



Exploring the Importance of Recreational Activities for the the Holistic Development of Children with Special Needs: A Systematic Review

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Abstract

Children with Special Needs face various challenges in achieving balanced emotional, social, cognitive, and physical development. Recreational activities have been increasingly recognized as supportive intervention in promoting children's well-being and quality of life. The aim of this systematic review is to explore the significance of recreational activities in promoting holistic development of Children with Special Needs. In this study, emphasis is given to how structured and unstructured forms of recreational activities can be utilized for promoting emotional, social, cognitive, and physical development among Children with Special Needs.

A systematic literature search was conducted on various academic databases, including Web of Science, ERIC, Taylor & Francis, Scopus, and PubMed. The peer-reviewed articles published between 2000 and 2025 were considered. Studies included in the review were those that investigated the effects of recreational activities including sports, play therapy, arts, music, dance, outdoor recreation, and other types of recreational interventions for Children with Special Needs. In line with the systematic review approach, the PRISMA guideline has been followed which includes relevant studies based on participant characteristics, types of recreational

activities, research design, and developmental outcomes.

The results indicate the significance of recreational activities in the holistic development of these children. Recreational interventions including group games, arts, music, dance, sports enhance the social interaction, emotional, cognitive, and physical development of these children, which improve the quality of life in the Children with Special Needs.



1. Introduction

Recreational activities are defined as activities that individuals engage in during their leisure time for enjoyment, relaxation, or personal satisfaction. These activities can include a broad spectrum of pursuits such as sports, arts and crafts, gaming, swimming, reading, gardening social gatherings, and outdoor adventures. According to the National Center for Biotechnology Information (NCBI), “Recreation refers to all those activities that people choose to do to refresh their bodies and minds and make their leisure time more interesting and enjoyable”. Recreational activities are widely defined in academic literature as activities undertaken during leisure time for enjoyment, relaxation, or personal satisfaction, and are recognized as vital for physical, mental, and social well-being (Petersen et al., 2021). Pressman et al. (2009) defines recreational activities as “mainly performed in leisure time and covers sport and exercise activities, cultural activities, outdoor activities, social activities and similar activities with the purpose of bringing pleasure, joy, amusement and meaning to our lives” (as cited in Petersen et al., 2021). Other studies also define Recreational or leisure activities as it refers to those activities which people do for pleasure, satisfaction, and enjoyment. It provides relief and joy to the mind and body (Gulam, 2016). Recreational activities are very important for keeping oneself calm, relaxed and free from fatigue.

Children with Special Needs face various difficulties in their daily life activities. These difficulties can be noticed in low self-confidence, lack of self-esteem, higher risk of obesity, associated health conditions and less muscles strengths (Green et al. 2018). Other implications such as decreased social acceptance, greater dependency on others for daily living, impairment of social communication and interaction and inability in developing friendships continuously challenge life of CwSNs (Murphy et al. 2008; Palisano et al. 2010; Cuhadar and Diken, 2011; Boudreau and Harvey, 2013; Kreiner and Flexer, 2009). Recreational activities work as an important tool to deal with their problems.

These challenges may limit their participation in everyday activities and reduce opportunities for meaningful engagement with peers and the community. Research indicates that recreational activities contribute to holistic development of Children with Special Needs including psychological, cognitive, physical, social, and linguistics development (Cuhadar and Diken, 2011). Further, it also help in developing skills and competencies, forming friendships and relationships, achieving mental and physical health and emotional well-being, developing self- identity, and acquiring a sense of meaning and purpose in life, enhance communication and social skills ((Murphy et al. 2008; King et al. 2009; Kreiner and Flexer, 2009).

The present systematic review aims to synthesize research evidence on the role of recreational activities in promoting the holistic development of Children with Special Needs. Specifically, the review seeks to examine the impact of recreational interventions on emotional, social, cognitive, and physical development.

Objective of the study

1. To study the importance of recreational activities in promoting the holistic development (physical, social, cognitive, and emotional) of Children with Special Needs.

