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Educational and Social Integration of People with Special Needs After Doing Therapeutic Exercises

Terapötik Egzersizler Sonrasında Özel Gereksinimli Bireylerin Eğitsel ve Sosyal Entegrasyonu

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Abstract

This study aimed to examine the relationship between sport participation and the resolution of psychological and social problems among people with special needs, specifically individuals with physical (motor) disabilities. It was hypothesized that sport plays an effective and positive role in addressing some of these problems. The descriptive method was employed, and the research sample consisted of 15 randomly selected educators working with individuals with physical disabilities in the province of Setif, Algeria. A questionnaire was used to identify the extent of the effectiveness of sport in the psychological and social improvement of this group, and the responses were analyzed with percentages and the chi-square (χ^2) test. The results showed that the

Özet

Bu çalışma, spor katılımı ile özel gereksinimli bireylerin —özellikle fiziksel (motor) engelli bireylerin— psikolojik ve sosyal sorunlarının çözümü arasındaki ilişkiyi incelemeyi amaçlamıştır. Araştırmada sporun bu sorunların bir bölümünün ele alınmasında etkili ve olumlu bir rol oynadığı varsayılmıştır. Betimsel yöntemin kullanıldığı çalışmanın örneklemini, Cezayir'in Setif vilayetinde fiziksel engelli bireylerle çalışan ve seçkisiz olarak belirlenen 15 eğitimci oluşturmuştur. Sporun bu grubun psikolojik ve sosyal gelişimindeki etkililik düzeyini belirlemek amacıyla anket uygulanmış; yanıtlar yüzdelere ve ki-kare (χ^2) testi ile analiz edilmiştir. Bulgular, eğitimcilerin büyük çoğunluğunun terapötik ve uyarlanmış fiziksel egzersizin fiziksel engelli bireylerin

great majority of educators agree that practicing therapeutic and adapted physical exercise raises the morale of individuals with physical disabilities (86.66%; $\chi^2 = 8.06 > 3.84$; $p < .05$), increases their courage, self-confidence, and psychological well-being, reduces aggression, fear, shyness, and depressive affect, alleviates social isolation, and facilitates integration into the group and the development of a spirit of cooperation. These findings are consistent with international evidence that physical activity participation yields substantial psychosocial benefits for people with disabilities and constitutes a key vehicle of social inclusion. The study recommends providing the necessary adapted equipment, integrating individuals with disabilities into community activities, and raising family and public awareness of the importance of adapted sport.

Keywords: Sport; therapeutic exercise; psychological and social problems; people with special needs; physical disability; social inclusion.

moralini yükselttiği (%86.66; $\chi^2 = 8.06 > 3.84$; $p < .05$), cesaretlerini, öz-güvenlerini ve psikolojik iyi oluşlarını artırdığı, saldırganlık, korku, utangaçlık ve depresif duygulanımı azalttığı, sosyal izolasyonu hafiflettiği ve gruba entegrasyon ile işbirliği ruhunun gelişimini kolaylaştırdığı görüşünde birleştiğini göstermiştir. Bu bulgular, fiziksel aktivite katılımının engelli bireyler için önemli psikososyal yararlar sağladığını ve sosyal içermenin temel araçlarından biri olduğunu ortaya koyan uluslararası kanıtlarla tutarlıdır. Çalışma; gerekli uyarlanmış araç-gereçlerin sağlanmasını, engelli bireylerin toplumsal etkinliklere entegre edilmesini ve uyarlanmış sporun önemli konusunda aile ve toplum farkındalığının artırılmasını önermektedir.

Anahtar Kelimeler: Spor; terapötik egzersiz; psikolojik ve sosyal sorunlar; özel gereksinimli bireyler; fiziksel engel; sosyal içirme.

1. Introduction and Research Problem

Physical activity is among the most significant human activities, and it has historically taken collective forms such as play, games, physical exercises, dance, and physical and sports training. The benefits resulting from practicing these forms of activity are not limited to the physical and health dimension: the positive effects extend to the psychological, social, mental and cognitive, motor and skill, and collective and artistic aspects. These are all dimensions that, taken together, form the individual's personality in a comprehensive and integrated manner and represent an awareness of the importance of organizing such activities within educational and cultural frameworks. Perhaps the oldest text pointing to the importance of educational physical activity is Schiller's observation, in his treatise on the aesthetics of education, that the human being is fully human only when at play. Educational philosophies have agreed that sports activity plays an important and distinct role in developing the individual's personality, through its contribution to improving health and physical capacity and to developing the social spirit and communication with others. Accordingly, these goals have been planted in three basic areas: the sensory-motor area, the social-emotional area, and the cognitive area (Khouli, 1996).

Sport for people with disabilities is a purposeful educational process designed to identify problems, help solve them, and provide services in the psychological, motor, and social domains. The latter include motor aids, individualized educational programs, training, and instruction for this group, so as to help them develop properly, maintain sound mental and physical health, and reach the fullest extent of their abilities and potential in the pursuit of a better life. These services must be provided by qualified individuals specialized in this type of adapted sport, or by individuals with relevant experience in the sports field. The adaptation of the person with a disability to contemporary life, and the sense of inadequacy stemming from the idea that a person's environment is the measure of their thoughts, feelings, and temperament, are of crucial importance: a positive environment creates a favorable impression that reflects optimism, initiative, and self-confidence, while an impoverished environment creates a negative impression characterized by low self-esteem, a weakened personality, and a persistently fatigued appearance (Ghassan, 1990).

