The Role of Health and Physical Education in Enhancing Psychological Well-Being of Students in Special Education

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ABSTRACT

The current study investigates the influence of Health and Physical Education on the psychological wellbeing of students in special education. This group experiences unique cognitive, physical, and emotional difficulties, which highlights the importance of promoting health education and physical exercise to develop mental resilience, social skills, and overall emotional balance. This study utilized a quantitative research design with a survey method and collected data through a close-ended questionnaire with a total of 150 students from selected special education schools in Rawalpindi and Islamabad. Pre-validated questionnaires assessed the impact of various physical education activities on selected psychological constructs, focusing on self-esteem, stress, motivation, and social interactions, respectively. Data are analyzed using descriptive and inferential statistics to identify patterns and correlations amongst variables. Results indicated that the regular engagement in Health and Physical Education significantly impacts the psychological well-being of students, focusing particularly on areas of self-confidence, social adjustment, and stress reduction. The involved students in the organized activities exhibited a significantly higher amount of motivation towards and better emotional stability compared to students who had least or no involvement in health and physical education experiences. With this in mind, the authors recommend bringing a health and physical education lens into special education contexts through specifically designed programs that recognize differentiated needs. Schools need to set up supports for staff and trainers, provide the necessary facilities/equipment for the activity properly to the needs, and develop an inclusive policy that provides the greatest benefit. While the present research recognized health and physical education as having worth in the special education curriculum, the importance is much more than just improving fitness, as they also promote psychological development and essentially well-being.

Keywords: Health and Physical Education, Psychological Well-Being, Special Education

INTRODUCTION

Education is not just about achieving academic goals (Nasir, 2024), it is about educating the whole person in relation to their physical health, emotional and psychological well-being. Within that explanatory framework, Health and Physical Education (HPE) has emerged as significant field of study that can educate and support both physical fitness, as well as mental health. HPE programming is significant for students in special education, who usually exhibit other psychological and developmental needs. Movement based activities such as coordination, interacting in a team, and expressing self, can increase self-competence, lowering stress, and increasing social interaction that leads towards overall well-being. (Arbour, 2018)

There is a significant of research of global nature linking involvement in physical education programming to improve psychological well-being, more specifically self-esteem and coping, but lowered anxiety. In Pakistan, where much of special education HPE programming remains unstudied, there is still need to create an emphasis for health and physical education to be incorporated more strongly; if not studied and part of the policy and practice of education HPE is not ever to be integrated into special education programming. Students with special needs are not given the same opportunity to experience physical activity in a structured manner in ways that meet their noted abilities; this limits growth and emotional stability. (Biddle, 2019)

The aim of this research is to engage with that issue regarding the respect of Health and Physical Education in the psychological well-being of students with special needs. This research take a quantitative survey based approach to provide a source of empirical evidence to further understand how physical activity can facilitate self-confidence, motivation, stress relief and nurture social development in this highly vulnerable population. The research findings contribute to the existing literature and provide evidence-based support for educators and policy makers and curriculum planners, when considering making HPE part of any special education program. Ultimately this research supports the concept that structured, and modified health and physical education is not a luxury, but rather a necessity for the health of the whole student and facilitates the conditions for students to be healthier, more productive citizens.

Background

Holistic education advocates for the integrated development of the body, mind, and spirit, and promotes the idea that when learning takes place (Nasir, 2025), it is much more than just academic achievement. Supporting this idea, Health and Physical Education (HPE) is an important area of study for students, contributing to their physical fitness but also to their overall mental well-being, social inclusion, and sense of belonging. Educational psychology evidence indicates that through structured physical activity, learners can improve emotional regulation, self-esteem, and social skills and reduce anxiety and depression. The implications of this research is potentially greater for students with special educational needs who has unique physical, cognitive, and psychological challenges. (Bloemen, 2015)

There has been an increased awareness across the globe to integrate HPE into special education. In developed countries, programs in adaptive physical education have been investigated and implemented to support students with disabilities to participate in physical activity and sport meaningfully. These programs are often evidence informed through psychological and pedagogical research showing the impacts on cognitive functioning, behavioural regulation, and social participation. (Brunes, 2015)

In Pakistan, the integration of HPE into special education is lacking and rarely practiced. Most special education institutes lack trained staff, facilities, and adapted programs to optimize the benefits of physical activity for children with disabilities. While students with disabilities have little opportunity to build their

psychological well-being through organized physical education, the result harms their personal development and limits their opportunity for educational and social inclusion. (Downs, 2018)

Given the need for evidence based practices, this study aims to understand the role of Health and Physical Education for enhancing psychological well-being among students in special education contexts. Through educational and psychological grounding, the research intends to build a more comprehensive understanding of how a targeted physical activity programs can intentionally support self-confidence, emotional resilience, and social skills.

