

Impact of Educational Qualification, Age and Number of Family Members on Quality of Life of Physically Disabled: A Comparative Analysis of Boys and Girls

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Abstract

The purpose of this study was to look at the effects of age, educational level, and the number of family members on the quality of life of physically challenged people, as well as to compare the disparities between boys and girls in this regard. The study used a cross-sectional comparative approach to collect data from 200 physically challenged people, evenly divided between boys and girls, aged 18 and under. The data found that age was positively connected with quality of life, implying that older people had greater physical quality of life while potentially experiencing reductions in psychological well-being and social interactions. Educational attainment was also positively related to quality of life, with higher attainment associated with improved overall quality of life in a variety of domains. Furthermore, the study discovered a negative relationship between the number of family members and quality of life, implying that an increase in family size was connected with a reduction in the quality of life of physically challenged people.

Furthermore, there was a substantial difference in quality of life between boys and girls, with boys reporting greater quality of life than girls.

These findings emphasize the necessity of considering age, educational level, and family dynamics when evaluating and addressing the quality of life of physically challenged people. The research provides important insights that can be used to inform treatments and support systems targeted at enhancing the well-being of this population. More research and focused interventions may be required to address specific issues faced by girls and people from bigger families in order to ensure an equitable and improved quality of life for all physically impaired people.

Keywords: Quality of life, physical disability, number of family members, educational qualification and age

1. Introduction

Disability is an issue that has been prevalent in society for centuries, and despite efforts to create a more inclusive world, disabled individuals still face significant challenges in their everyday lives. One of the most significant challenges faced by physically disabled individuals is the impact that age, educational qualifications, and the number of family members have on their quality of life (QOL). This study aims to conduct a comparative analysis of boys and girls with physical disabilities to explore the extent to which these factors influence their QOL. The term "quality of life" lacks a universal definition and its meaning evolves over time, making it a highly subjective concept that cannot be tied down to one specific object. It is an individual perception based on factors such as comfort, health, and pleasure. The World Health Organization acknowledges that QOL is influenced by a person's cultural context, surroundings, and moral framework, and is an important concept in medical, health-related, and psychological studies. However, due to its vagueness, QOL can be considered a multidimensional aspect that encompasses emotional, physical, material, and social well-being. Although quality of life and standard of living are often used interchangeably, standard of living

primarily addresses the acquisition of riches, making it somewhat materialistic. Many studies have shown that simply increasing one's standard of living does not necessarily improve their QOL. Despite its complexity, QOL can be assessed by considering factors such as access to healthcare, education, housing, and transportation. It is a holistic concept that incorporates social, political, medical, employment, and spiritual components. With several definitions and methods of measurement, quality of life remains an important consideration in understanding well-being

Physical disabilities affects individual's QOL to a great extent and the effects can vary depending on a range of factors. Age is an important factor that can influence the impact of physical disabilities on an individual's QOL. Younger individuals may face greater challenges in adapting to their disabilities, particularly if they have grown up without them. They may also face social and economic barriers, such as discrimination in education and employment opportunities. In contrast, older individuals may have more experience in adapting to their disabilities, but they may also face health issues related to aging, which can further complicate their situation.

Educational qualifications are another important factor that can influence the physically disabled individuals QOL. Education is critical for enabling individuals to acquire skills and knowledge necessary to lead productive and meaningful lives. However, disabled individuals often face barriers to accessing education, such as physical and attitudinal barriers. The extent to which an individual has access to education can, therefore, have a profound effect on their QOL.

Another element that might affect the QOL for people with physical disabilities is the number of family members.. Families play a critical role in providing social support, care, and assistance to disabled individuals. However, the extent to which an individual has access to support from their family can vary depending on the number of family members, as well as the availability and willingness of family members to provide support.

The purpose of this research was to examine the impact of age, educational qualifications, and the number of family members on the QOL of physically disabled boys and girls. The study involved a comparative analysis of boys and girls to explore whether there were any gender differences in the impact of these factors. By conducting a comparative analysis, the study aimed to identify any factors that may have been unique to either gender and to provide insights into how best to support physically disabled individuals in their everyday lives.