The global significance of this field is now firmly established. Approximately 1.5 billion people live with some form of disability, and their right to participate on an equal basis with others in recreational, leisure, and sporting activities is guaranteed by Article 30 of the United Nations Convention on the Rights of Persons with Disabilities (United Nations, 2006; World Health Organization, 2011). Yet people living with disabilities remain considerably less likely than others to meet physical activity guidelines, despite deriving comparable or greater health benefits from participation (Martin Ginis et al., 2021; Bull et al., 2020). Physical inactivity in this population is therefore simultaneously a public health problem and a problem of social inclusion (Rimmer & Marques, 2012), and adapted physical activity has developed as a cross-disciplinary field precisely in order to address it (Hutzler & Sherrill, 2007; Sherrill, 2004).

Therefore, caring for and attending to individuals with special needs is a vital social and humanitarian necessity. Neglecting this group leads to further problems that exacerbate their difficulties, and children with special needs require a specialized approach to interaction and specific methods for their upbringing and support (Youssef Bashir, 2004). The physically disabled are among the groups most in need of assistance in meeting their needs, particularly at the social level, and this assistance should focus on their social integration, like that of other individuals, rather than leaving them a passive and unproductive presence. Since the defining characteristics of an individual's personality are shaped through interaction with others, the self-image a person with a disability forms depends largely on the image they believe others hold of them, and their emotional and behavioral responses are consequently influenced by their relationships with those around them.

For these reasons, a person with a disability who joins clubs and participates in their programs and activities, including physical and sporting activities, contributes to their own mental well-being and sense of freedom. Such participation also provides opportunities to overcome and adapt to the disability, thereby increasing interaction with society; it is a means of engaging with other individuals as far as possible and dealing with them in a normal and positive way, enabling integration and enhancing social development. In addition, physical and sporting activity is a successful way for a person with a disability to relax and to overcome the monotony of life after injury, increasing energy and promoting the relaxation that positively affects overall well-being. Physical activity and sport play a vital role in social inclusion: they help individuals with disabilities define the boundaries of their physical appearance and teach patience, composure, stability, and self-control. Qualitative research syntheses confirm that for people with physical disabilities, leisure-time physical activity yields benefits spanning physical, psychological, and social domains, while its absence reinforces isolation (Williams, Smith, & Papathomas, 2014; Martin Ginis, Ma, Latimer-Cheung, & Rimmer, 2016). From this perspective, the crucial role of physical

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activity and sport as a fundamental factor in the social and psychological integration of people with physical disabilities becomes evident, and leads to the following question: Does sport play a role in addressing some of the psychological and social problems faced by people with physical disabilities?

Two sub-questions follow. Does sport play a role in addressing some of the psychological problems faced by people with physical disabilities? Does sport play a role in addressing some of the social problems faced by people with physical disabilities?

2. Theoretical Framework

2.1. Models of Disability. Contemporary understanding of disability has been reshaped by the shift from a medical to a social and, subsequently, to a biopsychosocial model. The medical model located disability in the impairment itself and framed intervention as the correction or compensation of individual deficit. The social model, by contrast, distinguishes impairment from disability and locates the latter in the barriers — physical, institutional, and attitudinal — that society erects around impairment (Oliver, 1996; Shakespeare, 2014). The International Classification of Functioning, Disability and Health integrates these perspectives, describing functioning as the outcome of interaction between health conditions and contextual factors, both environmental and personal (World Health Organization, 2001). This framework is directly relevant to the present study, because it implies that the psychological and social problems experienced by people with physical disabilities are not simply consequences of the impairment but products of an interaction that adapted sport can modify — by changing the individual's capabilities and self-perception, and simultaneously by changing the attitudes of those who observe them participating.

2.2. Adapted Physical Activity as a Field. Adapted physical activity is defined internationally as a cross-disciplinary body of knowledge and a service-delivery profession directed toward the identification and solution of psychomotor problems throughout the lifespan, with advocacy and self-determination as its guiding values (Hutzler & Sherrill, 2007; Sherrill, 2004). Two features of this definition matter here. First, its scope is not remedial alone but developmental and social: the aim is participation, not merely improved function. Second, self-determination is constitutive rather than incidental, which aligns the field with motivational theory holding that environments supporting autonomy, competence, and relatedness produce more durable engagement and greater well-being than environments that provide activity without agency (Ryan & Deci, 2000).

2.3. Psychosocial Mechanisms. Several mechanisms plausibly connect participation in adapted sport with psychological and social improvement. Mastery experiences in a physically demanding domain constitute the strongest source of self-efficacy beliefs, and these beliefs generalize beyond the specific activity to influence effort and persistence in other domains of life (Bandura, 1997). Participation restores a sense of bodily capability that injury or congenital impairment may have undermined, countering the identification of the self with limitation. Group activity provides structured, repeated contact with peers around a shared task, which is among the most reliable conditions for the formation of friendship and for the reduction of prejudice. Finally, visible competent performance alters the perceptions of observers, so that the athlete with a disability becomes, for family and community, evidence against the assumption of incapacity — a mechanism documented in the Paralympic literature (Blauwet & Willick, 2012).

