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Research Article

Identifying Underlying Factors for Promoting Sports Participation among Students with Intellectual Disabilities

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Abstract

The purpose of this study was to identify underlying factors for promoting sports participation among students with intellectual disabilities. The research method is qualitative and with a Grounded Theory approach and it is inductive and exploratory. The research area consisted of 20 experts in physical education and student sports for Special needs students with disabilities. The sampling method used a snowball based on the theoretical approach and continued until the categories reached theoretical saturation. The research tool was in-depth and exploratory semi-structured interviews. The validity of the findings was determined by matching methods by peer members and experimental interviews. Then, the data were analyzed using open, axial, and selective coding. The findings revealed that increased participation in sports among these children not only contributes to improved physical performance, but also has significant positive effects on their social development, self-confidence, and overall quality of life. Finally, the results of the present study showed that participation in physical activities provides students with intellectual disabilities not only with an opportunity to enhance their motor skills and improve physical health, but also plays a crucial role in fostering social interactions, increasing self-confidence, and enhancing their overall quality of life.

More Information

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Introduction

Health is one of the divine blessings and doing physical activity and mobility is one of the ways to provide human health, especially children as a vulnerable group in society [1]. One of the common issues among individuals with intellectual disabilities is physical inactivity. Therefore, a significant challenge for these individuals and their families is finding appropriate recreational and sports activities within the community. This is largely due to the various limitations they face in accessing such programs [2].

Children with Intellectual Disabilities (ID) face various challenges in motor, cognitive, and social development due to cognitive and functional limitations. To enhance their quality of life and empower this group, it is essential to implement multidimensional approaches in education and rehabilitation. In this context, physical activity has been identified as an effective intervention for improving the physical, cognitive, and psychological functioning of children with intellectual disabilities [3]. Moreover, regular physical activity has been associated with improvements in cognitive functions such as memory, attention, and decision-making in children with intellectual disabilities. School-based sports programs—particularly activities like badminton—have shown positive effects on enhancing executive functioning and visual perception in this population [4]. From a social perspective, participation in inclusive sports—where children with and without disabilities engage together—contributes to an increased sense of competence, self-confidence, and social interaction, helping to reduce the social isolation experienced by children with intellectual disabilities [5]. These findings highlight the importance of designing and implementing sports activities tailored to the needs of children with intellectual disabilities as an integral part of their educational and rehabilitation process.

In a systematic review, Maicas-Pérez, et al. [3] found that structured physical exercises—such as aerobic, strength, and group training—lead to improvements in balance,

muscular strength, and overall physical fitness in children and adolescents with intellectual disabilities. In a study on a school-based sports program, Wang, et al. [4] demonstrated that skill-based sports such as badminton significantly improved cognitive functions—including attention, concentration, and decision-making—in children with intellectual disabilities. Raso, et al. [5], in a study on inclusive sports, reported that children with intellectual disabilities who participated in shared sports environments alongside typically developing peers showed significant improvements in social skills, self-efficacy, and reduced social isolation. Also Zhang & Wang [6], in their research results, showed that inclusive sports and team-based programs can reduce health risks and enhance social inclusion among children with intellectual disabilities. A review of the existing literature indicates that physical activity not only enhances physical health but also positively impacts the cognitive and social skills of children with intellectual disabilities. However, there remain significant gaps, particularly the lack of qualitative studies exploring the sports participation experiences of students with special needs, including those with intellectual disabilities. The present study aims to address part of this gap.

Methodology

The research method in this study is qualitative, with the Grounded Theory approach, and is inductive and exploratory. To apply the grounded theory method, semi-structured interviews were used to identify underlying factors for promoting sports participation among students with intellectual disabilities. The scope of the present study was to identify some of the experts and informants in the field of student sports for Special needs students with disabilities. Also physical education specialists with a tendency for sport management with a specialized doctorate degree. Sampling was done by the snowball method and referring to other informants. This sampling and interviewing process continued until the process of analysis and discovery reached theoretical saturation. In the data analysis, at first, open coding, then axial coding, and then Strauss and Corbin selective coding was performed. The researcher first wrote the interviews in conversational text and during the open coding phase, the data were analyzed line by line the intended concepts were identified and the features and dimensions related to the interviews were extracted. In the axial coding step, discovered components were linked to each other at the level of features and dimensions, and in selective coding, components were integrated to form a larger theoretical arrangement and eventually the main categories. Contextual factors (substrate and effective Factors on strategies), finally, by performing selective coding, the research theory about identifying the factors influencing the promoting sports participation among students with intellectual disabilities has been narrated. To evaluate the validity of this research, the final report of the process of data analysis and the resulting categories was transferred to the interviewees after being implemented by the researcher to confirm the validity of the researcher's perceptions. The coding process was also reviewed by three experts who were not members of the interview group and their suggestions were used. In order to evaluate the reliability of the qualitative tool, the researcher conducted two experimental interviews and after analyzing the results and then comparing them with the research objectives and questions, modifications were made to the questions and prioritization of the questions to increase the accuracy of the research tool. In the meantime, the Strauss and Corbin process of qualitative research [7] has been depicted in Figure 1.

