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# The importance of physical activity participation among persons with disabilities

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**ABSTRACT**

Participation in physical activity and sports is beneficial for psychosocial health among children and adolescents with a disability. People with disabilities are far less likely to engage in physically active lifestyles than are people without disabilities. This study was conducted to investigate the importance of physical activity participation for persons with disabilities. A total of 100 (men = 59, women = 41) persons with disabilities aged between 10 to 40 years old participated in the study. The instrument used was The Benefits of Exercise towards Persons with Disabilities and Social Support to Exercise for Persons with Disabilities developed by Rauzon designed to investigate the importance of physical activity for disabled persons. The research instrument used for this study was a questionnaire on demographics, the benefits of exercise and social support for exercise. Overall, both men and women agreed with five main statements regarding the benefits of exercise: that they can improve blood pressure and cholesterol levels, help to avoid disease, give more energy, help to relieve tension and to have a more positive outlook on life. There is no significant relationship between family support and physical activity participation. However, for social support, there is a significant relationship between friend support and physical activity participation. The most selected statements for social support for both men and women such as offer to exercise with them, complain about the time they spend for exercise, fun exercise, rewards and help to plan activities around their exercise. Physical activity participation for persons with abilities appears to have many benefits, and this knowledge should be shared not only among the disabled but also the non-disabled as it will help them to become better caregivers who will encourage and support the disabled in physical activities. For a deeper insight, further research with more variables is recommended.

**Keywords**: Persons with disabilities; physical activity participation; benefits of exercise; social support; gender

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## INTRODUCTION

Physical fitness illustrates a physiologic state of well-being that allows individuals to meet the demands of both health-related and skill-related fitness (Abdullah, et al., 2016). Although adolescents with physical disabilities may participate in similar leisure activities as adolescents without disabilities, as in watching TV, listening to music, and talking on the phone, researchers have found that adolescents with physical disabilities tend to participate in more passive and solitary activities. According to Pitchford et al.

(2016) physical activity promotion is needed for youth with developmental disabilities. They stated that children and adolescents with disabilities who have fewer physical activities tend to become obese and are at a greater risk for additional secondary health conditions. The reason that people with disabilities in Portugal did not participate in physical activity and sports was primarily because of a lack of suitable sports facilities and this is one of many reasons persons with disabilities reluctant to exercise (Oh & So, 2022). Disabled persons with intellectual disability are less involve activity (Lee, 2004). Lee states that persons with disabilities who are not active tend to have a sedentary life cycle which can lead problems such as greater immediate and long-term diseases, low physical fitness and poor motor skills. Furthermore, Shields and Synnot (2016) stated the need for inclusive pathways that encourage ongoing participation as children grow or as their skills develop, and for better partnerships between key stakeholders from the disability community itself, sports, education and government sectors. Most people with physical disabilities do not meet physical activity recommendations (Waltersson & Rodby-Bousquet, 2017; Verschuren et al., 2016; Carlon et al., 2013) and are exposed at higher risk of developing secondary comorbidities such as cardiovascular disease and obesity (Whitney et al., 2018; Cremer, Hurvitz, & Peterson, 2017). Physical activity movement in childhood and adolescence can influence long-term health behaviors (Mckenzie, Willis & Sheilds, 2021).

While it is recognized that such persons do not react in predictable ways either to the presence of a disability or to the special pressures of their environment, self-acceptance and a positive attitude towards the disability are consistently important across many areas of functioning. In another study, Visagie et al. (2017) findings that gender had an impact only among persons without disabilities, where women report more environmental barriers than men. Behavior changes theories recommend personal factors such as attitudes and intention are influence to health behaviors such as physical activity (Cane, O'Connor, & Michie, 2012). However, some previous findings focusing on children, early adolescence, and adults with acquired physical disability such as stroke or spinal cord injury have identified a number of environmental factors (Ginis et al., 2013; Mulligan et al., 2012; Williams et al., 2014; Shields & Synnot, 2016). These detail reviews identified personal factors (e.g., attitudes and impairments), social factors (e.g. family support, negative attention), environmental factors (e.g. equipment, transport), and policy factors (e.g. funding) that influence physical activity participation (Mckenzie, Willis & Sheilds, 2021).

