LITHUANIAN SPORTS UNIVERSITY
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SARVAR RANGA

HEALTH RELATED QUALITY OF LIFE OF PEOPLE WITH INTELLECUTAL DISABILTY

FINAL MASTER'S THESIS

Final Thesis supervisor

Final Thesis evaluation: *recommends / does not recommend.*

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Study administrator: *N. Surname /signature*

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CONFIRMATION OF INDEPENDENT COMPOSITION OF THE THESIS

I hereby declare that the present Final Master's Thesis (entitlement) Health related Quality of life of people Intellectual Disability (Age 20-40 years)

1 Has been carried out by myself (by ourselves, if the final thesis was prepared by several students).

2 Has not been used in any other university in Lithuania or abroad.

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(Name, surname) (Study administrator's name, surname) (Signature)

Reviewer of the Final Master's Thesis:

_____ _____ _____

(Name, surname) (Study administrator's name, surname) (Signature)

Reviewer of the Final Master's Thesis:

_____ _____ _____

(Name, surname) (Study administrator's name, surname) (Signature)

Contents

ABSTRACT- Health related quality of life of people with intellectual disability.

Keywords: Health-related quality of life (HRQoL), quality of life, Intellectual disability (ID), SF-36 Questionnaire

People with intellectual disability are a diverse population. While some people have a moderate intellectual disability, others could have a severe one. Depending on the person's degree of functioning, the effect of impairment on quality of life for those with intellectual disabilities varies greatly. Health-related quality of life is a measurement of how a person's daily life is impacted by their physical, mental, and social well-being. It comprises measures of things like bodily functionality, discomfort, mental health, and subjective well-being. It covers social functioning, psychological health, and physical health.

Aim of Research

The purpose of this study is to evaluate the health-related quality of life for people with intellectual disabilities in India and Germany who are between the ages of 20 and 40.

Objectives of Research

- To evaluate health related quality of life of people with mild and moderate intellectual disability.
- To conduct a comparative analysis between age and gender on quality of life of people with intellectual disability (Mind and Moderate)
- To compare quality of life of people with intellectual disability (Mild and moderate) in India and Germany (for people with ID)

Research Methodology

A standardized close ended questionnaire has been used named SF-36 Questionnaire. Both descriptive and inferential analysis has been conducted in this research. Under descriptive analysis, mean and frequency analysis has been conducted. Under inferential analysis, independent sample t-test and one-way ANOVA has been used.

Results

The research found moderate issues in the health-related quality of life of people with intellectual disability, no significant difference in the perception of males and females on quality of life and is no significant difference in the perception of India and Germany on quality of life of people with intellectual disability.

ABSTRAKTAS - Su sveikata susijusi sutrikusio intelekto žmonių gyvenimo kokybė.

Raktiniai žodžiai: su sveikata susijusi gyvenimo kokybė (SVKG), gyvenimo kokybė, intelekto negalia (ID), SF-36 klausimynas

Sutrikusio intelekto žmonės yra įvairialypė populiacija. Vieni žmonės turi vidutinę protinę negalią, kiti gali turėti sunkią protinę negalią. Priklausomai nuo asmens funkcionavimo laipsnio, sutrikusio intelekto asmenų gyvenimo kokybės poveikis labai skiriasi. Su sveikata susijusi gyvenimo kokybė - tai su sveikata susijusios gyvenimo kokybės matas, parodantis, kokią įtaką asmens kasdieniam gyvenimui daro jo fizinė, psichinė ir socialinė gerovė. Ją sudaro tokie rodikliai kaip kūno funkcionalumas, diskomfortas, psichikos sveikata ir subjektyvi gerovė. Jis apima socialinį funkcionavimą, psichologinę sveikatą ir fizinę sveikatą.

Tyrimo tikslas

Šio tyrimo tikslas - įvertinti sutrikusio intelekto žmonių, kurių amžius nuo 20 iki 40 metų, gyvenimo kokybę, susijusią su sveikata, Indijoje ir Vokietijoje.

Tyrimo uždaviniai

- Įvertinti su sveikata susijusią žmonių, turinčių lengvą ir vidutinę protinę negalią, gyvenimo kokybę.

- Atlikti lyginamąją amžiaus ir lyties įtakos protinę ir vidutinę protinę negalią turinčių žmonių gyvenimo kokybei analizę.

- Palyginti žmonių, turinčių protinę negalią (lengvą ir vidutinę), gyvenimo kokybę Indijoje ir Vokietijoje (žmonių su intelekto sutrikimu).

Tyrimo metodika

Buvo naudojamas standartizuotas uždaras klausimynas, pavadintas SF-36 klausimynu. Šiame tyrime atlikta aprašomoji ir inferencinė analizė. Atliekant aprašomąją analizę, buvo atlikta vidurkio ir dažnio analizė. Atliekant inferencinę analizę, naudotas nepriklausomos imties t-testas ir vienpusė ANOVA.

Rezultatai

Tyrimo metu nustatyta, kad su sveikata susijusios sutrikusio intelekto žmonių gyvenimo kokybės problemos yra vidutinio sunkumo, vyrų ir moterų gyvenimo kokybės suvokimas reikšmingai nesiskiria, taip pat nėra reikšmingo skirtumo tarp Indijos ir Vokietijos sutrikusio intelekto žmonių gyvenimo kokybės suvokimo.

INTRODUCTION

Several reasons need an evaluation of the health-related quality of life for people with intellectual disability. First off, a person's quality of life is a crucial aspect of their overall wellbeing, and an intellectually handicapped person's level of wellbeing is influenced by their physical, mental, and social health. Second, because of societal stigma and marginalization, persons with intellectual impairments often have trouble obtaining resources and assistance (Pakmehr et al., 2022). Thirdly, research is required to identify the unique requirements of people with intellectual disabilities in Germany and India since the effects of impairment on quality of life differ significantly depending on an individual's degree of functioning.