Results

The demographic characteristics and frequency distribution of experts, elites, and stakeholders of the near and far environment of the student sports field of the present study have been presented in Table 1. As the table shows, the total number of interviewees has been 20 people all of whom are college-educated and most have more than 10 years of administrative experience. Based on the findings of Table 2 and using the semi-structured interview method, the information obtained from the views and opinions of the experts were summarized as the intended meanings of the research. The practical concepts were collected as open codes and after open coding, to identify the similarities and differences in the listing of the extracted content from the interviews, the axial coding process was used and the axial codes were selected by integrating some of the concepts and codes of the previous step. In the final coding step, the axial codes in the previous step were integrated in terms of integrity and holism, comprehensiveness and applicability of each

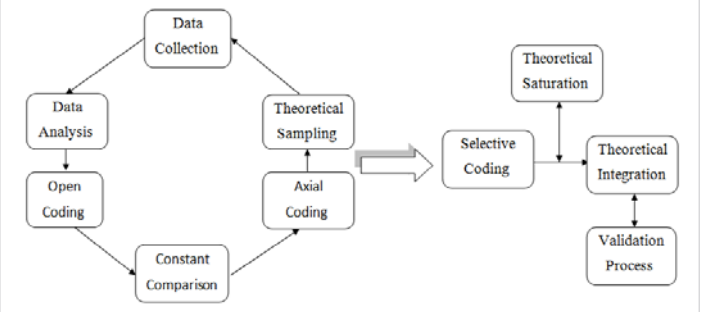

Figure 1: Steps of grounded theory based on Strauss. Source: Based on Strauss ad Corbin [6].

Table 1: Demographic characteristics and frequency distribution of interviewees.

Index	Age			Degree of Education		Administrative, Educational Background		
	30-40	41-50	51-60	Master's Degree	Ph.D.	1-10	11-20	20-30
Frequency	4	10	6	8	12	6	7	7
Frequency Percentage	20	50	30	40	60	30	35	35
Cumulative Frequency Percentage	20	70	100	40	100	30	65	100

Table 2: Codes obtained from qualitative analysis of data in open, axial, and selective coding.

Open coding (concepts)	Axial Coding (Components)	Selective coding (Categories)
Utilizing simplified instructional methods to teach motor and physical concepts. Applying step-by-step and repetitive teaching techniques. Incorporating purposeful games to enhance motor skill development. Emphasizing the improvement of balance, coordination, and muscular control. Considering individual differences in learning abilities and physical performance. Using visual aids and pictorial cues to enhance comprehension of instructions. Conducting ongoing assessments aligned with students' motor and cognitive progress.	Adaptive Instruction of Motor Skills	Promoting Sports Participation among Students with Intellectual Disabilities
Promoting public awareness of the motor abilities of children with intellectual disabilities. Showcasing successful role models among children with special needs who are active in sports. Utilizing media to shift public perceptions toward inclusive sports participation. Educating parents on the physical and psychological benefits of sports for their children. Launching awareness campaigns to highlight the role of sports in improving the performance of children with intellectual disabilities. Sharing inspirational stories from families and children who have succeeded in sports. Encouraging the gradual inclusion of children with intellectual disabilities in peer sports groups.	Creating a Social Culture for the Acceptance of Sports Participation	
Establishing specialized sports halls for students with special needs. Standardizing existing physical activity spaces to accommodate children with intellectual disabilities. Providing specialized equipment tailored to the cognitive and physical abilities of these children. Introducing a variety of simple and low-risk tools to support motor skill development. Creating safe, enclosed outdoor areas for play and motor skill practice. Designing simple, educational tools with attractive colors to facilitate a better understanding of sports concepts. Allocating designated government funding for sports programs for children with special needs.	Development of Infrastructure and Adaptive Sports Equipment for Children with Intellectual Disabilities	
Using motion-based video games to stimulate physical activity Leveraging educational sports apps to teach fundamental motor skills Enhancing motivation through interactive and digital equipment (smart balls, illuminated flooring) Applying virtual reality (VR) to simulate safe and controlled sports environments Employing simple and intuitive software for planning training programs tailored to cognitive abilities Improving students' attention and focus through digital audio-visual stimuli Establishing appropriate infrastructure in schools to support the use of technological tools	Utilizing Technology in Physical Education for Students with Intellectual Disabilities	

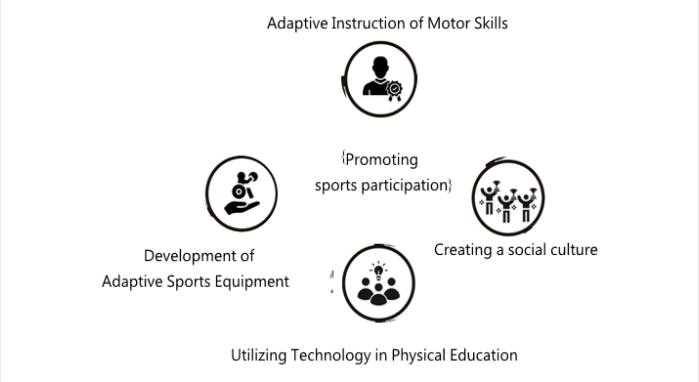

Figure 2: Identifying Underlying Factors for Promoting Sports Participation among Students with Intellectual Disabilities.

concept, in terms of semantic and content relationship, and then selectively extracted to complete the three-part coding process. At the end of this step, the following chart was drawn as the underlying factors for promoting sports participation among students with intellectual disabilities (Figure 2).

Discussion and conclusion

In the present study, after completing the studies, interviews, and coding, the underlying factors of promoting sports participation among students with intellectual disabilities were identified and presented. Generally, contextual factors such as adaptive instruction of motor skills, creating a social culture of infrastructure, and adaptive sports equipment utilizing technology, influence strategies and provide the basis for attraction and development of participation among students with intellectual disabilities. Based on the results, one of the most important underlying factors is adaptive instruction of motor skills including utilizing simplified instructional methods to teach motor and physical concepts and Incorporating purposeful games to enhance motor skill development. Accordingly structured physical activities that emphasize balance, coordination, and strength have been shown to improve overall motor performance and promote independence in daily activities among children with disabilities [8]. Also, another identified factor is such as creating a social culture by Promoting public awareness of the motor abilities of children with intellectual disabilities. Studies have shown that inclusive sports environments help reduce stigma and foster a sense of belonging and self-esteem in children with disabilities [9]. Another factor was the development of infrastructure and adaptive sports equipment for children with intellectual disabilities by establishing specialized sports halls and providing specialized equipment tailored to the cognitive and physical abilities of these children. Moreover, initiatives like the FIT Sport Design Awards have recognized innovative designs in adaptive sports equipment, highlighting the importance of inclusive design in promoting physical activity among children with disabilities [10]. Also utilizing technology in physical education for students with intellectual disabilities by using motion-based video games to stimulate physical activity and leveraging educational sports apps to teach these children fundamental motor skills. For instance, Choi, et al. [11] demonstrated that active video games significantly improved balance and coordination in children

with developmental disabilities. In the end, the present study can lead to positive results and contribute to the development and promotion of sports participation among students with intellectual disabilities in the economic, cultural, social, health, and education fields and promote community health and having a healthy and dynamic lifestyle, promoting sports culture, attracting financial resources and addressing some of the financial and infrastructure and technology problems in students with intellectual disabilities field.

References

1. Izadi Samad, AbediniBeltrak Moment, MansouriSirous. Content analysis of physical education in elementary education costs. J Sport Manag Mot Behav. 2011;7(13):27–40.
2. Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. 2nd ed. Washington, DC: US Government Printing Office; 2000. Available from: https://www.cdc.gov/nchs/data/hpdata2010/hp2010_general_data_issues.pdf
3. Maicas-Pérez L, Hernández-Lougedo J, Maté-Muñoz JL, Villagra-Astudillo A, García-Fernández P, Suárez-Villadat B, et al. Effect of physical activity interventions on health parameters in children and adolescents with intellectual disabilities: A systematic review. Healthcare (Basel). 2024;12(23):2434. https://doi.org/10.3390/healthcare12232434
4. Wang J, Zhang Y, Li H. Effectiveness of school-based physical activity programs in children with intellectual disabilities. Front Psychol. 2024;15:1431890.
5. Gallotta MC, Franciosi E, Giorgi M, Guidetti L, Cerbara E, Pes G, et al. Benefits of inclusive sport training on fitness and health of athletes with intellectual disabilities. Sci Rep. 2024;14:69334. https://doi.org/10.1038/s41598-024-69334-2
6. Li X, Zhang Y, Wang L. Benefits of inclusive sport training on fitness and health of athletes with intellectual disabilities. Sci Rep. 2024;14(1):12345.
7. Strauss A, Corbin J. Basics of qualitative research: Techniques and procedures for developing grounded theory. 3rd ed. Los Angeles: Sage Publications; 2008. Available from: https://research-proposal.ir/wp-content/uploads/2019/06/Basics_of_Qualitative_Research__Techniques_and_Procedures_for_Developing_Grounded_Theory.pdf
8. Faigenbaum AD, Myer GD, Fernandez I. Physical activity and motor skill development in children with disabilities. Pediatr Exerc Sci. 2013;25(3):407–19.
9. Shields N, Synnot A. Perceived barriers and facilitators to participation in physical activity for children with disability: a systematic review. Br J Sports Med. 2016;50(21):1327–33. https://doi.org/10.1136/bjsports-2011-090236
10. FIT Sport Design Awards. FIT Sport Design Awards Winners Shaping the Future of Inclusive Parasports. 2023. Available from: https://fitdesignawards.com/fit-sport-design-awards-winners-shaping-the-future-of-inclusive-parasports/
11. Choi J, Lee M, Lee SA. The effects of exergaming on balance and gross motor function in children with developmental disabilities: A randomized controlled trial. Int J Environ Res Public Health. 2021;18(3):1202.