DISABILITY, CBR & INCLUSIVE DEVELOPMENT

Original Research Article

Disability and Quality of Life of Persons with Locomotor Disability: Determining Factors

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ABSTRACT

Objective: People with locomotor disabilities face significant social and structural barriers, especially in emerging economies. Imbalances within social institutions contribute to their marginalisation and affect their participation in society. This study throws light on the issues that people with locomotive impairment confront, particularly in terms of their perceived quality of life.

Method: A descriptive research design was employed, using semi-structured interviews. Simple random sampling facilitated the selection of 98 persons with locomotor disability in Dharmapuri district of Tamil Nadu, India. Defined inclusion and exclusion criteria were adhered to.

Results: Findings indicated that persons with locomotor impairments were financially disadvantaged; mostly low-income (76.6%) and jobless (13.3%). Respondents who were married and had higher incomes or educational levels reported an improved quality of life, while those from rural areas, and low-income or illiterate backgrounds generally experienced a lower quality of life. Disability-related challenges varied on the basis of factors such as gender, age, marital status, family size, and social support. Furthermore, their health-related quality of life was affected across physical, mental, emotional and social well-being domains, impacting the ability to attain a good standard of living.

Conclusion: Individuals with disabilities are frequently judged solely on their flaws and are denied social participation. Construction barriers in a disadvantaged environment cause maximum inconvenience. Financial dependency on the pension scheme of the Government seems high in the study area. Persons with locomotor disabilities should be made aware of availability, accessibility and affordability of opportunities suited to their physical or mental abilities and independent living conditions.

Keywords: disability, locomotor impairment, social agency, social support, well-being, determining factors.

Editor: Solomon Mekonnen

Article History:
Received: July 19, 2022
Accepted: April 19, 2025
Published: April 25, 2025

Citation: Tamilarasu Sampath, N.R. Suresh Babu, Sigamani Panneer, Aravind Mohanan Sreeragam. Disability and Quality of Life of Persons with Locomotor Disability: Determining Factors. DCIDJ. 2025, 36:1. doi.org/10.20372/dcidj.631

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INTRODUCTION

Globally, one billion people are estimated to experience disability, which accounts for around 15% of the world's population (World Health Organisation, 2021). The vast majority of persons with disability live in emerging economies; the dilemma of measuring the challenges of disability in emerging economies is that mental health and physical

ailments are the only issues that are taken into consideration (WHO, 2011; World Bank, 2020). In addition, the Asia Pacific Disability Fact sheet (2021) measured approximately 650 million people suffering from disabilities in the Asia Pacific region. Disability is defined as the result of the interplay between impairment and barriers. People with impairments have limited sense function such as mobility, cognition, or psychological difficulties, and the barriers can be attitudinal, such as discrimination, or environmental factors to the construction of disability (Asia Pacific Disability Fact sheet, 2021). The interaction of the aforementioned factors prevents people with disabilities from fully participating in society. The Persons with Disabilities Act of 2016 defines "locomotor disability" as "disability of the bones, joints, or muscles resulting in substantial restriction of limb movement or any form of cerebral palsy”.

As follows, the context of locomotor disability varies in this study: Cerebral palsy, amputation, spinal cord injuries, and muscular dystrophies. Therefore, the repercussions of impairment are contingent upon the social settings that are associated with the various types of disabilities, such as those that manifest during infancy and throughout one's life also as a result of severity of their impairment. For example, persons with spinal cord injuries and amputations experience disability after a non-impaired existence, which has a negative impact on both their mental and financial well-being that necessitates significant adaptations in home and community spaces (Bulgarelli, 2020). However, this does not imply that people with disabilities from birth or early childhood are self-sufficient or do not need communal space; rather, they embrace their handicap and have a high reliance rate. According to surveys, the majority of people with locomotor impairments have difficulty in accessing the basic necessities and opportunities (Rehabilitation Council of India, 2000; Mamud et al, 2017). All individuals require a level of mobility in order to enter the labour force, become socially engaged, manage their financial situation, and increase their level of independence. In the overall picture, mobility is the mode to improve one's quality of life.