Meanwhile, Te Velde et al. (2018) revealed that participating in sports is beneficial for psychosocial health among children and adolescents with a disability. Those participating in sports scored better on sports participation, health-related quality of life for feelings of athletic competence and children but not for adolescents involving in sports who score on social acceptance. Velde and team found a strong relationship between sport participation and exercise self-efficacy. In contrast, Pitchford et al. (2016) it is important that the physically disabled person is surrounded by people like his or her parents, family and friends. Even though they are motivated, people with intellectual disabilities are often unable to reverse trends in the cycle of sedentary lifestyle because they rely upon parents or caregivers for support Anderson (2011), Brundage (2011), Lee (2004), Visagie et al. (2017), Te Velde (2018), Pitchford et al. (2016). However, more insight is needed to investigate the importance of physical activity participation for adults with disabilities. Therefore, the aim of this study is to determine what are the barriers occur in physical activity participation among persons with disabilities and to answer the research question: what are the barriers occur in participation among persons with disabilities

focus on different gender.

This study needs to be conducted since most literature focuses on able bodied but less literature did focuses on persons with disabilities. By conducting this study, the findings can be used to identify what are the barriers face by persons with disabilities in participating in physical activity. This study also can identify are their different barriers face by men and women with disabilities during physical activity participation. The findings can be used by many stakeholders such as Ministry of Women, Family and Community together with the expert/researchers in the area to draft a policy on how to overcome these barriers among persons with disabilities.

## METHOD

This is a non-experimental design study where a survey in a form of questionnaire been organize with a purposive sampling technique.

### Sample

This study comprises 100 respondents (n=100) consisting of persons with disabilities. The respondents include 59 men and 41 women. Respondents have physical disabilities such as blind and visual impairment (12), deaf and hearing impairment (21), amputation (43), cerebral palsy (16), and spinal cord injury (6) and others (2). The age range of the respondents is between 10 to 40 years old. The types of sports that the respondents are involved in are swimming (10), wheelchair basketball (7), sitting volleyball (6), wheelchair tennis (5), para-cycling (16), soccer (8), archery (4), wheelchair fencing (1), lawn ball (3), bowling tenpin (2), para-badminton (11), table tennis (4), para-athletics (13), kayaking (4) and goalball (6). The respondents must meet certain conditions to be in the study: they need to have been identified by doctors or ophthalmologists as persons with disabilities, and also must have a person with disabilities (OKU) Card identifying them as such from the Department of Social Welfare.

### Instrumentation

The study used the benefits of exercise towards persons with disabilities and social support to exercise for persons with disabilities, a questionnaire developed by Rauzon (2002) designed to investigate the importance of physical activity for disabled persons. The internal consistency of Cronbach's alpha for benefits of exercise scale is 0.81 and that for Social Support scale is 0.93. There are two parts in the questionnaire: Part A and Part B. Part A requires demographic information including gender, age, education level, sports involvement, and types of disabilities. Part B consists of 23 questions: 10 questions on the benefits of physical activity and 13 questions about the social support for exercise.

### Data analysis

Analyzed data using the Statistical Package for the Social Science (SPSS) for Windows ver.22.0. Descriptive statistics were used to discover the relationship between the benefits and importance of physical activity participation among the physically disabled. Standard deviation and means were calculated using the Independent T-test and Pearson Correlation at $p<0.05$.

## RESULTS AND DISCUSSION

Table 1 shows the descriptive analysis of the respondents with gender, age, type of disability, education level and involvement in sports.

**Table 1. Descriptive Analysis on the Respondents**

| Variables | Frequency |
|---|---|
| **Gender** | |
| Male | 51 |
| Female | 49 |
| **Age (years)** | |
| < 15 | 8 |
| 16-25 | 50 |
| 26-35 | 34 |
| >36 | 8 |
| **Disability** | |
| Amputees | 42 |
| Spinal Cord Injury | 8 |
| Blind | 11 |
| Deaf | 23 |
| Cerebral Palsy | 12 |
| Others | 4 |
| **Education Level** | |
| UPSR | 20 |
| SPM | 44 |
| Diploma | 21 |
| Degree | 13 |
| Others | 2 |
| **Sports participated** | |
| Swimming | 9 |
| Fencing | 2 |
| Wheelchair basketball | 6 |
| Lawn bowl | 4 |
| Sitting volleyball | 6 |
| Tenpin bowling | 6 |
| Wheelchair tennis | 5 |
| Badminton | 12 |
| Cycling | 13 |
| Table tennis | 4 |
| Soccer | 8 |
| Athletics | 11 |
| Archery | 4 |
| Kayak | 3 |
| Others | 7 |

Based on Table 2 below, there are five low means for the benefits of exercise which indicates that most of the respondents agree with the statements. Men agree that exercise helps to have a more positive outlook on life (2.41 ± 1.318), helps to perform routine physical tasks more easily (2.42 ± 1.264), improves blood pressure (2.49 ± 1.338), helps to relieve tension (2.63 ± 1.400), and improves cholesterol levels (2.69 ± 1.289); while for women, regular exercise can give more energy (2.44 ± 1.115), helps to avoid disease (2.44 ± 1.072), helps to perform routine physical tasks more easily (2.59 ± 1.133), helps to have a more positive outlook on life (2.63 ± 1.247), and improves cholesterol levels (2.71 ± 1.149). Even though the results are slightly different, both men and women agree that regular exercise can help them to improve their cholesterol levels.

