

Comparison of barriers to physical activity to levels of physical activity and psychological well-being based on the demographic environment in the vision impairment disability group

Comparación de las barreras a la actividad física con los niveles de actividad física y bienestar psicológico en función del entorno demográfico en el grupo de discapacidad visual

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Abstract Barriers to physical activity in vision impairment are associated with increased inactivity and psychological well-being problems. Previous research has only identified constraints in physical activity without conducting an in-depth analysis of physical activity levels and psychological well-being. This study aims to explore the differences in physical activity barriers based on three different demographic environments regarding physical activity levels and psychological well-being. The method used was quantitative inferential with a cross-sectional design approach involving 90 respondents registered with the Indonesia Association of the Blind. Data were collected using the Barrier Questionnaire for People with Vision Impairment (BPAQ-VI), the Psychological Well-Being Scale (PWBS), and General Practice Physical Activity (GPPAQ). The data was processed using the one-way ANOVA test and the Tukey HSD via SPSS version 26. The study's results stated differences in physical activity barriers, physical activity levels, and psychological well-being in vision impairment groups living in urban centres, suburbs, and rural areas ($p < 0.05$). It was concluded that the vision-impaired disability group living in the city centre had minimal barriers compared to the vision impairment group living in suburban and rural areas. Vision impairment groups living in urban centres have better physical activity and psychological well-being than those living in suburbs and rural areas. The study contributed to an increase in the number of fitness influencers among those with vision impairment. It raised awareness among sports practitioners to design innovative and friendly exercise methods and programs for the group.

Keywords: Barrier Physical Activity, health, fitness and wellness, environment, psychological well-being, blind.

Resumen. Las posibles barreras a la actividad física que experimenta el grupo de personas con discapacidad vision están relacionadas con la mayor prevalencia de inactividad y trastornos del bienestar psicológico. Investigaciones anteriores sólo identificaron barreras a la actividad física sin analizar en profundidad los niveles de actividad física y el bienestar psicológico. Esta investigación tiene como objetivo analizar las diferencias en las barreras a la actividad física en función de tres entornos demográficos diferentes en cuanto a niveles de actividad física y bienestar psicológico. El método utilizado fue inferencial cuantitativo con un enfoque de diseño transversal que involucró a 90 encuestados registrados en la Asociación Indonesia de Ciegos. Los datos se recopilaban mediante el Cuestionario de barreras para personas con discapacidad vision (BPAQ-VI), la Escala de bienestar psicológico (PWBS) y la Actividad física de práctica general (GPPAQ). Los datos se procesaron utilizando la prueba ANOVA unidireccional y Tukey HSD a través de SPSS versión 26. Los resultados del estudio indicaron que había diferencias en las barreras para la actividad física, el nivel de actividad física y el bienestar psicológico en el grupo con discapacidad vision que vivían en el centro de la ciudad, los suburbios y las zonas rurales. ($p < 0,000$). Se concluyó que el grupo con discapacidad vision que vivía en centros urbanos tenía obstáculos mínimos en comparación con el grupo con discapacidad vision que vivía en áreas suburbanas y rurales. El grupo de personas con discapacidad vision que vive en el centro de la ciudad tiene mejores niveles de actividad física y bienestar psicológico que el grupo de personas con discapacidad que vive en los suburbios y zonas rurales. Esta investigación tiene un impacto en aumentar el número de personas influyentes en el estado físico y el bienestar en el grupo con discapacidad vision y crear conciencia entre los practicantes de deportes para crear métodos y programas de entrenamiento innovadores que sean amigables para el grupo con discapacidad vision.

Palabras clave: Actividad Física Barrera, salud, fitness y bienestar, influencer, Bienestar psicológico.

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Introduction

Barriers to physical activity that impact physical activity levels and psychological well-being in individuals with vision impairments are of great concern to researchers and professionals, particularly in the context of fitness training. The positive relationship between physical activity levels and psychological well-being is also gaining attention in society (Ma et al., 2024). Inadequate physical activity levels can negatively impact psychological well-being (Wilski et al., 2024). Psychological well-being disorders, as defined by the American Psychiatric Association (APA), is a severe health condition that negatively affects a person's feelings, thoughts, and behaviours, causing health problems and

reduced interest in activities that were previously enjoyed. These disorders can lead to a variety of emotional and physical complications, ultimately lowering the individual's overall quality of life. (Campos et al., 2024).