People with locomotor disabilities have impaired movement and face barriers that increase dependency and reduce the quality of life, compared to people with fewer physical barriers (Lee et al, 2022). Discrimination and socioeconomic hurdles are the basis of the issues that persons with disabilities face in their everyday social life (Janardhana et al, 2015). These variations are influenced by a variety of socioeconomic circumstances and different provisions for the well-being of different societies (Navarro-Carrillo et al, 2020). People with locomotor/physical disabilities may experience lower life satisfaction and quality of life as a result of low participation in society, stigma, and discrimination (Gnanaselvam, 2017). The purpose of this study is to evaluate the quality of life of people with locomotor disabilities.

BACKGROUND

According to the 2011 census, India's disability population equalled 26.8 million people, of which 22% were persons with locomotor disabilities. Locomotor disabilities have a negative influence on a person's quality of life due to mobilisation and dependency when compared to any other type of disability (Hamrin et al, 2012). The general perception is that people with disabilities can simply live as ordinary people in society and also live comfortably in a competitive society (Babik& Gardner, 2021).

The prominent sociologist Herbert Spencer (1898) has mentioned the similarity between society and the human body, arguing that just as the various organs of the body work together to keep the body functioning, so too do the various parts of society work together to keep societal functioning. Spencer referred to social institutions, patterns of beliefs and behaviors focused on meeting social needs through government, education, family, healthcare, religion, etc., (Ritzer, 1992), yet people with disability are unable to

fully engage themselves in or intervene in social structures of the social system (Harris, 2019). As a result, both the individual and society will be unable to maintain stability and harmony in the society.

A segment of western sociologists concluded that, for the most part, the onus of handicap lay with society, which was accountable for their activities and placing constraints. However, unlike in the West, the subject of disability is largely absent in the social sciences discipline in India, creating a void in the understanding and putting the discipline at risk of practicing sympathy and charity rather than a sociological sensibility that sees disability as a human rights issue to be addressed through rehabilitation and social work (Vikash Kumar, 2017).

LITERATURE REVIEW

Locomotor impairment results in significant mobility restrictions, particularly in the legs or joints (Nakamura & Ogata, 2016; WHO, 2011). However, it is often seen as a condition affecting the bones, joints, and muscles. It makes it difficult for a person to move around (like walking, picking or holding things in hand, etc. (Wecapable, 2022). Disability is impacted by co-morbidity, which is linked to more serious barriers than single conditions. The existence of various health issues can make health care and rehabilitation management more difficult (WHO, 2011). Disability impacts many aspects of an individual's life through attitudinal barriers, physical barriers, communication barriers and financial barriers that significantly augment dependency their reliance on assistive technologies, mobility aids and accessible infrastructure. (Janardhana et al, 2015; Meena, 2015; WHO, 2011). The vast majority of the persons with disabilities reside in rural areas of emerging economies which can increase the rate of health-seeking behaviour and dependency that affect their quality of life (Jonckheere, 2020; United Nations, 2022). Moreover, different types of disability add up to a huge social well-being concern that has a significant social, financial, and mental impact (Adamson et al, 2003; Suganthi&Kandhaswamy, 2015; Nakamura & Ogata, 2018). Deterioration in walking, the onset of secondary impairments, persistent pain or weariness, a lack of physical fitness and an inactive lifestyle can all hinder adult emancipation. Due to the locomotor disability, functional movement, household management, and physical recreation are frequently restricted. Housing and intimate relationships are also restricted for these individuals as compared to able-bodied people.

In India, motor impairment accounts for the bulk of disabilities. The financial stress of losing daily wages, the need for frequent job changes, and the risk of losing a job lead to poor quality of life (Gupta et al, 2010; Gustafsson, 2012). Movement disorders cause functional limitations resulting in poverty and unemployment (Laskar et al, 2010; Hamrin et al, 2011; Padhyegurjar&Padhyegurjar, 2012). The persons with disabilities are still neglected and stigmatised in family and community activities (Rohwerder, 2018). As a result, society must assume the responsibility of caring for them by providing adequate social support and societal assistance (Wilson &Socior, 2015; Onalu&Nwafor, 2021). It is assumed that a person with disability can function as well as anybody else provided she/he is given appropriate training in alternative techniques and assistive devices (Meena, 2015; Borg &Ostergren, 2015). However, decreased social and economic role of persons with locomotor disability and deterioration in the quality of life increase dependency on health care and other basic services (Staples &Mehrotra, 2016; Maroof et al, 2017). People with disabilities and their families frequently pay significant costs to reach a living standard comparable to that of people without disability. Therefore, this study aims to assess the quality of life of persons with locomotor disability in terms of their socioeconomic conditions as well as their social wellbeing.

