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**Review**

# Recreational Activities for with Disability: School-Aged Children and Adolescents

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***Abstract***

There is a need to develop appropriate opportunities for people with disabilities throughout their life course. The provision of access for people with disabilities to quality physical activity and sporting opportunities must be addressed on an equal basis with those of their non-disabled peers. The aim of this study was to disabled children and Adolescents recreational physical activity, frequency of physical activity, examine the benefits of physical activity and the participation in recreational physical activity to create more active people with recommendations for physical activity. A high level overview of the reviews of published literature. A systematic search of Web of Science, Medline, PubMed, and Sportdiscus, Physical Education Index was employed to find all relevant studies focusing on human participants. Search terms included "Recreational Activities", "Children with Disabilities", "Prevalence of Physical Activity" and "Benefits of Recreational Physical Activity". The benefits of physical activity are universal for all children, including those with disabilities. Participation of children with disabilities in sports and recreational activities encourages inclusion, minimizes conditioning, optimizes physical function and improves overall well-being. Despite these benefits, children with disabilities are more limited in attendance, have lower fitness levels, and have higher levels of obesity than those without disabilities. The importance of sport and physical activity must be underlined by strategic action at national, regional and local level. Social commitment and an appreciation of the benefits to society of diversity is promoted and fuelled by clear national policy and frameworks and co-ordinated strategic planning. Increasing physical activity in children with disabilities is very complex and demands further development and research.

***Keywords:*** Recreation, Children Disability, Physical Activity, Sports.

# Engelliler İçin Rekreasyon Aktiviteleri: Okul Çağı Çocukları ve Adölesanlar

**Öz**

Yaşamları boyunca engelliler için uygun fırsatlar geliştirmeye ihtiyaç vardır. Engellilerin kaliteli fiziksel aktiviteye ve spor olanaklarına erişiminin sağlanması, engelli olmayan akranlarıyla eşit şekilde ele alınmalıdır. Bu çalışmanın amacı engelli çocuklara ve adölesanlara rekreasyonel fiziksel aktivite, fiziksel aktivite sıklığı, fiziksel aktivitenin yararlarını ve fiziksel aktivite için önerileri olan daha aktif insanlar oluşturmak için rekreasyonel fiziksel aktiviteye katılımını incelemektir. Yayınlanan literatürler yüksek düzeyde gözden geçirilmiştir. İnsan katılımcılarüzerine odaklanan tüm ilgili çalışmaları bulmak için Web of Science, Medline, PubMed ve SPORTDiscus, Beden Eğitimi İndeksi ile ilgili sistematik bir araştırma yapılmıştır. Arama terimleri "Rekreasyon Faaliyetleri", "Engelli Çocuklar", "Fiziksel Aktivitenin Yaygınlığı" ve "Rekreasyonel Fiziksel Aktivitenin Yararları" nı içermiştir. Fiziksel aktivitenin yararları, engelli olanlar dahil, tüm çocuklar için evrenseldir. Engelli çocukların spor ve rekreasyonel etkinliklere katılımı dahil edilmeyi teşvik eder, koşullandırmayı en aza indirir, fiziksel işlevi optimize eder ve genel refahı arttırır. Bu faydalara rağmen, engelli çocuklar katılımda daha sınırlıdır, uygunluk seviyelerine sahip değildir ve engelli olmayanlara göre daha yüksek obezite seviyelerine sahiptir. Sporun ve fiziksel aktivitenin önemi, ulusal, bölgesel ve yerel düzeyde stratejik eylemle vurgulanmalıdır. Sosyal taahhüt ve çeşitlilik toplum için faydalarının takdir edilmesi, açık ulusal politika çerçevesinde koordineli stratejik planlama ile teşvik edilmekte ve desteklenmektedir. Engelli çocuklarda fiziksel aktivitenin arttırılması çok karmaşıktır ve daha fazla gelişme ve araştırma gerektirir.