Rationale of the Study

Children with Special Needs often experience barriers that limit their opportunities for balanced physical, social, emotional, and cognitive development. Recreational activities are increasingly recognized as supportive interventions that can enhance well-being, participation, and overall development among this population. However, research findings on the developmental benefits of recreation are scattered across different disciplines and disability categories. A systematic review is therefore necessary to synthesize existing empirical evidence and provide a comprehensive understanding of how recreational activities contribute to holistic development. This study aims to highlight the importance of inclusive recreational practices and



provide evidence-based insights that can guide educators, therapists, and policymakers in designing effective programs for Children with Special Needs.

2. Methodology

2.1. Research Design

The research design was a systematic review to integrate the available empirical evidence on the recreational activities and holistic development of Children with Special Needs. To be transparent and rigorous in the selection and analysis of the studies, the review adhered to general principles of PRISMA (Preferred Reporting Items to Systematic Reviews and Meta-Analyses).

2.2 Data Sources and Search Strategy

A comprehensive search of literature was conducted across major academic databases, including Web of Science, ERIC (Education Resources Information Center), Scopus, Taylor & Francis, and PubMed. The Search terms included combinations of keywords such as “recreational activities”, “leisure participation”, “Children with Special Needs”, “disability”, “play therapy”, “sports intervention”, “holistic development”, “social and emotional development”. Also Boolean operators such as AND and OR were used to refine search results.

2.3 Inclusion and Exclusion Criteria

The inclusion criteria included studies published between 2000 and 2025, peer-reviewed empirical studies, included Children with Special Needs or disabilities, examined recreational or leisure-based activities, reported outcomes related to emotional, social, cognitive, or physical development, and published in English language. The exclusion criteria for this study includes studies which are other than English language, not examine recreational or leisure-based interventions, insufficient methodological details, unclear results, and incomplete data in the research.

2.4 Study Selection Process

The systematic review study selection has been conducted in a systematic and transparent manner based on the principles of the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA) guidelines to guarantee the methodological rigor and reduce the bias in the identification of the relevant studies. This was done through various steps such as identification, screening, assessment of eligibility and inclusion of studies.

The initial phase involved the wide search of multiple academic databases, such as Google Scholar, ERIC, Scopus, and PubMed. Relevant literature was retrieved using a combination of keywords and Boolean operators like: recreational activities, leisure participation, Children with Special Needs, disability, play therapy, sports intervention, and holistic development. The first search provided about 120 articles on the topic of recreational activities and developmental outcomes in Children with Special Needs.

The second stage involved the identification and elimination of duplicates of records that occurred in several databases. The duplicates have been removed and the rest of the articles were pre-screened in accordance with their titles and abstracts. In this phase, research papers that were obviously irrelevant to the research were not based on recreational or leisure-based intervention was eliminated. This screening procedure narrowed down to about 63 articles on potentially relevant studies.

During the third step, the complete text of the rest of the articles was assessed properly to establish whether the articles were eligible based on the previously set inclusion and exclusion criteria. All the studies were reviewed based on the characteristics of participants, research design, recreational activity, and the development results reported. Articles that did not include empirical data, those that were not research on



Children with Special Needs and those that were not concerned with holistic developmental outcomes were filtered out at this point.

At last, a total of 20 articles passed all the inclusion criteria and were chosen to be included in the final review after a careful evaluation. The studies were then compared and summarized to establish patterns and themes as well as evidence of how the recreational activities could help in supporting the holistic development of Children with Special Needs.

2.5 Data Extraction

Relevant information from the selected studies was extracted and organized into categories including Author and year, Participant characteristics, Type of recreational activity, Research design, and Key findings related to developmental outcomes.

3. Results

The selected studies revealed significant evidence supporting the role of recreational activities in promoting multiple aspects of holistic development among Children with Special Needs.