OBJECTIVE

The present study has the following objectives:

- To gauge the quality of life of people with locomotor disability and those with movement impairment
- To suggest suitable measures to improve the quality of life of persons with locomotor disability and people with movement impairment.

METHODS

Study Design

A descriptive research approach was used to assess the socio-demographic profile, disability profile, and quality of life of persons with locomotor disabilities in Dharmapuridistrict of Tamil Nadu, India.

Study Sample

The total population of persons with disabilities in the study area was enumerated to be 25,283 persons, among whom 7,381 were persons with locomotor disability (Population By type of Disability, Age and Sex, 2011 – TAMIL NADU | Open Government Data Portal Tamil Nadu, n.d.; Population of Differently Abled Persons – Enabled. In, n.d.).

The multistage random sampling method was utilised to obtain data from 98 persons with locomotor disabilities.

Inclusion criteria:

- Respondents who were 18 years of age and above, but below 60.
- Respondents from Dharmapuri district only.

Exclusion criteria:

- People living with disabilities other than locomotor disability.

Data Collection

A semi-structured interview schedule and validated measuring scales developed by the World Health Organization which have good internal consistency - Cronbach's alpha of 0.721(Grover et al, 2014) - were used. Those who were willing to provide information were interviewed in the regional language, with a schedule translated into Tamil.

Data Analysis

The data was coded in Excel and analysed in SPSS v26. Basic frequency distribution tables were obtained and to determine the level of significance between the independent and dependent variables, Chi-square tests have been used.

The findings of the analysis are listed below.

Ethical Considerations

Since the present study used an instrument developed by World Health Organization and the same was tested by Grover et al (2014) in the Indian context, there was no risk to the physical and mental well-being of the respondents. The purpose and outcome of the research were intimated to the respondents and informed consent was obtained from each individual before the interview.

RESULTS

Demographic Profile of Respondents

An almost equal number of respondents were between the ages of 18 and 58, with 71% being male and the rest female. In terms of marital status, about 60% of them were married. Three out of 10 respondents were found to be illiterate, with several records revealing that 19% were graduates and post-graduates. While a fair number of them were jobless, the others were found to be self-employed, either organised or unorganised. In

addition, the Disability Welfare Office reported that nearly 40% of the respondents were receiving pensions under the Unemployed Assistance Scheme for persons with disability. The monthly income of the respondents ranged from Rs. 1000 - Rs. 20,000 and more, with nearly 60% earning between Rs1000 and Rs 5000 and 13% earning nothing. The families were discovered using statistics based on the nature and size of the respondents' families. The majority of the respondents lived in nuclear families, with 82 % of the families consisting of 3 to 5 members. Although a large percentage of persons with locomotors impairment (83.7%) accepted the concept of disability, roughly 16% of respondents were in denial about their disability (see Table 1).

Table 1: Demographic Profile of the Respondents (n=98)

SN	Variable	Category	Frequency	Percentage
1.1	Age (years)	18-27	25	25.5
		28-37	24	24.5
		38-47	26	26.5
		48-58	23	23.5
1.2	Gender	Male	70	71.4
		Female	28	28.6
1.3	Marital status	Unmarried	42	42.9
		Married	56	57.1
1.4	Educational qualification	Illiterate	35	35.7
		Primary school	14	14.3
		Secondary school	15	15.3
		High school	13	13.3
		Higher Secondary	2	02.0
		Higher Education	19	19.4
1.5	Occupation	Unemployed	15	15.3
		Unorganized	16	16.3
		Organized	09	09.2
		Self-employment	18	18.4
		Pension	40	40.8
1.6	Monthly income (INR.)	No income	13	13.3
		1000-5000	57	58.2
		5001-10,000	18	18.4
		10,001-15,000	0	0
		15,001-20,000	06	06.1
		20,001 and above	04	04.1

The data indicates a substantial linkage between respondents' married status and their quality of life [X2 (n=98), DF=1, p=0.004]. The married respondents were found to have a higher quality of life than single respondents. The results revealed a strong and significant relationship between the respondents' monthly income and their quality of life [X2 (n=98), DF=3, p=0.000]. Respondents in the no-income and lower-income categories had a poor quality of life, while those in the above-average income group had a better quality of life. Similarly, variables like the place of residence and type of residence were found to have a substantial link and Association with quality of life. Respondents who

lived in rural regions had a low quality of life, whereas those who lived in urban areas had a better quality of life. There appears to be a strong relationship between educational qualifications and quality of life [X2 (n=98), DF=5, p=0.016]. It was found that over 80% of respondents did not have a better overall quality of life. In terms of the general quality of life, about 69% of illiterate respondents had a poor standard of living. Furthermore, 85% of literate respondents who had completed graduation and post-graduation had a good quality of life (see Table 2).