2.4. Barriers and Facilitators of Participation. Reviews of reviews identify consistent personal, social, and environmental factors shaping physical activity participation among children and adults with physical disabilities (Martin Ginis et al., 2016). Systematic reviews focused on children show that family and peer support, accessible and appropriately adapted programs, skilled and welcoming instructors, and reliable transport facilitate participation, whereas negative attitudes, lack of adapted equipment, cost, inaccessible facilities, and transport difficulties constitute the principal barriers (Shields, Synnot, & Barr, 2012; Shields & Synnot, 2016). Studies of adults with physical disabilities report a comparable profile, with the additional finding that inadequate professional knowledge among instructors is a recurrent obstacle (Jaarsma, Dijkstra, Geertzen, & Dekker, 2014). Students with disabilities themselves report that appropriately adapted physical education is central to their feelings of belonging and competence, while poorly adapted provision produces exclusion within nominal inclusion (Haegele & Sutherland, 2015). These findings converge on the educator as a decisive variable, which is the rationale for surveying educators in the present study.

2.5. Sport, Rehabilitation, and Quality of Life. A further strand of research examines the relationship between adapted sport participation and quality of life. Studies of adaptive sport programmes report improvements in perceived physical function, in mood, and in domains of quality of life that extend well beyond the physical, including employment status and community participation, with the strongest effects observed among individuals who participate regularly rather than occasionally. The Paralympic literature adds a further dimension by documenting how elite disability sport functions simultaneously as health promotion, as an assertion of rights, and as a vehicle of social integration, so that the individual and the collective effects reinforce one another (Blauwet & Willick, 2012). For the present study, this literature establishes two points. First, the outcomes reported by educators — morale, confidence, reduced isolation, cooperation — are not incidental by-products of exercise but the very outcomes that the international evidence identifies as central. Second, the frequency and continuity of participation matter: benefits accrue to sustained involvement, which makes the availability of ongoing programmes, rather than isolated events, the practical criterion of adequate provision.

3. Previous and Similar Studies

3.1. Khodja Adel (Master's thesis, Institute of Physical Education and Sports, University of Algiers). Entitled "The Impact of Physical Activity and Sports on Achieving Psychosocial Adjustment for Adolescents with Physical Disabilities," this study aimed to understand the reality of physical activity and sport within centers for individuals with physical disabilities, and to demonstrate that the participation of adolescents with physical disabilities in an adapted physical activity and sports program contributes to their psychosocial adjustment within the center. Participation was integrated within the limits of participants' abilities and potential so as to prevent frustration arising from failure to achieve the required performance. The study further aimed to understand the social structure and the patterns of social relationships among adolescents with disabilities within the functional rehabilitation center. The researcher employed a descriptive and experimental approach, using a questionnaire administered to school administrators, participant observation, and a sociometric test with 20 children. The study concluded that adolescents with physical disabilities tend to gravitate towards group membership at this stage of development and exhibit an increasing need for close friendships with peers. The researcher

additionally found that physical activity can change societal perceptions of individuals with disabilities, demonstrating that they are not incapable and can perform many of the same functions and tasks as able-bodied individuals.

3.2. Amarna Masoud (1997, Master's thesis, Institute of Physical Education and Sports, University of Algiers). Entitled "Legislation and People with Disabilities," this study aimed to identify the legal gaps in the legislation then in force and to develop solutions for addressing them; to identify the discrepancy between legislation as written and its practical application; and to establish the importance of physical activity and sport for individuals with disabilities. The researcher employed a descriptive approach relying on questionnaires. The first questionnaire was administered to 20 disabled individuals practicing sport at specialized centers and 60 individuals from clubs and national teams; the second was administered to 50 administrators of sport for people with disabilities. The researcher concluded that physical activity and sport are of paramount importance in the lives of people with disabilities: through physical activity they can overcome psychological complexes and alleviate pain, and it is a crucial factor in their integration into society. By engaging in physical activity and sport they liberate themselves from dependence on others and regain self-confidence; moreover, they can transform a significant aspect of society, namely the negative attitudes held towards them, into positive perceptions. On the other hand, the study established the modest status accorded to disability sport in the sports legislation then in force in Algeria, namely Order No. 95-09 of 25 February 1995 relating to the guidance, organization, and development of the national system of physical and sports activity, noting the marginalization of this type of sport and the failure to provide what would bring people with disabilities out of the isolation they experience and help them overcome their psychological, social, and physical difficulties.

3.3. Convergence with International Research. These national findings anticipate what the international literature has since established systematically. Global analyses confirm that participation in physical activity among people living with disabilities delivers substantial physical, psychological, and social benefits, and that participation rates nonetheless remain markedly below those of the general population (Martin Ginis et al., 2021). Reviews of the determinants of participation identify precisely the personal, social, and environmental factors documented in the Algerian studies (Martin Ginis et al., 2016; Shields et al., 2012; Shields & Synnot, 2016), and qualitative meta-syntheses document the gains in confidence, mood, and social connectedness that the Algerian researchers observed (Williams et al., 2014). What the international literature adds is a policy framework: the recognition of participation as a right (United Nations, 2006), the incorporation of specific recommendations for people living with disability into global physical activity guidelines (Bull et al., 2020), and the identification of inactivity in this population as a public health priority (Rimmer & Marques, 2012).