The purpose of this study is to evaluate the health-related quality of life for people with intellectual disabilities in India and Germany who are between the ages of 20 and 40. In order to clarify the variables influencing the health-related quality of life of people with intellectual disabilities, the study has concentrated on quality-of-life indicators such as physical functioning, pain, mental health, and subjective well-being. The study will also suggest methods for addressing this population's particular requirements in order to raise the standard of living for that group.

The **objectives** are as below-

- To evaluate health related quality of life of people with mild and moderate intellectual disability.
- To conduct a comparative analysis between age and gender on quality of life for people with intellectual disability.
- To compare quality of life of people with intellectual disability in India and Germany

Hypothesis

The researcher supposed that there is no difference in the perception of males and females on quality of life of people with intellectual disability. It was also supposed that different age groups do not have any perception-based difference on quality of life of people with intellectual disability. Finally, it was supposed that there is no difference

in the perception of India and Germany on quality of life of people with intellectual disability.

The study that is being researched is important for a variety of reasons. First of all, it will provide crucial insights about the standard of living of people with intellectual disabilities in Germany and India. It will look at how disability affects quality of life in particular and help us understand the difficulties this demographic faces. This will make it possible to more clearly compare and contrast the two nations' policies toward people with disabilities and their quality of life.

The study is important because it will contribute to improvements in practice and policy that might enhance the quality of life for people with disabilities in Germany. It will educate decision-makers on the unique requirements and difficulties experienced by people with disabilities and provide suggestions on how to effectively assist and serve this demographic.

Chapter: 1 Review of Literature

1.1 General Overview of Health-related Quality of Life and Individuals

The present chapter of literature review has examined the existing body of research on the health-related quality of life (HRQOL) of individuals with intellectual disabilities. The review elucidated the primary constituents of intellectual impairment, along with the subjective and objective metrics used for assessing the quality of life among individuals with intellectual disabilities.

People with intellectual disabilities are a diverse population. While some people have a moderate handicap, others could have a severe one. Although there is no single, accepted definition of Intellectual Disability (ID), this condition is typically diagnosed by taking into account a number of factors, including the severity of cognitive impairment, the age at which the impairment started, and how it affects the person's behavior and social functioning (Anjali et al., 2017; Guider, 2017).

Individuals with intellectual impairments often experience challenges, such as restricted access to work and educational possibilities. They are thus more likely to experience poverty and social marginalization. Their feeling of value is affected, and it may also result in a decline in their quality of life.

Depending on the person's degree of functioning, the effect of impairment on quality of life for those with intellectual disabilities varies greatly. Low functioning people may have trouble taking care of themselves, which makes them more reliant on their loved ones and caretakers (Døhl et al., 2016). High functioning people, on the other hand, could be able to live independent, successful lives and exert more influence over their surroundings (Bharti & Bhatnagar, 2018; Costanza et al., 2007; Yadav et al., 2022).

There are many approaches to enhance the quality of life for people with intellectual disabilities. These include assistance with everyday tasks, assisting with educational and employment possibilities, and establishing places that are accessible to people with disabilities. These treatments may help people with intellectual disabilities realize their full potential and fully engage in society.

1.2 Health-related Quality of life of people with intellectual disability

According to the World Health Organization (WHO), disability is characterized as a limitation or absence, arising from an impairment, that hinders an individual's capacity to engage in activities within the typical range expected for a human being (WHO, 2020). Over the last several decades, there has been a notable increase in the acknowledgment of mental and intellectual impairments as integral facets of disability. Individuals with intellectual disabilities have extra difficulties associated with their cognitive impairment, resulting in a subsequent impact on their overall quality of life (Crocker et al., 2021). The concept of health-related quality of life (HRQOL) encompasses a range of objective and subjective elements that have both direct and indirect effects on an individual's overall quality of life and well-being. Research on the health-related quality of life (HRQOL) among individuals with intellectual disabilities has examined several areas, including physical, psychological, and social aspects (Garcia et al., 2021). The objective of this literature review is to examine the existing body of research on the health-related quality of life (HRQOL) among individuals with intellectual disabilities.

Intellectual disabilities, sometimes referred to as intellectual disability and developmental disability, are marked by cognitive impairments that hinder information processing and comprehension, as well as the absence of certain physical capabilities that restrict an individual's capacity for independent functioning. In order to comprehend the essence of this all-encompassing impairment, it is crucial to acknowledge the three primary constituents delineated in scholarly literature (Aljehany & Bennett, 2019; Anjali et al., 2017; Pakmehr et al., 2022). To begin with, it should be noted that there exists a condition characterized by a deficiency in mental functioning or cognitive capabilities, which may manifest in varying degrees of severity. This condition has the potential to impact several aspects of an individual's cognitive abilities, including but not limited to their thinking processes, communication skills, learning capacity, ability to concentrate, memory retention, self-regulation, and decision-making abilities (World Health Organization, 2002). Furthermore, there exists a concomitant constraint in functionality, distinguished by challenges in adjusting to the

requisites of daily existence (Chen et al., 2020). This impedes an individual's capacity to adapt to their surroundings and engage in routine tasks. Lastly, it is worth noting that a significant number of persons with intellectual impairment present with concurrent medical and mental conditions, including Attention Deficit Hyperactivity Disorder (ADHD), autism spectrum disorder, drug misuse, depression, and bipolar disorder (Boland, 2021; Clarke et al., 2015; Dudschig et al., 2021; Kalman-Halevi et al., 2021; Palm et al., 2021).