Problem Statement

Pupils attending a special education school often experience developmental delays, cognitive delays, and social and emotional difficulties. These three factors put stress on the mental well-being of students and impact the development of self-esteem, stress coping mechanisms in their lives, socialization, and participation in the educational process. (Nasir, 2025) Researchers throughout the world have found that Health and Physical Education (HPE) may be a way of alleviating the issues regarding delays and difficulties for students in special education; however, HPE does not appear to be regarded as important value within special education in Pakistan. Many special education placements within Pakistan do not have an organized HPE program, and/or the HPE does not consider the comparative needs of the disabled. Trained personnel, appropriate equipment and resources, and specialized inclusion programs further complicate the issue of meeting students' physical and mental well-being needs. Many learners are deprived of opportunities to gain mental stability, self-esteem, social interaction and emotional interaction through physical activity. (Giese, 2015)

This gap highlights the need for more empirical investigation of Health and Physical Education and the psychological well-being of students in special education. Policymakers and educators need to base their decision making and curriculum decisions on evidence, if this evidence does not exist there is a lack of which lead to difficulty in having effective awareness programs or developing HPE in special education in teaching or curricula. Hence, the central concern presented in this investigation is an awareness and practice gap between Health and Physical Education and the psychological well-being.

Research Gap

While many researchers from different countries have reported on the beneficial effects of Health and Physical Education (HPE) on psychological well-being, especially in developed countries, empirical evidence from the context of Pakistan is scant. While research has shown that organized physical activity and health education contribute to self-esteem, social interaction, and stress coping among students requiring special education, most of the research is conducted from a Western educational context and an atmosphere of access to resources, trained staff, and specially adapted facilities. (Hartmann, 2010)

The educational context of Pakistan, particularly special education settings, is plagued by systemic issues that make integrating HPE into a curriculum difficult, including insufficient physical education specialists, inadequate facilities, and lack of policies to support the integration of HPE. Global research in Pakistan has documented the roles of physical education in general schools, but very little research has focused on students with special needs, nor is there research examining psychological well-being in relation to HPE in this context. The connection between HPE and psychological well-being in regard to the special needs context is under examined at both the research and practical implementation level in an academic setting. (Jin, 2018)

The absence of localized research therefore necessitates context-sensitive research looking at how Health and Physical Education can be appropriately adapted to develop the psychological well-being of students

in special educational settings in Pakistan. To fill this void not only advances the knowledge base, but also informs practice for educators, policymakers, and curriculum designers.

Objectives of the Study

- 1. To examine the impact of Health and Physical Education on the psychological well-being of students in special education institutions.
- 2. To investigate the relationship between participation in physical activities and improvements in self-esteem, social interaction, and stress management among students with special needs.
- **3.** To provide recommendations for integrating Health and Physical Education into special education curricula in Pakistan to promote holistic student development.

Research Questions

- 1. How does participation in Health and Physical Education influence the psychological well-being of students in special education?
- **2.** What is the relationship between physical activity and psychological indicators such as self-confidence, stress reduction, and social adjustment among students with special needs?
- **3.** How can Health and Physical Education programs be effectively adapted and implemented in special education settings in Pakistan?

Hypotheses

- H1: Participation in Health and Physical Education has a significant positive effect on the psychological well-being of students in special education.
- H2: There is a positive correlation between physical activity and psychological indicators (self-esteem, stress reduction, and social interaction) among students with special needs.
- H3: The integration of Health and Physical Education into special education curricula significantly enhance students' overall mental and social development.

Significance

This study holds significance on multiple levels academic, educational, social, and policy-oriented.

From an academic perspective, it contributes to the limited body of research in Pakistan on the integration of Health and Physical Education (HPE) within special education. While international studies highlight the psychological benefits of physical activity, there is a lack of context specific evidence in the Pakistani setting. This research addresses that gap, providing empirical data that can serve as a reference point for future studies in education, psychology, and health sciences.

On an educational level, the study emphasizes the need for incorporating structured HPE programs into special education curricula. By demonstrating how physical activity can enhance psychological well-being including self-confidence, social interaction, and stress management the research underscores the importance of holistic learning approaches that go beyond traditional classroom instruction.

At a social level, the findings advocate for improved opportunities and inclusive practices for children with special needs. Promoting psychological well-being through physical education not only improves

individual quality of life but also enhances students' ability to participate more actively in family, community, and social activities.

From a policy perspective, the research offers practical recommendations for curriculum developers, school administrators, and policymakers to prioritize HPE in special education. Implementing tailored physical education programs, supported by trained instructors and adequate resources, can significantly transform the educational experience for students with disabilities.

Overall, this study highlights the transformative potential of Health and Physical Education as a vital tool for fostering psychological resilience, social inclusion, and holistic development among students in special education in Pakistan.