2. Literature review

Physical disability is a significant issue in society, affecting millions of individuals worldwide. This literature review aims to explore the impact of age, educational qualifications, and the number of family members on the quality of life of physically disabled individuals, with a particular focus on a comparative analysis of boys and girls.

Age and Quality of Life:

Age is an important factor that can influence the impact of physical disabilities on an individual's quality of life. A study by Alshubki et al. (2021) found that older adults with physical disabilities reported lower levels of physical and psychological well-being than younger adults with physical disabilities. The study also found that older adults with physical disabilities were more likely to experience social isolation and reduced participation in daily activities, which further affected their quality of life. Similarly, a study by Miskovic et al. (2018) found that younger individuals with physical disabilities reported higher levels of life satisfaction than older individuals with physical disabilities.

Educational Qualifications and Quality of Life:

Several studies have examined the relationship between educational qualifications and the quality of life of physically disabled individuals. A study by Askari et al. (2020) found that higher levels of education were associated with higher levels of life satisfaction among physically disabled individuals. The study also found that physically disabled individuals who had completed higher levels of education had better employment

opportunities and were more likely to have access to social support networks, which further enhanced their quality of life. Similarly, a study by Ong et al. (2016) found that physically disabled individuals who had completed higher levels of education reported higher levels of self-esteem and a greater sense of control over their lives.

Number of Family Members and Quality of Life:

The number of family members is another factor that can influence the quality of life of physically disabled individuals. Several studies have examined the relationship between the number of family members and the quality of life of physically disabled individuals. A study by Javadi-Pashaki et al. (2018) found that physically disabled individuals with larger families reported higher levels of life satisfaction than those with smaller families. The study also found that physically disabled individuals with larger families had greater access to social support networks and were less likely to experience social isolation. Similarly, a study by Sahu et al. (2016) found that physically disabled individuals who received support from their family reported higher levels of life satisfaction than those who did not receive support from their family.

Comparative Analysis of Boys and Girls:

The impact of age, educational qualifications, and the number of family members on the quality of life of physically disabled individuals may vary depending on gender. Several studies have examined gender differences in the impact of these factors on the quality of life of physically disabled individuals.

A study by Kreutzer et al. (2015) found that female individuals with physical disabilities reported lower levels of social support and more negative experiences with healthcare providers than male individuals with physical disabilities. The study also found that female individuals with physical disabilities were more likely to experience sexual harassment and abuse than male individuals with physical disabilities. Similarly, a study by Asghari et al. (2017)

3. Problem statement

The main objective of this study is to investigate the impact of age, educational qualification, and number of family members on the quality of life of physically disabled individuals, and to compare the differences between boys and girls in this regard.

Objectives of the study

- 1) To determine the relation between the age and quality of life of physically disabled individuals.
- 2) To investigate whether individuals with higher educational qualifications have a better quality of life than those with lower educational qualifications.
- 3) To determine the relation between the number of family members and the quality of life of physically disabled individuals.
- 4) To compare the quality of life of physically disabled boys and girls.

Hypothesis

- 1) Older individuals will experience lower levels of quality of life compared to younger individuals.
- 2) Physically disabled individuals with higher educational qualifications will have a better quality of life than those with lower educational qualifications.
- 3) Physically disabled individuals with a larger number of family members will have a better quality of life than those with a smaller number of family members.
- 4) Physically disabled girls will experience lower levels of quality of life compared to physically disabled boys.

4. Methodology:

Study Design:

The influence of age, educational attainment, and the number of family members on the quality of life of people with physical disabilities was examined using a cross-sectional comparative approach. Additionally, the study attempted to compare the variations between boys and girls in this area.

Participants:

The participants of this study were physically disabled individuals aged 18 years and below, who were living in urban and rural areas of a Delhi northwest district. 200 individuals in total, equally split between boys and girls, were enlisted. The inclusion criteria for this study were: (1) individuals who had a physical disability, (2) individuals who could read and write in the local language, (3) individuals who agreed to take part in the research, and (4) individuals who had not participated in any other similar study.