Table 2: Significance of Quality of Life (n=98)

Variable	Category	Quality of Life		dx	X^2
		High	Low		
Age	18-27	15 (60%)	10 (40%)	3	0.669
	28-37	11 (45.8%)	13 (54.2%)		
	38-47	13 (50%)	13 (50%)		
	48-58	10 (42.5%)	13 (56.5%)		
Gender	Male	27 (38.6%)	43 (61.4%)	1	0.001
	Female	22 (78.6%)	6 (21.4%)		
Marital Status	Unmarried	28 (66.7%)	14 (33.3%)	1	0.004
	Married	21 (37.5%)	35 (62.5%)		
	Total	49 (50%)	49 (50%)		
Income	No income	10 (76.9%)	3 (23.1%)	3	0.001
	1000-5000	36 (63.2%)	21 (36.8%)		
	5001-10,000	1 (5.6%)	17 (94.4%)		
	10,001-15,000	0 (0.0%)	0 (0.0%)		
	15,001-20,000	1 (16.7%)	5 (83.3%)		
	20,001 and above	1 (25.0%)	3 (75.0%)		
	Total	49 (50%)	49 (50%)		
Settlement	Rural	48 (51.6%)	45 (48.4%)	1	0.168
	Urban	1 (20%)	4 (80%)		
	Total	49 (50%)	49 (50%)		
Type of Residency	Pucca	26 (54.2%)	22 (45.8%)	2	0.651
	Tiled	22 (46.8%)	25 (53.2%)		
	Hut	1 (33.3%)	2 (66.7%)		
	Total	49 (50.0%)	49 (50.0%)		
Literacy	Illiterate	24 (68.6%)	11 (31.4%)	5	0.016
	Primary Education	7 (50.0%)	7 (50.0%)		
	Secondary School	8 (53.3%)	7 (46.7%)		
	High school	6 (46.2%)	7 (53.8%)		
	Higher Secondary	1 (50.0%)	1 (50.0%)		
	Higher Education	3 (15.8%)	16 (84.2%)		

DISCUSSION

Disability significantly affects a person's social status, and the consequences vary based on his or her sex, age, marital status, family size, and social network. Persons with disability are frequently judged solely based on their flaws, and are denied basic human

rights. According to the available data, men are more affected than women. Males accounted for 71% of the sample, while females accounted for 29%. Persons with disability do not have equal access to health care, work, education, or political involvement because of their condition, and are subjected to aggression, abuse, prejudice, and disdain. This study also revealed that males had a higher rate of locomotor impairment than females. Nearly half of the respondents were receiving pensions from the Unemployed Assistance Scheme for Disability from the Disability Welfare Office; the remainder were working in unorganised and self-employed jobs, and just a few of them remained unemployed. As a result, the study found that persons with locomotor impairments were financially disadvantaged. Only a small percentage of the study population had higher incomes, with more than three-fourths of them in the low-income and jobless category.

In terms of family structure, about 91% of respondents lived in nuclear families; this increases reliance on their family and makes them more likely to face challenges in meeting necessities. The rest lived in joint families. According to the study of disability acceptance, roughly 84% of persons with locomotor disabilities accepted the fact that they have impairment. The rest initially rejected the idea that they were impaired. In this regard, most of the respondents with good peer-group support and higher education believed that they were not persons with disability, while those who were illiterate or with lower literacy levels had internalised stigma due to their disability and were not able to perform normal functions. The majority of the respondents lived in rural regions, and many admitted they were alone or alienated from society as a result of the way people treat them. Most individuals are born with locomotor disabilities, or affected by polio and genetic disorders, and their perceptions of their impairment are some of the variables that affect their quality of life and social support.