LITERATURE REVIEW

Mental health disorders continue to be a global concern, and these disorders are being recognized as one of the leading contributors to ongoing mental health related challenges and social maladjustment for children and adolescents (World Health Organization, 2019). The prevalence of such disorders can extend beyond temporary disruptions, which can result in lasting effects on children's abilities to socialize, succeed educationally, and develop in different environments. The most basic definition of mental health is a state of mental well-being where a person is functioning well in his or her professional, personal, and social life while productively contributing to their community (Downs et al., 2018).

In this context, we can think of psychological well-being as the expression of positive states, such as enjoyment, life satisfaction, self-concept, and an overall sense that one's life is meaningful. All of these positive states are indicators of healthy psychological functioning. In contrast, psychological ill-being is characterized by negative states. Negative states can include stress, anxiety, depression, burn-out and fatigue, for example, which can all disrupt performance and development (Stebbings et al., 2012). Therefore, in thinking about mental health more comprehensively, we must consider both well-being and ill-being, as this may help us better understand these complementary concepts.

For almost 40 years, researchers have examined the relationship between physical activity (PA) and mental health, with emphasis on typically developing children (Biddle et al., 2019). Despite utilizing quantitative and qualitative research, all of the literature has found a relationship between PA and positive self-image, self-efficacy, self-esteem, and confidence (Ahn & Fedewa, 2011; Martin, 2013). Benefits of PA suggested in earlier literature are psychological, biological and social. Neurobiological research suggests PA supports brain health, increases regulatory neurotransmitters, and enhances cognitive flexibility through PA. Psycho-social research suggests that active participation in PA builds relationships, engages in teamwork, engages in peer interaction, and receives positive feedback during PA which contribute to lower levels of anxiety and social adjustment. Behavioural research further states that participation in PA, develops discipline, consistency and resilience which are important elements in reducing stress and support emotional regulation.

While the benefits of PA are well-recognized, children and adolescents with SEN still manage to participate less in physical activity and have greater sedentary behaviour, even when compared to their peers (Corvey et al., 2016; Sit et al., 2020).

Less participation in PA can impede participation in beneficial, physical behaviours. Sedentary behaviour also contributes to the likelihood of excessive screen-based media behaviours, social withdrawal, increased feelings of loneliness, and deteriorated mental health (Rodriguez Ayllon et al., 2019). Therefore, a lack of activity can lead to an increased risk of developing maladaptive behaviours and discouraging

additional participation from children with SEN. The typical barriers to engaging in PA are limited access to facilities, availability of non-inclusive programming, and a lack of training for educators and staff about working with children with disabilities. This resulted in systemic inequity for children with SEN when trying to realize the psychological benefits of PA.

Despite this, previous literature has favourable findings about the positive benefit of PA on mental health outcomes for children with SEN. For instance, studies show that engagement in PA can provide leisure and positive emotion (Jin et al., 2018; Martin et al., 2013; Palisano et al., 2011) as well as positive self-perception and self-concept (Batey et al., 2014). Moreover, numerous studies indicate associations between PA and improved mental well-being considering factors including decreased childhood anxiety, depression, and fatigue (Brunes et al., 2015; Fiorilli et al., 2016; Gawrilow et al., 2016; Whitney et al., 2019a, 2019b; Maher et al., 2015). These associations reveal that PA is a significant indicator to psychological well-being, but modalities including the type, frequency, and environment of activity often mediate the strength of the relationship. School-based PA (Hartmann et al., 2010), leisure-related PA (Dahan-Oliel et al., 2012), organized sports (Sahlin & Lexell, 2015), and out-of-school PA-free play (Arbour-Nicitopoulos et al., 2018) all show different effects on mental health. Also, structured physical education programs delivered within schools (Kraft et al., 2019) provide additional opportunities to develop the self-esteem and resilience necessary for a successful school experience.

While systematic reviews in this area significantly add to the available evidence, the findings are inconsistent. One systematic review involving dance and self-concept in children with special educational needs found non-significant correlations indicating that not all forms of physical activity provide similar conclusions (May et al., 2021). Additionally, some systematic reviews discuss the role of mediators such as self-efficacy in the relationship of physical activity and mental health, specific to children with physical disabilities (Bloemen et al., 2015).

What this suggests is that although physical activity is linked to psychological outcomes, the influence of physical activity on outcomes can depend on internal or external variables like self-efficacy, accessibility, and inclusion of the program. Further to addressing the inconsistency of outcomes from physical activity, reviews pointed towards the positive relationship physical activity has with improving psychological well-being (Arbour-Nicitopoulos et al., 2018), self-esteem (Dahan-Oliel et al., 2012), reducing anxiety (Cerrillo-Urbina et al., 2015) and depression (Veneri et al., 2018). These findings speak the multiplicity of relationships between physical activity and mental health outcomes, while also identifying the need for adaptations in approaches to ensure children with special educational needs, all of whom are different, experience similar benefit to physical activity.

