+2.500
P value (ANOVA)	0.887	0.222	0.001	0.545

The mean of standard living index among respondents were  $22.72 \pm 5.769$ . Table 3 shows the relation between the standard of living index under different domains. Significant positive correlation was present in the environmental domain and significant inverse correlation was showed within the physical and psychological domains.

**Table 4 depicts the correlation with SLI and different domains**

Domains	Correlation coefficient (r)	P value
Physical	-0.043	0.751
Psychological	-0.007	0.961
Social	0.146	0.283
Environmental	0.369	0.005

## DISCUSSION

In this paper we have reviewed the topic which evaluates the effectiveness of quality of life among the disabled. The current study found that about 45.6% of the participants were males and rest of them were females. The quality of life in the social domain among the respondents were relatively poor on comparing with other domains. The QOL under the social domain among the respondents in the age group of >60 years showed significant improvement while comparing with respondents of <19 years. Standard of living is a measure of the prosperity of, and quality of life in a country. This study found that, improvement in the standard of living index has a greater impact on environmental domain among the respondents. On looking onto to other studies we found out that there is a limited number of studies regarding the interventions and its effect on the core domains of quality of life. A similar study done on quality of life among the disabled persons before and after intervention showed high QOL score in the physical and environmental domain. But there was no statistically significant difference in the psychological and social domain (12). A study done on quality of life among disabled showed that 72% of the total respondents comes under average level of quality of life in environmental and psychological domain, but in the matter of social relationship (84%) are in average quality of life and (76%) with average physical quality of life (13).

A study conducted in Bangladesh on quality of life revealed that disability had a devastating effect on the quality of life of the disabled people with a particularly negative effect on their marriage, educational attainment, employment, and emotional state. About 71.9% was unable to attend school due to disability. 79.7% people reported that disability had some negative consequence on their employment. This study also revealed a variety of emotional and marital problems among the disabled persons (15).

A similar study in Udupi on quality of life among persons with physical disability under various domains showed maximum score of 100 in social relationship domain and minimum score of six in physical, psychological and social domains each. Lowest median score was noted in psychological domain. Overall, QOL score was also found low in psychological domain reflecting on negative feelings, bodily image, appearance, spirituality, self-esteem and their thinking. Psychological domain score was observed to be low across all types of disabilities (16). According to the current study, more importance must be given to improvise the social factors among the disabled persons.

## CONCLUSION

The quality of life in social domain among the age group of <19 years showed poor performance on comparing with the age group of >60 years. In view of this, more concern should be undertaken to enhance the social life of <19 years age group. The quality of life among the respondents were relatively low in social domain on comparing with other domains. So more importance has to be given to improve the social factors by increasing the social activities among the disabled. Self-help groups and group activities can be promoted. Health education programmes has to be conducted among the community to raise the social factors among disabled. Efforts need to be directed towards empowering them with knowledge on various social protection schemes which plays a facilitative role so that it can be accessed easily without much difficulty.

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