

## DETERMINANTS OF QUALITY OF LIFE ON PERSONS WITH PHYSICAL DISABILITY: LITERATURE REVIEW

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### ABSTRACT

People with physical disabilities not only have functional limitations but also have more risks related to health problems and social barriers faced than non-disabled people. Studies have shown that people with disabilities tend to have a low quality of life. The purpose of this study was to determine the determinants of quality of life in people with physical disabilities. The study design used *literature review* by analyzing articles that discuss the determinants of quality of life of people with physical disabilities. Article searches were conducted on three databases including *Scopus*, *EBSCOhost* and *Google Scholar* with the keywords Determinants, Quality of Life, and Physical Disability. Articles used in Indonesian and English with a time span between 2012 and 2022. Searching articles using keywords on *Scopus* found 176 articles, 57 articles on *EBSCOhost Medline* and 210 articles from *Google Scholar*. Furthermore, screening was carried out so as to produce 9 articles that are relevant and in accordance with the objectives of this *literature review*. The results found that gender, age, degree of disability, availability of assistive devices, access to health information, psychological factors, family support, social support and stigma and accessibility are determinants of quality of life of physical disability. Knowledge of the determinants of quality of life for people with physical disabilities can help health workers and relevant agencies to design interventions and provide appropriate support for them.

**Keywords:** *Quality of life, determinants, physical disability*

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### INTRODUCTION

Global trend has shown that persons with disability are still being categorized as a group with high vulnerability to experiencing exclusion in any development. Not only that they are being excluded from opportunities to enjoy the result of the development, they are also being excluded from any right of chance to actively participate in a development. As a result, persons with disability groups tend to possess a lower quality of life than those who are not (Dewi et al., 2020).

Inclusivity index is one of the indicators that is used as a reference in seeing the developments in global disability which measures the construction of Inclusivity more holistically. Globally, in 2020 Indonesia ranked 125 (with Inclusivity index value of 26,5) for the exercise of inclusive development. This position falls way behind compared to a number of other developed countries such as the Netherlands and New Zealand, even amongst ASEAN countries, this position is still below Philippines, Vietnam, Singapore and Thailand. According to the National Social and Economic Survey (Survey Sosial Ekonomi Nasional/SUSENAS) in 2020, there are 22,97 million Indonesian people with disability, wherein 53,3% are labeled as persons with single disability and the other 48,7% as persons with multiple disability. 1,2 million people are recorded as people with physical disability.

Persons with physical disability are those who are diagnosed with motor disability, who lost the ability to move their limbs completely or partially, whether arms or legs or both due to amputation, paralysis, deformation, or joints dysfunction which affects a person's normal ability to move and being mobile (Kuvalekar et al., 2015). Moreover, there is also deformation

and the decrease in function of bones, muscles, joints and nerves. One instance of motor function disorder experienced by persons with disability is Acute Flaccid Paralysis (AFP), Paraplegia, Cerebral Palsy, and Leprosy and so on. These conditions can be triggered by illness, accident or hereditary condition.

Physical disability is not only concerned with physical health problems, but also psychological which can affect their health condition in general. As a result, organ anomaly and damage causes a number of life restraints for persons with physical disability such as difficulty in doing daily activity. According to Lindsay (2014) any physical restrictiveness experienced by an individual could cause them to be excluded socially (Saputri et al., 2019). Besides functional limitations, persons with disability are also facing a lot more risks and social restraints compared to those who are not. It has been reported that individuals with physical restriction generally possess a lower quality of life (Wibisana et al., 2022).

Other than functional limitations possessed by persons with disability, they are also vulnerable to a lot more risks concerning mental health compared to those who are not, and researches have shown the causal relationship between disability and a low quality of life (Milner et al., 2020). Theoretically, persons with physical disability experienced a lower quality of life in relation to negative feelings on physical view, appearances, self-esteem, and individual thoughts. Physical appearance makes a person with physical disability restraint themselves and even hampered to participate in their families and social environment (Kuvalekar et al., 2015).