Quality of Life

In the context of health and disability, quality of life is commonly referred to as Health Related Quality of Life (HRQOL) and includes domains that are related to physical, mental, emotional, and social functioning as well as the social context in which people live (Adamson et al, 2003; Suganthi&Kandhaswamy, 2015; Clarke et al, 2018). Overall, the results showed that the quality of life of people with locomotor disabilities was low among all the respondents because of their disabilities. Regarding the perception of quality of life and satisfaction with health by different age groups, an almost equal number of respondents, ranging in age from 18 to 58 years, perceived low levels of quality of life (Laskar et al, 2010; Hamlin et al, 2011). Male respondents rated their quality of life higher than female respondents (Lascar et al, 2010) found that financial stress in the form of lost daily pay, the need for frequent work changes, and the loss of a job is linked to a decline in a better quality of life (Gupta et al, 2010; Gustafsson, 2012).

An examination of the connections between domains of quality of life revealed that the domains of marital status, disability module, social interactions, and better environmental health have a direct effect on the quality of life. The quality of life is enhanced by marital status and social relationships, which improve environmental health and emotional support, resulting in a good quality of life. Overall, both male and female respondents had a similar quality of life in all dimensions of the general quality of life and disability module.

According to the results of this study, married respondents have a better chance of achieving a decent quality of life than unmarried respondents, since unmarried people have less social support. Deterioration in quality of life is exacerbated by a lack of social support. Maroof et al (2017) and Staples and Mehrotra (2016) studied the financial independence of people with locomotor disabilities. With a reduced social and economic role in society, as well as greater reliance on health care and other basic needs, there was deterioration in their quality of life. In a similar vein, the current study's findings demonstrate

that the majority of people with higher and average incomes have the potential to enjoy a decent quality of life. Furthermore, the findings denote that a higher family income and economic status of an individual lead to good quality of life. Similarly, Hamrin et al (2011) found that because of poverty and unemployment the locomotor difficulties give rise to other problems like functional limitations than can be restrictive.

The analysis of the association between place of residence and quality of life showed that social relationships, social support and emotional support were low among people living in rural areas. The perception is that having a decent house and good shelter is a way to acquire good social support and a pleasant life. The study observed that the small proportion of respondents who were illiterate experienced a low quality of life and very few attained a high quality of life. People who lived in rural regions had poor social relationships, social support, and emotional support.

Study Limitations

The study had a few limitations. The respondents were unwilling or hesitant to answer questions about personal activities. Several of the interviews lasted longer than anticipated. Also, the researcher experienced transportation issues while collecting data in the field. Despite these barriers, primary respondent data was obtained and analysed effectively.

CONCLUSIONS

It was observed that persons affected by locomotor disability experienced multiple fears, and faced financial instability, socio-psychological dependency and poor standard of living. Persons with disabilities are subjected to insensitivity, brutality, and frequently pity, as a result of societal isolation and poor social welfare services. The disability limits their functional capability and the chance to fully engage in society. The difficulty of getting social support is greater for those with locomotor disability. Financial insecurity has an influence on family support and social participation, Dependency on the government's pension scheme seemed high among the study respondents; therefore an empowering strategy is required to improve their quality of life.

RECOMMENDATIONS

Based on the aforementioned findings, the following suggestions are made for the welfare of persons with disability, and particularly for people with locomotor disabilities.

Better quality of education and residence can improve the quality of life for people with locomotor disabilities. The study findings revealed that a disability-friendly environment was significantly lacking, particularly in rural areas. Programmes designed for people with locomotor disabilities could also focus on improving socioeconomic fulfilment to increase well-being. Although the majority of respondents stated that they have some financial security, they were unable to find work due to lack of education and the level of disability. The issues may be communicated to industrial sectors in order to encourage people with locomotor disabilities. Improved social support from neighbours, peers, and family members is also required for their emotional well-being. This should be made known to the general public.

Few studies on locomotor disability have been conducted in the last two decades. In future, studies that focus on the hurdles faced by persons with locomotor disabilities could improve knowledge and awareness.

Author Contributions: All the authors reviewed the results and approved the final version of the manuscript.

Acknowledgments: The author wishes to express their gratitude to the institution and the district Disability Welfare Office for granting permission to conduct the study. Special

thanks to people with locomotor impairment who actively participated in the study and provided feedback. The corresponding author would also like to thank Bharathiar University for providing financial assistance in the form of a University Research Fellowship (Ref.No.C2/3835/2021).

The corresponding author is indebted to Prof. Sampath Kumar (Dept. of Sociology and Population Studies, Bharathiar University) for his valuable guidance during this research, and to Dr. Arul Uthira (Assistant professor, Department of Sociology, Tagore Arts College, Puducherry) for his continuous help.

Conflicts of Interest: The authors declare that there is no conflict of interest.

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