**Anahtar Kelimeler***:* Rekreasyon, Engelli Çocuklar, Fiziksel Aktivite, Spor.

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## INTRODUCTION

There is a need to develop appropriate opportunities for children with disabilities throughout their life course. The provision of access for people with disabilities to quality physical activity and sporting opportunities must be addressed on an equal basis with those of their non-disabled peers. Access to physical exercise by persons with disabilities in competitive sports and physical education curricula should be planned and included in all structures, strategies and programs (Coates and Vickerman, 2010). These include community facilities, entertainment and sports venues; national, regional and local strategies and public awareness campaigns; Recreational physical activity and sports programs should be prepared in schools and society (Bertills et al., 2018).

Barriers that contribute to low levels of participation in recreatif physical activity and sport by people with disabilities in Türkiye include the following: providing poor physical education (PE) in schools; negative school experiences; low expectations from teachers, families and peers; lack of information on what is available; lack of knowledge and expertise; poor community facilities and lack of access to facilities and programs; temporary structures and approaches; transportation difficulties; the lack of a wide range of disabilities sports in the media; Lack of experience with the benefits of physical activity; lack of untrained staff and accessible facilities; The lack of staff who may facilitate / assist disabled people with access to facilities and programs as necessary; Only coordinated and harmonious studies will be successful in overcoming these complex obstacles (Lieberman et al., 2002; Shields and Synnot, 2016; Demirci et al., 2017).

Participation in moderate to high intensity recreatif physical activity (PA) during childhood is advocated in the promotion of optimal health outcomes and can balance the predetermined risk for the development of secondary health conditions for disabled children (Chiarello et al., 2010). Participation in PA opportunities is a basic childhood experience that promotes psychosocial development of interpersonal skills, self-confidence and self-efficacy. Increased PA participation is the primary goal expressed by professionals for parents and children with disabilities (Damiano, 2006; Murphy and Carbone, 2008). The aim of this study was to disabled children and Adolescents recreational physical activity, frequency of physical activity, examine the benefits of physical activity and the participation in recreational physical activity to create more active people with recommendations for physical activity.

### *Recreation at Disabilities*

Participatory and self-motivating participation in recreation and leisure activities is thought to be a vital part of the development of children and young people (Larson, 2000). This also applies to children and young people with disabilities. Participation in activities is the context in which people with disabilities, like all people, develop skills and competencies, build friendships and relationships, provide mental and physical health, express creativity, develop self-identity and determine the meaning and purpose in life (Brown, Brown and Bayer, 1994). Community participation and meaningful, rewarding activity are the main targets for rehabilitation service delivery models for children and adults.

The World Health Organization defines participation as the nature and scope of participation in a person's living conditions and classifies participation in terms of personal care; mobility; information exchange; social relations; domestic life; education, work and employment; Economic life; and society, social and social life (World Health Organization, 2001). This is a broad definition of participation of children in more voluntary, extracurricular activities such as recreation and entertainment, as well as participation in school settings.

Recreational activities for children are regarded as 'designated for recreation chosen activities, performed when not involved in self-care or work or school'. More specifically, recreation activities are defined as 'everyday activities of childhood in all sport, entertainment, learning and religious expression' (Majnemer, 2009). Being active and involved in freely chosen activities are essential for the development of skill competencies, socializing with peers, exploring personal interests and enjoying life. Without opportunities to participate in recreation activities'people are unable to explore their social, intellectual, emotional, communicative and physical potential and are less able to grow as individuals' (King et al., 2003). Moreover, participation contributes to the quality of life for children and youth (Mc Manus, et al., 2008). Children and youth with physical disabilities participate less in recreation activities than their able bodied peers (Bult et al., 2010). Moreover, their recreation activities tend to be more home-based and organized by adults. In conclusion, recreation activities are essential for the development of all children, particularly for children who are disabled.