The assessment of quality of life among persons with intellectual impairments has been conducted via the use of subjective and objective methodologies. Subjective measurements refer to assessments that are dependent on subjective views, while objective measures are derived from external evaluations. Self-report questionnaires and proxy tools have been used in assessing the quality of life of individuals with intellectual disabilities, using subjective metrics. Self-report measures are often used to get an understanding of an individual's subjective assessment of their quality of life (QOL). Several assessment tools have been used, such as the World Health Organization Quality of Life-Bref (WHOQOL-BREF), Short Form-36 (SF-36), and Assessment Questionnaire for Parents (AQP) (Bharti & Bhatnagar, 2018; Ulger et al., 2017). A proxy measure is used to evaluate the quality of life by using an alternate individual as the subject of study, rather than the person directly under investigation. Various proxy measures have been used to assess the quality of life of individuals with intellectual disabilities, such as the Affectometer-2, Quality of Life Inventory (QOLI), and Quality of Life Scale (QOLS). Objective measures, such as the Multidimensional Autonomy Scale (MAS) and the Capacity for Self-Determination (CSD), have been used in assessing the degree of independence and autonomy among persons who have intellectual impairments (Bharti & Bhatnagar, 2018; Tavoli et al., 2016).

Numerous investigations have been undertaken to examine the health-related quality of life (HRQOL) among individuals with intellectual disabilities, including assessments of both subjective and objective indicators. Research has shown that persons with impairments tend to have poorer scores in terms of their quality of life (QOL) compared to those without disabilities (Keleş et al., 2018; Maslow, 1943). This distinction is evident in both the physiological and psychological aspects of health. A comprehensive evaluation of the physical well-being of individuals with intellectual

disabilities reveals that they bear a higher prevalence of physical impairments compared to the broader community. Moreover, this situation is exacerbated by the presence of extra psychological anguish they encounter. Individuals with intellectual impairments exhibit elevated levels of anxiety, sadness, and emotional discomfort when contrasted with the broader community (Garcia et al., 2021; Guider, 2017; Yadav et al., 2022). Likewise, assessments of social well-being demonstrated a significant disparity between the broader populace and those with intellectual impairments, as those with intellectual disabilities exhibit a greater tendency towards social isolation. Furthermore, it has been shown that individuals with intellectual impairments experience a notable decline in their overall quality of life when compared to those without disabilities (Cavioni et al., 2017; Døhl et al., 2016).

Keleş et al., (2018) examined the correlation between dental anxiety and the oral health related quality of life (OHRQoL) among individuals with intellectual disability. The research investigation employed a cross-sectional research design, utilizing a sample size of 86 individuals diagnosed with intellectual disability. The findings of the study revealed that a significant proportion of the participants, specifically 28%, exhibited dental anxiety. Moreover, it was observed that this dental anxiety had a negative association with their Oral Health-Related Quality of Life (OHRQoL).

Sasinthar et al., (2021) undertook a cross-sectional investigation aimed at assessing the health-related quality of life among children with intellectual disabilities who were enrolled in a specialized educational institution located in Puducherry. The data was gathered utilizing the GENCAT scale instrument, which encompasses a total of 69 items. The findings indicated that the quality of life (QOL) among these children varied from favorable to exceptional.

Bharti & Bhatnagar, (2018) investigated the correlation between psychological wellbeing and quality of life among individuals with intellectual disability and physical disability. The study was carried out utilizing a sample of 150 male participants, half of whom (n=75) presented with physical disability while the other half (n=75) exhibited intellectual disability. The findings of the study indicated a significant positive association between psychological well-being and quality of life, as well as a significant negative association with disability. Based on the results obtained, the authors reached the conclusion that individuals with intellectual disabilities exhibited

comparatively lower levels of psychological wellbeing and quality of life when compared to individuals with physical disabilities.

Yadav et al., (2022) devised a machine learning algorithm with the aim of forecasting the individualized quality of life for individuals with intellectual disabilities. The data was gathered utilizing the GENCAT scale instrument. The model was trained using the multiple linear regression algorithms, yielding a root mean squared error of 1.4729 and an R2 score of 0.9918.

Anjali et al., (2017) conducted a comprehensive review to assess the quality of life experienced by mothers who have children with intellectual disabilities. The findings indicated that the researchers employed a diverse range of survey methodologies, while also investigating multiple dimensions of quality of life, including but not limited to financial stability and familial assistance. The conduct of meta-analysis was not aligned with the intended scope of the review.

In their study, Garcia et al., (2021) conducted an assessment of the impact of dance on the overall quality of life experienced by individuals with intellectual disabilities. A qualitative research methodology was employed, utilizing semi-structured interviews as the primary data collection technique. The findings of the study demonstrated a clear indication of the capacity of dance to enhance the overall well-being of individuals with intellectual disabilities.

The aforementioned studies provide clear evidence that individuals with intellectual disabilities experience a lower health-related quality of life compared to individuals with physical disabilities (Aljehany & Bennett, 2019; Park, 2007; Rodriguez et al., 2020). Various factors, including physical health, mental health, family and support networks, and social factors, exert an influence on the health-related quality of life (HRQoL) experienced by these individuals. Furthermore, there have been encouraging discoveries concerning the capacity of dance to enhance Health-Related Quality of Life (HRQoL). Additional investigation is required to enhance comprehension of the Health-Related Quality of Life (HRQoL) among individuals with Intellectual Disabilities (ID), with the aim of providing more informed healthcare services and social support.