Quality of life can be viewed as a concept that identifies what is important, necessary and fulfilling in human existence. Quality of life also becomes a subjective indicator that is not easy to be optimized without predicting its intrinsic and extrinsic determinants (Rajati et al., 2018). The concept of quality of life was first known in 1960 as the alternative of social development which at the time was defined as the increase of a person's material conditions (Grabowska et al., 2022). The World Health Organization (WHO) defines quality of life as an individual perception about the life they live according to local culture and values where they are situated as well as comparing that life to purposes, hopes and standards set by individuals themselves. Health is one of the domains which determines a person's quality of life, whether it is physical and mental health, independence level, social relation as well as individual trust towards their environment.

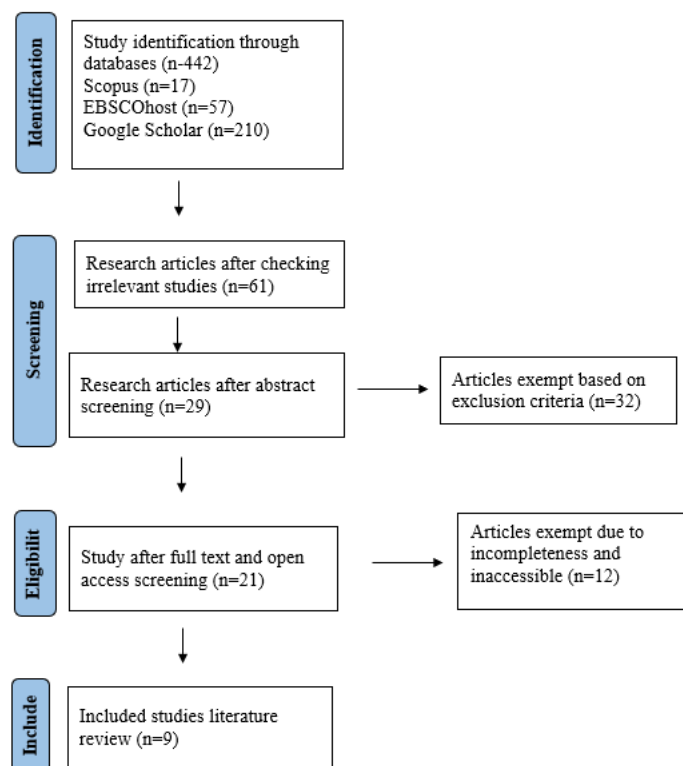
Previous research has reported that meaningful participation in the society by persons with disability is in fact contributing towards their prosperity and quality of life starting from childhood, teenagers up to becoming adults. A number of persons with physical disability still face limitations to self-growth and participate in their community, whether at home, school, workplace, as well as social environment in general.

A few researches have mentioned the importance of pushing the enhancement of quality of life for persons with disability, as discovered by Abraham (2013) supporting the enhancement of quality of life by deducting both environmental and social obstacles as well as advising the government and related institutions to take initiatives to embody an inclusive and disability-friendly society (Abraham, 2013). Today, we still need a more comprehensive understanding about the factors that contribute towards the quality of life for persons with physical disability (Arnaud et al., 2021). This state can be achieved by understanding the determinants of quality of life comprehensively. Research on determinants of quality of life on

persons with physical disability is needed as an attempt to understand the relation and to yield a complete result in order to plan the health intervention program, promote inclusivity and encourage the society to create a better quality of life. Therefore, it is urgent to study the determinants of quality of life for persons with physical disability according to a number of researches conducted in the past.