Recreational activity is valuable for all people. Research shows that physical recreatif activities provide many health benefits, such as reducing the risk of many types of diseases, cancers, and diabetes. Other benefits of recreational activity include reducing hypertension, reducing depression, and controlling weight. Moreover, many people engage in recreation activities due to its intrinsic benefits, such as relaxation and social interactions (Hurd and Anderson, 2011)

### *Example of Recreation Activities for Disabled Children*

For the 54 million people with disabilities in the US, positive approaches to promoting health are extra important. That's because this special population has a relatively high rate of health problems—including obesity, cardiovascular disease, diabetes, and depression. In fact, a much lower percentage of people with disabilities than people without disabilities report their health to be excellent or good (28.4% versus 61.4%). One of the best ways to beat the odds and enjoy a healthy lifestyle is to participate in physically and mentally stimulating recreational activities (WHO, 2015). A few decades ago, people with disabilities had limited opportunities for recreational activities. The restrictions were due to physical barriers—like the absence of wheelchair ramps to recreation buildings—and discriminatory attitudes in our society. But remarkable advances have been made in recent years, sparked by the passing of the Americans with Disabilities Act of 1990. These days, with a little investigation and information, everyone has access to healthy and enjoyable recreational activities. So which activities will you choose to participate in? Are special equipment and training required to get started (Demirci et al.,

2018). To choose your ideal activities, make a list of what interests and excites you most. Consider that you might not experience the greatest enjoyment and health benefits of new recreational pursuits for several weeks or months. If you choose activities that are personally meaningful and engaging, you'll naturally stick with them long enough to reap their full rewards. You might even become a life-long participant in selected activities (King et al., 2009) (Table 1).

**Table 1.** Example of Recreational Activities for Disabled Children

| | | |
|---|---|---|
| Aquatics | Archery | Graphic Arts |
| Aviation | Baseball | Basketball |
| Bowling | Camping | Fishing |
| Hiking | Exercise Training | Gardening |
| Fencing | Frisbee | Horseback Riding |
| Golf | Arts and Crafts | Motorcycle Riding |
| Jogging | Martial Arts | Skiing (Water and Snow) |
| Music | Photography | Swimming |
| Skydiving | Tennis | Writing |

***How Much Recreational Physical Activity is Adequate for Children with Disabilities?***

Due to the positive effects of recreational physical activity and energy expenditure on health, the first evidence of physical activity recommendations was published by CDC and ACSM in 1995. These in guidelines, emphasize that PA should be performed at the desired severity, duration and frequency for prevention of noncommunicable diseases and for the protection and development of health (WHO, 2015). In addition to these guidelines, recommendations regarding the frequency, severity and duration of the PA in important organizations such as WHO, ACSM and CDC are given in Table 5 (Rhodes et al., 2017; WHO (2018). The importance of physical activity in health promotion and protection is increasing day by day.

Children with disabilities spend most of the school day sitting and get very little exercise, even during recess and gym class. Recreational physical activity is important for all children's development, but those with disabilities rarely get the recommended 60 minutes per day of exercise, researchers report (Cindy et al., 2017) (Table 2). According to studies, children with severe intellectual disabilities had the least amount of physical activity, compared with students with other types of disabilities. Physical inactivity is a serious global health problem and its associations with obesity or obesity-related diseases are well documented. Children with disabilities are less physically active, tend to adopt a more sedentary lifestyle, and are at three to six times greater risk for obesity (Demirci and Toptaş Demirci, 2018). The U.S. Institute of Medicine recommends that schools provide children with at least

half an hour of exercise during gym class (WHO,2016).

