



Investigating Mental Well-being Levels of Physically Disabled People Compared to People without Disabilities

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ABSTRACT. According to the World Health Organization (2022), about 15 percent of the world's population is affected by disability, and the number is increasing year over year. It is well known that people with physical disabilities have limitations in certain aspects of their lives, but do they have higher or lower mental well-being compared to able-bodied people? Do they appear more negative and complain more about life than healthy people? The facts may not be as simple as the stereotype. Since both of my parents are special needs educators, I have had the opportunity to closely observe several physically disabled people and learned about their lives since childhood. I found that a large proportion of physically disabled people seem to have positive attitudes towards life, even more than the healthy people around them. Therefore, I chose to conduct a study to explore whether physically disabled people have higher or lower levels of mental well-being than able-bodied people. For this study, questionnaires measuring mental well-being levels were distributed to physically disabled and able-bodied people, and face-to-face interviews were conducted with several physically-disabled people.

Keywords: disability, well-being, psychoanalysis, mental health

1 INTRODUCTION

1.1 Definition of well-being

Ruggeri and colleagues pointed out that well-being has been defined as the combination of feeling good and functioning well; the experience of positive emotions such as happiness and contentment as well as the development of one's potential, having some control over one's life, having a sense of purpose, and experiencing positive relationships. In addition, it has been given that subjective well-being (SWB) is people's cognitive and affective evaluations of their lives, which is also an emerging field of research in social sciences [1]. According to the research of Diener et al. [2], subjective well-being (SWB) is often used by psychologists as an umbrella term for how we think and feel about our lives.

1.2 Measurements of well-being

In the earliest days of well-being research, which was around the 1980s, the moment-to-moment flow of pleasure was measured in laboratories. Participants were exposed to a noisy environment and then asked to record how much pleasure they experienced in real time [3]. Nowadays, some scholars believe that the methods to measure well-being include but are not limited to the following examples. The first approach is to measure satisfaction with life, using only one question. The second approach is to use the life satisfaction scale, which uses a score to show the level of well-being. The last is the use of a personal well-being index, which is made up of seven elements that can be modified to suit the situation in different regions [4]. In the work of Ross and colleagues [5], measures of subjective well-being include indicators such as the subjective well-being measure used in the Gallup World Poll and psychological need satisfaction and frustration scales, whereas measures of objective well-being use indicators such as the Global Youth Development Index, positive youth development indicators or developmental assets scores.

1.3 Factors that may affect happiness

A number of scholars have discussed the study of well-being from their professional perspective, including the application of sociology, economics, law, and other disciplines. Ben-Zur showed in his research that a multitude of familial and parental factors can shape and determine the cognitive, affective, behavioral, and personality attributes of adolescents [6]. Parental and family influences on adolescents' characteristics can be genetic or environmental in origin, and both were found to contribute to stability and change in the developmental patterns of adolescent adjustment [7]. The research of Clark, Paul, and Shields clearly showed through data and charts that income and level of well-being are influenced by each other [8]. It showed that there is a positive correlation between personal income and personal subjective well-being by using a functional model. In addition, gender is also a factor that many researchers are keen to discuss, but different research methods seem to have difficulty agreeing on whether gender affects well-being levels. In some studies, women tend to report higher happiness [9]. However, there are also a few studies reporting no gender differences in happiness levels [10]. This is understandable given the large number of factors that influence well-being levels that confound analysis on whether gender affects the levels of well-being.

1.4 Research on the mental health of the physically disabled

Kariuki and colleagues' survey on the mental health of young Australians with disabilities pointed out that many people with disabilities suffer from psychological problems such as loneliness, anxiety, and low self-esteem [11]. Disabled people may doubt their social ability, have a strong sense of inferiority, and even doubt their sense of value, which brings on serious anxiety, depression, and other emotional problems. Honey, Emerson, and Llewellyn noted in their research that people with disabilities are more

likely to live in poverty, lack access to higher education, have difficulties in employment, and even commit crimes due to certain conditions [12]. Mental illness occurs more often in such situations. These studies on the mental health of people with disabilities all suggest that people with disabilities are more likely to suffer from mental illness and have more negative feelings about things than people without disabilities.

However, there are also some situations where people with disabilities show higher mental health levels. Cerebral palsy patients are often accompanied by language, hearing, body, intelligence, and other aspects of the disorder. Despite the difficulties they face in their daily lives, they do not seem to be any different from average people in terms of life satisfaction. People with cerebral palsy only experience problems related to their dysfunctions when their happiness is concerned [13]. Andren and Grimby's study of people with cerebral palsy showed that their levels of well-being were not significantly different from those of healthy people either [14]. In a study of visually impaired people using questionnaires, Runjic and colleagues found that they had above-average levels of SWB [15]. All these studies show that sometimes, people with disabilities do not report lower levels of mental well-being, as might be expected.