Theoretical Framework

The research framework for this study is situated at the intersection of educational psychology, health sciences, and special education. The study utilizes some of the most widely accepted psychological and educational theories in the field to conceptualize how Health and Physical Education (HPE) plays a key role in education for enhancing the psychological well-being of students in special education.

Maslow's Hierarchy of Needs (1943)

Maslow's theory stated that people have to satisfy their physiological and safety needs before they can move to higher order needs, such as belongingness, self-esteem, and self-actualization. Health and Physical Education fulfills physiological needs directly through establishing a foundation for physical fitness and living a healthy lifestyle. Organised and structured physical activity also satisfies students'

needs for belongingness and self-esteem through teamwork, social interaction, and accomplishment. Similarly, health and physical education subsequently contributes to self-actualization for students with special needs by developing self-confidence and emotional well-being.

Self-Determination Theory (Deci & Ryan, 1985)

The central role of competence, autonomy, and relatedness in achieving growth in psychological and well-being is recognised in self-determination theory. Health and Physical Education allows students in special education to develop competence through movement skills and physical skills, autonomy through cooperating and being active, and relatedness through social industry and interaction with peers. All of these aspects are crucial for fostering intrinsic motivation and psychological well-being.

Social learning theory (Bandura, 1977)

Bandura is an example of a theorists who suggested that learning can harness observation, imitation, and social interaction. In health and physical education, students with special needs can model behaviours, learn to work within a team, and develop personal strategies for coping when engaging in structured physical activity. Participation provides the opportunity for adjustment and social skill enhancement, while also increasing individual psychological well-being.

Conceptual Linkage

With these theories in mind, the study conceptualizes Health and Physical Education as both a preventative and promote aspect of psychological well-being. HPE contributes to elements like self-confidence, stress management, social inclusion, and motivation, which promote the holistic development of students in special education. Therefore, the framework positions HPE as a multidimensional intervention that captures both physical health and promotes emotional stability and social competence.

RESEARCH METHODOLOGY

Research Design

The study utilized a quantitative research design, specifically using a survey method to determine the role of Health and Physical Education (HPE) in promoting psychological well-being among students in special education. The choice of a quantitative method collected measurable data with identified patterns and relationships between physical education activities and psychological indicators including self-esteem, diminished stress, and social interaction.

Population and Sample

The population of interest is special education students in the city of Islamabad and Rawalpindi, Pakistan. From the population, 150 students are selected as a sample using the stratified random sampling technique to ensure that all categories of disabilities are represented (e.g., physical, cognitive, and learning disabilities). The use of stratified random sampling enabled the study to reflect diverse views while ensuring accuracy and reliability.

Instrumentation

Data collection is achieved using a structured questionnaire that measured psychological well-being and effects of health and physical education (HPE). The questionnaire contained the following elements:

- **Demographic Information:** age, gender, type of disability, and education level
- **Health and Physical Education Participation:** frequency of participation and what activities are done
- **Psychological Well-Being:** Indicators from standardized measures (e.g. Rosenberg Self-Esteem Scale, Warwick-Edinburgh Mental Well-Being Scale).

The questionnaire responses utilized a five point Likert scale ranging from "Strongly Disagree" to "Strongly Agree".

Validity and Reliability

Experts in the areas of psychology, special education, and physical education reviewed the item on the survey for validation. The first step in determining the reliability and clarity of the instrument was the pilot study with 20 students. The analysis of the pilot study data revealed that the instrument displayed strong reliability, based on a Cronbach's alpha coefficient of .82.

Data Collection Procedure

Permission is obtained from the respective institutions prior to data collection. Informed consent is secured from parents/guardians where required. Surveys are administered in a supportive environment, with assistance provided to students who had difficulty reading or writing.

Ethical Considerations

The study adhered to ethical standards, ensuring confidentiality, anonymity, and voluntary participation. Students' responses are used solely for academic purposes, and their identities are protected throughout the research process.

Data Analysis

The collected data are analyzed using **descriptive statistics** (mean, frequency, percentage) to summarize responses and **inferential statistics** (Pearson correlation, regression analysis, and t-tests) to test hypotheses and identify significant relationships between variables. Statistical analysis is performed using **SPSS software**. The data results are displayed via tabulation method and Pie Charts along with discussions.

Figure 1: Pie Chart Representation

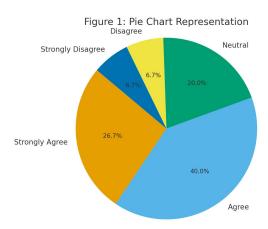


Table 1: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	40	26.7%	
Agree	60	40.0%	
Neutral	30	20.0%	
Disagree	10	6.7%	
Strongly Disagree	10	6.7%	

Discussion 1:

The majority of participants expressed agreement with participation in Physical Education, with 66.7% either strongly agreeing or agreeing. A smaller portion remained neutral (20%), while only 13.4% disagreed or strongly disagreed. This indicates a generally positive attitude toward participation.

Figure 2: Pie Chart Representation

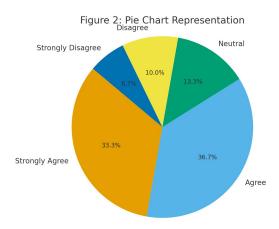


Table 2: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	50	33.3%	
Agree	55	36.7%	
Neutral	20	13.3%	
Disagree	15	10.0%	
Strongly Disagree	10	6.7%	

Discussion 2:

Responses regarding improvement in self-esteem are highly positive, with over 70% agreeing or strongly agreeing. Neutral responses are minimal, and disagreement accounted for only 16.7%. This suggests that Physical Education contributes significantly to enhancing self-esteem.

Figure 3: Pie Chart Representation

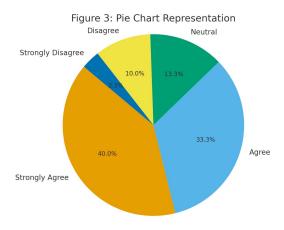


Table 3: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	60	40.0%	
Agree	50	33.3%	
Neutral	20	13.3%	
Disagree	15	10.0%	
Strongly Disagree	5	3.3%	

Discussion 3:

Stress reduction results showed 73.3% agreement, demonstrating that Physical Education is viewed as beneficial for reducing stress. Only 13.3% disagreed to some extent, and 13.3% remained neutral, indicating a widely shared positive perception.

Figure 4: Pie Chart Representation

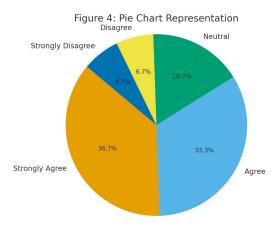


Table 4: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	55	36.7%	
Agree	50	33.3%	
Neutral	25	16.7%	
Disagree	10	6.7%	
Strongly Disagree	10	6.7%	

Discussion 4:

Social interaction improvement was supported by 70% of participants, showing a strong belief in the role of Physical Education in fostering social connections. Neutral and disagreement responses are fewer, suggesting consistent positive views.

Figure 5: Pie Chart Representation

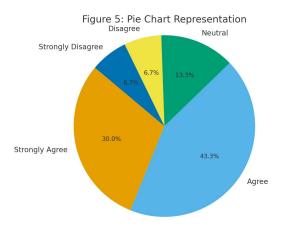


Table 5: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	45	30.0%	
Agree	65	43.3%	
Neutral	20	13.3%	
Disagree	10	6.7%	
Strongly Disagree	10	6.7%	

Discussion 5:

Motivation to participate is highly rated, with 73.3% in agreement. A smaller proportion of participants remained neutral or disagreed, suggesting that motivation is a key factor influenced by Physical Education.

Figure 6: Pie Chart Representation

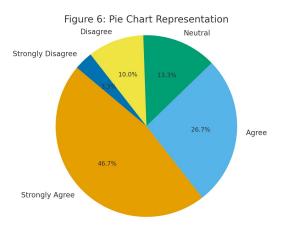


Table 6: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	70	46.7%	
Agree	40	26.7%	
Neutral	20	13.3%	
Disagree	15	10.0%	
Strongly Disagree	5	3.3%	

Discussion 6:

Teacher support in HPE received the strongest endorsement, with 73.4% of participants agreeing or strongly agreeing. This reflects the crucial role of teachers in motivating and guiding students in Physical Education activities.

Figure 7: Pie Chart Representation

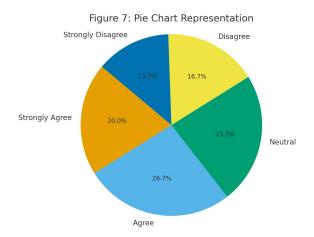


Table 7: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	30	20.0%	
Agree	40	26.7%	
Neutral	35	23.3%	
Disagree	25	16.7%	
Strongly Disagree	20	13.3%	

Discussion 7:

Availability of facilities generated mixed responses, with only 46.7% in agreement and a notable 30% expressing disagreement. This highlights a significant concern regarding infrastructure and access to facilities.

Figure 8: Pie Chart Representation

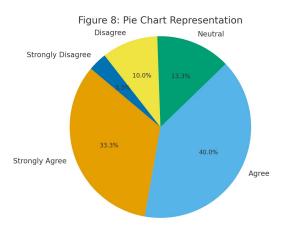


Table 8: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	50	33.3%	
Agree	60	40.0%	
Neutral	20	13.3%	
Disagree	15	10.0%	
Strongly Disagree	5	3.3%	

Discussion 8:

Psychological well-being perception showed strong positive responses, with 73.3% agreeing or strongly agreeing. Minimal disagreement (13.3%) reinforces the idea that Physical Education contributes to mental well-being.

Figure 9: Pie Chart Representation

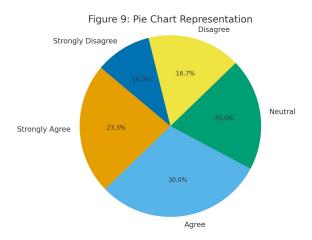


Table 9: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	35	23.3%	
Agree	45	30.0%	
Neutral	30	20.0%	
Disagree	25	16.7%	
Strongly Disagree	15	10.0%	

Discussion 9:

Frequency of participation responses are more evenly distributed, with 53.3% in agreement, 20% neutral, and 26.7% disagreeing. This reflects varying levels of engagement, likely influenced by personal, institutional, or environmental factors.

Figure 10: Pie Chart Representation

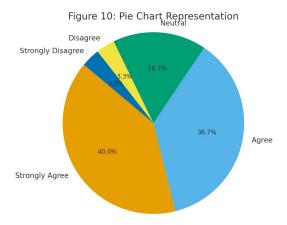


Table 10: Distribution of Responses

Response Category	Frequency	Percentage	
Strongly Agree	60	40.0%	
Agree	55	36.7%	
Neutral	25	16.7%	
Disagree	5	3.3%	
Strongly Disagree	5	3.3%	

Discussion 10:

The overall impact of HPE is viewed positively, with 76.7% agreement. Very few participants disagreed (6.6%), confirming that HPE has a generally favourable influence on students' physical and psychological development.

FINDINGS

- 1. A majority of students in special education institutions reported that participation in Health and Physical Education (HPE) positively influenced their psychological well-being.
- 2. The data analysis revealed strong correlations between physical activity and improvements in self-esteem, stress reduction, and social interaction.
- **3.** Students who regularly engaged in HPE activities demonstrated higher levels of motivation, confidence, and social adjustment compared to those with limited participation.
- **4.** Despite the positive outcomes, a significant proportion of institutions lacked adequate facilities, trained staff, and structured programs tailored to the needs of students with disabilities.
- **5.** Teacher support is identified as a critical factor in enhancing the effectiveness of HPE programs for students in special education.

CONCLUSION

The findings of this study indicate that Health and Physical Education improves the psychological well-being of students with special needs in the classroom. The act of physical engagement serves to create self-esteem and confidence, as well as alleviate stress, and is beneficial for social engagement, which also supports overall well-being. Even though it is recognized that HPE has proven psychological benefits for special needs students, the special education context in Pakistan does not always address students' psychological needs for a variety of reasons, including lack of programming or lack of support from the school itself.

RECOMMENDATIONS

- 1. Policy Issues: Research the HPE programming based on issues for individuals with special needs in policy.
- 2. Professional Learning for Educators, Instructors, and Staff: Provide professional learning for educators, instructors, and staff to support better and inclusive learning in HPE contexts.
- 3. Facilities and Equipment: Provide access to facilities and equipment to allow for more authentic engagement in HPE programming.
- 4. Awareness: Create awareness and knowledge for parents, school system, and policy related to HPE programming, personnel, and psychological wellbeing options.

Further Research: Identify and seek out opportunities for further research, located within the area, to continue research on longer term sustainability related to psychological wellbeing and HPE programming, in what ways the interventions are culturally based and explore associated factors that contribute to resilience.



REFERENCES

- Ahn, S., & Fedewa, A. L. (2011). A meta-analysis of the relationship between children's physical activity and mental health. *Journal of Pediatric Psychology*, 36(4), 385–397. https://doi.org/10.1093/jpepsy/jsq107
- Arbour-Nicitopoulos, K. P., Martin Ginis, K. A., & Latimer-Cheung, A. E. (2018). Exploring the relations between school-based physical activity, social support, and self-perceptions in youth with physical disabilities. *Adapted Physical Activity Quarterly*, 35(1), 1–19. https://doi.org/10.1123/apaq.2016-0121
- Batey, J. J., Missiuna, C., Timmons, B. W., Hay, J., Faught, B. E., & Cairney, J. (2014). Self-concept and self-perceptions in children with developmental coordination disorder. *Child: Care, Health and Development*, 40(2), 195–202. https://doi.org/10.1111/cch.12061
- Biddle, S. J. H., Ciaccioni, S., Thomas, G., & Vergeer, I. (2019). Physical activity and mental health in children and adolescents: An updated review of reviews and an analysis of causality. *Psychology of Sport and Exercise*, 42, 146–155. https://doi.org/10.1016/j.psychsport.2018.08.011
- Bloemen, M. A. T., Backx, F. J. G., Takken, T., Wittink, H., Benner, J., Mollema, J., & de Groot, J. F. (2015). Factors associated with physical activity in children and adolescents with a physical disability: A systematic review. *Developmental Medicine & Child Neurology*, 57(2), 137–148. https://doi.org/10.1111/dmcn.12616
- Brunes, A., Augestad, L. B., & Gudmundsdottir, S. L. (2015). Personality, physical activity, and symptoms of anxiety and depression: The HUNT study. *Social Psychiatry and Psychiatric Epidemiology*, 50(3), 419–427. https://doi.org/10.1007/s00127-014-0941-9
- Cerrillo-Urbina, A. J., García-Hermoso, A., Sánchez-López, M., Pardo-Guijarro, M. J., Santos Gómez, J. L., & Martínez-Vizcaíno, V. (2015). The effects of exercise on depression in children and adolescents: A meta-analysis of randomized controlled trials. *Sports Medicine*, 45(4), 439–449. https://doi.org/10.1007/s40279-014-0281-8
- Corvey, K., Menear, K. S., Preskitt, J., Goldfarb, S., & Menachemi, N. (2016). Obesity, physical activity and sedentary behaviors in children with an autism spectrum disorder. *Maternal and Child Health Journal*, 20(2), 466–476. https://doi.org/10.1007/s10995-015-1844-5
- Dahan-Oliel, N., Shikako-Thomas, K., & Majnemer, A. (2012). Quality of life and leisure participation in children with neurodevelopmental disabilities: A thematic analysis of the literature. *Quality of Life Research*, 21(3), 427–439. https://doi.org/10.1007/s11136-011-0063-9
- Downs, J., Blackmore, A. M., Epstein, A., Skoss, R., Langdon, K., Jacoby, P., Whitehouse, A. J., Leonard, H., & Glasson, E. J. (2018). The prevalence of mental health disorders and symptoms in children and adolescents with cerebral palsy: A systematic review and meta-analysis. *Developmental Medicine & Child Neurology*, 60(1), 30–38. https://doi.org/10.1111/dmcn.13555
- Emerson, E., Hatton, C., Robertson, J., Roberts, H., Baines, S., & Glover, G. (2010). People with learning disabilities in England: 2010. Durham: Improving Health and Lives Learning Disabilities Observatory.
- Fiorilli, C., Viviani, D., De Stasio, S., Di Chiacchio, C., & Pepe, A. (2016). The effect of sport involvement on body image and resilience in a sample of Italian adolescents. *Social Indicators Research*, 126(2), 711–725. https://doi.org/10.1007/s11205-015-0910-0

- Gawrilow, C., Stadler, G., Langguth, N., Naumann, A., & Boeck, A. (2016). Physical activity, affect, and cognition in children with symptoms of attention-deficit/hyperactivity disorder. *Journal of Attention Disorders*, 20(2), 151–162. https://doi.org/10.1177/1087054713493318
- Giese, M., Stangier, C., Spanagel, R., & Bleich, S. (2017). Influence of physical exercise on mental health in children and adolescents with mental illness: A systematic review. *Child and Adolescent Psychiatry and Mental Health*, *II*(1), 1–11. https://doi.org/10.1186/s13034-017-0169-7
- Hartmann, T., Zahner, L., Pühse, U., Puder, J. J., Kriemler, S., & Schindler, C. (2010). Effects of a school-based physical activity program on physical and psychosocial health in young schoolchildren:
 A cluster-randomized trial. *Preventive Medicine*, 51(5), 424–430. https://doi.org/10.1016/j.ypmed.2010.09.002
- Jin, Y., Kim, J., & Kim, J. (2018). The relationship between physical activity and self-reported enjoyment and stress in children with disabilities. *Journal of Developmental & Physical Disabilities*, 30(5), 569–584. https://doi.org/10.1007/s10882-018-9615-7
- Kapsal, N. J., Dicke, T., Morin, A. J. S., Vasconcellos, D., Maiano, C., Lee, J., & Lonsdale, C. (2019). Effects of physical activity on the mental health of children and adolescents: A systematic review and meta-analysis. *Health Psychology Review*, *13*(3), 266–283. https://doi.org/10.1080/17437199.2019.1597170
- Kraft, E., Loiselle, S., & Bardige, B. (2019). Physical education for students with special needs: Benefits and challenges. *Journal of Physical Education and Sport*, 19(2), 753–761. https://doi.org/10.7752/jpes.2019.02109
- Licence, L., Oliver, C., Moss, J., & Richards, C. (2019). Prevalence, impact and management of affective disorders in individuals with intellectual disabilities: A systematic review. *Journal of Applied Research in Intellectual Disabilities*, 32(3), 533–549. https://doi.org/10.1111/jar.12547
- Lubans, D. R., Richards, J., Hillman, C. H., Faulkner, G., Beauchamp, M. R., Nilsson, M., Kelly, P., Smith, J. J., Raine, L. B., & Biddle, S. J. H. (2016). Physical activity for cognitive and mental health in youth: A systematic review of mechanisms. *Pediatrics*, 138(3), e20161642. https://doi.org/10.1542/peds.2016-1642
- Maher, J. P., Pincus, A. L., Ram, N., & Conroy, D. E. (2015). Daily physical activity and fatigue in middle-aged adults with multiple sclerosis. *Health Psychology*, 34(10), 1068–1077. https://doi.org/10.1037/hea0000208
- Martin, K. (2013). Brain boosts: How physical activity strengthens the mind. *Active & Healthy Magazine*, 20(2), 14–16.
- May, T., Chan, E. S., & Williams, K. (2021). Dance movement therapy for children with autism spectrum disorder: A systematic review. *Autism*, 25(1), 104–116. https://doi.org/10.1177/1362361320934213
- Nasir, T., Anwar, S. A. S., Iqbal, N., & Arif, M. (2025). The Psychological Impact of Digital Media Consumption on Mental Health, A Case Study of Undergraduate Students in Pakistan. *Annual Methodological Archive Research Review*, *3*(4), 369-382. https://doi.org/10.63075/7022md02
- Nasir, T., Siraj, S. A., Hannan, F. Z. U., Hussain, W., & Javed, S. (2024). A Perception of University Students Regarding the Influence of Social Media on the Academic Performance. *Journal of Peace, Development and Communication*, 8(03), 431-450. https://doi.org/10.36968/JPDC-V07-I01-25

- Palisano, R. J., Di Rezze, B., Stewart, D., Rosenbaum, P. L., & Wright, F. V. (2011). Life habits of school-aged children with cerebral palsy: Their relationship with participation in leisure activities. *Child: Care, Health and Development, 37*(1), 90–101. https://doi.org/10.1111/j.1365-2214.2010.01138.x
- Puce, L., Marinelli, L., Serio, A., Lunghi, A., Mori, L., & Bonifazi, M. (2019). Physical activity and mental wellness in children with developmental disabilities: A systematic review. *Research in Developmental Disabilities*, 95, 103511. https://doi.org/10.1016/j.ridd.2019.103511
- Rodriguez-Ayllon, M., Cadenas-Sánchez, C., Estévez-López, F., Muñoz, N. E., Mora-Gonzalez, J., Migueles, J. H., Molina-García, P., Henriksson, H., Mena-Molina, A., & Esteban-Cornejo, I. (2019). Physical activity and mental health in children and adolescents: An updated review of reviews and an analysis of causality. *Sports Medicine*, 49(9), 1373–1398. https://doi.org/10.1007/s40279-019-01092-3
- Sahlin, K. B., & Lexell, J. (2015). Impact of organized sports on activity, participation, and quality of life in people with neurological disabilities. *Journal of Rehabilitation Medicine*, 47(1), 74–79. https://doi.org/10.2340/16501977-1906
- Sit, C. H. P., McKenzie, T. L., Lonsdale, C., & Salmon, J. (2020). Physical activity levels in children and adolescents with disabilities: A systematic review. *Preventive Medicine*, 130, 105864. https://doi.org/10.1016/j.ypmed.2019.105864
- Stebbings, J., Taylor, I. M., Spray, C. M., & Ntoumanis, N. (2012). Antecedents of perceived coach autonomy supportive and controlling behaviors: Coach psychological need satisfaction and wellbeing. *Journal of Sport and Exercise Psychology*, 34(4), 481–502. https://doi.org/10.1123/jsep.34.4.481
- Veneri, D., Jiang, Y., Henley, J., & Smiley, A. (2018). Physical activity and depressive symptoms in children and adolescents with physical disabilities: A systematic review and meta-analysis. *Disability and Health Journal*, 11(4), 508–516. https://doi.org/10.1016/j.dhjo.2018.05.006
- Whitney, S. D., Peterson, A. P., & Murray, C. I. (2019a). Physical activity and depressive symptoms in children and adolescents with autism spectrum disorder. *Autism Research*, 12(1), 53–62. https://doi.org/10.1002/aur.2010
- Whitney, S. D., Peterson, A. P., & Murray, C. I. (2019b). Sedentary behavior, physical activity, and mental health in adolescents with disabilities. *Journal of Developmental & Physical Disabilities*, 31(6), 781–799. https://doi.org/10.1007/s10882-019-09669-7
- World Health Organization. (2019). Adolescent mental health. Geneva: WHO. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health
- Young, N. L., Wedge, J. H., McCormick, A., Fehlings, D., McKeever, P., & Williams, J. I. (2019). Transition to adulthood for young people with cerebral palsy: Functioning across participation domains. *Developmental Medicine & Child Neurology*, 61(3), 277–283. https://doi.org/10.1111/dmcn.14009