**Table 2.** Recommendations on Physical Activity for Health (Demirci et al., 2018).

| Age group | Physical activity recommendations | Criteria typically used to define meeting physical activity recommendations for surveillance |
|---|---|---|
| School-aged children and adolescents aged 5–17 | 1. Accumulate at least 60 min of moderate to vigorous intensity physical activity daily<br>2. Amounts of physical activity greater than 60 min provide additional health benefits<br>3. Most of the daily physical activity should be aerobic. Vigorous intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week | ≥60 min of moderate to vigorous intensity physical activity on all 7 days of the week |

To determine how much exercise kids with disabilities were getting in school, the study team assessed 259 children aged 6 to 23 years from 13 specialized schools in Hong Kong, collecting data on exercise and time spent sitting throughout the day and particularly during gym class, recess and lunchtime. Overall, children spent 70 percent of their day sitting or not moving. Students spent one quarter of the day doing light physical activity. Parents should know that it is very important for children with disability to participate in physical activity throughout their lives. Parents can encourage schools to provide more opportunities for exercise, but noted, schools cannot provide all the physical activity that children need for growth, development, and health (Cindy et al., 2017).

These guidelines are set out for children in general. If your child has a disability or medical condition, activities and exercises should be adapted according to what they can do. Evidence indicates that children with disabilities do not meet the recommended 60 mind of moderate-to-vigorous PA (MVPA). Compared with their typically developing peers, children with disabilities are much less physically active, tend to engage more in sedentary pursuits, and are at three to six times greater risk for obesity (Neter et al., 2011). Increasing PA in children with disabilities is therefore important for reducing the prevalence of obesity as well as a number of secondary conditions, and thus is a public health priority (Rimmer and Marques, 2012). Your children with disabilities should aim to take part in at least one hour of medium to hard intensity recreation physical activity every day. Bu süreler If your child has a disability or medical condition, activities and exercises should be adapted according to what they

can do. Example physical activity applications (Fig.1).

Your children with disabilities should aim to take part in at least one hour of medium to hard intensity physical activity every day. Bu süreler If your child has a disability or medical condition, activities and exercises should be adapted according to what they can do. Example physical activity applications (https://www.physiopedia.com, 2019) (Fig.1)

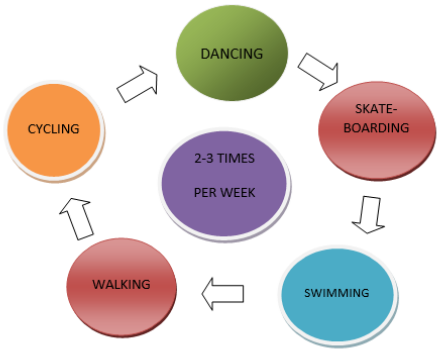


**Fig 1.** Recreational physical activity applications for children with disabilities

### *Benefits of Recreational Physical Activity for Children with Disabilities The physical benefits*

Regular as made recreational physical activity plays a crucial role in maintaining health. It is suggested that regular physical activity is very important in the prevention of many diseases such as cardiovascular diseases. Today, only 5 days a week, participation in moderate physical activity (eg walking) has been shown to reduce the risk of death from cardiovascular diseases by 30% (Leitzman et al., 2007). Everyone should know in theory, and ideally also in practice, that physical exercise influences long-term health status and also general well-being, personal and social development, effectiveness and achievement for Children with Disabilities. Regular recreational physical activity prevents a range of illnesses and reduces the effects of age and the incidence of chronic illness and disease such as coronary heart disease, stroke, diabetes mellitus and colon cancer (Powell et al, 1994 cited by de Ploeg et al, 2004). Muscle and bone pain, shortness of breath, pain, including back pain, fatigue, depression, difficulty with sleeping and weakness can often be improved by physical activity (Ploeg et al., 2004).

Each component of physical fitness including balance/ co-ordination, muscle strength, reaction time, visual acuity, power, body composition and cardiovascular and muscular endurance can be defined on a continuum ranging from low to high fitness levels. However, it is generally accepted that moderate physical activity e.g. brisk walking or its equivalent for 60 minutes most days of the week will improve health and quality of life (ACSM, 2013). A wide variety of sports can be enjoyed by people with disabilities and can be of benefit. For example, horse riding can be beneficial to people with disabilities including people with learning difficulties, whose confidence, coordination, and communication skills can be improved Some people with intellectual disability, notably persons with Down's Syndrome, have low Vitamin D levels and are at risk of bone disease with an increased prevalence of osteoporosis. Thus, physical activity may yield particular benefits for them by decreasing the risk of osteoporosis (Boland, 2005).