S.N.	Author & Year	Participant Characteristics	Type of Recreational Activity	Research Design	Key Findings Related to Developmental Outcomes
1.	Nemaranzhe et al. (2025)	Students with different disabilities	Inclusive sports and recreational activities	Cross-sectional empirical study	Supported physical health, social participation, and psychological well-being
2.	Lisauskienė et al. (2025)	Individuals undergoing rehabilitation	Therapeutic recreation programs	Systematic literature analysis using the SALSA method (Search, Appraisal, Synthesis, Analysis)	Support physical recovery, psychological well-being, and functional independence
3.	Badia et al., 2023	Young people with developmental disabilities	Leisure education program	Quasi-experimental non-randomized design	Improved adaptive behavior, including conceptual, social, and practical skills
4.	Alcaraz-Rodríguez et al. (2021)	Individuals with visual impairment	Sports and physical activity	Systematic empirical analysis	Improved social inclusion and health outcomes
5.	Toptaş Demirci (2019)	Children and adolescents with various	physical activities and sports programs	Literature review	Improved physical fitness, motor skills, and



		disabilities			functional capacity
6.	Haegele & Zhu (2017)	Children with visual impairment	Physical activity and recreational sports	Mixed-methods	Improved physical health and social inclusion
7.	Zhao & Chen (2017)	Children with autism	Structured physical activity	Experimental	Improved communication and social interaction
8.	Shields & Synnot (2016)	Children with physical disabilities (e.g., cerebral palsy)	Physical recreation and sports	Systematic empirical review	Improved activity participation and motor skills
9.	Potić (2014)	Persons with disabilities including individuals with physical, sensory, and intellectual disabilities	Adapted sports, exercise programs, leisure sports, and therapeutic physical recreation	Review and theoretical analysis of literature	Psychological well-being, self-confidence, and emotional stability.
10.	Bedell et al. (2013)	Children with various disabilities	Community leisure participation	Cross-sectional study	Increased quality of life and social participation
11.	Perkins et al. (2013)	Parents of children with visual impairment	Adapted physical recreation and sports	Experimental	Improved orientation, mobility, and social participation
12.	Gabriels et al. (2012)	Children with autism	Therapeutic horseback riding	Randomized controlled trial	Improved emotional regulation and social communication
13.	Fragala-Pinkham et al. (2011)	Children with ASD	Swimming and aquatic play	Non-randomized controlled trial	Improved endurance, motor coordination, and participation
14.	Kasari et al. (2011)	Children with autism	Peer-mediated playground games	Randomized controlled trial	Increased peer engagement and social communication
15.	Stagnitti et al. (2011)	Children with developmental delays	Play-based learning program	Longitudinal study	Improved play competence, creativity, and social skills
16.	Pfeiffer et al. (2011)	Children with autism	Sensory-integration play activities	Randomized controlled trial	Improved adaptive behavior and



					goal attainment
17.	Pan (2010)	Children with Autism Spectrum Disorder (ASD)	Aquatic exercise program	Experimental	Improved social interaction, motor skills, and physical fitness
18.	Kim, Wigram & Gold (2009)	Children with autism	Improvisational music therapy	Randomized controlled trial	Improved joint attention, emotional responsiveness, and communication
19.	Goodwin et al. (2004)	Youth with physical disabilities	Inclusive sports and dance	Qualitative empirical study	Enhanced self-confidence and social inclusion
20.	Lakes & Hoyt (2004)	Children with behavioral disorders/ADHD	Martial arts recreation	Quasi-experimental	Improved self-discipline, attention, and self-regulation

4. Discussion

Recreational activities have gained prominence as effective interventions that can enhance the comprehensive development of Children with Special Needs, including physical, social, cognitive, and emotional development and facilitate inclusion and quality of life.

4.1. Physical Development

Recreational activities help in the physical growth as it improve motor skills, physical fitness, and functional abilities. Research showed that involvement in inclusive sports and recreational activities enhance the level of overall physical health and participation among Children with Special Needs (Nemaranzhe et al., 2025). Demirci highlighted that the motor coordination and functional capacity of children and adolescents with disabilities are also developed through physical recreation including sports and exercise (Demirci, 2019). Similarly, Haegele & Zhu showed that visually challenged children find physical recreation beneficial to mobility skills and active lifestyles (Haegele & Zhu, 2017). Many empirical researches have been conducted on children with autism; their finding revealed that aquatic exercise and swimming programs have a significant positive effect on endurance, coordination and physical fitness (Pan, 2010; Fragala-Pinkham et al., 2011). Moreover, adapted physical recreation programs have been found to enhance orientation, mobility, and physical independence in children with visual impairment (Bedell et al., 2013; Perkins et al., 2013). These results denoted that organized and modified recreational programs may be useful in increasing physical functionality and health outcomes among children with various disabilities.