Data Collection:

Data were collected using WHOQOL-BREF questionnaire and demographic data questionnaire. The data gathering procedure for the study was conducted over a period of three months. The study was allowed to proceed after receiving the informed agreement of the participants' parents and the endorsement of the schools.

Statistical Analysis:

The data were compiled and the sample was described using descriptive statistics like mean and standard deviation. The relationship between quality of life and age, education level, and the size of the family was investigated using Pearson's correlation coefficient. The quality of life of physically challenged boys and girls in adolescence was compared using t-tests to see if there were any significant differences.

5. Result

Table 1 Distribution of participants based on their social demographic variables (N=200)

Variable	Boys	Girls	Total
	N (%)	N (%)	N (%)
Age			
12 years	4 (4%)	4 (4%)	8 (4%)
13 years	8 (8%)	13 (13%)	21 (10.5%)
14 years	21 (21%)	28 (28%)	49 (24.5%)
15 years	26 (26%)	16 (16%)	42 (21%)
16 years	24 (24%)	23 (23%)	47 (23.5%)
17 years	17 (17%)	16 (16%)	33 (16.5%)
Educational qualification			
VI standard	2 (1%)	1 (1%)	3 (1.5%)
VII standard	4 (4%)	4 (4%)	8 (4%)

VIII standard	12 (12%)	17 (17%)	29 (14.5%)
IX standard	23 (23%)	24 (24%)	47 (23.5%)
X standard	25 (25%)	19 (19%)	44 (22%)
XI standard	23 (23%)	23 (23%)	46 (23%)
XII standard	11 (11%)	12 (12%)	23 (11.5%)
Family members			
Four members	17 (17%)	7 (7%)	24 (12%)
Five members	25 (25%)	22 (22%)	47 (23.5%)
Six members	17(17%)	26 (26%)	43 (21.5%)
Seven members	30 (30%)	32 (32%)	62 (31%)
Eight members	10 (10%)	12 (12%)	22 (11%)
Nine members	1 (1%)	1 (1%)	2 (1%)

The distribution of participants based on their social demographic factors is shown in Table 1. There are 200 participants in the sample, with a balance of boys and girls. The participants' ages range from 12 to 17, with 14.5% being under the age of 14 and 16.5% being above the age of 16. The participants' educational backgrounds range from VI to XII standards, with 23.5% having an IX-level education and 22% having an X-level education.

The participants' homes range from four to nine family members, with the majority (31%) having seven family members. Although there are somewhat more females in households with five and six members, the distribution of boys and girls is nearly the same across all age groups and educational levels.

Table 2 Quality of life among physically disabled adolescents

Domains of quality of life	Boys Mean (SD) N=100	Girls Mean (SD) N=100	Combined Mean (SD) N=200
Physical quality of life	23.34 (1.37)	21.45 (1.83)	22.39 (1.87)
Psychological quality of life	14.8 (1.10)	14.3 (1.0)	14.55 (1.07)
Social relation	11.71 (0.98)	11.15 (0.89)	11.43 (0.97)
Environmental	21.77 (1.44)	20.65 (1.25)	21.21 (1.46)
General quality of life	2.32 (0.54)	1.88 (0.70)	2.1 (0.66)
General health	2.43 (0.53)	1.99 (0.64)	2.21 (0.63)

Table 2 presents the quality of life among physically disabled adolescents in terms of different domains. The sample size is 200, with an equal number of boys and girls. The table shows the mean scores and standard deviations for each domain separately for boys, girls, and the combined group.

The physical quality of life domain has a mean score of 22.39 (SD=1.87) for the combined group, with boys having a higher mean score of 23.34 (SD=1.37) than girls with a mean score of 21.45 (SD=1.83). In the psychological quality of life domain, the combined mean score is 14.55 (SD=1.07), with boys and girls having mean scores of 14.8 (SD=1.10) and 14.3 (SD=1.0), respectively.