### *The social and psychological benefits*

Participation in sport has many social benefits. People build friendships and social networks where collective identities can be created. Participation can facilitate social integration, eliminate cultural

challenges and lead to employment. Participation in sport with various others can overcome prejudice and discrimination (eg, ethnic background, social background or disability) and play a role in reaching an inclusive society. While being active is important for typically developing children, children and adolescents with physical disabilities could benefit even more from regular recreation physical activity in the prevention not only of comorbidity but also of functional decline and fatigue (Bloemen et al., 2017).

It is no secret that physical activity is an important aspect of a healthy lifestyle. Physical activity can provide significant benefits for children in all stages of life. It also includes children with disabilities who tend to be physically less active and at higher risk for non-immobility complications. The benefits of regular recreational physical activity for children with disabilities may vary physically, emotionally and socially. Although some believe that children with special needs can see, they show power gains, increased flexibility, improved bone health and better endurance, and cardiovascular fitness (Willis et al., 2018). In people who have acquired a disability, participation in sport/physical exercise can help them come to terms with their disability, regain self-esteem and social integration. Persons with learning difficulties appear to gain significant mental, social, spiritual and physical benefits from sport and leisure activities (Chawla, 1994).

If you have managed to introduce a physically active lifestyle from a young age - that's great! However, maintaining this lifestyle can be challenging as your child grows older. Parental support is also thought to be a key factor in maintaining physically active habits (Dowda et al., 2007). Thus, the importance you place on your child's physical activity levels, along with the encouragement and support you provide is vital in facilitating your child to maintain an active behaviour. This involves your willingness and ability to provide transport to practices and competitions, and showing support and appreciating their achievements in order to aid participation (Conchar et al., 2016). As a parent, you are also in charge your child's daily schedule. Why not reduce screen time during the day and encourage your child to go outside and play? Factor in the time taken to go to the park or a class to include physical as a daily requirement. Children enjoy belonging to something or someone; taking part in activities with family and friends can give them a feeling of togetherness and of being noticed and accepted as part of a group. It also gives them the opportunity to meet others with similar abilities and most importantly to be seen as more than their disability (Lauruschkus et al., 2015).

To sum it up, keeping these six Fs of childhood disability in your mind will help you remember what's most important to them and the key motivators to encouraging your child to being physically active (Fig 2)

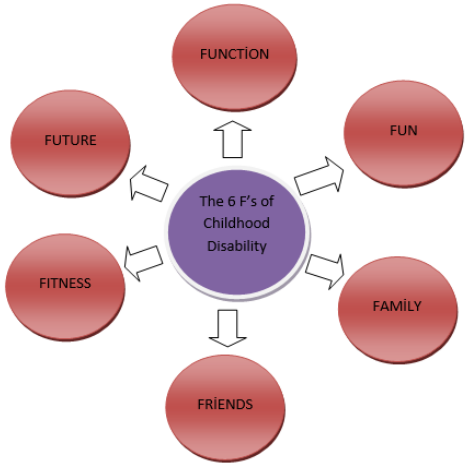


**Fig.** Six F To Keep Childhood Disability in Your Mind

### *Participation Rates in Recreational Physical Activity for Children with Disabilities*

Since 2010, 23 % of adults worldwide and 81 % of adolescents (aged 11-17) show that have not met the global recommendations of WHO on physical activity for health. In particular, the prevalence of inactivity varies significantly between countries and may be as high as 80 % in some adult subpopulations. Physical inactivity in adults is highest in the Eastern Mediterranean, America, Europe and the West Pacific regions, and the lowest in Southeast Asia. These rates increase with economic development due to changing transportation patterns, technology usage, urbanization and cultural values (Labrique et al., 2013). The WHO (2018) estimate that, worldwide, 60% of adults do not engage in levels of physical activity that will benefit their health and that physical inactivity is greater among people with disabilities, women, older adults and those from lower socio-economic groups. There is limited, though growing, descriptive and comparative data on physical activity patterns and participation rates of people with disabilities. Where data exists, people with a disability generally engage in less physical activity than their non-disabled counterparts. This does vary, however, depending on circumstances, incentives, barriers and personal factors.