1.3 Identified gaps

This review has examined the existing body of research on the health-related quality of life (HRQOL) of individuals with intellectual disabilities. The review elucidated the primary constituents of intellectual impairment, along with the subjective and objective metrics used for assessing the quality of life among individuals with intellectual disabilities. The results of several research have shown that persons with disabilities generally exhibit worse scores in terms of quality of life (QOL) compared to those without impairments (Bhola, 2016; Chow, 2015; Crocker et al., 2021; Greenhaus et al., 2003; Hunker, 2014; Mullan, 2015; Sanabrias-Moreno et al., 2023; Sonti et al., 2022). This trend is seen across both physical and psychological dimensions. The findings of the research indicate that individuals with intellectual impairments have a higher prevalence of physical disability when compared to the general population (Koipysheva et al., 2018; Park, 2007; Robert Walters Group Company, 2021). Additionally, they suffer elevated levels of anxiety, depression, and emotional distress, along with heightened social isolation (Theis et al., 2019; United Nations, 2018, 2020). Therefore, it is crucial to assess the health-related quality of life for intellectually disabled individuals. This will enable the stakeholders to address the determinants that impact the health-related quality of life of individuals with intellectual disabilities. This was found to be missing in the existing literature. Further, no research was found to assess the same while taking into consideration demographic factors like gender and age. Thus, these gaps will be mended in the present research.

Chapter: 2 Research Methodology

2.1 Research strategy and logic

The two major philosophies are Positivism philosophy that is when only single reality is used (Kothari, 2012; Quinlan et al., 2019). Since present research has focused on the single reality of assessing health related quality of life of people with intellectual disability in India and Germany, thus Positivism philosophy has been used. Herein, out of exploratory, explanatory, and descriptive research methods, explanatory and descriptive research methods have been used. Explanatory research method is used when the scope of the research is novel and has never been conducted before. Since, present research is one of its kind's health related quality of life of people with intellectual disability in India and Germany has not been conducted before will assessing difference in terms of age, gender and overall health related quality of life. Descriptive research method is used when quantitative data is used in the research which is the case of present research. Out of inductive and deductive approaches) (Novikov & Novikov, 2013), deductive research has been implemented in this research. For research strategy, out of multiple available strategies like experiments, surveys, case study, action research, grounded theory, to name a few (Saunders et al., 2008), survey strategy has been adopted.

2.2 The nature of research

Primary data has been used in the present research. This research is quantitative research.

2.3 Sampling

2.3.1 Population of Research

People with mild and moderate intellectual Disability (clinically diagnosed) between the age group of 20 years to 40 years based in India and Germany have been selected to be the population of the present research. On behalf of the selected individuals in the sample, their parents have responded.

2.3.2 Sample Size

A total of 200 questionnaires were distributed (100 in India and 100 in Germany). Out of the 200 questionnaires, a total of 139 respondents responded (67 from Germany and 72 from India). The response rate was 69.5%.

2.3.3 Sampling Method

Non- Probability sampling method is a sampling method under which all the members of the population do not have equal opportunity of being selected in the sample (Flick, 2015). Convenience sampling of non-probability sampling method has been used in the present research. Convenience sampling is a sampling technique wherein the respondents who are "convenient" to the researcher are included in the sample (Edgar & Manz, 2017). The reason for using Convenience sampling is the rear nature of the population of the research.

2.4 Measurement Instrument

For collection of primary data, a standardized close ended questionnaire has been used named SF-36 Questionnaire. The SF-36 measures eight scales: physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, and mental health (Lins & Carvalho, 2016).

2.5 Administration of questionnaire

The questionnaires were distributed via Google form link. The email IDs of such parents were obtained from the special institution post approval of the parents. The parents were well informed about the research via administration of the special institution.

2.6 Data Analysis

For analyzing the collected data, SPSS 23.0 software has been used. Both descriptive and inferential analysis has been conducted in this research. Under descriptive analysis, mean and frequency analysis has been conducted. Under inferential analysis, independent sample t-test and one-way ANOVA have been used.

2.7 Research organization

The permission of the Social Research Ethics Commission No. MNLTFV-22-2. The study took place in the months of October-December 2023 in Germany and India. The primary data was collected using Google forms via a quantitative questionnaire.

On the behalf of the subjects, their parents filled in the questionnaire. The time required to fill the questionnaire was 10-15 minutes.

Chapter: 3 Research Findings

3.1 Objective 1: To evaluate health related quality of life for people with intellectual disability

To evaluate health related quality of life for intellectually disabled, descriptive analysis has been conducted as presented in Table 1 in Annex 3 while the graphical representation has been shared below-

	N	Minimum	Maximum	Mean	Std. Deviation
Limitation of Activities	139	1	3	2.06	.557
Physical Health Problems	139	1	2	1.75	.406
Emotional Health Problems	139	1	2	1.33	.394
General Health	139	1	5	2.89	.813
Energy and Emotions	139	1	6	2.48	.979
How much bodily pain have you had during the past 4 weeks	139	1	5	2.25	1.168
During the past 4 weeks, how much did pain interfere with your normal work	139	1	6	2.74	1.791
Emotional problems interfered with your normal social activities	139	1	5	3.15	.924
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities	139	1	5	3.15	.908

Figure 3.1: Descriptive Statistics

While discussing the limitation of life over a 3-point scale (1= Yes, Limited a lot, 2= Yes, Limited a little, 3=No, not limited at all), the mean value of responses is 2.06 (Standard deviation-.557) shows that maximum respondents believe that they are limited a little.

While discussing the Physical Health Problems over a 2-point scale (1= Yes, 2= No), the mean value of responses is 1.75 (Standard deviation=.406) which is almost 2, shows that maximum respondents believe that they do not have physical health problems. Similarly, for emotional health problems, the mean value of responses is 1.33 (Standard deviation=.394) which is almost 1, shows that maximum respondents believe that they have emotional health problems.

While discussing the general health over a 5-point scale (1= definitely true, 2= Mostly true, 3= don't know, 4= Mostly false, 5= definitely false), the mean value of responses is 2.89 (Standard deviation=.813) which is almost 3, shows that maximum respondents don't know about their general health.