In addition to studying the mental well-being levels of people with disabilities, there are a number of studies that explore the factors that influence their well-being levels. Numerous factors may be involved, but one that is well documented is the positive impact of social support on people with disabilities. To improve the mental health of disabled persons, mental health service personnel can make full use of social support to help the disabled form a sense of belonging to their networks of social relationships, including relatives, friends, and co-workers in a positive way by integrating social resources and utilizing social support system [16]. Li and Qi also pointed out in their research that the causes for the mental health problems of the disabled are complex, but the support and assistance of the surrounding environment for the disabled, namely social support, is undoubtedly an important factor affecting the mental health of the disabled [17].

2 METHODOLOGY

Questionnaires and interviews were used to study whether physically disabled people have higher or lower mental well-being levels than able-bodied people and the influencing factors behind the potential difference in this research.

First, the reason for comparing mental well-being levels between physically disabled and able-bodied people through questionnaire surveys is that it can obtain first-hand data and directly find out the factors that may affect mental well-being. Questionnaire surveys are widely used in psychological research because of their practicality and comparability. It can harvest enough effective information with the least cost in the shortest time. Since it is not easy to meet physically disabled people in daily life, it is the best way to study their mental well-being levels by distributing questionnaires online. Although there may be deviations caused by different understanding levels of participants in the questionnaire survey, this problem can be effectively controlled by making the questions as detailed as possible and selecting people with physical disabilities with

sufficient understanding ability to participate in the questionnaire. The questionnaire suggested several factors for mental well-being, such as control of emotions and behavior [18]. Each questionnaire had an overall score of 120, with a higher score indicating a higher level of mental well-being. The score is given by adding the score of each response, for example, to the question "Did you wake up feeling refreshed and energetic (in the past month)?" there are six choices to choose from, "every day," "almost every day," "quite frequently," "not much," "very little" and "none." Participants were given six points if they chose "every day," and only one point for "none".

The purpose of using interviews was to find out why physically disabled people reported higher or lower mental well-being than non-disabled people. Because it is a real-time question and answer format, the interviewees need to respond to the questions in a short time, so their answers are often spontaneous. This makes the interview data more reliable than the questionnaire, which is why case interviews were conducted after the questionnaire in this study. Moreover, one key point is that direct communication with physically disabled people can help them understand their lives and thoughts more deeply and obtain more detailed information than questionnaire surveys because physically disabled people may not be good at actively expressing their thoughts and they may need to be guided by step-by-step questioning. In the interview, a more comprehensive understanding of their background, childhood living environment, personality, and physical health can be obtained.

In this study, the independent variable was the presence or absence of physical disability and the dependent variable is the level of mental well-being. The degree of physical disability was classified into four levels on the questionnaire, from severe to mild [19]. The hypothesis is that physically disabled people have higher or lower mental well-being than able-bodied people. To test this hypothesis, the mental well-being levels of physically disabled people were compared with those of able-bodied people. Since mental well-being is a subjective feeling, it may be affected by age, gender, education level, family property, grade of physical disability, and other factors. If these differences among sample groups are large, the result may not be accurate. To ensure the validity of the research, when selecting samples, a mixed population was selected to ensure that different backgrounds were all covered. Background questions were also included in the questionnaire to help categorize the sample population. Quota sampling was used as the sampling method, and most of the samples of the physically disabled came from Zhejiang Vocational College of Special Education, a school for the disabled in China. Therefore, the physically disabled and able-bodied people who participated in the questionnaire survey were mostly in a school class as a unit. All the questionnaires were answered online, produced, and distributed by professional questionnaire software. Given the relative difficulty of identifying persons with physical disabilities, the sample of persons with physical disabilities may differ slightly in age range and education level. The prepared research materials include two well-being questionnaires for physically disabled and able-bodied people, one consent form, and one raw data table. Each questionnaire was preceded by a paragraph telling participants about their rights and guaranteeing that the research will not cause any physical or mental harm. For the physically disabled participants in the interview, they need to read and sign a detailed consent form, which covers their right to refuse to continue the interview at

any time and their right to know the follow-up information. The information of the physically disabled persons interviewed is strictly confidential and the research guarantees that no harm will be done to them, either physically or mentally.

The questionnaire for the physically disabled uses China's disability rating system to classify participants into four levels of disability from severe to light. Independent t-test (significance level set at $p < 0.05$) was used as a statistical test to analyze the data of the questionnaire because this research intended to determine whether there was a statistically significant difference between the means in two unrelated groups, the physically disabled and able-bodied groups. To make the research results universal and representative, the number of valid samples recovered from the questionnaire survey was set at approximately 50 for each population group.

3 RESULTS

3.1 Overview

The purpose of this study was to compare the levels of mental well-being between physically disabled people and able-bodied people through questionnaire surveys. From the data and analysis of the questionnaire survey, it can be found that the average mental well-being level of the physically disabled was higher and there was a significant difference compared with the healthy people.

3.2 Analysis of questionnaire responses

The result of all responses to the question "The type of disability you have" in the questionnaire for the physically disabled was that many participants were deaf or physically disabled, accounting for 74 percent of the total. And more than half of the fifty physically disabled people had the first-degree disability, meaning they had a severe degree of disability. It can be seen from this that the physically disabled participants in the questionnaire survey faced many physical inconveniences and difficulties, and they were not mildly disabled people who can live almost independently.

People with physical disabilities answered questions such as "Have you been or have you ever been subjected to any restraint, provocation, or stress (in the past month)" and had a better overall situation than people without physical disabilities. Nearly three-quarters of the physically disabled reported little or no provocation or stress, while that number dropped to just 34 percent of the able-bodied.

Certainly, there were cases in which the able-bodied answered more positively than the physically disabled.

In the answer to the question "Has your day been filled with things that interest you (in the past month)," only two percent of able-bodied people said they had nothing interesting going on in their lives, compared with a full ten percent increase among physically disabled people.

Overall, the questionnaire responses alone could not tell the difference between the two mental well-being levels.

3.3 Data analysis

Below is the original data table obtained from the questionnaire survey.

Table 1. Raw data on well-being levels

<i>Physically disabled people</i>	101,81,84,78,78,111,78,102,101,104,73,99,90,91,77,77,80,105,90,88,100,78,83,87,93,72,85,87,95,90,97,102,66,102,77,88,90,95,88,85,90,83,96,81,91,76,81,83,77,86
<i>Able-bodied people</i>	70,60,56,49,75,84,85,67,69,86,92,78,80,78,88,78,74,102,100,77,98,76,75,84,94,58,81,64,76,62,51,111,80,74,60,82,73,91,104,99,77,77,92,86,84,68,108,110,81,78

Table 2. Descriptive statistics of well-being levels

	<i>Physically disabled people</i>	<i>able-bodied people</i>
<i>Mean</i>	87.84	80.02
<i>Standard deviation</i>	9.99	14.73
<i>Variance</i>	99.77	217.08

Table 3. Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
VAR00006	.073	100	.200*	.984	100	.273

Table 4. t-test results

Independent Samples Test										
		Levene's Test for Equality of Variances		t	df	Sig.(2-tailed)	t-test for Equality of Means		95% Confidence Interval of the Difference	
		f	Sig.				Mean Difference	St. Error Difference	Lower	Upper
score	Equal variances assumed	4.110	.045	3.106	98	.002	7.820	2.517	2.824	12.816
	Equal variances not assumed			3.106	86.186	.003	7.820	2.517	2.816	12.824

After obtaining the original data, this study calculated the mean, standard deviation, and variance of the two groups of data respectively for the physically disabled and the able-bodied.

Comparing the means of the two groups of data, the average level of mental well-being of the physically disabled was nearly eight points higher than that of the able-bodied. In addition, the standard deviation and variance values of the physically disabled were smaller than those of the healthy, which means that the range of mental well-being scores of the physically disabled was closer to the mean and the fluctuation was smaller.

Before verifying whether the two sets of data are significantly different, it is important to ensure that the data are normally distributed. The following are the results obtained by inputting 100 data through SPSS software:

According to the results of the normal test and the chart, the data of the questionnaire were normally distributed, which means that the next t-test can be carried out.

For this study, the null hypothesis should be that there was no significant difference in mental well-being levels between physically disabled people and healthy people.

Although the mean value of mental well-being of physically disabled people was not much different from the mean value of mental well-being of healthy people, which was about eight; as the t-test score $t = 3.106$ was higher than the critical value of 1.667 at 49 df then we can assume that the results were significant at 0.05 level on a one-tailed test. Since the t-value of both sets of data exceeded the critical value, it was clear that the null hypothesis was rejected, and the two sets of data are significantly different. Therefore, the hypothesis was accepted that the levels of mental well-being of physically disabled people were significantly higher than that of healthy people.

4 DISCUSSION

Because the results from the questionnaire survey were consistent with the hypothesis that physically disabled people have higher levels of mental well-being, this suggests that a large proportion of physically disabled people were indeed more satisfied with their lives [20]. Many people have the stereotype that physically disabled people are more pessimistic mentally because of their physical inconveniences [21]. However, this study confirms that physically disabled people may be more hopeful about life than able-bodied people. To find out the causes of this phenomenon, this study continued to carry out case interviews, hoping to find some clues through face-to-face communication with the physically disabled. In the interview, a total of four physically disabled college students with different types and degrees of disability participated. Students of different genders and ages were also selected in this study to ensure that more universal interview results could be obtained.

Throughout the whole interview, the following four reasons can be summarized for the higher mental well-being of the physically disabled:

4.1 Social support

In exploring the reasons for the higher levels of mental well-being of the physically disabled, it can be found that social support is an important reason [22]. When a society cares for and supports people with disabilities, they are significantly more likely to have

a happier life experience. Every respondent said that they were satisfied with the help received from society at present, and in China, physically disabled people have basic living security subsidies, so they do not need to worry about finding a job when they graduate from college. And thanks to many support policies for disabled people, they can work in the community after graduation, even if they cannot find a job in society. Therefore, although they face greater difficulties in mobility than able-bodied people, financially they do not have to face the great pressure of finding a job as other students do, nor do they have to worry about their future basic livelihood.

4.2 Less pressure from their parents

Parents of children with physical disabilities are likely to be more tolerant of their children because of their physical disabilities than parents of able-bodied children. These parents showed more tolerance and raising a child with a disability allowed them to transcend any prejudice and simply love their child [23]. Unlike many Chinese parents, who traditionally expect a high income and a decent career, they expect much less from their children because they know it is more difficult for the physically disabled to live or study. Among the four interviewees, three of them refuted almost immediately when asked whether their parents would exert pressure on their life and study, and only one did not deny it. However, the answers she gave did not have much to do with pressure but showed that her parents cared a lot. The others all responded like “They won’t. They didn’t even ask me for the exams. There’s no pressure on me.” In addition, on the question of their parents’ future expectations, each participant expressed that their parents did not have high demands on them and only looked at their ideas and choices. It is not hard to see that the family environment of the physically disabled had little pressure on their career and study, and their parents were open-minded. In terms of their children’s future choices, they gave their children enough freedom and support, allowing them to choose their future work or residence according to their preferences and ideas. Research shows that family support is positively correlated with people’s happiness [24]. This is one of the reasons why disabled people are happier than non-disabled people.

4.3 Fewer wants and needs (compared to able-bodied people)

At the end of the interview, they were asked what they most wanted to accomplish now or later. For two students, the dream was to find an acceptable job where they could earn their living. The other two were learning how to drive and continuing their studies by taking the postgraduate exam. Physically disabled people cannot do many things because of their limited mobility compared to able-bodied people. Traveling may be a common thing for people, but it is almost impossible for them to achieve. As a result, they have fewer needs and desires than able-bodied people, and most physically disabled people are content as long as they can live independently. With such an attainable goal, they have less to live for, and their mental well-being is naturally higher. In fact, people in modern society are suffering from a great deal of social pressure. According to a survey by the American Psychological Association and American Institute of Stress

[25], about 33 percent of people report feeling extreme stress and 77 percent of people experience stress that affects their physical health. In such a social environment, these physically disabled people can show higher mental well-being related to their simple attitude towards life.

In conclusion, through literature reading and interviews, this study discussed four reasons why physically disabled people have high mental well-being levels. These four factors involve peers, society, parents, and themselves.

5 CONCLUSION

The purpose of this study was to compare the levels of mental well-being of physically disabled people with those of healthy people and to explore reasons affecting the levels of mental well-being of physically disabled people. According to the results of the questionnaire survey, the average level of mental well-being of the physically disabled was higher and there was a significant difference compared with the healthy people. From the interview survey, the phenomenon of higher mental well-being levels of the physically disabled may be due to four factors: less communication with the mainstream society, less pressure and expectation from parents, the guarantee of basic life, and low personal needs. This study also hopes to call on society to pay attention to people's mental well-being in a way to maintain the levels of mental well-being of the physically disabled and improves the levels of mental well-being of the healthy. Although it is not a simple and easy task to improve people's mental well-being, it is believed that people will pay more attention to their mental state after they consciously understand their mental well-being, and they can also adjust through some methods.

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