The most common obstacles to the active participation of children with disabilities in sports and physical recreational are the functional limitations of the child (18%), high costs (15%), and lack of nearby facilities and programs (10%). In fact, adolescents with disabilities have shown the cost of non-specialist equipment as the most common cause of disability. Participation is directly influenced by the perception of time, home environment and the child's self-sufficiency, and indirectly from social support from schools and communities, family demography and family and child preferences (Murphy NA, Carbone PS, 2008). Families involved in physical activities tend to encourage similar participation for children with disabilities. Moreover, ineffective role models, competing demands and time pressures, unsafe environments, lack of adequate facilities, inadequate funds and inadequate quality of daily physical education seem more common among populations with special needs (AAP, 2006). In general, environmental and family factors seem to be the most important determinants of participation in children. Determining short-term goals, emphasizing diversity and entertainment, and positive reinforcement through documented progress towards goals can help increase and sustain motivation for participation (King et al., 2003).

Many disabled individuals still offer limited opportunities to participate in group physical activities by experiencing largely socially segregated and negative social stereotypes and low performance expectations. These attitudinal barriers in society contribute to a lack of awareness of existing programs and opportunities for participation (Durstine, 2000). While special programs are useful, the participation of children with disabilities in community activities with other children can reduce social barriers. It is a common misconception that children with disabilities are sensitive to trauma and therefore avoid the strict sporting activities that are typically related to injury. Although disabled athletes have similar injury rates to those of other athletes, the fear of injury is often an obstacle to participation. In general, misunderstandings at the individual,

family, and community level, and behavioral barriers, should be addressed to integrate all of their abilities into entertainment and sporting activities (King et al., 2003; Murphy NA, Carbone PS, 2008).

## DISCUSSION AND CONCLUSION

In conclusion, the readers should take over a number of salient points. First, people with disabilities are, in general, less healthy compared to people without disabilities but having a disability doesn't automatically equate with being unhealthy. Second, recreational physical activity may be more valuable for quality of life and health for individuals with disabilities relative to individuals without disabilities. Third, physical activity engagement confers physiological, emotional, cognitive and social benefits to individuals with disabilities. Fourth, a significant number of barriers to physical activity engagement exist for people with disabilities. Some barriers can easily be categorized as individual, social and environmental barriers that support medical/individual and social models of disability.

All children benefit from recreational physical activities and disabled children are no exception. Participation of children with disabilities in sports and physical activity programs promotes physical, emotional and social well-being. Well-informed decisions on each child's participation should take into account the general health status, individual activity preferences, safety measures and the availability of appropriate programs and equipment. Social barriers to child, family, financial and participation should be directly identified and addressed in the context of local, state and federal laws. Physical education teachers are required to encourage children with disabilities to participate in competitive and recreational sports and physical activities. There is a need to develop opportunities for people with disabilities throughout their lives. The access of persons with disabilities to quality physical activity and sports facilities should be treated equally with their non-disabled peers. Access to physical exercise by persons with disabilities in competitive sports and physical education curricula should be planned and included in all structures, strategies and programs. These include community facilities, entertainment and sports venues; national, regional and local strategies and public awareness campaigns; physical activity and sports programs in schools and society.

## REFERENCES

American Academy of Pediatrics (2006). Council on Sports Medicine and Fitness and Council on School Health. Active healthy living: prevention of childhood obesity through increased physical activity. Pediatrics ;117(5):1834 –1842

American College of Sports Medicine (2013) ACSM's guidelines for exercise testing and prescription, 9th edn. Williams & Wilkins, Baltimore.