**Table 2. The Mean and Standard Deviation for Benefits and Exercise**

| Benefits of exercise regular exercise can: | Gender | N | Mean | Std. Dev |
|---|---|---|---|---|
| Improve my blood pressure. | Men | 59 | 2.49 | 1.338 |
| | Women | 41 | 2.76 | 1.023 |
| Improve my cholesterol levels | Men | 59 | 2.69 | 1.289 |
| | Women | 41 | 2.71 | 1.149 |
| Help me avoid disease. | Men | 59 | 2.76 | 1.074 |
| | Women | 41 | 2.44 | 1.072 |
| Give me more energy. | Men | 59 | 2.71 | 1.184 |
| | Women | 41 | 2.44 | 1.115 |
| Help me relieve tension. | Men | 59 | 2.63 | 1.400 |
| | Women | 41 | 2.80 | 1.351 |
| Help me have a more positive outlook on life | Men | 59 | 2.41 | 1.318 |
| | Women | 41 | 2.63 | 1.247 |
| Help me perform routine physical tasks more easily. | Men | 59 | 2.42 | 1.264 |
| | Women | 41 | 2.59 | 1.133 |

Table 3 below shows that the five highest results cited by men are "criticize or made fun of them for exercising" (4.00 ± 1.862), "give rewards for exercising" (3.99 ± 1.667), "offer to exercise with them" (3.42 ± 1.055), "give helpful reminders to exercise" (3.36 ± 1.034), and "give encouragement to stick with my exercise program" (3.32 ± 1.259). The five highest results of social support for women are "criticize or made fun of them for exercising" (4.10 ± 1.594), "helps to plan activities around their exercise" (3.80 ± 1.077), "complain about the time spent for exercising" (3.73 ± 1.230), "give encouragement to stick with exercise program" (3.67 ± 1.047) and "give rewards for exercising" (3.66 ± 1.583). Certainly, the findings show that the types of social support are different for men and women because of the different attention that they get from people surrounding then. They agree that "criticize and make fun of them" is a factor of support for them to participate in physical activity. Besides that, both men and women get encouragement from family and friends to stick with the exercise program, and "gives them rewards for exercising" is also a common factor of support.

**Table 3. The Mean and the Standard Deviation for Social Support**

| Social Support | Gender | N | Mean | Std. Dev |
|---|---|---|---|---|
| Offer to exercise with me | Men | 59 | 3.42 | 1.055 |
| | Women | 41 | 3.57 | 1.028 |
| Give me helpful reminders to exercise | Men | 59 | 3.36 | 1.034 |
| | Women | 41 | 3.61 | 0.848 |
| Give me encouragement to stick with my exercise program. | Men | 59 | 3.32 | 1.259 |
| | Women | 41 | 3.67 | 1.047 |
| Complain about the time I spend exercising. | Men | 59 | 3.29 | 1.584 |
| | Women | 41 | 3.73 | 1.230 |
| Criticize me or made fun of me for exercising. | Men | 59 | 4.00 | 1.862 |
| | Women | 41 | 4.10 | 1.594 |
| Give me rewards for exercising. | Men | 59 | 3.99 | 1.667 |
| | Women | 41 | 3.66 | 1.583 |
| Help me plan activities around my exercise. | Men | 59 | 3.09 | 1.212 |
| | Women | 41 | 3.80 | 1.077 |

**Table 4. Results for the Importance of Participation based on Independent T-Test**

| | Gender | N | Mean | Std. Dev | P value* |
|---|---|---|---|---|---|
| Benefit | Men | 59 | 2.64 | 0.932 | .746 |
| | Women | 41 | 2.70 | 1.024 | .750 |

** p < 0.05*

Table 4 shows that the mean for "benefits for participation" for men is 2.64 ± 0.932 compared to women at mean 2.7 ± 1.024. The result is not significant among the men (.746; p>0.05) and the women (.750; p>0.05).