In the social relations domain, the mean score for the combined group is 11.43 (SD=0.97), with boys having a higher mean score of 11.71 (SD=0.98) compared to girls with a mean score of 11.15 (SD=0.89). The environmental domain has a mean score of 21.21 (SD=1.46) for the combined group, with boys having a higher mean score of 21.77 (SD=1.44) than girls with a mean score of 20.65 (SD=1.25).

In the general quality of life domain, the combined mean score is 2.1 (SD=0.66), with boys having a higher mean score of 2.32 (SD=0.54) than girls with a mean score of 1.88 (SD=0.70). In the general health domain, the combined mean score is 2.21 (SD=0.63), with boys having a higher mean score of 2.43 (SD=0.53) than girls with a mean score of 1.99 (SD=0.64).

Table 3: Relation between Age and quality of life

Variable	Age	Nature of Correlation
Domains of quality of life		
Physical quality of life	0.58	Moderate Positive
Psychological quality of life	0.38	Weak positive
Social relation	0.43	Weak positive
Environmental	0.46	Weak positive
General quality of life	0.43	Weak Positive
General health	0.46	Weak Positive
Cumulative quality of life	0.57	Moderate Positive
(Sum of all domains)		

This table presents the correlation between age and different domains of quality of life, as well as the cumulative quality of life (the sum of all domains). The correlation coefficients indicate the strength and direction of the relationship between age and quality of life. Overall, age is positively correlated with quality of life, with moderate to weak positive correlations observed across all domains. The strongest correlation is observed between age and physical quality of life, while the weakest correlation is observed between age and psychological quality of life.

Table 4: Relation between educational qualification and quality of life

Variable	Educational qualification	Nature of Correlation
Domains of quality of life		
Physical quality of life	0.45	Weak Positive
Psychological quality of life	0.33	Weak positive

Social relation	0.42	Weak positive
Environmental	0.39	Weak positive
General quality of life	0.39	Weak Positive
General health	0.41	Weak Positive
Cumulative quality of life	0.50	Moderate Positive

(Sum of all domains)

The table shows the correlation between educational qualification and various domains of quality of life among the participants. The correlation is generally weak to moderate positive, with the highest correlation observed for cumulative quality of life (0.50). Physical quality of life had the second highest correlation with educational qualification at 0.45. Overall, the data suggests that higher educational qualification is associated with slightly better quality of life in multiple domains.

Table 5: Relation between numbers of family members and quality of life

Variable	Number of family members	Nature of Correlation
Domains of quality of life		
Physical quality of life	-0.43	Weak Negative
Psychological quality of life	-0.34	Weak Negative
Social relation	-0.45	Weak Negative
Environmental	-0.52	Moderate Negative
General quality of life	-0.45	Weak Negative
General health	-0.48	Weak Negative
Cumulative quality of life	-0.55	Moderate Negative

(Sum of all domains)

The table shows the correlation between the number of family members and the quality of life of physically disabled adolescents across various domains. A negative correlation was observed between the number of family members and quality of life, indicating that as the number of family members' increases, the quality of life tends to decrease. The correlation was weak to moderate, with the strongest negative correlation observed in the environmental domain (-0.52) and the weakest in the psychological quality of life domain (-0.34). The cumulative quality of life showed a moderate negative correlation (-0.55), indicating that overall, an increase in the number of family members is associated with a decrease in the quality of life of physically disabled adolescents.

Table 6: Gender difference and quality of life

Variable	Gender	N	Mean	Standard deviation (SD)	Degree of freedom (df)	t _{cal}
Quality of life	Boy	100	76.37	4.81	99	7.236*

	Girl	100	71.42	4.85	99	
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***p<0.01**

In this table, "Quality of life" was measured for both boys and girls. The sample size for boys was 100 and for girls was 100, giving a total sample size of 200. The mean score for quality of life for boys was 76.37 with a standard deviation of 4.81. The mean score for quality of life for girls was 71.42 with a standard deviation of 4.85. A t-test was conducted to compare the difference in quality of life between boys and girls, and it was found that the difference was statistically significant with $t_{cal} = 7.236$ (significant at $p < 0.01$). This indicates that there is a difference in quality of life between boys and girls.

6. Discussion

The first objective of this study was to determine the relationship between age and quality of life among physically disabled individuals. The hypothesis was that older individuals would experience lower levels of quality of life compared to younger individuals.

The results of the study show that there is a moderate positive correlation between age and physical quality of life, a weak positive correlation between age and psychological quality of life, social relation, general quality of life, and general health, and a moderate positive correlation between age and cumulative quality of life.

The findings of this study suggest that as physically disabled individuals' age, their physical quality of life may improve, but there may be a decline in their psychological well-being and social relationships. The moderate positive correlation between age and cumulative quality of life indicates that overall, quality of life tends to improve with age for physically disabled individuals.

The second objective of the study was to investigate whether physically disabled individuals with higher educational qualifications have a better quality of life than those with lower educational qualifications. The hypothesis was that individuals with higher educational qualifications would have a better quality of life compared to those with lower educational qualifications. The results of the study showed a weak to moderate positive correlation between educational qualification and different domains of quality of life.

The results revealed that individuals with higher educational qualifications had a better quality of life compared to those with lower educational qualifications. The correlation was weak for psychological quality of life, social relation, environmental and general quality of life, while it was moderate for physical quality of life and cumulative quality of life.

The positive correlation between educational qualification and quality of life may be explained by the fact that individuals with higher educational qualifications may have greater access to employment opportunities, which can lead to a higher income and better healthcare facilities. This can result in better physical and psychological health, higher social status, and greater social support, which can contribute to a better quality of life.

The third objective was to determine the relation between the number of family members and the quality of life of physically disabled individuals. The hypothesis was that physically disabled individuals with a larger number of family members will have a better quality of life than those with a smaller number of family members.

The result shows a negative correlation between the number of family members and the quality of life of physically disabled individuals. All domains of quality of life, including physical quality of life, psychological quality of life, social relation, environmental, general quality of life, general health, and cumulative quality of life, show negative correlations with the number of family members.

Therefore, the hypothesis is rejected as the result shows that physically disabled individuals with a larger number of family members do not have a better quality of life than those with a smaller number of family members. The fourth objective of the study was to compare the quality of life of physically disabled boys and

girls, and the hypothesis stated that physically disabled girls would experience lower levels of quality of life compared to physically disabled boys.

The results of the study indicate that there is a statistically significant difference in the quality of life between physically disabled boys and girls ($t = 7.236, p < 0.01$). The mean score for physically disabled boys was 76.37 ($SD = 4.81$), while the mean score for physically disabled girls was 71.42 ($SD = 4.85$). These results suggest that physically disabled boys have a higher quality of life than physically disabled girls.

Therefore, the hypothesis is accepted, as the results indicate that physically disabled girls experience lower levels of quality of life compared to physically disabled boys.

Limitation of the present study

There are several limitations to this study, including:

- 1) **Limited sample size:** The sample size of the study was limited to 200 physically disabled individuals aged 18 years and below. This may limit the generalizability of the study results to other populations.
- 2) **Cross-sectional design:** The study used a cross-sectional design, which only provides a snapshot of the data at a particular point in time. It does not allow for the examination of changes in quality of life over time.
- 3) **Self-report bias:** The data collected in the study were self-reported by the participants. This may introduce bias into the study results, as participants may not always report their experiences accurately.
- 4) **Language barrier:** The study was conducted in a local language, which may have created a language barrier for some participants. This could have affected their ability to fully understand and accurately respond to the questionnaire.
- 5) **Limited geographical scope:** The study was conducted in a specific district of Delhi, which may not be representative of other regions in India or other countries.
- 6) **Potential confounding variables:** The study did not account for potential confounding variables that could influence the relationship between age, educational attainment, and family size on quality of life, such as socioeconomic status, access to healthcare, and type of physical disability.

Conflict of interest

The authors of this work have made it clear that they have no conflicts of interest to disclose.

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