4.2. Social Development

Recreational activities contribute to social development through peer interaction, communication skills and social participation in the activities. Nemaranzhe emphasized in his research that Sports programs that are inclusive give Children with Special Needs a chance to interact with peers and develop meaningful relationships in school and community (Nemaranzhe et al., 2025). Kasari showed that the intervention of playing in playgrounds through peer mediation has been shown to produce highly beneficial effects as far as peer interaction and social communication among children with autism are concerned (Kasari et al., 2011). It has also been noticed that structured physical activity programs are effective in improving communication and social interaction skills in children with autism spectrum disorder (Zhao and Chen, 2017). According to Bedell, community involvement in leisure activities also leads to a better social involvement and interpersonal



relationship among Children with Special Needs (Bedell et al., 2013). In addition, inclusive sports and dancing activities also help to foster social belonging and friendship development among young people with physical disabilities (Goodwin et al., 2004). Together, these articles demonstrate the significance of recreational settings in promoting social competence and minimizing isolation in Children with Special Needs.

4.3. Cognitive Development

Recreational interventions facilitate cognitive development as well, especially with play-based and creative interventions that arouse learning and problem-solving skills. It has been established that leisure education programs offered to the youth with developmental disabilities enhance adaptive behavior, conceptual understanding, and practical life skills (Badia et al., 2023). Similarly, play-based learning programs are associated with the improvement of creativity, the competence of play, and cognitive flexibility among children with developmental delays (Stagnitti et al., 2011). Lakes and Hoyt worked on martial arts recreation programs that have shown signs of improvements in attention, self-discipline, and cognitive self-regulation among children with behavioral disorders and ADHD (Lakes and Hoyt, 2004). Also, Pfeiffer highlighted on sensory-integration play activities which bring about enhanced adaptive functioning and goal attainment among autistic children (Pfeiffer et al., 2011). These studies indicate that recreational involvement may be a viable channel of stimulating cognitive functioning and learning skills.

4.4. Emotional Development

Recreational activities can also significantly influence the emotional development encompassing self-confidence, emotional control, and psychological well-being. It has been shown that adapted sports and therapeutic recreation have contributed to greater emotional stability, self-confidence, and overall psychological well-being in people with disabilities (Potic, 2014). Gabriels demonstrated that therapeutic horseback riding programs can greatly enhance the emotional regulation and social communication among children with autism spectrum disorder (Gabriels et al., 2012). Research indicated that music therapies also increase emotional responsiveness, joint attention, and communication abilities in children with autism (Kim et al., 2009). Furthermore, increased self-esteem and reduced feelings of isolation among children with disabilities can be achieved through inclusive recreational activities (Goodwin et al., 2004). The results indicate that leisure experiences have the potential of offering supportive conditions that foster emotional stability and psychological health.

4.5. Holistic Development

The combined effect of physical, cognitive, emotional, and social gains demonstrates that recreational activities are beneficial to holistic development in the Children with Special Needs. According to Lisauskienė's research, recreation-based therapeutic programs applied to the rehabilitation settings have been discovered to contribute to physical healing, mental health, and functional autonomy (Lisauskienė et al., 2025). Alcaraz-Rodriguez observed that sports activities among people with visual impairment result in positive health, independent, and social integration outcomes (Alcaraz-Rodriguez et al., 2021). On the same note, leisure education programs facilitate the enhancement of adaptive behavior and social functioning, which are crucial aspects of the holistic development (Badia et al., 2023). Collectively, these researchers indicated the multidimensional advantages of recreational activities in the promotion of balanced development in various life aspects.

4.6. Inclusion and Quality of Life

Recreational activities promote inclusion and quality of life of Children with Special Needs. Inclusive sports programs allow Children with Special Needs to engage in sports activities with their counterparts, thus promoting social acceptance and inclusion (Nemaranzhe et al., 2025). Leisure activities participation in the community have been found to lead to better life satisfaction, independence, and involvement in daily



activities among disabled children (Bedell et al., 2013). Adapted physical recreation programs also contribute to enhanced mobility, independence, and involvement of children with visual impairments (Perkins et al., 2013). Also, systematic reviews demonstrated that recreational engagement is strongly associated with better health outcomes, social inclusion, and well-being in individuals with disabilities (Shields and Synnot, 2016). Therefore, recreational involvement not only contributes to the developmental outcomes but the general quality of life and social inclusion of Children with Special Needs.

5. Implications for Practice

The results of this review indicate significant implications on the educators, therapists, policymakers and community organizations dealing with Children with Special Needs. Recreational activities play an important part in physical, social, emotional and cognitive development and thus, it is important to incorporate recreational activities in educational and community environments.

5.1. Integration of recreation in educational programs

The use of adapted sports, play-based learning, art, and music should be integrated into the curriculum of schools. These activities have been indicated to enhance physical fitness, involvement, and psychological health of Children with Special Needs (Nemaranzhe et al., 2025; Shields and Synnot, 2016). Leisure-based educational methods also can be used to improve adaptive behavior and conceptual skills in these students (Badia et al., 2023).

5.2. Development of Inclusive recreational programs

Community recreation centers and local organizations should develop inter-community recreational programs to meet children with different abilities and needs. Inclusive sports, adapted physical activities, and community leisure activities have been found to improve social integration, physical health, and overall well-being of people with disabilities (Alcaraz-Rodríguez et al., 2021; Haegele and Zhu, 2017). Community recreation also enhances social participation and quality of life among such children by providing opportunity to interact with peers in the natural environments (Bedell et al., 2013). Therefore, accessible infrastructure, modified equipment, and inclusive programming are necessity of equal participation.

5.3. Professional and family training

Recreation professionals and teachers need to be trained on the therapeutic and adapted recreation strategies in order to be able to assist children with disabilities (Pfeiffer et al., 2011; Pan, 2010). Moreover, parental and community participation is also necessary to promote the long-term engagement and increase in social inclusion and emotional health (Goodwin et al., 2004).

6. Future Recommendations

The future research should conduct longitudinal and experimental studies on the long-term effect of recreational activities on holistic development of Children with Special Needs. Further empirical studies are required on various disability groups such as visual disability, hearing disability, locomotor disabilities, and multiple disabilities to understand the various recreational interventions for them. The effectiveness of inclusive community-based recreation programs and technology based recreational activities should also be investigated. Additionally, the research should also examine how family involvement, cultural contexts and school environments contribute to encouraging recreational participation.



7. Conclusion

This systematic review showed that recreational activities play a very crucial role in the holistic development of Children with Special Needs. The conclusion of the studies reviewed indicates that engagement in both structured and unstructured recreational activities has a positive effect on various developmental aspects, which are physical, social, cognitive, and emotional development. Recreational programs have been found to enhance motor skills, physical fitness, communication skills, and adaptive behavior in children with various disabilities through recreational programs like sports, play-based learning, music therapy, aquatic activities, and leisure education (Toptaş Demirci, 2019; Pan, 2010; Badia et al., 2023). Moreover, such activities offer individuals the chance to interact with their peers and socially integrate as well as form interpersonal relationships, which minimizes social isolation, increasing their engagement in community life (Bedell et al., 2013; Kasari et al., 2011).

It is also described in the review that recreational involvement leads to emotional well-being by enhancing self-confidence, emotional regulation, and psychological resilience (Gabriels et al., 2012; Kim et al., 2009). Furthermore, recreational programs should be inclusive to facilitate equality, access, and quality of life among children with disabilities (Nemaranzhe et al., 2025; Shields and Synnot, 2016). Overall, the evidence indicates that recreational activities are to be considered as a vital element of educational, therapeutic, and community-based interventions. Inclusive recreation as a component of school curriculum and community programming play an important role in the holistic development and wellbeing of Children with Special Needs.

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