Physical activity has benefits for the body and mind, improving overall health and energy (Ashadi et al., 2023). People who regularly integrate exercise into their habits can increase their levels of physical activity and improve physical, mental, and emotional health for everyone (Zhuang et al., 2023). Inactive physical activity and sedentary lifestyles are associated with a variety of health problems, both physical and mental (Tomé et al., 2024). Previous research has shown that high levels of physical activity positively affect quality of life, including ideal

physical, mental, and social health, rather than simply being free from illness or disability. (Rauh et al., 2024).

Realizing that physical activity is quite essential for personal health is crucial. However, many people have obstacles to doing physical activity exercises, especially those with disabilities such as vision impairment, who face difficulties in fulfilling it. Research shows that individuals with vision impairments tend to be sedentary, which emphasizes the great challenge of encouraging physical activity among this group (Derakhshan et al., 2023). Physical activity inhibition in individuals with disabilities due to the degree of disability or vision problems can significantly impact physical activity levels. (Peres et al., 2023). People with physical limitations may need help moving around or performing certain activities, limiting the type and level of physical activity they can do. Difficulties in balance and coordination can make some physical activities more difficult or put them at risk of injury (Flynn et al., 2024).

Low levels of physical activity are influenced by the many barriers that can hinder physical participation for individuals with disabilities, especially for those with vision impairments (Parent et al., 2023). The barrier physical activity questionnaire for vision impairment (BPAQ-VI) is a valid and reliable questionnaire measuring potential barriers to physical activity and emphasizing eight aspects as potential factors for physical activity barriers. These eight aspects include health, beliefs/Attitudes towards physical activity, friends, family, the environment built in the gym, Staff/Programs/Policies, community-based environment, and Safety (Ashadi et al., 2022).

Improving overall health requires individual participation in physical activity, including for those with disabilities. Previous research indicates that individuals with disabilities often lead a less active lifestyle due to a lack of confidence or a positive attitude towards physical activity (Vlachou & Tsirantonaki, 2023). Previous research has found a positive association between attitudes/beliefs towards physical activity and participation in those activities, especially in individuals with high and moderate levels of disability. These findings indicate that low beliefs or attitudes towards physical activity can result in reduced participation in physical activity (Ashadi et al., 2023).

Factors that hinder physical activity among wheelchair users with disabilities are influenced by their living environment. Support from family and friends, as well as external aspects such as sports facilities, infrastructure, public facilities, and sports experts, play a significant role. The study concluded that the main problem faced by people with disabilities is the lack of accessibility to sports facilities (Ashadi et al., 2022).

People with disabilities, especially those with vision impairments, who lead a sedentary lifestyle, are at higher risk of psychological problems, degenerative diseases, injuries, and chronic diseases compared to the rest of the population (Jacinto et al., 2021). Previous studies indicate that individuals with disabilities face challenges in physical

activity, vitality, and life satisfaction caused by constraints in performing physical activity (Manaf et al., 2021). The increase in the prevalence of metabolic syndrome has resulted in mental health problems, physical illness, and reduced enjoyment of activities that were previously preferred (Mckenzie et al., 2021). Regular physical activity exercises are preventive for a sedentary lifestyle and psychological well-being in vision impairment (Huang et al., 2023).

Regular participation in physical activity provides benefits both directly and for a more extended period. Studies show that physical activity positively impacts physical and mental health, including for people with developmental disabilities (Abid et al., 2023). Increased physical activity is positively associated with heart health, excellent motor ability, and muscle strength. In addition, exercising also provides benefits for mental well-being, self-esteem, psychological well-being, and overall life satisfaction (Parent et al., 2023). However, people with disabilities, especially those with vision impairments, which is one of the most common causes of physical disability, often find it challenging to maintain an active lifestyle. It is recommended that this group participate in a minimum of sixty minutes of moderate-to-vigorous intensity physical activity at least three times a week (Landen et al., 2023).

Based on the summary of previous research, the main focus is only on identifying physical activity barriers without further investigating the impact on physical activity levels and psychological well-being. Therefore, the novelty of this study is to thoroughly explore the barriers faced by vision impairment groups in participating in physical activity and their impact on physical activity level and psychological well-being. The goal is to integrate physical activity training with psychological well-being to improve the quality of life, especially for vision impairment groups. This study explains the potential barriers to physical activity and its benefits for psychological well-being. In addition, this study highlights evidence regarding differences in physical activity barriers experienced by vision impairment groups in three varied demographic contexts.

This study aims to analyze in depth the barriers faced by individuals with vision impairment groups regarding physical activity level and psychological well-being. The results of this study are expected to be a reference for practitioners, athletes, and individuals, as well as provide recommendations in the form of a holistic approach to increase participation in physical activity and psychological well-being, especially for the vision impairment groups. The study also explores the impact of physical activation barriers among individuals with impairment, highlighting differences based on three demographic contexts and six dimensions: autonomy, environmental mastery, personal growth, positive relationships, life purpose, and self-acceptance. Given the importance of this issue, the impairment groups have been prioritized in efforts to improve physical health and psychological well-being. This research can potentially encourage the growth of fitness and

wellness influencer communities in other countries to improve physical activity and psychological well-being for individuals with vision disabilities. In addition, the study encourages sports practitioners to innovate and overcome existing barriers as a preventive measure in maintaining physical activity levels and psychological well-being in vision-impaired groups.

Materials and methods

Research design and research subjects

This research study uses inferential quantitative methods and a cross-sectional design method. It uses an online-based survey via Google Form media. The population studied is a group with vision impairment who live in Indonesia and are spread across three different demographic environments. Among them is the vision impairment disability group, which lives in big cities and suburban and rural environments. The respondents were 101 people with vision impairment recruited in collaboration with the Indonesian Blind Association (PERTUNI). Respondents were sampled using simple random sampling techniques.

The inclusion criteria are set as follows: is a group with vision impairment who are registered as members of the Indonesian Blind Association (PERTUNI), have an average age of over 25 years, are willing to agree to informed consent verbally, are willing to follow the rules while data collection is in progress, provide data and facts needed during the research. The exclusion criteria set in this study are that participants are considered dropout samples if research information/data is provided partially and online questionnaires are collected beyond the collection limit.

Ethical approval

This research has complied with the ethically recognized principles of human well-being in 7 (seven) WHO Standards 2011, namely: 1) Social Value, 2) Scientific Value, 3) Fair Assessment and Benefit, 4) Risk, 5) Persuasion/Exploitation, 6) Confidentiality and Privacy, and 7) Informed Consent, by the CIOMS 2016 Guidelines. The Center has approved the research procedure for the Research Ethics Commission of the Institute for Research and Service of the State University of Surabaya. With registration number No.006/UN38.III.1/DL.01.02/2024.

Data collection procedures and measuring instrument

Information was gathered over a month through an online questionnaire that 101 participants answered. However, 11 respondents were excluded due to incomplete data. While completing the questionnaire, PERTUNI organization staff, family, or friends supported individuals with vision impairment. The accuracy of the responses was confirmed upon submission of the form.

The measuring instrument was adopted from previous research and has been tested for reliability and validity. In this study, there were three main questionnaires, including the

following;

a. The Barriers Questionnaire for People with Vision Impairment (BPAQ-VI) measures potential barriers and emphasizes eight aspects as potential factors for barriers to physical activities. These eight aspects include health, Beliefs/Attitudes towards physical activity, friends and family, the Fitness centre-built environment, Staff/Program /Policy, the community-based environment, and Safety.

b. The psychological well-being scale measures the level of psychological well-being. Psychological well-being is the potential that a person has to function fully in his life, which is seen from six dimensions: self-acceptance, personal growth, positive relationships with others, independence (autonomy), mastery of the environment (environmental mastery), and having a purpose in life (purpose in life).

c. General Practice Physical Activity (GPPAQ) measures individual physical activity levels and emphasizes four main categories: GPPAQ Inactive, GPPAQ Moderately Inactive, GPPAQ Moderately Active, and GPPAQ Active.

Statistical analysis

The information was provided using one-way ANOVA, the statistical method utilized. This involved conducting a comparison test on three groups, with Tukey (Honestly Significant Difference) used to compare all pairs of treatment means following the analysis of variance test.

Results

Table 1.

Characteristics of research subjects

The characteristics of respondents		Percentage
Gender	Male	61%
	Female	39%
Age	25 – 45 years old	35%
	Above 45 years old	65%
Disability caused	congenital	58%
	acquired	42%
Disability type	Full Blind	80%
	Low vision	20%
Work/ daily activity	Masseur	65%
	Self-employed	5%
	Entrepreneur	7%
	Jobless/stay-at-home	23%

Table 1 provides the primary information about the characteristics of the individuals in the urban, suburban, and rural categories.

Table 2.

The difference test of the barriers to physical

The barriers to physical activity	Prevalence rate (%)			p-value One way ANOVA
	urban	suburban	rural	
Health	21,4%	45,3%	53,2%	0,000
Beliefs/attitudes towards physical activity	27,7%	48,1%	62,3%	0,000
Friends	25,2%	46,8%	67,6%	0,000
Family	31,1%	50,2%	70,3%	0,000
Fitness centre built environment	24,9%	51,3%	80,6%	0,000
Staff/program/policy	20,4%	40,8%	45,2%	0,000
Community built environment	25,9%	52,2%	73,2%	0,000
Safety	50,1%	31,9%	20,3%	0,000

Based on Table 2, the analysis of eight aspects showed significant differences in all aspects ($p < 0.05$). Among the

three groups studied, individuals with disabilities who lived in urban areas experienced fewer physical barriers compared to those living in suburban and rural areas. However, safety-related barriers recorded the highest prevalence of 50.1% in groups in urban environments, while groups in suburban areas had a prevalence of security barriers of 31.9%, and rural groups with 20.3%. The high number of security barriers for people with disabilities in urban areas is due to the high level of traffic density.

The visionally impaired group living in the suburbs has barriers to access to fitness centres, with a prevalence of 51.3%. This happens due to the lack of ergonomic fitness facilities and infrastructure, especially for the visionally impaired in the region. Meanwhile, in rural areas, the prevalence of physical activity barriers in the environment built by fitness centres reached 80.6%, making it the highest among other factors. The limitations of fitness facilities are not affected by the distance between settlements and government centres, so the high prevalence of community environmental problems is considered relevant. There is also a need for more fitness training experts to support this situation. Therefore, the prevalence of barriers in physical activities related to staff/programs/policies for people with disabilities in the suburbs was recorded at 40.8%, while in rural areas, it reached 45.2%.

Groups of people with disabilities living in suburban and rural areas showed very high levels of barriers to physical activity, especially related to friends and family. This can negatively impact their beliefs and attitudes towards physical activity, which is essential for physical training for people with disabilities in those environments. Table two shows that beliefs and attitudes towards physical aspects among people with disabilities living in the suburbs reached 48.1%, while in rural areas, it reached 62.3%.

Based on Table two, it was concluded that there were differences in barriers to physical activity in eight aspects (health, attitudes/beliefs towards physical activity, friends, family, gym environment, staff/programs/policies, community environment, and safety) among groups of people with disabilities living in urban, suburban, and rural areas. People with disabilities who are in urban areas experience fewer barriers compared to those living in the suburbs and rural areas.

Table 3.

The difference test of General Practice Physical Activity based on environmental demographic

General Practice Physical Activity	Prevalence rate (%)			p-value One way ANOVA
	Urban	Suburban	Rural	
Active	9,7%	3,3%	3,3%	0,000
Moderate active	80%	26,7%	13,7%	
Moderate inactive	6,7%	43,5%	49,3%	
Inactive	3,6%	26,5%	33,7%	

Table three compares the physical activity levels of standard practices among three different demographic environments. The one-way ANOVA test found a difference in the level of physical activity of general practice between groups of people with vision disabilities living in urban, suburban, and rural areas. From these findings, it

can be concluded that people with vision disabilities who live in urban areas have a better average level of physical activity in general practice than those living in suburban and rural areas ($p < 0,05$).

This can be proven by the prevalence of the Inactive level with the lowest value and the prevalence of the moderate active level with the highest value. Meanwhile, in the vision impairment disability group who live in suburban and rural environments, the average level of general practice physical activity has a relatively high prevalence of inactive levels. The differences in the level of general practice physical activity between the three occur because of the obstacles to physical activity, which are explained in Table Two. Apart from that, differences in the type of work carried out by each individual also influence the level of general practice physical activity.

Table 4.

The difference test of psychological well-being based on the demographic environment

	Difference test		Mean difference	Sig.	95% Confidence interval	
	Demographic I	Demographic II			Lower bond	Upper bond
Tukey HSD	urban	suburban	9,5333	0,000	6,65	12,41
		rural	10,1000	0,000	7,21	12,98
	suburban	urban	-9,5333	0,000	-12,41	-6,65
		rural	0,5666	0,886	-2,315	3,448
	rural	urban	-10,1000	0,000	-12,981	-7,218
		suburban	-0,5666	0,886	-2,315	3,448

Table 4 presents the results of comparison tests among groups using the honestly significant difference test (HSD). There are differences in psychological well-being between the impaired disability group who live in the city centre environment and the vision-impaired disability group who live in the suburban environment. Based on this phenomenon, it is known that the vision impairment disability group who live in urban centres has a score higher psychological well-being compared to the vision impairment disability group who live in the suburbs ($p < 0,05$). This is proven by the fact that the mean difference in the vision impairment disability group who live in the city centre is more significant.

Differences Psychological well-being between disability groups living in urban centres and rural areas shows significant differences ($p < 0,05$). The vision impairment disability group residing in urban centres has a score higher psychological well-being compared to the vision impairment disability group who live in rural environments. However, there is no difference in psychological well-being between the vision impairment disability group who live in suburban environments and the vision impairment disability group who live in rural environments ($p > 0,05$). This is proven by the mean difference between the two is minimal.

Discussion

Physical activity offers numerous advantages for the body and mind, helping sustain overall health and wellness.

Studies have shown that individuals with vision impairment who maintain an active lifestyle experience improved psychological well-being (Física et al., 2024). Recently, several studies have been published highlighting the advantages of engaging in physical activity. These studies show that exercise can lower stress levels and trigger the release of hormones like dopamine, serotonin, and endorphins, which promote psychological well-being (Martins et al., 2023). This hormone release can help alleviate fatigue and tension, boosting energy levels and creating a positive mood (Alcaraz-Rodríguez et al., 2022).

Indonesia has a vast and geographically diverse territory, making it the most populous country in the world, with demographic variations from urban to rural. The population includes many age groups, including toddlers, adolescents, adults, and the elderly. Due to its diversity, Indonesia records the highest incidence of vision impairment and has many inactive individuals when compared to other countries. The study focused on a visionably impaired group of adults and the elderly, which was a limitation of this study. To apply the results to a broader population, further research may explore barriers to physical activity, physical practice, and psychological well-being in children and adolescents.

The findings of this study identified eight aspects that hinder physical activity and showed significant differences in all aspects ($p < 0.05$). Among the three groups studied, the visionably impaired group in urban environments experienced the most minor barriers compared to those living in suburban and rural areas. This phenomenon shows a variation in the level of physical activity between the visionably impaired groups in the city centre, suburbs, and rural areas ($p < 0.05$). It can then be concluded that visionably impaired people living in urban areas have better levels of physical activity compared to those living in suburban and rural areas. This condition affects psychological well-being, so there is a significant difference in psychological well-being between visionably impaired people in urban centres, visionably impaired groups living in suburbs and rural areas ($p < 0.05$). Those living in urban centres showed higher psychological well-being scores than those in the suburbs and rural areas.

The benefits of physical activity have a positive role in the prevention and treatment of various medical conditions, highlighting the idea that physical activity can reduce stress levels and negative emotions while increasing positive emotions (Binsaeed et al., 2023). It has been proven that someone who has done physical activity experiences decreased stress and negative feelings. Psychological well-being is a growing phenomenon in modern society associated with various health-related problems (Martins et al., 2021).

A good level of physical activity has a positive impact on health. However, only a few people can achieve the recommended level of physical activity, making it a significant challenge in overcoming a sedentary lifestyle, especially among visionably impaired individuals (Física et al.,

2024). Previous research has shown that individuals with vision impairments have lower physical activity levels. The group has been made one of the main focuses in promotional efforts to improve their physical health and psychological well-being (Rodríguez-Jiménez et al., 2022).