4. Hypotheses, Significance, and Objectives

4.1. Hypotheses. The general hypothesis stated that sport plays an effective and positive role in addressing some psychological and social problems among people with physical disabilities. Two sub-hypotheses were formulated: sport plays an effective role in changing the behavior of individuals with special needs, specifically those with physical disabilities; and sport plays a positive role in addressing some psychological and social problems among people with special needs, specifically those with physical disabilities.

4.2. Significance. The study highlights the role of sport in reducing psychological and social problems among people with special needs; introduces the concept of sport and its impact on these problems for people with physical disabilities specifically; helps demonstrate the importance of sport in addressing the psychological and social problems of this group, so that the findings may guide educators in fulfilling their role and achieving the healthy development of children; and derives further significance from being conducted in the Algerian context, which lacks such studies, and among people with physical disabilities, a group that warrants considerable societal attention.

4.3. Objectives. The objectives were to understand the importance of sport for individuals with physical disabilities; to raise awareness among individuals with physical disabilities of their role in society as active and contributing members; to increase community support for their participation in sport; to highlight the importance of sport in comprehensive rehabilitation and in the development of essential cognitive skills, concepts, and psychosocial competencies; to gain a deeper understanding of the changes that occur in individuals with disabilities during and after engaging in sport; to use sport as a tool for guiding and regulating the behavior of athletes with disabilities; and to recognize the seriousness of psychological and behavioral disorders, including aggression, among individuals with disabilities.

5. Definition of the Study's Concepts and Terminology

5.1. The Disabled Person with Special Needs. Terminologically, a disabled person is one whose general culture and cultural development should be prioritized in the Arab world: an individual who suffers from a disability or impairment limiting their activity and effectiveness, and hindering them in one way or another from performing the tasks of an able-bodied person. Since these disabilities are not uniform but diverse, it is difficult for researchers to find a definition applying to all disabled individuals regardless of category or degree of disability; this difficulty necessitates defining each category specifically in order to ensure accuracy (Al-Shabani, 1989). Statistically, a disabled person is one who suffers from a total or partial disability, congenital or acquired, that is stable in any of the senses or in physical, psychological, or mental abilities, to an extent that limits their ability to meet the requirements of a normal life under the same circumstances as their non-disabled peers.

5.2. Motor Disability. Technically, motor disability denotes a deficiency in the function of body organs, whether related to movement, such as the limbs, or to vital organs, such as the heart; it is a permanent condition affecting the individual's ability to lead a normal life (Hanna et al., 1997). Fahmy defines motor disability as anything related to a deficiency in the functions of body organs, whether related to movement or to organs connected with biological life processes such as the heart and lungs. Motor disability does not refer to temporary illnesses that do not result in a real impairment of an individual's ability to perform their social role, but rather to a permanent physical condition that significantly affects the ability to lead a normal life, whether completely or partially (Fahmy, 1983). Operationally, it refers to cases of individuals who suffer some degree of impairment in motor ability or activity, such that this impairment affects aspects of their mental, social, and emotional development, necessitating special education.

5.3. Psychological Problems. Technically, psychological problems are defined as difficulties in a person's relationships with others, in their perception of the world around them, or in their attitudes toward themselves. These problems may be characterized by feelings of anxiety or tension, dissatisfaction with one's own behavior, excessive focus on the problem itself, and inefficiency in achieving desired goals. They are further described as a group of problems limiting a disabled person's capacity to participate actively in school activities, both inside and outside the classroom, and hindering positive social interaction, with consequent social repercussions. Operationally, these are problems related to the psyche and its emotions, whose effects may be reflected in the physically disabled individual.

5.4. Social Problems. Technically, a social problem is a situation or condition in society that is considered serious and undesirable by society as a whole; it focuses on social values and is believed to be something that can be improved or resolved. The concept has nonetheless been subject to clear differences in viewpoint and intellectual perspective. Richard Fuller holds that a social problem is a condition affecting a sufficient number of people in an undesirable way, about which something must be done through social action (Qabawi, 1993). Operationally, these are problems related to society whose effects may be reflected on the physically disabled individual.

6. Method

6.1. Exploratory Study. An exploratory study was conducted to ensure the smooth progress of the research. An initial interview was held with the educators, after which the questionnaire was distributed to them. This was considered a fundamental technique in investigating the facts required by field research, through which the researcher can identify the way forward. The purpose of the exploratory study was to determine the research sample and to establish how the sample understood the questions in the questionnaire.

6.2. Areas of the Study. Three areas were defined: the temporal, the spatial, and the human. The temporal area extended over the 2021–2022 academic year: the study of the topic began at the start of the academic year, during which theoretical scientific material relevant to the topic was collected in its various forms; the development of questionnaire items began at the beginning of December, and the items were presented to a group of professors for review; distribution of the questionnaire began on 2 February 2022. The spatial area was the field setting in which educators of individuals with physical disabilities work. The human area was defined as 15 educators.

6.3. Methodology Used. Given the nature of the topic under study — the role of sport in addressing the psychological and social problems of people with special needs, specifically those with physical disabilities — the descriptive method was adopted. This method is based on studying, analyzing, and interpreting the phenomenon by identifying its characteristics and dimensions. The descriptive approach is defined as an analytical method centered on sufficient and accurate information about a specific phenomenon or topic, in order to obtain scientific results interpreted objectively and in accordance with the actual data of the phenomenon (Obaidat, Abu Nassar, & Mubaideen, 1999).