## **METHOD**

This research uses literature review as a method according to the PRISMA manual by analyzing articles from 2012 until 2022. The steps for conducting a research according to this method is started by finding the criteria, collecting source of information, study selection, process of collecting data and data selection. The articles are obtained from the Scopus database, EBSCOhost and Google Scholar. The inclusion criteria used in this research are that the articles are written in Bahasa Indonesia and English from various countries, the articles are full text and open access, the articles are published within 2012 until 2022, as well as the articles that are relevant with the objective of this research. Some of the keywords used in collecting the articles are “determinants”, “quality of life” and “physical disability”. There are the total of 9 articles selected to be used for this research, with the selection process as shown in the following diagram:



**Picture 1.** PRISMA flow diagram

**RESULTS AND DISCUSSION**

The search result from the database yields the total of 9 articles with details as shown in the following table:

**Table 1.** Summary of Articles on Determinants of Quality of Life for Persons with Physical Disability 2012-2022

No	Researcher	Country	Title	Year	Result
1	Detsyk et al., 2021	Ukraine	Quality of Life Determinants in Persons with Disability After Musculoskeletal Injuries	2021	The factors related with quality of life for persons with physical disability are sex, age, severity of disability, assistive device, and access to information, social factor, stigma and family support.
2	Makris et al., 2021)	Australia	Quality of Life in Children and Adolescents with Cerebral Palsy: A Systematic Review with Meta-Analysis	2021	There are relation between psychological and social factors towards the quality of life for children with physical disability type Cerebral Palsy.
3	Halimi et al.,	Malaysia	The Impact of Physical Environment Toward Children with Cerebral Palsy	2022	Accessibility and barrier-free environment increase the participation and quality of life for children with physical disability type Cerebral Palsy.
4	Ow et al.,	Canada	What is QOL in Children and Adolescents with Physical Disability?	2021	Social acceptance influences the quality of life for children and teenagers with physical disability.
5	Wilasih & Salsabila	Indonesia	<i>Faktor-faktor yang Mempengaruhi Kualitas Hidup Penyandang Disabilitas</i>	2017	Some of the factors that are related with quality of life for persons with daksa disability are optimism, hope, social support and religiosity.

6	Rahmah	Indonesia	<i>Pengaruh Dukungan Sosial dan Religiusitas Terhadap Kualitas Hidup Remaja Penyandang Disabilitas Fisik</i>	2017	Social support and religiosity are both influential towards quality of life for persons with physical disability.
7	Canha et.al	Portugal	The Importance of Perceived Quality of Life and Personal Resources in Transition from School to Adult Life	2012	Social environment, school and technological assistive devices are connected with the quality of life for persons with disability during transition time towards adulthood life.
8	Silvan-Ferrero et al.,	Spain	Psychological Quality of Life in People with Physical Disability: The Effect of Internalized Stigma, Collective Action and Resilience	2020	Internalized stigma is related to the quality of life for persons with physical disability.
9	Arnaud et al.,	Europa	Determinants of Quality of Life of Young Adults with Cerebral Palsy Longitudinal Approach and Comparison with the General Population	2021	Physical environment, the availability of assistive devices and social support are influential towards the quality of life for persons with physical disability in the early stage of adulthood.

Table 1 shows that some of the determinants of quality of life for persons with physical disability are sex, age, severity of disability, the needs for assistive devices, access towards health information, psychological condition, family support, social support and stigma, and the accessibility of physical environment.

## DISCUSSION

### Sex

There are differences in seeing the relation between male and female sex with the quality of life of persons with physical disability. A study in Ukraine mentions that female has a 1,3-5,6 more probability to possess a lower quality of life compared to male (Detsyk et al., 2021).

This could be explained by the cultural aspect that female with physical disability experience double burden, where they are being excluded from their social environment and also vulnerable towards violence risks. Attitude, assumption and faith about disability and gender in the society has produced a certain stigma and practice of discrimination which silences and harms female with disability. Moreover, the United Nation Partnership on the Rights of Persons with Disabilities (UNPRPD) reported in the account of 2021 that female and female children with disability experienced a decrease in quality of life two times more possible due to various obstacles and abuse they had to face (Quinn, 2006). Differ with the research conducted in Indonesia, the decrease in quality of life is in fact experienced more by male with 60,93% due to being head of a family.

### **Age**

There are differences in the result of seeing the relation between age and quality of life of persons with physical disability. Children and teenagers with physical disability experience a decrease in their quality of life due to physical limitations and body image problems that they have to deal with. However, this could also be affected by bias when the quality of life for children is determined by their parents, where there is possibility for inaccurate assessment and result. As for adults, the decrease in quality of life is experienced during the productive age between 35 to 54 years old (Benner et al., 2017). Other studies have also stated that the decrease in quality of life for adults with physical disability is explained by the demands to be productive and to be working during those years of life (Nanthamongkolchai et al., 2022). Theoretically, the age development for adults is generally marked with the changes in new roles and responsibilities like being wife/husband and parents, making a living, as well as other social demands so that adults with physical disability would also face the same complexity (Putri, 2019).

### **Severity of Disability**

Severity of disability shows significant differences in the quality of life. Severity of disability takes part in determining the decrease in quality of life for persons with physical disability 1,3-6,0 more times. Research conducted in Ukraine shows that those who suffer a severe disability and need third party assistance possess a low quality of life. Furthermore, that research finds that the location of disability is also one of the determining factors for the quality of life of persons with physical disability, like those with lower limbs disability would possess a lower quality of life. Severity of disability is used as one of the standards for the poverty eradication and maintaining level of social prosperity program in the form of Social Security for persons with disability in Indonesia, such as those with a very severe disability who are used as indicators in the aid program from the Ministry of Social Affairs. On the other hand, the use of severity of disability turns out to be discriminative and in opposition with the equality of rights principle.

### **The Needs for Assistive Device**

The lack of assistive devices for persons with physical disability also affects negatively towards the quality of life for them, where they have a high need for assistive devices to support rehabilitation such as crutches, wheelchairs and so on. Other studies have mentioned that physical disability indeed affects and decreases a person's quality of life due to the high expenses for fulfilling that need. The use of assistive devices such as orthotic and wheelchair is very urgent and it will give them independence as well as predictor for a long-term quality

of life (Rousseau et al., 2016). This claim is also supported by other research which states that assistive device technology plays an important role in the life of persons with physical disability, particularly to support their mobility and access to the outside world. The Ministry of Health and The Ministry of Social Affair have initiated a program to provide assistive devices for persons with physical disability as mandated by Law Number 8 of 2016, however its coverage and impact is still very limited and also has not been spread evenly to the entirety of Indonesia.

### **Access to Health Information**

Access towards health information is related to the quality of life for persons with physical disability. 87,0% of the respondents are not satisfied with the result of their rehabilitation, because they did not receive proper information on their further care plan in the outpatient facility, thus lowering their quality of life. Besides, access to health information such as rehabilitation services also becomes one of the determining factors for a long-term quality of life for persons with severe disability. Indonesia owns a regulation concerning this issue especially in the Law Number 8 year 2018 article 12 on Health Rights, article 73 on Health Section and article 124 regarding Communication and Information Section. Therefore, it is a binding consequence for all elements and agencies to give an easy access to information for persons with disability. Yet at the moment, the access to health information for persons with disability is still very limited and still depending on the presence of the companion such as family (Swastikawara, 2018).

### **Psychological Condition**

Anxiety and depression also influence the quality of life for persons with physical disability. 61,1% of female with physical disability are in need of psychotherapy service and only 28,6% of male with physical disability need the same. Quality of life is measured by a different instrument yet shows significant effect towards mental health, where a bad mental health (emotional disturbances and low self-esteem) is found in persons with physical disability (Schipper, 2010). Other studies state that persons with physical disability are consistently showing a decreasing pattern in psychological function. Complexity in emotion is also expressed through anger, frustration, anxiety and despair over their physical limitations and discomfort caused by their very condition. Persons with physical disability admitted that this becomes a part of their everyday life which can be hard to control at times.

### **Family Support**

The claim that family support is related to the quality of life for persons with physical disability turns out to be different in a number of research results. Some researches stated that support from family members provides protection and encouragement can increase the quality of life for persons with physical disability. Family support plays a role in giving comfort and enhancing their resilience in facing changes and challenges in life. Other than that, the support can be in the form of emotional support, appreciation support, informational and instrumental support that can affect the quality of life for persons with physical disability. The absence of family support can result in the lowering of quality of life significantly. However, this statement differs from other studies which state that persons with physical disability who live together and receive support from their children have shown a decrease in quality of life. This is due to the awareness of their responsibility as parents, being conscious of their weakness and reluctance to being a burden to their family. This is in line with the concept of quality of life

which are multidimensional, where there are subjective and personal aspect that can differentiate how a person interprets their quality of life.

### **Social Support and Stigma**

There is a relation between social support and quality of life for persons with physical disability. They possess a low quality of life due to losing social support at their workplace even losing a job over their physical condition. For children and teenagers, social support is seen from the support of their friends of the same age. Children and teenagers with Cerebral Palsy who feel unaccepted and unsupported by their friends of the same age showed a significant impact towards the lowering of their quality of life. The same study also mentioned that they identified the importance of same-aged friends and social support at school although the sample size for this study is small thus limits the generalization. In other research, same-aged friends are seen as the source of support in the school environment and could help them deal with physical limitations. The research in Indonesia stated that in every 1% increase of social support mirrors a 0,626% increase in quality of life for persons with disability. A number of researches in Southeast Asian countries such as Indonesia and Malaysia showed that there is a religiosity factor that can influence quality of life for persons with physical disability, where the more religious a person is the more their quality of life also increases. This is due to holding on to religious values in order to keep being optimistic, trust God's help, as well as having faith and hope towards God's Greatness (Halimi et al., n.d.; Rahmah, 2018).

Other research in Iran stated the low quality of life for persons with physical disability is correlated with a bad social support and stigma given by healthy people towards those with physical disability. Discrimination and stigma received from the social environment also influence the quality of life for persons with physical disability. Society gives stigma because of the different characteristics that are not yet to be understood as the uniqueness of individuals in the society. Other findings in Spain that measured perceived stigma on persons with physical disability stated that there is a relation with quality of life. Thus, this adds as a strong proof that stigma does not only influence persons with mental disability, but also those with physical disability.

### **Accessibility of Physical Environment**

Accessibility has a significant relation to quality of life for persons with physical disability. There is a significant impact towards quality of life for persons with physical disability while getting access to the public and private space. It is known that persons with physical disability need to overcome their limitations by using assistive devices and tools to support their movement such as wheelchairs, crutches or walkers. Public facilities, services and buildings need to be accessible for all people, including those with physical disability. In line with this, there is a significant relation between quality of life and environmental restraints, thus when environmental restraints lower and access to the environment is met, the quality of life for persons with physical disability will increase, and vice versa (Rezaei et al., 2018). Up to today, there are at least a number of laws and their derivatives which concern with the commitment of Indonesia towards accessibility issues for persons with disability, among those are Circular Letter of The Social Minister No.A/A-05/VI-04/MS and Circular Letter of The Minister of National Republic of Indonesia Development Planning No.3064/M.PPN/05/2006. It is recorded from 2005 until 2009 that Indonesia has implemented as pilot in providing



accessibility as many as 225 location points spread across the country. However, the implementation of this regulation still needs to be improved.

## **CONCLUSION**

This research concludes that there are a number of determinants of quality of life for persons with physical disability such as: sex, age, severity of disability, the needs for assistive devices, access to health information, psychological condition, family support, social support and stigma, as well as accessibility of physical environment.

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