**Table 5. Results for Social Support based on Independent T-Test**

| Type of support | Gender | N | Mean | Std. Dev | p value* |
|---|---|---|---|---|---|
| Family support | Men | 59 | 3.04 | .902 | .104 |
| | Women | 41 | 3.29 | .839 | .088 |
| Friends support | Men | 59 | 3.20 | .860 | .123 |
| | Women | 41 | 3.42 | .647 | .118 |

Based on Table 5 above, there are two types of social support identified that is social support from family and that from friends. For men, the mean for family social support is 3.04 ± 0.903 while for women it is 3.29 ± 0.839 which is higher. Similarly, the mean for men regarding friends' social support is 3.20 ± 0.861 while the mean social support for women is 3.42 ± 0.647. The significant result for family social support is 0.408, that is more than the p-value, p>0.05 different from the friends' social support that has significant value (0.006; p<0.05). The results may be due to disabled persons usually being in the company of friends in a sharing community, which will enable them to do physical activities together, compared to the time spent with their family members who need to work and therefore have limited time with them.

**Table 6. The Relationship between Social Support factors and the Importance of Physical Activity Participation based on Pearson Correlation Test**

| | | Benefit | Support |
|---|---|---|---|
| Benefit | Pearson Correlation | 1 | -.174* |
| | Sig. (1-tailed) | | .042 |
| | N | 100 | 100 |
| Support | Pearson Correlation | -.174* | 1 |
| | Sig. (1-tailed) | .042 | |
| | N | 100 | 100 |

** Correlation is significant at the 0.05 level (1-tailed).*

Table 6 reveals that there is a significant correlation between social support factors and the importance of physical activity participation among persons with disabilities because the significant p-value is (0.042; p<0.05). The social support groups around the persons with disabilities are encouraging them to do physical activities in order to live a healthy life.

## The Importance of Physical Activity Participation among Persons with Disabilities

Te Velde et al. (2018) suggest that participation in any kind of activity would depends on their social friendships and relationships with others. As noted earlier, the need for increasing physical activity is well established, not as much is known about the determinants of physically active lifestyles (Wilhite, Martin, & Shank, 2016). This is because there is a lack of knowledge in the area. They need to be given more information about the benefits of physical activity in their daily life. According to, Shields and Synnot

(2016), disabled women also scored lower on the social scale compared to female secondary school students in Kenyon's study. Differences in body esteem and the factor's differential contribution to involvement in physical activity in males and females should be considered. Compared to men, women might be more affected by regard for their physical being. It means that there are slight differences between men and women's opinions on physical activity as found in this study. However, in this study it was found that they agreed on five factors in benefits of exercise, i.e., regular exercise can improve blood pressure, improve cholesterol levels, help to avoid disease, give them more energy, help to relieve tension, and help them to have a more positive outlook on life.

**Social Support Factors Contribute to Physical Activity for Persons with Disabilities**

There are significant values between the social support factors and physical activity participation as can be viewed in the study. Social support undoubtedly plays a big role in making persons with disabilities participate in physical activity. Brundage (2011) hypothesized that reported physical activity levels of the parents or caregivers of the children or adults with disabilities will be lower than nationally recommended physical activity guidelines. It also shows that social support is important in supporting persons with disabilities to do physical activity and they should give some time to exercise with their people surrounding them. The results show that the five most selected statements for social support for both men and women are: offer to exercise, reminders to exercise, encouragement with exercise program, complain about the time they spend for exercise, criticize or made fun exercising, rewards, and help to plan activities around their exercise.

**The Relationship between Social Support Factors and the Physical Activity Participation**

The finding shows that the correlation between the social support factors and physical activity for persons with disabilities. Well over half of physically disabled females said they desire to take part in activities when watching other individuals with disabilities participating. They also felt encouraged when they saw people in their surroundings doing physical activity as this made them want to join them. On the other hand, they felt discouraged by the motion of participating solely for rehabilitative reasons (Calzonetti, 1988). Besides that, social factors involving family and friends greatly influence persons with disabilities. The knowledge about the importance of physical activity is most needed for both the abled and the disabled. Besides that, there are more factor contribute to physical activity participation in either positive or negative factors.

**CONCLUSION**

The current study exhibit that physical activity participation gives many benefits and has great importance for persons with disabilities. Besides that, social factors involving family and friends greatly influence persons with disabilities to participate in physical activity. The knowledge about the importance of physical activity is most needed for both the abled and the persons with disabilities. Besides that, there are more factors contribute to physical activity participation in either positive or negative factors. The quantity of participation in physical activity among people with disabilities is affected by many factors set of barriers that are unique to this population. As the long-term effects the level of physical inactivity that can lead to serious minor health problems among persons with disabilities, accepting the factors that influence participation in physical activity is important to help plan successful involvements and strategies that increase their level of commitment in activity from time to time. Some implications that can be

discussed here is that persons with disabilities should be given choices in selecting their type of physical activities and also be with someone that are comfortable with. Some limitations in the current study warrant comment and suggest directions for future research. As when analyzed the needs of people with disabilities in small groups, it is difficult to generalize these findings. Although areas for improvement been identified, further studies should confirm which areas should be improved first.

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