6.4. Research Population and Sample. The population on which the study was conducted comprised educators of individuals with physical disabilities. This population was selected randomly, since random selection provides equal opportunities for all educators regardless of their levels and characteristics and constitutes the simplest sampling method. The sample is one of the most important stages in scientific research and is defined as a part of the whole, selected in a specific way in order to study and verify the phenomenon; it may also be defined as a group of individuals chosen by the researcher from a large population in order to study the phenomenon within it. The research sample consisted of 15 educators in the province of Setif.

6.5. Study Instruments. Questionnaires are frequently used in descriptive methodology, and given the nature of this study, a single questionnaire was designed for distribution to the sample in order to identify the trends and characteristics that reveal the role and the individual differences of the specialized educators. The questionnaire is a means of obtaining answers to a number of written questions on a form designed for that purpose and completed by the respondent. The items addressed two thematic domains corresponding to the sub-hypotheses: the psychological effects of sport participation (morale, courage, self-confidence, aggression, fear and anxiety, shyness, depressive affect) and its social effects (isolation, group integration, cooperation, affection and interaction). Items were reviewed by a panel of professors before distribution in order to establish content validity.

6.6. Statistical Methods. Percentages were calculated for each item, and the chi-square (χ^2) test was applied to determine the statistical significance of the distribution of responses, at one degree of freedom and the .05 significance level, with the tabulated critical value of 3.84 used as the criterion.

7. Presentation, Analysis, and Discussion of Results

7.1. Illustrative Item. Question 1 asked whether exercise improves the morale of people with physical disabilities. The objective of the question was to determine whether exercise contributes to raising the morale of physically disabled individuals, morale being taken here as an accessible indicator of the broader psychological dimension addressed by the first sub-hypothesis.

Table 1. Contribution of exercise to improving the morale of people with physical disabilities (Question 1)

Answer	f	%	χ^2 (calculated)	df	χ^2 (tabulated)	Sig. level	Conclusion
Yes	13	86.66%	8.06	1	3.84	0.05	Significant
No	2	13.34%					

Note. The calculated χ^2 value exceeds the tabulated value; the difference is statistically significant at $p < .05$.

Analysis of the results in Table 1 reveals that 86.66% of educators responded that sport contributes to raising the morale of physically disabled individuals. Conversely, 13.34% responded negatively, indicating that in their view sport does not contribute to raising morale. Statistical analysis using the chi-square test yielded a calculated value of 8.06, which is greater than the tabulated value of 3.84 at one degree of freedom and the .05 significance level. There are therefore statistically significant differences between the response categories, and the distribution cannot be attributed to chance.

7.2. Aggregate Findings. Applying the same analytical procedure to the remaining items yielded a consistent pattern across both thematic domains, summarized in Table 2.

Table 2. *Summary of educators' responses across the two thematic domains*

Domain	Effect reported by the majority of educators
Psychological	Raises morale and self-confidence
	Increases courage and audacity
	Contributes to psychological well-being
	Reduces aggression
	Alleviates fear and anxiety
	Alleviates shyness
Social	Helps combat depression and sadness
	Reduces social isolation
	Facilitates integration into the group
	Fosters a spirit of cooperation and teamwork
	Promotes affection and interaction among people with disabilities

As Table 2 shows, the majority of educators agreed that practicing sport increases students' courage and audacity; contributes to psychological well-being; reduces aggression; alleviates fear, anxiety, and shyness; helps combat depression and sadness; boosts morale and self-confidence; reduces social isolation; helps individuals integrate into groups; fosters a spirit of cooperation and teamwork; and promotes affection and interaction among people with disabilities. The convergence of responses across items addressing distinct outcomes is itself informative: it indicates that educators do not perceive sport as acting on one narrow dimension but as producing a broad shift in the participant's relation to self and to others, which is consistent with the mechanisms outlined in Section 2.3.

8. Discussion

It was hypothesized that sport plays a role in addressing some psychological and social problems among people with physical disabilities, and the results reported above confirm this hypothesis at an acceptable level. The educators' responses demonstrate the effectiveness of sport in changing behavior and in resolving psychological problems — fear, shyness, depressive affect, low self-confidence, aggression — and social problems — isolation, weak group integration, limited cooperation. The results obtained in this study are consistent with those of the previous and similar studies reviewed in Section 3, in terms of both their objectives and their findings, so that practicing sport emerges as being of great importance in addressing the psychological and social problems of people with special needs.

8.1. Relation to the International Evidence Base. More broadly, the findings align with the international evidence. Global syntheses show that physical activity participation among people living with disabilities yields meaningful physical, psychological, and social benefits and constitutes a key vehicle of community participation and inclusion (Martin Ginis et al., 2021; Martin Ginis et al., 2016). Qualitative meta-syntheses similarly document gains in confidence, mood, and social connectedness from leisure-time physical activity in people with physical disabilities, together with the isolating consequences of its absence (Williams et al., 2014). Studies of young people emphasize that supportive instructors and peers — precisely the educators surveyed here — are decisive facilitators of participation (Shields et al., 2012; Shields & Synnot, 2016; Jaarsma et al., 2014), and research on students' own perspectives establishes that appropriately adapted physical education is central to their sense of belonging and competence (Haegele & Sutherland, 2015). The World Health Organization's current guidelines accordingly include specific recommendations for people living with disability, underscoring that the benefits of regular activity outweigh the risks for this group (Bull et al., 2020).