While discussing the energy and emotions over a 6 point scale (1= All of the time, 2= Most of the time, 3= A good Bit of the Time, 4= Some of the time, 5= A little bit of the time, 6= None of the Time), the mean value of responses is 2.48 (Standard deviation=.979) which is almost 2.5, shows that maximum respondents are low on energy and emotions many times.

While discussing the bodily pain experienced during the past 4 weeks over a 6 point scale (1= None, 6= Very Severe), the mean value of responses is 2.25 (Standard deviation=1.168) which is almost 2, shows that maximum respondents have experiences very mild pain during the past 4 weeks. On asking about how much pain interfered with normal work, the mean value of responses is 2.74 (Standard deviation=1.791) which is almost 3, shows that for maximum respondents pain interfered moderately with normal work.

While discussing the Emotional problems interfered with normal social activities with family, friends, neighbors, or groups over a 6-point scale (1= Not at all, 6= Very Severe), the mean value of responses is 3.15 (Standard deviation=.924) which is almost 3, shows that maximum respondents have experiences emotional problems moderately interfered with normal social activities. On asking about how much of the time has your physical health or emotional problems interfered with your social activities, the mean value of responses is 3.15 (Standard deviation=.908) which is almost 3, shows that for maximum respondents' physical health or emotional problems interfered Some of the time with your social activities.

Based on the above discussion, it can be stated that there have been moderate issues in the health-related quality of life for intellectually disabled. This is because for "Limitation of Activities" the result obtained is Limited a little, for "Physical Health Problems'' result is "No", for "Emotional Health Problems" result is "Yes", for "General Health" result obtained is "Don't know", for "Energy and Emotions" result is "low on energy and emotions many times", for "How much bodily pain have you had during the past 4 weeks" the result "Very Mild", for "During the past 4 weeks, how much did pain interfere with your normal work" the result is "Moderately", for "Emotional problems interfered with your normal social activities" the result obtained is "Moderately", for "During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities" the result is "Some of the time". Out of 9 variables, 7 variables registered negative emotion.

3.2 To conduct a comparative analysis between age and gender on quality of life

3.2.1 Comparative analysis between gender on quality of life

The total numbers of males in the research were 77 while females were 62. For conducting the comparative analysis between perception of males and females on quality of life, independent sample t-test has been conducted as below-

	Gender	**N**	**Mean**	**Std. Deviation**	**t-value**	**Sig. (2-tailed)**
Limitation of Activities	Male	77	2.02	.554	-1.130	.260
	Female	62	2.12	.560		
Physical Health Problems	Male	77	1.77	.402	.524	.601
	Female	62	1.73	.413		
Emotional Health Problems	Male	77	1.40	.409	2.466	.015
	Female	62	1.24	.358		
General Health	Male	77	2.90	.654	.034	.973
	Female	62	2.89	.980		
Energy and Emotions	Male	77	2.38	.870	-1.381	.170
	Female	62	2.61	1.093		
How much bodily pain	Male	77	2.14	1.097	-1.228	.222

have you had during the past 4 weeks	Female	62	2.39	1.246		
During the past 4 weeks, how much did pain interfere with your normal work	Male	77	2.70	1.885	-.294	. 769
	Female	62	2.79	1.681		
Emotional problems interfered with your normal social activities	Male	77	3.25	.710	1.302	.196
	Female	62	3.03	1.130		
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities	Male	77	3.25	.710	1.328	.187
	Female	62	3.03	1.101		

Table 3.1: Group Statistics and T values

It can be inferred from Table 3.1 above that mean values for all the factors are almost same for both males and females pointing towards the fact that there is not much difference in the perception of males and females on quality of life for intellectually disabled. But this cannot be concluded simply on the basis of descriptive analysis and requires inferential analysis to be conducted-

$H_0$1: There is no significant difference in the perception of males and females on quality of life for intellectually disabled.
H_A1: There is a significant difference in the perception of males and females on quality of life for intellectually disabled.

Except for “Emotional Health Problems” (p-value=.015 wherein equal variance has not been assumed), the significance level for all other factors is more than 0.05. Overall, the alternate hypothesis has been rejected and it can be stated that there is no significant difference in the perception of males and females on quality of life for intellectually disabled except for “Emotional Health Problems”.

Further, a big t-value (2.466) for “Emotional Health Problems” indicates that difference between the perception of males and females actually exist and are not merely by chance. In this direction, the mean values (Table 3.1) of males (1.40) and females (1.24) indicate that females have the perception that they are dealing with “Emotional Health Problems” whiles males are towards neutrality on if they are dealing with Emotional Health Problems or not.

3.2.2 Comparative analysis between age groups on quality of life

To assess difference in the perception of different age on quality of life for intellectually disabled, one- way ANOVA has been conducted as below (Table 3.2). The hypothesis to be tested is as follows-

$H_0$2: There is no significant difference in the perception of different age groups on quality of life for intellectually disabled.
H_A2: There is a significant difference in the perception of different age groups on quality of life for intellectually disabled.

		Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Limitation of Activities	Between Groups	.494	3	.165	.525	.666
	Within Groups	42.343	135	.314		
	Total	42.837	138			
Physical Health Problems	Between Groups	.411	3	.137	.828	.481
	Within Groups	22.339	135	.165		
	Total	22.750	138			
Emotional Health Problems	Between Groups	.925	3	.308	2.028	.113
	Within Groups	20.519	135	.152		
	Total	21.444	138			

General Health	Between Groups	1.505	3	.502	.755	.521
	Within Groups	89.618	135	.664		
	Total	91.122	138			
Energy and Emotions	Between Groups	1.456	3	.485	.501	.682
	Within Groups	130.731	135	.968		
	Total	132.187	138			
How much bodily pain have you had during the past 4 weeks	Between Groups	5.293	3	1.764	1.302	.276
	Within Groups	182.894	135	1.355		
	Total	188.187	138			
During the past 4 weeks, how much did pain interfere with your normal work	Between Groups	12.938	3	4.313	1.355	.259
	Within Groups	429.739	135	3.183		
	Total	442.676	138			
Emotional problems interfered with your normal social activities	Between Groups	.907	3	.302	.349	.790
	Within Groups	116.921	135	.866		
	Total	117.827	138			
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your	Between Groups	.907	3	.302	.361	.781
	Within Groups	112.921	135	.836		
	Total	113.827	138			

social activities						

Table 3.2: One-way ANOVA

It can be inferred from Table 3.5 above that significance level for all the factors of quality of life considered in this research is more than 0.05 (p-value). Thus, the alternate hypothesis can be rejected while accepting the null hypothesis and it can be stated that there is no significant difference in the perception of different age groups on quality of life for intellectually disabled.

3.3 To compare quality of life of people with intellectual disability in India and Germany

For conducting the comparative analysis between perception of males and females on quality of life, independent sample t-test has been conducted as below-

Country		N	Mean	Std. Deviation	**t-value**	**Sig. (2-tailed)**
Limitation of Activities	Germany	67	2.05	.546	-.346	.730
	India	72	2.08	.571		
Physical Health Problems	Germany	67	1.79	.387	1.257	.211
	India	72	1.71	.422		
Emotional Health Problems	Germany	67	1.48	.377	4.697	.000
	India	72	1.19	.357		
General Health	Germany	67	2.98	.690	1.185	238
	India	72	2.82	.910		
Energy and Emotions	Germany	67	2.40	.897	-.918	.360
	India	72	2.56	1.050		
How much bodily pain have you had during the past 4 weeks	Germany	67	2.28	1.165	.309	.758
	India	72	2.22	1.178		
During the past 4 weeks,	Germany	67	2.57	1.681	-1.105	.271
	India	72	2.90	1.885		

how much did pain interfere with your normal work						
Emotional problems interfered with your normal social activities	Germany	67	3.42	.607	3.474	.001
	India	72	2.90	1.090		
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities	Germany	67	3.42	.607	3.537	.001
	India	72	2.90	1.064		

Table 3.3: Group Statistics and t- value

It can be inferred from Table 3.3 above that mean values for all the factors are almost same for both India and Germany except for Emotional Health Problems (India=1.19, Germany=1.48), Emotional problems interfered with normal social activities (India=2.90, Germany=3.42) and during the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (India=2.90, Germany=3.42). But this cannot be concluded simply based on descriptive analysis and requires inferential analysis to be conducted-

$H_0$3: There is no significant difference in the perception of India and Germany on quality of life for intellectually disabled.

H_A3: There is a significant difference in the perception of India and Germany on quality of life for intellectually disabled.

Except for “Emotional Health Problems” (p-value=.000), Emotional problems interfered with your normal social activities (p-value=0.001) and during the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (p-value=0.001). The significance level for all other factors is more than 0.05. Overall, the alternate hypothesis has been rejected and it can be stated that there is no significant difference in the perception of India and Germany on quality of life for intellectually disabled except for “Emotional Health Problems”, “during the past 4 weeks, times your physical health or emotional problems interfered with your social activities” and “Emotional problems interfered with your normal social activities’.

Further, the largest t-value (4.697) for “Emotional Health Problems” indicates that difference between the perception of India and Germany actually exist and are not merely by chance. In this direction, the mean values (Table 3.3) of Germany (1.48) and India (1.19) indicate that intellectually disabled in India are dealing with “Emotional Health Problems” while intellectually disabled in Germany are towards neutrality on if they are dealing with Emotional Health Problems or not.

For “during the past 4 weeks, times your physical health or emotional problems interfered with your social activities” which is the next biggest significant factor with t value 3.537 (India=2.90, Germany=3.42 as mean values) shows that intellectually disabled in India experience their physical health or emotional problems interfered less with social activities when compared to Germany. The same was found to be the case with the third most significant factor that is Emotional problems interfered with normal social activities (t-value=3.474, India=2.90, Germany=3.42 as mean values).

Chapter: 4 Considerations

Health-related quality of life (HRQoL) is a measurement of how a person's daily life is impacted by their physical, mental, and social well-being. It comprises measures of things like bodily functionality, discomfort, mental health, and subjective well-being (Mao et al., 2021). The ability to engage in activities of daily living, or HRQoL, is a metric that is often used in the assessment of medical interventions.

Assessing HRQoL entails determining how a person's health affects their functioning and sense of wellbeing. It covers social functioning, psychological health, and physical health (Benzing et al., 2021). On evaluating people with intellectual disability in India and Germany, it was found that that there have been moderate issues in the health-related quality of life. A person's health, lifestyle, environment, and access to resources are only a few of the variables that have an impact on HRQoL. Moderate issues in the HRQoL of people with intellectual disability in Germany and India suggest that there has been some gap in such resources being successfully delivered to this specific stratum of society. Beyond the conventional evaluation of symptoms, HRQoL examination also provides an objective assessment of the health and functionality of intellectually disabled in Germany and India. The finding of the present research that moderate issues do exist suggest that there are some definite health and functionality related issues being faced by intellectually disabled in Germany and India. To support this finding, in research conducted by Sasinthar et al., (2022), it was found that HRQoL of intellectually disabled students studying is special school in Puducherry was low.