Bertills K, Granlund M, Dahlström Ö. & Augustine L. (2018). Relationships between physical education (PE) teaching and student self-efficacy, aptitude to participate in PE and functional skills: with a special focus on students with disabilities. Physical Education and Sport Pedagogy, 23(4): 387–401.

Bloemen M, Van Wely, L., Mollema J.M., Dallmeıjer A., De Groot J. (2017). Evidence for increasing physical activity in children with physical

disabilities: a systematic review. Developmental Medicine & Child Neurology, 59: 1004–1010

Boland, M. (2005). Health promotion and health promotion needs assessment of people attending disability services in the HSE, East Coast Area. Doctorate of Medicine, University College Dublin (under consideration)

Brown, R. I., Brown, P. M., & Bayer, M. B. (1994). A quality of life model: New challenges arising from a six year study. In D. Goode (Ed.), *Quality of life for persons with disabilities* (pp. 39–56). Cambridge, MA: Brookline.

Bult, M. K., Verschuren, O., Gorter, J. W., Jongmans, M. J., Piskur, B., & Ketelaar, M. (2010). Cross-cultural validation and psychometric evaluation of the Dutch language version of the children's assessment of participation and enjoyment (CAPE) in children with and without physical disabilities. Clinical Rehabilitation, 24, 843–853.

Chawla, JC. (1994) Sport for people with disability. British Medical Journal 308:1500-4.

Chiarello L, Palisano R, Maggs J, Orlin M, Almasri N, Kang LJ, et al. (2010). Family priorities for activity and participation of children and youth with cerebral palsy. Phys Ther; 90(9):1254–64.

Cindy H. P. Sıt, Thomas L. Mckenzıe, Ester Cerın, Bık C. Chow, Wendy Y. Huang, And Jıe Yu (2017). Physical Activity and Sedentary Time among Children with Disabilities at School. Medicine & Science in Sports & Exercise, 292-297.

Coates, J., and P. Vickerman (2010). Empowering Children with Special Educational Needs to Speak up: Experiences of Inclusive Physical Education. Disability and Rehabilitation 32 (18): 1517–1526.

Conchar L, Bantjes J, Swartz L, Derman W. (2016). Barriers and facilitators to participation in physical activity: The experiences of a group of South African adolescents with cerebral palsy. Journal of health psychology. Journal of Health Psychology, Vol. 21(2) 152–163

Damiano DL. (2006). Activity, activity, activity: rethinking our physical therapy approach to cerebral palsy. Phys Ther; 86(11):1534–40.

Demirci N, Toptas Demirci P, Demirci E (2017). The Effect of School-based Exercise Practices of 9-11-Year-Old Girls Students on Obesity and Health-related Quality of Life. Universal Journal of Educational Research, 5(8), 1323-1331

Demirci N, Yıldırım İ, Toptas Demirci P, Ersöz Y. (2018). Why Should We Do Physical Activity? More Active People For A Healthier World, International Journal of Disabilities Sports and Health Science,1(2);1-14

Demirci N, Toptas Demirci P (2018). The determination of physical activity, nutrition and self-sufficiency levels of sedanter individuals of fitness club member. Pedagogics, psychology, medicalbiological problems of physical training and sports, 22 (5), 237-245.

Dowda, M., Dishman, R. K., Pfeiffer, K. A., & Pate, R. R. (2007). Family support for physical activity in girls from 8th to 12th grade in South Carolina. Preventive medicine, 44(2), 153-159.

Durstine JL, Painter P, Franklin BA, Morgan D, Pitetti KH, Roberts SO. (2000). Physical activity for the chronically ill and disabled. Sports Med;30(3):207–219

Hurd, A., & Andersen, D. (2011). Definition of leisure, play, and recreation. In The park and recreation professional's handbook. Champaign: Human Kinetics.