8.2. Theoretical Interpretation. The pattern of results is intelligible in terms of the framework set out in Section 2. Within a biopsychosocial understanding of disability, the improvements reported by educators are not corrections of impairment but modifications of the interaction between the individual and the environment (World Health Organization, 2001; Oliver, 1996). Mastery experiences in adapted sport generate self-efficacy beliefs that generalize beyond the activity (Bandura, 1997); group participation supplies the structured, repeated, cooperative peer contact under which social integration reliably develops; and the visible competence of the participant modifies the expectations of families and communities, which is the mechanism by which sport changes attitudes as well as individuals (Blauwet & Willick, 2012). The reported reductions in aggression and depressive affect are consistent with the well-documented mood benefits of regular activity, while the reported increases in courage and self-confidence correspond to the autonomy- and competence-supportive character of well-designed adapted programs (Ryan & Deci, 2000; Sherrill, 2004).

8.3. Practical Significance. Two practical consequences follow. First, since educators are identified in both this study and the international literature as decisive facilitators, their preparation is the most efficient point of intervention: an educator who knows how to adapt a task, how to construct achievable challenge, and how to manage a mixed-ability group converts available facilities into effective provision, whereas an unprepared educator does not, however good the facilities. Second, since the reported benefits span psychological and social domains simultaneously, adapted sport should be positioned within rehabilitation and educational planning as an integrated service rather than as recreation appended to therapy — which is precisely how adapted physical activity defines itself as a field (Hutzler & Sherrill, 2007).

8.4. Limitations. The study relied on the perceptions of a small sample of educators (n = 15) in a single province, without direct measurement of psychological and social outcomes among the individuals with disabilities themselves; educators' reports may be influenced by their professional commitment to the value of the activity they deliver. The instrument was constructed for the purpose and its reliability was not formally established. The cross-sectional questionnaire design precludes causal inference, and items with dichotomous response formats capture the direction of opinion but not its intensity. Neither the type nor the severity of the participants' disabilities, nor the nature, frequency, or duration of the exercise programs to which the educators referred, was documented, so the findings cannot be attributed to any specific form of provision. Future research should include larger multi-site samples, standardized psychosocial outcome measures administered to individuals with disabilities, documentation of program characteristics, and longitudinal or intervention designs evaluating structured therapeutic exercise programs.

8.5. Contribution to the Regional Literature. The study makes a specific contribution to the Algerian and wider Arab literature. Research on adapted physical activity has developed largely in settings where legislative frameworks, funded programs, and trained specialists are already in place, and where the research question is consequently how to optimize provision rather than whether provision exists. In the Algerian context the prior question remains live: Amarna Masoud's thesis documented the marginal position of disability sport within the legislation of the mid-1990s, and the intervening decades have not fully closed the gap between formal recognition and practical availability. Surveying the educators who work directly with individuals with physical disabilities therefore establishes something that international data cannot supply: what those closest to the practice believe it accomplishes, and by implication what they would be prepared to sustain if the material conditions were improved. The strong convergence of their responses across psychological and social outcomes indicates that professional conviction is not the limiting factor; equipment, facilities, transport, and specialist preparation are. This is a more actionable conclusion than a general call for greater attention to disability sport, because it identifies where the constraint actually lies.

Table 3. Recommendations by level and the constraint each addresses

Level	Recommendation	Constraint addressed
Facilities	Provide adapted equipment and accessible practice spaces	Lack of adapted equipment; inaccessible facilities
Personnel	Strengthen the preparation of specialised educators	Insufficient professional knowledge among instructors
Family	Educate parents on the needs of people with disabilities and the value of sport	Low family support; protective restriction of participation
Community	Media programmes and specialist visits to raise awareness	Negative societal attitudes
Policy	Integrate adapted sport into rehabilitation and education planning	Treatment of adapted sport as recreation rather than service
Research	Measure outcomes with participants, not only with educators	Absence of direct psychosocial outcome data

9. Conclusion and Recommendations

Based on the results obtained and the data collected, the findings of the statistical analysis of the questionnaire used in this study were acceptable and supportive of the research hypotheses. It is concluded that sport is of great importance to individuals with physical disabilities in addressing some psychological and social problems, in line with previous and similar studies in terms of their objectives and results. Educators consistently reported that participation raises morale and self-confidence, increases courage, reduces aggression, fear, shyness, and depressive affect, alleviates social isolation, and facilitates integration into the group and the development of cooperation.

In light of these conclusions, the following recommendations and suggestions are offered. The necessary equipment and sports supplies for people with disabilities should be provided in order to create a better environment and achieve the desired results. Systematic work should be undertaken to address the psychological and social problems of people with disabilities. Efforts should be made to integrate people with disabilities into various community activities so that they can play social roles contributing to the building of society. Public awareness should be raised through educational and guidance programs on television and radio, as well as through visits by specialists to the families of people with disabilities. Parents and the community should be educated about the specific needs of people with disabilities and about the importance of sport in improving their various psychomotor, psychological, and social aspects. Finally, the preparation of specialized educators should be strengthened, since the evidence assembled here and internationally identifies the educator as the decisive condition of effective provision.

Conflict of Interest

The authors declare that they have no conflict of interest.

Ethical Approval

The study was conducted in accordance with the ethical principles of the Declaration of Helsinki. Institutional permission was obtained from the relevant institutions in the province of Setif before data collection.

Informed Consent

Informed consent was obtained from all educators who participated in the study.

Data Availability Statement

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Author Contributions

M. Mohammadi designed the study and drafted the manuscript. S. Arezki and Y. Ait Tahar contributed to instrument development and data collection. A. Haddache and M. Bouhadj contributed to the statistical analyses. D. Dahmani, I. Hamani, and N. Mansouri contributed to the literature review, interpretation of results, and critical revision of the manuscript. All authors approved the final version of the manuscript.

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Declaration of Generative AI and AI-Assisted Technologies

The authors declare that no generative artificial intelligence (AI) or AI-assisted technologies were used in the design of the study, data collection, analyses, or interpretation of results of this manuscript.

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Genişletilmiş Özet

Giriş

Fiziksel aktivitenin yararları yalnızca bedensel ve sağlıkla ilgili boyutla sınırlı olmayıp psikolojik, sosyal, zihinsel-bilişsel, motor ve toplu-sanatsal alanlara da uzanmakta; bunlar bütünlüklü biçimde bireyin kişiliğini oluşturmaktadır. Engelli bireyler için spor; sorunları belirlemeyi, çözümüne yardımcı olmayı ve psikolojik, motor ve sosyal alanlarda hizmet sunmayı amaçlayan planlı bir eğitsel süreçtir. Bu hizmetlerin uyarlanmış spor alanında yetkin ve uzmanlaşmış kişilerce sunulması gerekmektedir. Yaklaşık 1,5 milyar insan bir tür engellilikle yaşamakta; Birleşmiş Milletler Engelli Hakları Sözleşmesi'nin 30. maddesi bu bireylerin rekreasyon, boş zaman ve spor etkinliklerine eşit koşullarda katılım hakkını güvence altına almaktadır. Buna karşılık engelli bireylerin fiziksel aktivite önerilerini karşılama olasılığı, katılımdan en az diğerleri kadar yarar görmelerine rağmen belirgin biçimde daha düşüktür. Bu durum aynı anda hem bir halk sağlığı hem de bir sosyal içerme sorunudur. Engellilik anlayışı tıbbi modelden sosyal ve ardından biyopsikososyal modele doğru dönüşmüş; İşlevsellik, Yetiyitimi ve Sağlığın Uluslararası Sınıflandırması işlevselliği sağlık durumu ile bağlamsal etkenler arasındaki etkileşimin sonucu olarak tanımlanmıştır. Bu çerçevede çalışma açısından doğrudan önem taşımaktadır; çünkü fiziksel engelli bireylerin yaşadığı psikolojik ve sosyal sorunların yalnızca yetersizliğin sonucu olmadığını, uyarlanmış sporun değiştirebileceği bir etkileşimin ürünü olduğunu ima etmektedir. Bu çalışmanın amacı, spor katılımının fiziksel engelli bireylerin psikolojik ve sosyal sorunlarının çözümündeki rolünü eğitimci görüşleri üzerinden incelemektir.

Yöntem

Araştırmada betimsel yöntem kullanılmıştır. Öncelikle keşif amaçlı bir ön çalışma yürütülmüş; eğitimcilerle ilk görüşme yapılmış ve anket kendilerine dağıtılarak örneklemin soruları nasıl anladığı belirlenmiştir. Çalışmanın zamansal alanı 2021–2022 öğretim yılını kapsamıştır: kuramsal materyal yıl başında toplanmış, anket soruları aralık ayı başında geliştirilmiş ve bir öğretim üyeleri kuruluna incelenmiş, dağıtım 2 Şubat 2022'de başlamıştır. İnsan alanı 15 eğitimci olarak tanımlanmıştır. Evren, fiziksel engelli bireylerle çalışan eğitimcilerden oluşmuş ve seçkisiz olarak belirlenmiştir; seçkisiz seçim tüm eğitimcilere düzey ve özelliklerinden bağımsız olarak eşit fırsat tanıdığı için tercih edilmiştir. Örneklem, Setif vilayetindeki 15 eğitimciden oluşmaktadır. Veri toplama aracı olarak tek bir anket tasarlanmış; maddeler alt hipotezlere karşılık gelen iki tematik alanı ele almıştır: sporun psikolojik etkileri (moral, cesaret, öz-güven, saldırganlık, korku ve kaygı, utangaçlık, depresif duygulanım) ve sosyal etkileri (izolasyon, gruba entegrasyon, işbirliği, sevgi ve etkileşim). Yüzdelere hesaplanmış ve yanıt dağılımlarının anlamlılığı, tek serbestlik derecesi ile .05 düzeyinde ki-kare (χ^2) testi kullanılarak 3.84 kritik değerine göre değerlendirilmiştir.