HRQoL is a gauge of how a person's daily life is impacted by their physical, mental, and social well-being. It evaluates how a person's health state affects regular activities including work, play, and relationships. HRQoL serves as a general indicator of life quality and aids in decision-making about patient treatment and healthcare costs (Shigley & Green, 2022). In this direction, it is important to assess that if there exists any difference in between males and females or in between different age groups when it comes to Quality of life (QoL) for people with intellectual disability. The research found that there exists no difference neither in between genders nor between different age groups on quality of life. The term QoL refers to the general well-being of a person or population as determined by factors such as physical and mental health, social

functioning, and environmental conditions. The present research found it to be similar across genders and age groups for intellectually disables in India and Germany.

Though overall no difference was found to exist between genders and age groups except for “Emotional Health Problems” wherein females were found to have the perception that they are dealing with “Emotional Health Problems” whiles males are towards neutrality on if they are dealing with Emotional Health Problems or not in India and Germany. This means females with intellectual disability are facing emotional health problems in both the countries. Focusing on the similar issues, in a research conducted by Flygare Wallén et al., (2023), it was found that intellectually disables females face more mental and emotional illnesses compared to intellectually disables men. This research supports the findings of the present research. A person's total well-being is influenced by their surroundings and the circumstances of their existence, which are captured by the complex and multifaceted indicator of quality of life, Emotional Health Problems being one of them. This means that QoL of females with intellectual disability of age group 20 years to 40 years needs to be managed more seriously. QoL has a significant impact on how well people function in their daily lives, which makes it an important issue for many governments and people (Crocker et al., 2021). Thus, the governments and other related stakeholders need to focus on intellectually disabled female’s emotional health problems both in India and Germany while policy formulation.

Numerous ideas, including financial position, health, education, gender, and culture are connected with QoL. It affects decision-making and the possibility for change in addition to serving as a gauge of well-being (Rappaport, 2009). This means that different nations like developing and developed nations might has some differences on quality of life for people with intellectual disability. To assess the same, the present research compared the quality of life for people with intellectual disability in India (developing nation) and Germany (developed nation). The research found that there is no significant difference in the perception of India and Germany on quality of life of People with intellectual disability except for “Emotional Health Problems”, “during the past 4 weeks, times your physical health or emotional problems interfered with your social activities” and “Emotional problems interfered with your normal social activities’. It was further found that people with intellectual disability in India are

dealing with “Emotional Health Problems” while people with intellectual disability in Germany are towards neutrality on if they are dealing with Emotional Health Problems or not. Also, people with intellectual disability in India experience their physical health or emotional problems interfered less with social activities when compared to Germany. This means that emotional health is taking a toll on social activities more in Germany than in India though people with intellectual disability in India are facing more emotional health problems. QoL serves as a gauge of how well public health measures are working (Buiting & Olthuis, 2020) which can be supposed to be not at its best both in Indian and Germany as far as people with intellectual disability of age group 20 to 40 years are concerned. People with intellectual disabilities are a part of our society. These people experience physical, mental, or a combination of the three, which impairs their ability to adapt, perform, and act normally. People with disabilities may not be able to manage their life on their own. Different physical, psychological, educational, and social difficulties result from this thus it should be a chief concern for the stakeholders.

Conclusion

1. There have been moderate issues in the health-related quality of life of people with intellectual disability. Limited a little in life emotional health problems and not knowing about their general health while being low on energy and emotions many times, pain interfered moderately with normal work and experiences emotional problems moderately interfered with normal social activities and physical health or emotional problems interfered some of the time with your social activities.
2. The research found no significant difference in the perception of males and females on quality of life of people with intellectually disability except for “Emotional Health Problems”. It was found that that females have the perception that they are dealing with “Emotional Health Problems” whiles males are towards neutrality on if they are dealing with Emotional Health Problems or not.
3. It was also found that there is no significant difference in the perception of different age groups on quality of life for intellectually disabled.
4. There is no significant difference in the perception of India and Germany on quality of life of people with intellectual disability except for “Emotional Health Problems”, “during the past 4 weeks, times your physical health or emotional problems interfered with your social activities” and “Emotional problems interfered with your normal social activities’.

Suggestions/ Recommendations

The recommendations of the research are as below-

1. Both the health care system and the environment in which individuals live have an influence on their quality of life. Since the research found moderate issues in the health-related quality of life for people with intellectual disability. This means that health care system and the environment in which individuals live both in India and Germany needs improvement. Also, health care expenses are significantly influenced by quality of life. Thus, both in India and Germany, cost effective medical interventions for intellectually disabled is the need of the hour.

2. Since the research found moderate issues in the health-related quality of life of people with intellectual disability, health policies both in India and Germany require amendments. Additionally crucial to health policy research is HRQoL. It is used to assess the efficacy of social policy initiatives, health care systems, and public health interventions. The efficacy of medications and medical interventions, such as medical treatments, are also evaluated using this method. HRQoL may be used to evaluate the efficacy of various therapies and provide light on their advantages and disadvantages.
3. The present research provided a thorough knowledge of the elements that affect intellectually disabled people's quality of life like “Emotional Health Problems”, “during the past 4 weeks, times your physical health or emotional problems interfered with your social activities” and “Emotional problems interfered with your normal social activities’. Using these findings, stakeholders both in India and Germany will be able to deliver increased freedom and self-determination for this group and assist in identifying measures to improve their quality of life.

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Annex 1

Dear Participant,

This research aims to gain a better understanding of health-related quality of life in relation to people with disabilities (age 20 - 40 years). The data from this survey will be used to evaluate the quality of life in the final research paper. This research is being conducted by Sarvar Ranga at the Lithuanian Sports University, Kaunas under the guidance of Prof. Jurate Pozeriene.

The results of the study will be presented only statistically summarized in the final master's thesis. Rest assured that your responses will remain confidential and anonymous. The results of this study will be shared with the appropriate university tutors and examiners and will be used for scholarly purposes.