The high prevalence of inactive physical activity levels is caused by potential obstacles experienced by the vision impairment disability group when carrying out physical activity. The potential obstacles for each individual studied varied extensively. The differences in potential barriers are caused by differences in the living environment/demographic environment (Alhumaid et al., 2021). Potential obstacles were measured in eight aspects: health, beliefs/attitudes towards physical activity, friends, family, fitness center-built environment, staff/program policy, community-built environment, and safety (Ginis et al., 2021). Based on these eight potential aspects of barriers, each demographic environment has a different prevalence of barriers ($p < 0.05$).

The vision impairment disability group who live in the city centre environment has potential barriers to physical activity in the form of safety aspects. The prevalence of obstacles in the safety aspect is highest compared to other aspects. Apart from that, the prevalence of safety aspects in disability groups who live in urban environments is highest compared to disability groups who live in suburban and rural areas. Previous research states that the city centre environment has busy traffic conditions and is prone to accidents, as well as a lack of friendly means of transportation and public access for people with vision impairment (Filippou et al., 2024).

Potential barriers in the vision impairment disability group who live in suburban and rural areas, on average, have the exact prevalence of barriers. The two groups' most significant prevalence of potential barriers lies in the fitness centre's built environment; the lack of sports fitness facilities and infrastructure is the most significant potential barrier aspect. The lack of human resources who master the scientific field of sports coaching/fitness coaching contributes to the high prevalence of potential aspects of staff/program/policy barriers (Olsen et al., 2023). The further you are from the city centre, the further you are from the centre of government, this has an impact on increasing potential obstacles to aspects of the community-built environment. Resident disability groups out of reach of the urban structure will feel the impact of limitations in the form of minimal access and minimal facilities to meet the needs of physical activity practice (Koontz et al., 2021)

Lack of support from family and friends is a potential obstacle to physical activity experienced by groups with vision impairment who live in suburban and rural environments (Willingham et al., 2024). This impacts the motivation of groups with vision impairment who live in suburban and rural environments to fulfil their physical activity needs, resulting in aspects of beliefs/attitudes towards physical activity becoming potential barriers to physical activity. Previous research has shown that external

support factors positively correlate with increasing motivation to engage in physical activity. Apart from that, aspects of health/physical conditions that differ from those of general people can also decrease motivation (Zarei et al., 2024).

The barriers to physical activity faced by individuals with vision impairment can vary based on their demographic environment, affecting their overall level of physical activity. Lower levels of physical activity are linked to better psychological well-being in general. Physical activity interventions are beneficial in reducing symptoms of depression, anxiety, and post-traumatic stress disorder across different populations, both clinical and nonclinical (Martín-Rodríguez et al., 2024).

Barrier physical activity negatively correlates with physical activity and psychological well-being. Apart from that, good psychological well-being results from good physical activity. Previous research confirms that physical activity carried out systematically and continuously can be a proper additional treatment to standard therapy, and is recommended for individuals with mental disorders and improves psychological well-being (Shields et al., 2024). To maximize the benefits for mental health from physical activity, it is recommended that the activity be enjoyable and participation in organized activities can meet the needs of psychological well-being. Additionally, it is recommended that people engage in physical activity during their free time, ideally outdoors in natural environments (Franco et al., 2023).

The impact of physical activity on mental health can vary depending on the location/demographic environment where the physical activity practice occurs. As reported in previous research, environmental conditions can be the most significant obstacle factor for individuals during physical activity. Barriers to physical activity have a negative correlation with mental health. This statement is validated by previous research, which states that, on average, groups who live in environments with minimal fitness facilities are declared as sedentary communities and, therefore, experience an increase in the prevalence of depression (Aparecida Da Silva et al., 2024).

Based on the data obtained, the average psychological condition in the vision impairment disability group who live in suburban and rural areas has the same value. This happens because both have the same potential obstacles, so the impact on the average level of physical activity falls into the inactive category. In the vision impairment disability group, those who have a low average level of physical activity and a low average psychological well-being can have an impact on their physical and mental health (Rojo-Ramos et al., 2022). Various types of physical and mental illnesses have emerged due to the level of inactive physical activity they experience every day, resulting in a decrease in muscle-skeletal mobility, thereby triggering various chronic diseases (Katzmarzyk et al., 2020). These include cardiovascular disease and obesity, but can also cause an increase in musculoskeletal disorders, including pain and

disability (Kerin et al., 2024).

Previous research shows that sitting for more than 7 hours a day with physical inactivity increases the risk of metabolic syndrome (Wan et al., 2022). Therefore, physical activity is necessary for optimal integral health, as hormones such as dopamine, serotonin, and endorphins are released through physical activity, bringing the body to a state of satisfaction and confidence. Individuals with a good physique are positively correlated with increased self-confidence (Michalsen et al., 2020).

The average level of inactive physical activity causes large amounts of stress. Poor psychological well-being conditions are positively correlated with physiological decline in the body. The physiological decline that occurs includes heart rate, systolic and diastolic blood pressure, and oxygen saturation in the blood, which can be affected by psychological and physical inactivity, which translates into pressure and stress levels (Al-Shaer et al., 2024). Previous research states that no preventive efforts against inactive physical activity will impact individual health in the long term. Good physical activity is carried out continuously and continuously so that the individual can enjoy the benefits (Pelc et al., 2024). Therefore, innovation is needed from academics and practitioners as a curative and preventive effort against potential physical obstacles to create a vision impairment disability group that is physically active and has good psychological well-being. Innovation from academics and practitioners is needed.

Indonesia has one of the world's largest populations, standing at the fourth position, and it is expected to keep growing. Consequently, there is a significant prevalence of obstacles to physical activity among individuals with disabilities, particularly those with vision impairments. The potential for high activity barriers directly impacts physical activity levels, affecting psychological well-being. This research aims to increase the number of fitness and wellness influencers to make it easier to invite other countries to establish the vision impairment group as one of the main priorities in improving physical health and psychological well-being. This research will likely encourage further research to analyze potential barriers to physical activity, physical activity practice, and psychological well-being in all age categories of the vision impairment group. Apart from that, it is believed that this research can be used as a reference for further research to facilitate further research to analyze potential barriers to physical activity, physical activity practice, and psychological well-being in disability groups. This research is believed to increase awareness and motivation of the vision impairment group to practice physical activity even though it has high potential barriers. Awareness and motivation to practice physical activity are positively correlated with quality of life.

The World Health Organization (WHO) defines a good quality of life as being in a state of overall physical, mental, and social well-being rather than just the absence of disease (Wibowo et al., 2021). It is crucial to embrace and promote healthy lifestyle habits, incorporate them into daily

routines, and raise awareness about public health to share information about physical, mental, and social care (Franco et al., 2023). This research has an impact on creating awareness among sports practitioners, particularly fitness coaches, creating exceptional training works and innovations for the vision impairment group, including physical activity methods and exercise programs that are flexible and friendly for the vision impairment group. The intervention methods and training programs are expected to overcome potential barriers to physical activity as a preventive effort to prevent vision impairment groups from experiencing inactive and psychological well-being conditions.

Conclusion

This study concluded that the level of physical activity inhibition impacts the level of physical activity, thus affecting psychological well-being. Further research is recommended to continue this research by analyzing potential barriers to physical activity, physical activity practices, and psychological well-being in the age categories of children and adolescents so that the study results can be generalized to a larger population. The study helped increase the number of fitness and wellness influencers and invited other countries to designate vision impaired groups as one of the top priorities in improving physical health and psychological well-being. This research is helpful as a reference and facilitates further research to analyze potential barriers to physical activity, physical activity practices, and psychological well-being in groups with disabilities.

The vision impairment group in the city centre has better physical activity and psychological well-being than those in the suburbs and rural areas. This occurs because the prevalence of potential activity barriers experienced by the vision impairment disability group who live in the suburbs and rural areas is greater than the vision impairment disability group who live in the city centre. This research has an impact on creating awareness among sports practitioners and fitness and wellness influencers to create innovative training methods and programs which are expected to be implemented, as well as curative and preventive efforts to reduce the quality of life in the vision impairment disability group.

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