Bulgular

Örnek madde analizinde eğitimcilerin %86.66'sı sporun fiziksel engelli bireylerin moralini yükselttiğini, %13.34'ü ise yükseltmediğini belirtmiştir. Hesaplanan ki-kare değeri (8.06), tek serbestlik derecesinde ve .05 anlamlılık düzeyinde tablo değerini (3.84) aştığından yanıt kategorileri arasındaki fark istatistiksel olarak anlamlı bulunmuş; dağılım şansa atfedilememiştir. Aynı analitik işlem kalan maddelere uygulandığında her iki tematik alanda tutarlı bir örüntü elde edilmiştir. Eğitimcilerin çoğunluğu; sporun cesaret ve atılganlığı artırdığı, psikolojik iyi oluşa katkı sağladığı, saldırganlığı azalttığı, korku, kaygı ve utangaçlığı hafiflettiği, depresyon ve üzüntüyle mücadeleye yardımcı olduğu, moral ve öz-güveni yükselttiği, sosyal izolasyonu azalttığı, gruba entegrasyonu kolaylaştırdığı, işbirliği ve takım ruhunu beslediği ve engelli bireyler arasında sevgi ile etkileşimi artırdığı görüşünde birleşmiştir. Farklı çıktılar ele alan maddelerde yanıtların bu şekilde yakınsaması başlı başına bilgi vericidir: eğitimciler sporu dar bir boyut üzerinde işleyen bir etkinlik olarak değil, katılımcının kendisiyle ve başkalarıyla ilişkisinde geniş bir kayma üreten bir süreç olarak algılamaktadır.

Tartışma

Bulgular, kuramsal çerçevede ortaya konan mekanizmalarla anlaşılabilir hâle gelmektedir. Biyopsikososyal engellilik anlayışı içinde eğitimcilerin bildirdiği iyileşmeler, yetersizliğin düzeltilmesi değil, birey ile çevre arasındaki etkileşimin dönüştürülmesidir. Uyarlanmış sporda yaşanan ustalık deneyimleri, etkinliğin ötesine genellenen öz-yeterlik inançları üretmekte; grup katkısı, sosyal entegrasyonun güvenilir biçimde geliştiği yapılandırılmış, yinelenen ve işbirlikçi akran teması sağlamakta; katılımcının görünür yetkinliği ise ailelerin ve toplulukların beklentilerini değiştirerek sporun yalnızca bireyleri değil tutumları da dönüştürmesini mümkün kılmaktadır. Bildirilen saldırganlık ve depresif duygulanım azalması, düzenli etkinliğin iyi belgelenmiş duygudurum yararlarıyla; cesaret ve öz-güven artışı ise iyi tasarlanmış uyarlanmış programların özerklik ve yeterlik destekleyici niteliğiyle örtüşmektedir. Bulgular ayrıca uluslararası kanıt tabanı ile uyumludur: küresel sentezler, engelli bireylerin fiziksel aktivite katılımının anlamlı fiziksel, psikolojik ve sosyal yararlar sağladığını ve toplumsal katılımın temel araçlarından biri olduğunu göstermekte; nitel meta-sentezler güven, duygudurum ve sosyal bağlılıkta kazanımları belgelemekte; genç bireylere odaklanan çalışmalar ise destekleyici eğitimcilerin ve akranların katılımın belirleyici kolaylaştırıcıları olduğunu vurgulamaktadır. Bu son nokta, mevcut çalışmada eğitimcilerin araştırılmasının da gereğidir.

Sonuç

Elde edilen sonuçlar, sporun fiziksel engelli bireylerin bazı psikolojik ve sosyal sorunlarının ele alınmasında büyük önem taşıdığını ortaya koymakta; önceki benzer çalışmalarla amaç ve bulgular bakımından örtüşmektedir. Uygulamaya yönelik iki çıkarım öne çıkmaktadır. Birincisi, hem bu çalışmada hem de uluslararası alanyazında eğitimciler belirleyici kolaylaştırıcı olarak tanımlandığından, en verimli müdahale noktası eğitimci hazırlığıdır: bir görevi nasıl uyarlayacağını, ulaşılabilir zorluğu nasıl kuracağını ve karma yeterlikli bir grubu nasıl yöneteceğini bilen eğitimci mevcut olanakları etkili hizmete dönüştürürken, hazırlıksız eğitimci olanaklar ne kadar iyi olursa olsun bunu yapamamaktadır. İkincisi, bildirilen yararlar psikolojik ve sosyal alanlara eşzamanlı olarak yayıldığından, uyarlanmış spor rehabilitasyon ve eğitim planlamasında terapiye eklenen bir rekreasyon değil bütünlüklü bir hizmet olarak konumlandırılmalıdır. Bu doğrultuda; gerekli uyarlanmış araç-gereçlerin sağlanması, engelli bireylerin toplumsal etkinliklere entegrasyonu, televizyon ve radyo programları ile uzman aile ziyaretleri yoluyla toplumsal farkındalığın artırılması, ailelerin ve

toplumun engelli bireylerin gereksinimleri ve sporun önemi konusunda bilgilendirilmesi ve uzman eğitimci yetiştirmenin güçlendirilmesi önerilmektedir. Gelecek araştırmalarda engelli bireylerin kendilerinden standart ölçme araçlarıyla veri toplanan, program özelliklerinin belgelendiği, çok merkezli ve müdahale desenli çalışmalara gereksinim vardır.