King, G., Law, M., King, S., Rosenbaum, P., Kertoy, M. K., & Young, N. L. (2003). A conceptual model of the factors affecting the recreation and leisure participation of children with disabilities. Physical & Occupational Therapy in Pediatrics, 23, 63–90

King G, Petrenchik T, Law M & Hurley P.(2009). The Enjoyment of Formal and Informal Recreation and Leisure Activities: A comparison of school-aged children with and without physical disabilities. International Journal of Disability, Development and Education, Vol. 56, No. 2, 109–130.

Labrique A. B., Vasudevan L, Kochi E, Fabricant R, Mehl G (2013). Health innovations as health system strengthening tools: 12 common applications and a visual framework. Glob Health Sci Pract;6;1(2):160–71.

Larson, R. W. (2000). Toward a psychology of positive youth development. *American Psychologist, 55*(1), 170-183.

Lauruschkus, K., Nordmark, E., & Hallström, I. (2015). "It's fun, but…" Children with cerebral palsy and their experiences of participation in physical activities. Disability and rehabilitation, 37(4), 283-289.

Leitzman, MF, Park, Y. Blair, A. (2007) Physical activity recommendations and decreased risk of mortality. Archives of Internal Medicine, 167: 999-1008.

Lieberman LJ, Houston-Wilson J, Kozub, FM.(2002). Perceived barriers to including students with visual impairments in general physical education. APAQ;19:364–377.

Majnemer, A. (2009). Promoting participation in leisure activities: Expanding role for pediatric therapists. Physical & Occupational Therapy in Pediatrics, 29, 1–5

Mc Manus, V., Corcoran, P., & Perry, I. J. (2008). Participation in everyday activities and quality of life in pre-teenage children living with cerebral palsy in South West Ireland. BMC pediatrics, 8(1), 50.

Murphy N.A. & Carbone P.S (2008). Promoting the participation of children with disabilities in sports, recreation, and physical activities. Pediatrics; 121(5):1057–61.

Neter, J. E., Schokker, D. F., de Jong, E., Renders, C. M., Seidell, J. C., & Visscher, T. L. (2011). The prevalence of overweight and obesity and its determinants in children with and without disabilities. The Journal of pediatrics, 158(5), 735-739.

Rhodes R E, IJanssen I, Bredin S S D, Warburton E R D & Bauman A (2017). Physical activity: Health impact, prevalence, correlates and interventions. Psychology & Health, 32:8, 942-975.

Rimmer, J. H., & Marques, A. C. (2012). Physical activity for people with disabilities. The Lancet, 380(9838), 193-195.

Shields N. & Synnot A. (2016). Perceived barriers and facilitators to participation in physical activity for children with disability: a qualitative study. BMC pediatrics, 19;16(1):1.

Van der Ploeg, HP., van der Beek, AJ., van der Woude, LHV., van Mechelen, W. (2004). Physical Activity for People with a disability. Sports Medicine 34(10): 636-649.

Willis, C., Nyquist, A., Jahnsen, R., Elliott, C., & Ullenhag, A. (2018). Enabling physical activity participation for children and youth with disabilities following a goal-directed, family-centred intervention. Research in developmental disabilities, 77, 30-39.

World Health Organization (2015). Regional Office for Europe. Health-enhancing physical activity (HEPA) policy audit tool (PAT) - version.

World Health Organization [Internet]. Geneva (Switzerland): World Health Organization; [cited 2016 Apr 30]. Available from: http:// whqlibdoc.who.int/hq/2003/WHO_ NMH_NPH_PAH_03.2.pdf.

World Health Organization (2018). Physical Activity Guidelines Advisory Committee Scientific Report, February 2018, Part D: Integrating the Evidence. Visithttps://health.gov/paguidelines/ secondedition/ report.aspx to access the entire report.

https://www.physiopedia.com/Physical_A ctivity,_Sport_and_Recreation_for_ Young_People_with_Physical_Disa bilities#cite_note-PAWHO-1 (Accessed 17th February 2019).