Your participation in this research is voluntary, you may choose not to participate. This survey will take around 20 minutes to complete. If you have any questions, please contact SARVAR RANGA, student of the Master's in Adaptive physical activity program at the Lithuanian Sports University, Kaunas on EMAI- sarran@stud.lsu.lt

Kindly provide your consent below to proceed further.

o Yes, I agree - I don't agree

o I confirm that I have read and understood the above information, have had the opportunity to ask questions or enough time to consider the information provided about the survey and data collection.

Note: This research has been reviewed according to the ethical procedures for research involving people of the Social Research Ethics Supervision Committee of the Lithuanian Sports University (Sporto str. 6, LT 44221, Kaunas) to conduct the study.

Many thanks,

Annex 2

SF36 Form - Untitled form - Google Forms

Annex 3

Table 1: Descriptive Statistics to evaluate health related quality of life for people with intellectual disability

	N	Minimum	Maximum	Mean	Std. Deviation
Limitation of Activities	139	1	3	2.06	.557
Physical Health Problems	139	1	2	1.75	.406
Emotional Health Problems	139	1	2	1.33	.394
General Health	139	1	5	2.89	.813
Energy and Emotions	139	1	6	2.48	.979
How much bodily pain have you had during the past 4 weeks	139	1	5	2.25	1.168
During the past 4 weeks, how much did pain interfere with your normal work	139	1	6	2.74	1.791
Emotional problems interfered with your normal social activities	139	1	5	3.15	.924
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities	139	1	5	3.15	.908

Table 2: Independent Samples Test for analysis between gender on quality of life

		Levene's Test		t-test						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Limitation of Activities	EVA	.009	.926	-1.130	137	.260	-.107	.095	-.295	.080
	EVNA			-1.129	130.176	.261	-.107	.095	-.295	.081
Physical Health Problems	EVA	.248	.619	.524	137	.601	.036	.069	-.101	.174
	EVNA			.522	129.217	.602	.036	.070	-.101	.174
Emotional Health Problems	EVA	6.634	.011	2.431	137	.016	.161	.066	.030	.291
	EVNA			2.466	136.043	.015	.161	.065	.032	.289
General Health	EVA	9.368	.003	.036	137	.972	.005	.139	-.270	.280
	EVNA			.034	102.103	.973	.005	.145	-.283	.293
Energy and Emotions	EVA	3.168	.077	-1.381	137	.170	-.230	.166	-.559	.099
	EVNA			-1.347	115.136	.180	-.230	.171	-.568	.108
How much bodily pain have you had during the past 4 weeks	EVA	1.677	.198	-1.228	137	.222	-.244	.199	-.638	.149
	EVNA			-1.211	122.566	.228	-.244	.202	-.643	.155
During the	EVA	1.999	.160	-.290	137	.772	-.089	.307	-.695	.517

past 4 weeks, how much did pain interfere with your normal work	EVNA			-.294	135.549	.769	-.089	.303	-.688	.510
Emotional problems interfered with your normal social activities	EVA	11.883	.001	1.365	137	.175	.214	.157	-.096	.525
	EVNA			1.302	97.979	.196	.214	.165	-.113	.542
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities	EVA	9.960	.002	1.389	137	.167	.214	.154	-.091	.520
	EVNA			1.328	99.721	.187	.214	.162	-.106	.535

* Equal variances assumed =EVA, Equal variances not assumed =EVNA

Table 3: Independent Samples Test for life of people with intellectual disability in India and Germany

		Levene's Test		t-test						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Limitation of Activities	EVA	.258	.612	-.346	137	.730	-.033	.095	-.220	.155
	EVNA			-.346	136.90	.730	-.033	.095	-.220	.155
Physical Health Problems	EVA	.986	.322	1.257	137	.211	.086	.069	-.050	.222
	EVNA			1.261	136.972	.210	.086	.069	-.049	.222
Emotional Health Problems	EVA	2.447	.120	4.697	137	.000	.293	.062	.170	.416
	EVNA			4.688	134.847	.000	.293	.062	.169	.416
General Health	EVA	4.367	.038	1.173	137	.243	.162	.138	-.111	.434
	EVNA			1.185	131.790	.238	.162	.136	-.108	.431
Energy and Emotions	EVA	.761	.385	-.918	137	.360	-.153	.166	-.481	.176
	EVNA			-.923	136.031	.358	-.153	.165	-.479	.174
How much	EVA	.003	.955	.309	137	.758	.061	.199	-.332	.455

bodily pain have you had during the past 4 weeks	EVNA			.309	136.475	.758	.061	.199	-.332	.454
During the past 4 weeks, how much did pain interfere with your normal work	EVA	1.673	.198	-1.105	137	.271	-.336	.304	-.936	.265
	EVNA			-1.109	136.757	.269	-.336	.303	-.934	.263
Emotional problems interfered with your normal social activities	EVA	13.090	.000	3.408	137	.001	.515	.151	.216	.814
	EVNA			3.474	112.727	.001	.515	.148	.221	.809
During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your	EVA	11.096	.001	3.473	137	.001	.515	.148	.222	.808
	EVNA			3.537	114.306	.001	.515	.146	.227	.804

social activities										

* Equal variances assumed =EVA, Equal variances not assumed =EVNA

Table 0.1: Independent Samples Test

ANNEX 4

International Science Group 13. Dec

to me

Good day!

Materials accepted for the XIV International Scientific and Practical Conference "World trends, realities and accompanying problems of development", December 19-22, 2023, Copenhagen, Denmark.

The ISG team has started publishing individual monographs and monographs in co-authorship, which will be posted on the respective sites within 10 days of their acceptance for publication. Publication of these monographs is negotiated individually. Examples of published monographs can be viewed on the archive page.

Foreign scientific periodicals - https://isg-journal.com/

вт, 12 дек. 2023 г. в 20:45, Sarver <xarver01@gmail.com>: