

THE RELATIONSHIP BETWEEN PERCEIVED PHYSICAL LITERACY AND
PHYSICAL SELF PERCEPTION OF THE HIGH SCHOOL STUDENTS

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ABSTRACT

THE RELATIONSHIP BETWEEN PERCEIVED PHYSICAL LITERACY AND PHYSICAL SELF PERCEPTION OF THE HIGH SCHOOL STUDENTS

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The purpose of this study was to investigate the relationship between perceived physical literacy and physical self perception of the high school students aged 14-19 in Kadıköy, İstanbul. Total of 417 (224 girls, 193 boys) high school students from four high schools participated in the study in the 2023-2024 academic year. The "Perceived Physical Literacy Instrument for Adolescents" [PPLI] (Sum et al., 2018; Yılmaz and Kabak, 2021) and the "Physical Self Description Questionnaire Short Form" [PSDQ-S] (Marsh et al., 2010; Urfa et al., 2019) were used in the study. The findings of the study demonstrated that the students reported relatively high levels on the overall perceived physical literacy and the "self-expression and communication with others" sub-dimension, and moderately high levels on the "knowledge and understanding" and "sense of self and self-confidence" sub-dimension; a moderate level on overall physical self-perception and moderate perceptions of activity, body fat, sport competence, global physical self-concept, appearance, strength, and flexibility sub-dimensions. They exhibited strong perceptions of health, coordination, and global self-esteem, and slightly lower perceptions of endurance and fitness. The findings indicated a strong positive correlation between PPLI Total and PSD

Total, with a Pearson correlation coefficient of $r=.746$. The p-value ($p < .001$) indicates that this correlation is very large and significant at the 0.01 level. In conclusion, these findings highlight the importance of integrating physical literacy into educational settings to support adolescents' physical development and active lifestyles.

Keywords: Physical Literacy, Self Concept, Self Confidence, Self Expression, Adolescents



ÖZ

LİSE ÖĞRENCİLERİNİN ALGILANAN FİZİKSEL OKURYAZARLIK DÜZEYLERİ İLE FİZİKSEL BENLİK ALGILARI SEVİYELERİNİN İLİŞKİSİ

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Bu çalışmanın amacı, İstanbul Kadıköy'deki 14-19 yaş arası lise öğrencilerinin algılanan fiziksel okuryazarlıkları ile fiziksel benlik algıları arasındaki ilişkiyi araştırmaktır. 2023-2024 eğitim-öğretim yılında dört liseden toplam 417 (224 kız, 193 erkek) lise öğrencisi çalışmaya katılmıştır. Çalışmada Sum vd. (2018) tarafından geliştirilen ve Yılmaz ve Kabak (2021) tarafından Türkçe'ye uyarlanan "Ergenler için Algılanan Fiziksel Okuryazarlık Ölçeği" ile Marsh vd. (2010) tarafından geliştirilen ve Urfa vd. (2019) tarafından Türkçe'ye uyarlanan "Fiziksel Benlik Algısı Anketi Kısa Formu" kullanılmıştır. Araştırmanın sonuçlarına göre, öğrencilerin genel algılanan fiziksel okuryazarlıkları ile “başkaları ile iletişim kurma ve kendini ifade etme” alt boyutu sonuçlarının oldukça yüksek; “bilgi ve kavrama” ve “benlik algısı ve özgüven” alt boyutlarının orta derecede yüksek olduğu görülmüştür. Araştırmanın sonuçları, öğrencilerin genel fiziksel benlik algılarının, fiziksel aktivite, vücut yağı, spor yeteceği, genel fiziksel yeterlilik, görünüm, kuvvet, ve esneklik alt boyutlarının sonuçlarının ortalama; sağlık, koordinasyon, ve kendine güven alt boyutlarının sonuçlarının yüksek, dayanıklılık alt boyutunun sonucunun ise hafif düzeyde düşük olduğu görülmüştür. Araştırmanın sonuçlarına göre algılanan

fiziksel okuryazarlık toplamı ve fiziksel benlik algısı toplamı arasında, Pearson korelasyon katsayısı $r=.746$ olan güçlü bir pozitif korelasyon gözlenmektedir. P-değeri ($p < .001$), bu korelasyonun 0.01 düzeyinde son derece yüksek ve anlamlı olduğunu göstermektedir. Sonuç olarak, bu bulgular ergenlerin fiziksel gelişimi ve aktif yaşamları için fiziksel okuryazarlığın eğitim sistemine entegre edilmesinin önemini ortaya koymaktadır.

Anahtar Kelimeler: Bedensel Okuryazarlık, Benlik Kavramı, Kendine Güven, Kendini İfade Etme, Ergenler





*Nazım Hikmet, the poet, once said, "Beauty will save the world."
I dedicate this work to my female students, each one beautiful in her own
way, who either already know or will soon discover how powerful they are.*

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LIST OF ABBREVIATIONS

PA	: Physical Activity
WHO	: World Health Organization
GAPPA	: Global Action Plan on Physical Activity
PL	: Physical Literacy
PE	: Physical Education
PPL	: Perceived Physical Literacy
PSP	: Physical Self-Perception
PPLI	: Perceived Physical Literacy Instrument
PPLI_SS	: PPLI Sense of Self and Self-Confidence
PPLI_SC	: PPLI Self-Expression and Communication with Others
PPLI_KU	: PPLI Knowledge and Understanding
PSDQ-S	: Short form of the Physical Self-Description Questionnaire
IPLA	: International Physical Literacy Association
HL	: Health Literacy
PHE Canada	: Physical and Health Education Canada
SHAPE America	: Society of Health and Physical Educators
PLAY	: Physical Literacy Assessment for Youth
CAPL	: Canadian Assessment for Physical Literacy

CHAPTER 1

INTRODUCTION

1.1. Background of the study

Physical activity [PA] is described as “any bodily movement produced by skeletal muscles that requires energy expenditure” (Caspersen et al., 1985). Physical activity contributes significantly to physical health by strengthening bones and muscles, reducing body fat, promoting cardio-metabolic health, and also supporting motor and cognitive development during the period of childhood and adolescence (WHO, n.d.). Regular PA also leads to significant mental health outcomes. During the pandemic of COVID-19, lockdowns, staying at home, and working online caused an increase in physical inactivity and sedentary lifestyles and mental health problems (Harangi-Rákos et al., 2022). A study in Türkiye during the pandemic of COVID-19 found that decreased PA was strongly linked to declining emotional well-being, with contributing factors including female gender, extended sleep durations, smoking, and heightened levels of psychological problems (Karartı et al., 2023).

According to the Global Status Report on Physical Activity (2022), 81% of adolescents aged 11–17 years old are physically inactive and do not meet World Health Organization’s [WHO] recommended levels of PA for optimum health, with inactivity rates being 85% for girls and 78% for boys. The Global Action Plan on Physical Activity [GAPPA] has a goal to reduce physical inactivity globally by approximately 15% by 2030 (WHO, 2018). Physical inactivity in adolescents is influenced by many factors, like personal (age, gender, interests, etc.), economical, social, environmental (lack of facilities, etc.), and behavioral (attitudes towards PA, etc.) (Ahmad et al., 2021). Being physically active was related with social support and increased sense of competency and attraction while physical inactivity was

related with negative feedback, lack of social support, and social obstructions (Belanger et al., 2011).

In recent years, physical literacy [PL] has been a growing topic, especially in the health subject (Cairney et al., 2019). Physical literacy cannot be considered independently of health literacy [HL]. The World Health Organization (n.d.) describes health as not only being free from disease or disability but also total well-being in terms of physical, mental, and social. Physical literacy encourages physical potential and PA as a lifestyle, confidence, knowledge, and being independent (Whitehead et al., 2018). The physical literacy concept becomes an essential framework for encouraging PA during the period of childhood and adolescence, forming the basis for a lifelong active lifestyle (Grauduszus et al., 2023) because PA tends to reduce with age, while sedentary behaviors rise as people get older (Demirci et al., 2024).

Physical literacy serves as a valuable framework for educators, caregivers, and leaders to better comprehend the complex processes that contribute to different dimensions of well-being across all stages of life (Fox, 2010). To create a physically literate generation, a well-planned curriculum is necessary (Silverman & Mercier, 2015). Physical education teachers and a quality physical education [PE] program develop the physical literacy of children and adolescents (Mandigo et al., 2009; Silverman & Mercier, 2015). If adolescents drop out of participating in physical activity early, they miss opportunities for growth and development, leading to a widening gap between those with advanced skills and those with poor skills (Fox, 2010). If the system fails to manage this balance, there will be long-term negative effects on those adolescents who lack them (Fox, 2010).

Adolescence is a crucial term for shaping physical self-perceptions [PSP] that significantly influence lifelong participation in physical activity and sports (Fox, 2010). Fox (1997) mentioned that by 11 years old, children have already developed perceptions about their physical appearance, evaluating themselves on various aspects and forming an opinion of whether they view themselves as attractive or not. Adolescents dissatisfied with their physical appearance may use the internet to

enhance their physical self-esteem, which is crucial for overall self-worth, but this behavior may also lead to problematic internet use, as dissatisfaction with appearance is linked to a higher risk of such tendencies (Öztürk & Özmen, 2016). However, excessive internet use leads to physical inactivity, which in turn contributes to excessive weight gain (Peltzer et al., 2014; Durkee et al., 2016; Bozkurt et al., 2018). Children and adolescents who followed the WHO guidelines for physical activity showed lower percentiles in body measurements, highlighting the significant role of physical activity in preventing obesity within these groups (Demirci et al., 2024). Adolescents with obesity often have lower self-esteem, but it is uncertain whether low self-esteem leads to obesity or vice versa (Mohammed et al., 2019). To avoid obesity, improve self-esteem, and decrease depression, health education should emphasize the importance of sleep, balanced eating, and regular PA in adolescence (Moon, 2012). Furthermore, physically literate individuals can recognize and refine the key aspects of their movement efficiency while understanding the foundational health principles of PA, sleeping, and eating (Whitehead, 2010). Physically literate individuals cultivate a strong self-awareness through their physical presence and interaction with their social environment, that enhances their self-esteem and confidence (Whitehead, 2010). The concept of PL is closely connected to the concept of a healthy physical self. Physical literacy refers to a blend of behavioral and mental characteristics which develop and preserve a healthy physical self (Fox, 2010). Participating in PA or exercise can help enhance one's physical self-worth (Kim & Ahn, 2021). Contrarily, a positive self-perception of sports competence and physical fitness encourages participation in exercise (Kim & Ahn, 2021). Therefore, a high level of self-perceived fitness is likely to correspond with a high level of PL (Pastor-Cisneros, 2021). In conclusion, PL has an important role in promoting PA and fostering positive self-perceptions among adolescents, ultimately contributing to lifelong engagement in exercise.

1.2. Purpose of the study

The purpose of this study was to investigate the relationship between perceived physical literacy and physical self-perception of the high school students aged 14-19 in Kadıköy, İstanbul.

1.3. Research questions

The following research questions were examined for this study;

- 1- What is the perceived physical literacy of high school students?
- 2- What is the physical self-perception of high school students?
- 3- What is the relationship between perceived physical literacy and physical self-perception among high school students in İstanbul?

1.4. Significance of the study

Physical literacy has become a growing topic of interest in latest years, particularly in the subject of health (Cairney et al., 2019). Higher education has an important role in advancing the scientific framework by shaping how PL is defined, supported, and implemented in society (Lundvall, 2015). The majority of research conducted globally focuses on elementary and middle school children, with relatively few studies addressing high school students. The situation is similar in Türkiye. However, no study has been identified that investigates the relationship between physical literacy and physical self-perception, particularly among high school students, to the best of author's knowledge.

The findings can be particularly valuable in designing PE curriculum development and in the creation of interventions aimed at increasing PA and PL among high school students, considering their physical self-concept. Sport is frequently linked with the terms of competition, winning, or losing between children and adolescents, while PL focuses on personal progress, understanding of personal potential, and the significance of sports (Lundvall, 2015).

Given that physical literacy is a continual process spanning a lifetime, its cultivation, initially instigated by parents or caregivers within the family unit, will be further honed by various instructors, such as PE teachers or trainers, throughout different developmental phases. Hence, it is imperative to introduce this assessment tool into the scholarly discourse to address this gap (Yılmaz & Kabak, 2021). Physical literacy empowers adolescents to develop self-reliance in basic skills, coordination, and

control, enabling them to navigate changing environments through physical activity (Choi et al., 2018). In spite of the well-known health benefits associated with PA, the levels of PA among children and adolescents have been still decreasing (Grauduszus et al., 2023).

This study offers valuable insights into Turkish adolescents' physical literacy, their physical self-perception, and the relationship between these aspects. Additionally, the findings may contribute to the designing of a new PE curriculum, which incorporates the concept of PL.

1.5. Definitions of terms

Physical activity: It is described as “any bodily movement produced by skeletal muscles that requires energy expenditure (Caspersen et al., 1985).

Physical literacy: It is described as the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life (International Physical Literacy Association, 2017).

Perceived physical literacy: It contributes to the understanding of individuals' physical activity engagement (Ortega-Benavent, 2024).

Self-concept: It is a person's perception of himself or herself (Shavelson et al., 1976).

Physical self perception: It (also referred to as physical self-concept) encompasses an individual's perception, understanding, and evaluation of their body, leading to body image satisfaction and body management (Hong, 2024).

Adolescence: It is the phase of life between childhood and adulthood, from ages 10 to 19 (WHO, n.d.).

Anatolian high school: It is an high school type in Türkiye admitting students based on an academic test administered at the end of grade 8 (https://en.wikipedia.org/wiki/Anatolian_High_School#References).

Vocational technical high school: It is a high school type in Türkiye admitting students based on their secondary education success score



CHAPTER 2

LITERATURE REVIEW

This chapter explains the definition of the physical literacy, components of physical literacy, history and philosophical background of the physical literacy, the physical literacy studies on adolescents, both in national and international level, physical self-perception and its significance, the physical self-perception studies on adolescents, both in national and international level, and general conclusion.

2.1. Definition of physical literacy

Physical literacy has many different definitions created by various organizations, institutions, individuals, etc., which are essentially the same at their core. Whitehead, (2010) defined physical literacy as “the motivation, confidence, physical competence, knowledge, and understanding to sustain physical activity throughout one's life, depending on one's capabilities”. The International Physical Literacy Association [IPLA] (2017) expresses a similar definition by stating, “Physical literacy is described as the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life”. The Aspen Institute, which is an educational and policy studies organization based in Washington, DC., and working with a group of 15 members, released a report called Physical Literacy in the United States. In this report, physical literacy is defined as “ability, confidence, and desire to be physically active for life” (Society of Health and Physical Educators, n.d.). Physical literacy is described as “about developing the skills, knowledge, and behaviors that give us the confidence and motivation to lead active and healthy lives” in the Australian Physical Literacy Framework (Australian Sports Commission, 2019). Physical Literacy Consensus Statement for England (2023) defined physical literacy as “our relationship with

movement and physical activity throughout life" (Sport England, 2023). Physical and Health Education Canada [PHE Canada] (n.d.) defines physical literacy as “Individuals who are physically literate move with competence in a wide variety of physical activities that benefit the development of the whole person”.

2.2. Components of physical literacy

Whitehead (2010) defined the attributes of physical literacy with the letters from A to F. Those are motivation (A), confidence and physical competence (B), interaction with the environment (C), sense of self and self-confidence [PPLI-SS] (D), self-expression and communication with others [PPLI-SC] (E), and knowledge and understanding [PPLI-KU] (F). Motivation (A) increases participation in physical activity; participation increases confidence and physical competence (B). As confidence and physical competence (B) increase, it affects motivation (A) positively in the cycle. Enhancement of confidence and physical competence (B) increases interaction with the environment (C). As interaction with the environment (C) increases, confidence and physical competence (B) will also improve. An increase in interaction with the environment (C) will also influence the rise in motivation (A), with one (A) positively affecting the other (C) as they grow (Whitehead, 2010). Figure 2.1 shows the relationships between these three key attributes.

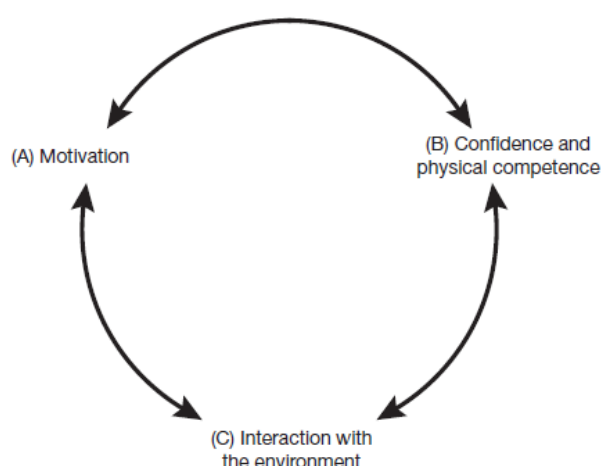


Figure 2.1. The relationship between the key attributes adapted from Whitehead, M. 2010. *Physical literacy: Throughout the lifecourse: The concept of physical literacy*, p.15. Copyright 2010 by Routledge.

The other three attributes (D, E, and F) naturally progress as motivation, confidence, physical competence, and fluent interaction improve and can contribute to the development of the core attributes of A, B, and C in the cycle (Whitehead, 2010). Figure 2.2 shows this cycle.

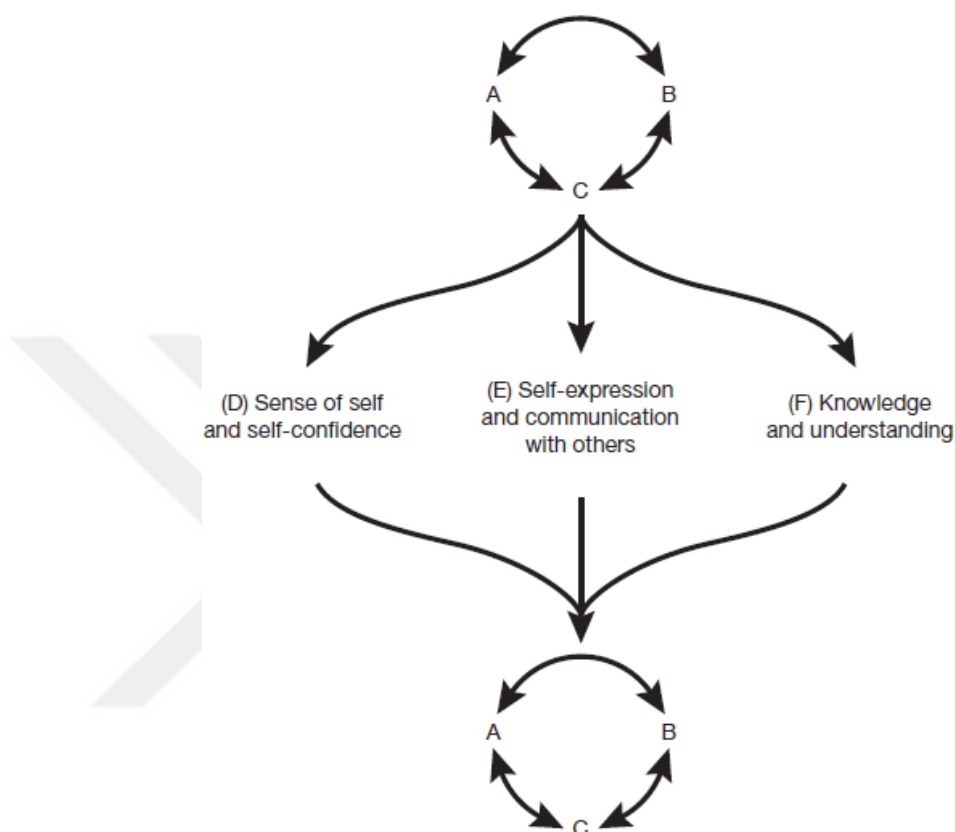


Figure 2.2. The relationship between all attributes of physical literacy adapted from Whitehead, M. 2010. Physical literacy: Throughout the lifecourse: The concept of physical literacy, p.16. Copyright 2010 by Routledge.

In Canada's Physical Literacy Consensus Statement (Sport for Life, 2015), the definition of physical literacy includes four essential and interconnected elements: affective (motivation and confidence), physical (physical competence), cognitive (knowledge and understanding), and behavioral (engagement in physical activities for life).

Canada's Physical Literacy Consensus Statement and The Australian Physical Literacy Framework discuss the same concept. The four elements in Canada's Physical Literacy Consensus Statement have been defined as domains in The

Australian Physical Literacy Framework. The four domains have been identified as physical, psychological, social, and cognitive (Australian Sports Commission, 2019). Each domain has numerous elements, which consist of the essential skills, knowledge, and behaviors needed to support the growth of physical literacy. The physical domain encompasses elements such as movement skills, moving with equipment, object manipulation, coordination, flexibility, stability/balance, agility, strength, cardiovascular endurance, muscular endurance, reaction time, and speed. Psychological domain includes elements such as engagement & enjoyment, confidence, motivation, connection to place, self perception, self regulation (emotions), and self regulation (physical). Social domain consists of relationships, collaboration, ethics, and society & culture. Cognitive domain comprises content knowledge, safety & risk, rules, reasoning, strategy & planning, tactics, and perceptual awareness (Australian Sports Commission, 2019). Establishing a common definition and language guided by Whitehead's components of physical literacy is essential for comprehensively understanding and implementing PL in all its aspects. In this context, the examples from Canada's Physical Literacy Consensus Statement and The Australian Physical Literacy Framework serve as integrative references for understanding the PL concept, promoting a shared vision with the help of a common definition and language (Sports for Life, 2015; Sport Australia, 2019).

2.3. History and philosophy of physical literacy

The concept of physical literacy was established in a doctoral study in the Schools of Existentialism and Phenomenology (IPLA, n.d.). The philosophers of this school, especially Jean-Paul Sartre and Maurice Merleau-Ponty, adopted a monist stance, challenging the dualistic view. They emphasize the significance of human embodiment in our experience of life (IPLA, n.d.). Monism, existentialism, and phenomenology are the philosophical foundations for understanding physical literacy (Whitehead, 2001). While investigating the reasons behind the low profile of physical education and physical activity, Whitehead (2013) diagnosed the issue as the unquestioned acceptance of dualism. Dualism is a philosophical approach famously associated with Descartes' renowned phrase, "Cogito, ergo sum" ("I think, therefore I am") (Pot, Whitehead & Durden-Myers, 2018). Dualism describes the

individual as two different parts, which are the body and the mind (Pot et al., 2018). As a counter to dualism, the definition of monism reflects the commitment, which takes into account the emotional, the physical, and the cognitive aspects of human nature, and concentrating on just one of these facets of human potential does not define physical literacy (Whitehead, 2013). Existentialism is the other philosophical approach for physical literacy. The phrase "existence precedes essence", which is famously attributed to French existentialist philosopher Jean-Paul Sartre, describes that our uniqueness, or essence is affected by the individual experiences throughout life (Whitehead, 2010). Phenomenology is the third philosophical approach for physical literacy. Phenomenology emphasizes the idea that everybody will experience the circumstances as having his/her own unique and personal perspectives (Whitehead, 2010). The body and the world of experiences, available to the physical/athletic individual, are valuable from a phenomenological perspective (Mechikoff, 2020).

The concept of "physical literacy" was introduced by Margaret Whitehead in 1993 in a paper at the International Association of Physical Education and Sport for Girls and Women [IAPESGW] Congress in Melbourne, Australia (IPLA, n.d). Since 1993, there has been an increasing number of research studies on this issue, and numerous conferences and workshops have been mounted around the world. Whitehead (2010) published a seminal book titled "Physical Literacy: Throughout the Lifecourse, and this book has challenged the colleagues to re-evaluate the place of physical activity in life and to explore the best ways to include individuals in physical activity, thus ensuring potential benefits of participation can be realized (Whitehead, 2019). Whitehead's and her contributors' philosophy and application of PL point out its importance not only for young people but also for individuals of all ages throughout their entire lives (Doll-Topper & Talbot, 2010). Physical literacy is a developing concept in children's health promotion and could influence their PA patterns throughout life (Belanger et al., 2018). Although people understand the health importance of PA, levels of participation continue to decline among both youth and children (Grauduszus et al., 2023). The concept of PL offers a promising, universal approach to supporting PA by incorporating with all dimensions physical, emotional, and cognitive (Grauduszus et al., 2023). Whitehead (2013) revealed her concerns

about the decrease in PA after school graduation, the increase in sedentary leisure pursuits, the rise in obesity and stress-related health issues, and the high-level performance as the main focus of many schools.

The USA, the UK, Canada, Australia, and New Zealand are the leaders in the subject of physical literacy. They have undertaken efforts to integrate PL into education, health, and community initiatives to enhance participation and performance in physical activities (Giblin et al., 2014). The Society of Health and Physical Educators [SHAPE America] (n.d.) is an organization that was founded in 1885 in the United States of America. In 2014, SHAPE America released National Standards & Grade-Level Outcomes for K-12 Physical Education. Incorporating the term ‘physical literacy’ into the physical education goals of the national standards enables physical education teachers to educate students as individuals who are physically literate and allows students to enjoy healthy physical activities for life. Incorporating physical literacy into the national standards enables physical education teachers to educate students as individuals who are physically literate and allows students to enjoy healthy physical activities for life. While the 2013 National Physical Education Standards included five standards, the new version of the National Standards for K-12 Physical Education features only four standards, which are related to developing motor skills, knowledge, and social, and personal skills through physical activity (SHAPE America, n.d.). The Physical Literacy Consensus Statement was introduced in June 2015 at the International Physical Literacy Conference in Vancouver, Canada, and after that the Sport for Life Society prepared and announced the “Vancouver Declaration” as additional guidance to the Statement (Tremblay et al., 2018). The Physical Literacy Consensus Statement aimed to refine terminology, minimize confusion, enhance alignment, and strengthen the synergy of efforts among sector partners (Tremblay et al., 2018). The Physical Literacy Consensus Statement for England was introduced at a conference in London, attended by over 100 participants from the academic, sport, and physical activity sectors (Sport England, 2023). The Physical Literacy Consensus Statement for England was developed to foster a common understanding of physical literacy among professionals in the sport, education, physical activity, recreation, play, health, and youth sectors. The statement highlighted the significance of physical literacy in providing positive

experiences with movement and physical activity for everyone (Sport England, 2023). Sport New Zealand (n.d.) is a crown entity in Aotearoa New Zealand. It aims for the greatest well-being for all New Zealanders by encouraging and facilitating quality in play, active recreation, and sports. Sport New Zealand adopts three strategies to achieve this quality: the Insights Approach, the Locally Led Approach, and the Physical Literacy Approach (Sport New Zealand, n.d.). Numerous organizations in the sector have demonstrated the benefits of employing the three approaches together, fostering quality experiences that enhance people's confidence, competence, and motivation to be physically active for life (Sport New Zealand, n.d.). PHE Canada (n.d.) is the leading association in Canada for physical and health educators since 1933. Canada has demonstrated its position as one of the global leaders in physical literacy by developing four distinct physical literacy measurement tools: Canada's Passport for Life, Physical Literacy Assessment for Youth, Canadian Assessment of Physical Literacy, and Fundamental Movement Skills Assessment Tool.

In conclusion, leading countries have made efforts in integrating physical literacy into education and health systems, but challenges remain in its widespread adoption and consistent measurement. Ongoing efforts by international organizations and national frameworks are essential in advancing physical literacy and ensuring its benefits for individuals of all ages.

2.4. Physical literacy studies on adolescents

2.4.1. National physical literacy studies on adolescents

There is a lack of study about adolescents' physical literacy level not only in Türkiye but also all around the world. Most of the studies is about 8-12 or 12-15 years old children. Taş, Yolcu, & Altunsöz (2024) investigated the physical literacy studies published in Turkish literature, focusing on the conceptual framework, the definition of physical literacy, sample selection, data collecting instruments, and analysis. This research has shown that out of 14 physical literacy studies conducted in Türkiye, only 3 focus on high school students. Furthermore, in these three studies (Cengiz, 2023; Yılmaz & Kabak, 2021; Yılmaz et al., 2023), Perceived Physical Literacy

Instrument [PPLI] for Adolescents (Sum et al., 2018) was used as the measurement tool (Taş et al., 2024). Yılmaz ve Kabak adapted this instrument into Turkish in 2021.

Gerger (2022) investigated the physical activity levels, physical literacy, and e-health literacy levels of 522 high school students. The International Physical Activity Questionnaire [IPAQ], the Perceived Physical Literacy Scale, and the e-Health Literacy Scale were used in the study. The results of the study showed that high school students displayed moderate levels of PA, PL, and e-health literacy, with a positive and important relationship between their levels of PA and PL (Gerger, 2022).

Yılmaz and her colleagues (2023) conducted a study investigating the relationship between PL, PA behavior, and extracurricular sport activities on secondary and high school students between 12 and 18 years old. The study utilized three scales, including the Perceived Physical Literacy Scale for Adolescents, the Student Attitude Scale towards Extracurricular Sports Activities (Yılmaz & Güven, 2018), and the Cognitive Behavioral Physical Activity Scale (Eskiler et al., 2016). The study demonstrated that PL attitudes towards extracurricular sports activities, and PA attitudes and behavior levels were higher among the participants who participated in sports compared to those who did not (Yılmaz et al., 2023).

Cengiz (2023) studied to examine the physical literacy of high school students aged 14 to 18. The PPLI for Adolescents was conducted in the study. The study indicated that total scores on the physical literacy scale did not vary by gender; however, a significant difference was observed based on grade level. Furthermore, there was a significant relationship between students participating in sports or not. Physical literacy levels of the students participating in sports were higher than the ones not participating in sports in all sub-dimensions of PL (Cengiz, 2023).

Öztürk et al. (2023) examined the PL level of 568 university students between 18 and 20 years old. The participants were regarded as late adolescents since they were first and second-year students studying in physiotherapy and rehabilitation

departments. In the study, not only PL but also PA level, enjoyment of activity, and barriers to PA were assessed. Perceived Physical Literacy Instrument for Adolescents, the International Physical Activity Questionnaire–Short Form, Physical Activity Enjoyment Scale, and the Physical Activity Barriers Questionnaire were conducted in the research. In conclusion, there was a significant correlation between PL, enjoyment derived from PA, and male gender with PA levels among the late adolescents. Furthermore, PL was found to be related to barriers to PA and enjoyment derived from such activities. Enhancing PL in late adolescence may be important for increasing PA levels (Öztürk et al., 2023).

Cengiz and Delen (2019) investigated the literature on the effects of adolescents' PA levels on physical, physiological, psychological, and sociological factors such as depression, anxiety, academic achievement, socialization, mood, loneliness level, social support, parental attitudes, quality of life, sleep, eating habits, number of meals, smoking, consumption habits, obesity, cardiovascular disease, body composition, and smartphone usage. Those studies had been conducted between 2014 and 2019 and have shown that in addition to its physiological effects, PA also had positive sociological and psychological impacts on adolescents (Cengiz & Delen, 2019).

A study conducted by Iğdır and colleagues (2024) measured the comparison of physical literacy and self-perception levels of individuals in the 10–14 age group. In this study, Sum's Physical Literacy Scale for Adolescents (2018) and Harter's Self-Perception Profile Scale for Children (1985) were used. According to the study's results, it can be stated that as individuals in early adolescence develop higher levels of physical literacy, their self-perceptions improve as well (Iğdır et al., 2024).

Açak and his colleges (2024) examined the relationship between high school students' physical literacy and self-esteem. Two Dimensional Self-Esteem Scale and Physical Literacy Scale were conducted to collect the data from 510 high school students. The study's findings revealed a positive, linear, and low-level correlation between the research group's physical literacy and self-esteem levels (Açak et al., 2024).

In conclusion, while there is a significant amount of research on physical literacy in younger age groups, there is a clear gap in studies focusing on adolescents, particularly in the context of high school students. Based on the studies conducted in Türkiye, it can be concluded that as individuals engage more in physical activity, their physical literacy tends to improve, regardless of whether they are in early or late adolescence. PE teachers play a vital role in addressing this gap, as their influence can significantly shape students' physical literacy and engagement in physical activities, promoting lifelong healthy habits.

2.4.2. National physical literacy studies on physical education and sports

Teachers

According to the current belief, PL may be more widely represented and emphasize self-sufficiency, hence optimizing students' potential beyond the definition of a "physically educated person" (Castelli et al., 2015). Due to the important role schools play in children's development, it is important for PE teachers to comprehend PL, as their knowledge can maximize opportunities to engage students in various ways (Stoddart & Humbert, 2017). In this regard, recent research on PE and sports teachers has been enriching the field of PL literature in Türkiye. The Perceived Physical Literacy Instrument (Sum et al., 2016) was introduced into Turkish literature by Ülker (2019), who conducted the reliability and validity analysis of the Turkish version, and Munustular and Yıldız (2020), who translated it into Turkish. In the review of Turkish literature, studies that use this instrument to measure the PL levels of PE teachers are found.

Ülker (2019) investigated awareness levels, thoughts, and perspectives of graduates from sports sciences programs (coaching, education, and sports management) on physical literacy. This study conducted a reliability and validity analysis of the Turkish version of the PPLI, and the Physical Literacy Awareness Scale was designed and tested in the initial study. The study demonstrated that compared to graduates of sports management programs, physical educators and teachers possess a greater awareness, a stronger tendency to implement, and a more valuable view of PL and its dimensions (Ülker, 2019).

Çuhadar (2021) conducted a study to examine the relationship between physical literacy perceptions and PA levels of PE and sports teachers. The Perceived Physical Literacy Instrument and International Physical Activity Questionnaire were used for this research. The findings revealed that as PE and sports teachers' involvement in PA rises, their understanding of PL rises accordingly (Çuhadar, 2021). Sivri (2023) investigated the relationship between PE teachers' self-efficacy opinions, educational instructions and capabilities, and physical literacy. In this research, Perceived Physical Literacy Scale, Physical Education Teacher Interpersonal Self-Efficacy Scale, validated and tested for reliability by Esentürk et al. (2019), and Pedagogical Knowledge and Skills Scale, developed by Choy et al. (2012) and adapted into Turkish by Gökçek, and Yılmaz (2019) were conducted. The findings of this research revealed that the teachers were unfamiliar with the concept of PL and lacked information regarding it (Sivri, 2021).

Macar (2022) studied to examine the relationship between physical literacy perceptions and self-efficacy perceptions of PE teachers. The Perceived Physical Literacy Instrument, which is called the "Perceived Body Literacy Scale" in the study, and the Self-Efficacy Scale designed by Tschannen-Moran and Woolfolk Hoy (2001) and adapted into Turkish by Çapa et al. (2005) were used in this study. The analysis revealed that PE teachers' perceptions of PL showed significant differences depending on their athletic career background (Macar, 2022).

Taştan (2022) investigated if PPL predicts psychological strength of PE and sports teachers. The Perceived Physical Literacy Instrument and the Brief Resilience Scale were used as instruments in the research (Smith et al., 2008; Doğan, 2015). According to the results of the study, the only sub-dimension of PPLI that significantly predicts psychological strength is "self-expression and communication with others." Furthermore, although the levels of PL among PE teachers exhibited significant differences based on sex, with male teachers scoring higher than their female counterparts, psychological strength did not demonstrate any gender-based variations (Taştan, 2022).

Yıldizer and Munustular's study (2022) aimed to determine the differences in PPL between primary school teachers who teach PE lessons and PE teachers, based on

years of professional experience. In this study, the Perceived Physical Literacy Scale for Physical Education Teachers was conducted. The results show that PE teachers got a higher score compared to primary school teachers, and teachers with professional experience between 16 and 20 years showed a notably lower score in the sub-dimensions of "sense of self and self-confidence" and "communication" (Yıldızır and Munustular, 2022).

Balabanlı (2023) conducted research to determine PA and PL levels of PE teachers and the opinions of PE teachers about PE lessons and about increasing the PA levels of students. The Perceived Sports Literacy Scale and the International Physical Activity Questionnaire–Short Form were conducted in the research. The study indicated that the PA participations of the PE teachers were moderate, and their perceptions of PL were high with a positive and significant correlation. In conclusion, it could be said that PA level served as an important indicator of PL level (Balabanlı, 2023).

In conclusion, supporting teachers' perception of PL and designing actual experiences is important to promote students' PL and stimulate students to be physically active lifetime commitments in PA (Stoddart & Humbert, 2017). In conclusion, it is important to support teachers in their perception of PL and designing actual experiences that promote students' PL and stimulate students to be physically active lifetime commitments in PA (Stoddart & Humbert, 2017).

2.4.3. International physical literacy studies on adolescents

This section includes some studies examining the PL of adolescents from various countries. Few countries have added PL into their national PE curricula, such as Canada, the USA, and Greece. In 2022, experts from 25 European countries came together to investigate the application of PL in terms of research, policy, and practice throughout the European continent (Carl et al., 2023). It was reported that PL was a very new topic for most of those countries, and there was no clear reference or adoption in the curriculum or political statements (Carl et al., 2023). Only Greece had adopted PL in all school curricula and political statements in 2021 (Carl et al.,

2023). In Denmark, PL as a concept was accepted by Danish School Sports [Dansk Skoleidræt] (Carl et al., 2023). Dansk Skoleidræt is a non-profit organization founded in 1946 and supported by the Ministry of Education. The organization conducted a “sports and exercise survey” in Denmark as part of a large-scale study about PL (Dansk Skoleidræt, n.d.).

At present, Germany lacks any method for evaluating PL for all age groups (Grauduszus et al., 2023). Krenz and colleagues (2022) designed Germany’s first PL assessment instrument, the German Physical Literacy Assessment for Children, by testing 567 children between 6 and 12 years old from primary school.

Blain et al. (2020) examined the relationships between PL and PE involvement, spare time PA behavior, and mental health of the early adolescents. This study measured 187 early adolescents in the United Kingdom using an obstacle course, plank, and anthropometric measures, along with the PACER, sit and reach, and grip strength tests, and the CAPL instrument (Blain et al., 2020). As a result, a positive relationship between PL and PE involvement, spare time PA behavior, and positive influence was found in the research. However, PL showed a negative relationship with negative influence (Blain et al., 2020).

The Spanish Perceived Physical Literacy Instrument [S-PPLI] was carried out for reliability and validity in 360 adolescents between 12 and 17 years old (López-Gil et al., 2023). The result of the study indicated that S-PPLI had strong validity and reliability in assessing Spanish adolescents' perceptions of PL across the sub-dimensions "knowledge and understanding," "self-expression and communication with others," and "sense of self and self-confidence. Boys’ scores were higher than girls’ for all sub-dimensions. Without age or sex differences, adolescents participating in sportive activities for more than 7 years indicated higher PL for all sub-dimensions than those participating in sportive activities for less than 6 years (López-Gil et al., 2023).

A study examined with 544 adolescents from Croatia between 14 and 18 years old tested the reliability of the Canadian Assessment of Physical Literacy Knowledge

and Understanding [CAPL-2-KU] and PLAY-self and the validity in relation to its correlation with objectively assessed physical fitness in adolescents (Gilic et al., 2022). According to the results of the CAPL-2-KU, the physical fitness level does not show a strong relationship with the cognitive domain of CAPL-2. The researchers attribute the reason for this finding in the study to the existence of a school and sports system in Croatia that is based on physical fitness and motor abilities while neglecting the knowledge and understanding sub-dimension of PL in the PE curriculum (Gilic et al., 2022).

The European Health Literacy Survey Questionnaire 47 [HLS-EU-Q47] was applied to 268 Croatian high school adolescents with a mean age of 16.8 to measure the school success, HL and PL relations (Geets-Kesić et al., 2023). The PLAY-self instrument was conducted to evaluate PL levels, and grade point average [GPA] and school absences were used to measure school success. The study revealed a usually weak correlation between HL and PL and academic success. Although weak correlations were found between HL and academic variables, a significant correlation was seen exclusively between girls' GPA and HL. Furthermore, higher levels of HL and PL were observed in girls with higher school success (Geets-Kesić et al., 2023).

Mohammadzadeh and colleagues (2022) designed and performed a psychometric evaluation of self-assessment called the Adolescent Physical Literacy Questionnaire [APLQ]. Total of 836 Iranian adolescents between 12 and 18 years old attended the research. As a result, the instrument had high consistency, high test-retest reliability, and strong validity, and it was found that there was a high correlation between PPLI and APLQ (Mohammadzadeh et al., 2022).

Alipour-Anbarani and colleagues (2022) examined the PL of 510 Iranian participants between 16 and 18 years old according to the sources through which they access information on PA. Physical training teachers, club coaches, parents, friends, and the internet were determined to be the sources of receiving PA information. The findings of the study indicated that boys' PL was higher than girls', with no important difference, and adolescents receiving information from the club coach had higher PL (Alipour-Anbarani et al., 2022).

The India Report Card [IRC] is part of a worldwide foundation called “Global Matrix 4.0” guided by Active Healthy Kids Global Alliance with participation of 57 countries (Bhawra et al., 2023). Each country’s report card is structured based on an assessment measuring 10 indicators that reflect active living. The IRC evaluates 11 indicators of active living behaviors among Indian children and adolescents, including yoga as the 11th indicator (Bhawra et al., 2023). According to the 2022 IRC, minimizing gender inequality as the aim of educational campaigns should also be provided to support PL among educators and families (Bhawra et al., 2023).

Sum and colleagues (2018) developed the PPLI for adolescents and examined its reliability and validity on 1945 adolescents between 11 and 19 years old in Hong Kong. The findings of the study demonstrated PPLI with good validity and reliability for adolescents’ perceptions of PL regarding the three sub-dimensions of the instrument (Sum et al., 2018). The Physical Literacy Academy for Children and Youth [PLACY], which is a social initiative connected to sports, was founded with the leadership of Sum and colleagues in 2022. The aim of the PLACY is to support children and youth in Hong Kong in developing into healthy, confident, happy, and active individuals by providing PL programs, fitness, sports talent evaluations, certifications, awards, rankings, and consultation and referral services (PLACY, n.d.).

Ke and colleagues (2022) examined a literature review of PL studies in Japan. The results demonstrated that PE experts and researchers studying health and sports in Japan did not have an agreement on PL statement and PL instruments yet.

In conclusion, these international research studies on adolescents investigated the relationship between PL and some other variables. As a result, there are some common conclusions that can be drawn from these examples; moreover, they will reveal several important common trends. While PL is gaining attention globally, many countries are still in the early stages of integrating it into educational curricula and policies, with only a few countries, such as Greece, adopting it into PE curricula. Some countries, such as Germany, are developing new instruments, while others, such as Japan, haven’t reached a consensus on its definition or measurement yet.

Studies consistently show that higher PL is linked with increased PA, positive affect, and greater vitality, while some research suggests a negative link with negative impact. Additionally, research is exploring how different sources of information affect PL. One study (Alipour-Anbarani et al., 2022), for example, indicates that adolescents who receive PA guidance from club coaches tend to exhibit higher levels of PL.

In other words, these global findings underscore the significance of further research to develop standardized instruments for assessing PL, clarify the factors that influence its growth, and guide the development of effective interventions to enhance PL among adolescents worldwide.

2.5. Physical self-perception and its significance

The World Health Organization describes adolescence as a term between ages 10 and 19, as the transition from childhood to adulthood. During this time, adolescents live a fast physical, cognitive, and psychological growth, affecting their emotions, thoughts, decision-making, and interactions with their environment (WHO, n.d.). At this developmental period, physical self-concept becomes particularly significant due to the many bodily changes adolescents undergo (Scarpa, 2011). This physical self-concept, encompassing appearance, physical competence, and social engagement, contributes to overall well-being and self-esteem (Fox, 2010).

Maslow's (1943) hierarchy of needs outlines five categories: physiological, safety, love and belonging, esteem, and self-actualization needs. Within this structure, self-esteem plays a crucial role in adolescents' development. Fulfilling the need for self-esteem fosters confidence, a sense of worth, strength, competence, and a feeling of value and purpose in the world (Maslow, 1943). Conversely, low self-esteem in adolescents may lead to feelings of loneliness, powerlessness, resentment, distrust, and frustration, potentially resulting in aggressive, violent, teasing, or bullying behaviors. Adolescents with high self-esteem, however, are inclined to feel proud of themselves and experience a strong sense of belonging, acceptance, and competence (Selvam & Gomathi, 2022).

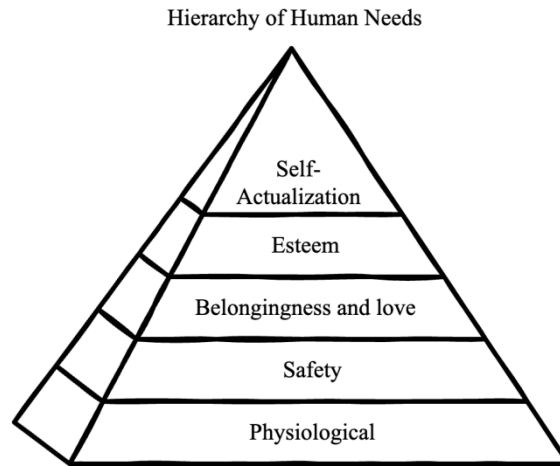


Figure 2.3. Maslow's Hierarchy of Needs (1943). Created with Napkin AI.

In *Youth and Crisis* (1968), Erikson argues that young people must navigate changes such as growing up physically, sexually and socially to develop as whole individuals. To feel complete, adolescents require continuity between the identity shaped in childhood and the person they aspire to become, as well as alignment between their self-perception and how they believe others view them (Erikson, 1968).

Self-concept refers to one's perception of himself or herself guiding actions and, in turn, shaped by those actions (Shavelson, Hubner, and Stanton, 1976). The physical self-concept model of Fox and Corbin's (1989) highlights four core components: sports competence, physical conditioning, body attractiveness, and strength. For adolescent and young adult females, a paradox often arises between their perceived physical attractiveness and societal emphasis on 'looking good'; adolescent males experience a similar paradox, though typically to a lesser extent (Fox, 2010).

Self-concept, esteem, and perception are interconnected, significantly impacting adolescents' lifestyles and health habits (Palenzuela-Luis et al., 2022). Physical literacy aligns with a positive physical self, promoting self-esteem and psychological well-being (Fox, 2010). Those with a healthy physical self-engage in activities like exercise, balanced eating, and positive social interactions. They work through confidence challenges and inhibitions, embracing personal growth, learning, participation, and a balanced recognition of strengths and weaknesses. This adaptability is essential for healthy lifelong development (Fox, 2010).

Children and adolescents with low motor skill competence, whether perceived or actual, may fall into a negative cycle where low competence leads to reduced PA, increased inactivity, and heightened obesity risk throughout childhood, adolescence, and adulthood. Over time, this cycle intensifies, increasing the likelihood of being sedentary and overweight (Stodden et al., 2008). Developing a student's self-concept is, in itself, a meaningful educational goal (Shavelson et al., 1976). In conclusion, adolescents' physical self-concept has an important effect in shaping their self-esteem, identity, and overall well-being during a period of rapid growth and development. A positive physical self-concept, supported by physical literacy, fosters confidence, promotes healthy habits, and cultivates lifelong physical and mental health.

2.5.1. National physical self-perception studies on adolescents

There is a limited number of research studies about PSP among adolescents in Türkiye. Some of these studies on adolescents were included and summarized in this section. However, PSP is a significant concept for all ages. Apart from adolescents, there are some studies on different age groups. For example, Aşçı (2002) examined the physical self-concept of the participants studying at university according to their age and sex. Aşçı (2004) investigated the PSP of late adolescents studying at university on account of sex and PA levels. Baydemir and colleagues (2018) examined the variables affecting the physical ego of the young adolescents between 11 and 13 years old regarding PA levels and PSP levels.

Çağlar and Aşçı (2010) investigated adolescent athletes' motivational styles and the relationships between these styles and their PSP. The Sport Motivation Scale [SMS] and Physical Self-Perception Profile [PSPP] were conducted on 216 adolescent athletes in the study. Athletes with high and moderate motivation consistently were higher on the PSPP sub-dimensions for perceived sport competence, physical condition, and physical self-worth compared to those with a lack of motivation (Çağlar and Aşçı, 2010).

Altıntaş and colleagues (2014) investigated the effect of PA level, body mass index [BMI], and puberty in PSP and self-esteem of 1012 participants between 11 and 18

years old. The results indicated remarkable distinction between boys and girls in PA, perceived body attractiveness, social environment concern and satisfaction levels of body image. The findings revealed that BMI gives signs about perceived body attractiveness, social environment concern, satisfaction of body and self-esteem among girls, PA and BMI were connected to perceived body attractiveness and social environment concern among boys (Altıntaş et al., 2014).

Erturan-İlker and Mülazimoğlu-Ballı (2017) examined 2680 high school students to investigate the role of motivational environment on PSP in a PE environment. The findings of the research indicated that there were important distinctions in perceived motivational environment and PSP depending on age and gender; the motivational environment of PE in high school had decisive effect on physical self-perception for adolescents; and there was a negative correlation between perceived performance deterrent environment in PE and body attractiveness perception and physical self-worth of students (Erturan-İlker and Mülazimoğlu-Ballı, 2017).

Yıldız (2018) researched the relationship of PA participation with social support, PSP, BMI, economical and educational status of parents. Total of 1227 adolescents between 14 and 18 years old participated in the study. The study indicated a significant relationship between social support and PSP with participation in moderate to vigorous PA. Participation in overall PA was related to the physical condition and sport competence sub-dimensions of the PSP, as well as the economic and educational status of parents. Adolescents with greater level of self-perception of sports competence and physical condition demonstrated a greater tendency to take part in PA (Yıldız, 2018).

İğdir and colleagues (2024) conducted a study comparing the PL and self-perception levels of 484 adolescents aged 10 to 14. The findings of the study showed that there was a positive correlation between PL and self-perception levels.

In conclusion, while there are relatively few studies on adolescents about physical self-perception in Türkiye, the existing research emphasizes the significance of factors such as PA levels, body image, and motivational environment in shaping

adolescents' physical self-concept. These findings emphasize the need for further exploration of physical self-perception across different age groups to better understand its impact on overall well-being and development.

2.5.2. International physical self-perception studies on adolescents

This section includes some studies examining the physical self-perception or self-concept of adolescents from various countries, offering a wider perspective on these subjects through international research.

Babic and colleagues (2014) investigated 64 studies to examine the strength of establishments and possible mediators between PA and physical self-concept in children and adolescents. The study included research from various countries, such as the US, which contributed 17 studies; England, 12; Australia, 7; Canada, 5; and the UK, 4, while Spain, Finland, and Sweden had 2 each. Other countries like China, Cyprus, Estonia, Germany, Greece, Hong Kong, Italy, Jamaica, Mexico, Norway, Poland, Scotland, and Taiwan had one research. These studies, based on their number and subject, are as follows, respectively: fifty-nine on perceived competence, fifty-five on perceived appearance, thirty-three about physical self-concept, twenty-eight on physical self-concept, and twenty-five on perceived fitness. According to the results PA represents an important relationship with physical self-concept, and perceptions of competence, fitness, and physical appearance. Gender moderated physical self-concept while age moderated perceptions of appearance and competence, but there were not any important mediators for perception of fitness (Babic et al., 2014).

Maïano et al. (2004) investigated the the relationship of sex and age on self-esteem and PSP among 605 participants between 11 and 16 years old from France. The study indicated that sex and age influenced global self-esteem and physical self-perceptions. While an age effect was explored on the self-esteem, physical self-worth, and attractive body, and a sex influence was explored on self-esteem and all PSP sub-dimensions (Maïano et al., 2004).

Raustorp et al. (2005) investigated how physical self-perception relates to daily PA and BMI, and applied Children and Youth Physical Self-Perception Profile [CY-PSPP] instrument in the study. Total number of 501 Swedish students between 10 and 14 years old participated in the study. The study found a reasonable correlation between the CY-PSPP sub-dimensions and PA in boys, while the correlation was weak in girls. Overall, the correlations among the CY-PSPP sub-dimensions were medium to high. In terms of physical self-worth, ‘‘body attractiveness’’ sub-dimension showed one of the strongest correlations both for girls and boys (Raustorp et al., 2005).

Lubans and Cliff (2011) examined sex differences of 106 Australian participants (mean 15 years old) in the relationship between muscular power, body composition, and PSP. According to the results of the study, body fat and relative total strength, but not exact total strength, were related to physical self-worth in girls, whereas in boys, exact total strength and the rest of the physical self-perception sub-dimensions, but not body fat or relative total strength, were related to physical self-worth. Lubans and Cliff (2011) examined sex differences of 106 Australian participants (mean 15 years old) in the relationship between muscular power, body composition, and PSP. According to the results of the study, body fat and relative total strength, but not exact total strength, were related to physical self-worth in girls, whereas in boys, exact total strength and the rest of the physical self-perception sub-dimensions, but not body fat or relative total strength, were related to physical self-worth.

Morgan et al. (2012) researched the impact of a schedule aiming to prevent obesity at school on PSP and PA-related awareness, with the other aim of exploring whether psychological changes were related to improvements in weight status. Participants, 100 adolescent males with a mean age of 14.3 studying at schools for disadvantaged students, were equally separated into two groups: the PA Leaders Group [PALS] and the Control Group. The group of PALS showed remarkable improvements in physical self-worth, perceived physical condition, resistance training self-efficacy, and usage of PA tactics. In conclusion, a schedule aiming to prevent obesity at school focused on leading abilities enhanced the mental well-being in the physical domain for adolescent males from schools for disadvantaged students (Morgan et al., 2012).

In conclusion, the studies from various countries indicated the importance of PA and related factors such as gender, age, and body composition in shaping adolescents' physical self-perception. The findings of these studies underline promoting physical self-worth and PA to increase adolescents' overall well-being and self-esteem.

2.6. General conclusion

This chapter examined the PPL and PSP of adolescents both in Türkiye and worldwide. Researches from different cultural and social settings consistently highlight the effect of PSP in influencing adolescents' participation in PA and their overall well-being. These studies maintain valued insights for higher PL levels in adolescents are associated with higher participation in PA. Similarly, adolescents with a strong physical self-concept are willing to attend more in PA. Overall, these outcomes indicate the emphasis of further research to better comprehend the factors that develop adolescents' PL and PSP.

CHAPTER 3

METHODS

This chapter explains the research design, participants, instruments, data collection procedures, data analysis, and limitations.

3.1. Research design

A quantitative research method and a cross- sectional design were applied in this study.

3.2. Participants

The study was conducted in Kadıköy, İstanbul. The data was collected from the students of Kadıköy Anatolian High School, İstanbul Kadıköy High School, Kemal Atatürk High School, and Kadıköy Vocational and Technical High School. These four high schools were selected by the researcher since they were very close to each other's and accessible. Total of 485 adolescents aged between 14 and 19 attended in the study. However, 441 participants completed all questionnaires. After removing outliers identified in the normality test, a total of 417 responses were considered as valid data for this study. Table 3.1 presents the demographic characteristics of participants such as gender, school type, grade level, age.

Table 3.1. Demographic Characteristics of Participants

	N	%
Gender		
Female	224	53.72
Male	193	46.28

Table 3.1. (continued)

School type		
Vocational High School	113	27.10
Anatolian High School	304	72.90
Grade level		
9 th grade	118	28.30
10 th grade	96	23.02
11 th grade	154	36.93
12 th grade	49	11.75
Age		
19	26	6.24
18	52	12.47
17	126	30.22
16	128	30.70
15	79	18.94
14	6	1.44
Total	417	100

Table 3.2 presents the number and percentage of the participants regarding with what sports they engage in outside of school.

Table 3.2. Participation in organized sport

	N	%
Track & Field	1	1.64
Volleyball	12	19.67
Basketball	12	19.67
Football	23	37.70
Handball	1	1.64
Swimming	5	8.20

Table 3.2. (continued)

Tennis	3	4.92
Boxing	1	1.64
Karate	3	4.92
Race Walking	1	1.64
Total	61	100

3.3. Instruments

Three different instruments were used in this study. These three questionnaires were created as one in an online survey platform called Survey Monkey. The online questionnaire was designed starting with demographic questions and following with the Perceived Physical Literacy Instrument and the Physical Self-Description Questionnaire. The consents of the authors were taken by e-mail to use the questionnaires in this study. The demographic information of participants, such as gender, grade level, birth year, school type, and whether a participant is in a sport club or not were also collected.

3.3.1. Perceived Physical Literacy Instrument

The Perceived Physical Literacy Instrument [PPLI] was initially developed as an 18-item instrument to explore the self-perceived physical literacy of PE teachers who aim to educate students for lifelong PA (Sum et. al., 2016). Later, an adapted version for adolescents was developed based on the original PPLI (Sum et al., 2018). This adolescent version consists of 9 items and 3 sub-dimensions: “knowledge and understanding” (3 items), “self-expression and communication with others” (3 items), and “sense of self and self-confidence” (3 items). The instrument is rated on a 5-point Likert scale, with scores ranging from 1 (Strongly Disagree) to 5 (Strongly Agree); higher scores represent a higher level of perceived physical literacy. All items are positively phrased, with no negative statements included. The Turkish adaptation of the Perceived Physical Literacy Scale for Adolescents was carried out by Yilmaz & Kabak (2021), and validity and reliability analyses were performed

using data from 585 participants between 12 and 19 years old. The internal consistency coefficient for the total scale is reported as 0.85, with sub-dimension reliability coefficients calculated as 0.73 for self-awareness and self-confidence, 0.76 for communication with others and self-expression, and 0.76 for knowledge and understanding.

3.3.2. Physical Self-Description Questionnaire Short Form

The Physical Self-Description Questionnaire (PSDQ) was designed to assess physical self-concept. Originally, Marsh et al. (1994) developed the PSDQ with 70 items and 11 sub-dimensions: strength, body fat, activity, endurance/fitness, sports competence, coordination, health, appearance, flexibility, global physical self-concept, and global esteem. Later, Marsh (1996) revised the PSDQ using the same seventy items but organized them into 9 sub-dimensions (strength, body fat, endurance/fitness, sports competence, coordination, health, appearance, and flexibility) along with two global measures (global physical self-concept and global esteem). In 2010, Marsh and colleagues introduced a short form of the questionnaire [PSDQ-S] with 40 items selected from the original instrument, which retained the 11 sub-dimensions. Each item is presented as a declarative statement and is scored on a 6-point Likert scale (1 = False, 6 = True) (Marsh et al., 1994). The Turkish version of the PSDQ-S, designed for adolescents aged 12–18, was evaluated by Urfa et al. (2019), who reported strong internal consistency for its sub-dimensions, with coefficients ranging from 0.73 for the self-confidence sub-dimension to 0.93 for the sports ability sub-dimension. In this study, the PSDQ-S was used to assess adolescents, utilizing 40 items with 11 sub-dimensions.

3.4. Data collection procedures

This study had an online questionnaire and it was conducted at the 2023 - 2024 academic school, between February 26th 2024 and March 12th 2024. Data collection procedure included six steps. In the first step, approval of the Human Subjects Ethics Committee of Middle East Technical University was obtained (Appendix A). In the next step, the legal permission was taken from the Istanbul Provincial Directorate of

National Education (İstanbul İl Milli Eğitim Müdürlüğü) (Appendix B). Then consent letters from parents were obtained for all students before they took part in the study (Appendix C). All participants were free to withdraw from the research at any stage. The purpose and significance of the study were explained to the school principals, teachers and the students.

3.5. Data analysis

In this study, an online survey was applied. A total of 485 students attended the survey. Since 44 participants didn't complete the questionnaire, 441 responses were included in the analysis. Descriptive results (frequency analysis, normality analysis), reliability analysis, and the correlation of two instruments and their sub-dimensions were examined. Before conducting Pearson's correlation analysis, assumptions of normality and linearity were tested. To understand if the data followed a normal distribution, skewness and kurtosis values were tested. The dataset, originally consisting of 441 cases, was reduced to 417 after removing outliers identified during the normality test. Data within the ± 1.5 range were considered to follow a normal distribution (George & Mallery, 2019; Tabachnick & Fidell, 2007). Cronbach's Alpha and Spearman Brown Coefficient analysis were tested for the reliability of the instruments and sub-dimensions. The relationship between PPLI and PSDQ levels was tested using the Pearson correlation test. The Pearson correlation coefficients (r) were calculated, and the strength of the relationships between PPLI and PSDQ levels and their sub-dimensions were interpreted based on these criteria: $r < 0.1$: Trivial, $0.1 \leq r < 0.3$: Small, $0.3 \leq r < 0.5$: Moderate, $0.5 \leq r < 0.7$: Large, $0.7 \leq r < 0.9$: Very large, $r \geq 0.9$: Nearly perfect (Hopkins, Marshall, Batterham, & Hanin, 2009). Microsoft Office, Excel, and SPSS 28.0 version were used for the analysis of quantitative data.

3.6. Limitations

This thesis is limited to the following conditions:

- Adolescents participating in the study are between 14 and 19 years old.

- The participant group consists of students enrolled in four high schools in Kadıköy, Istanbul.
- The availability of 12th-grade students was limited, resulting in lower participation. This was because Vocational and Technical High School students were occupied with three-day internships, and Anatolian High School students were focused to university entrance exam preparation



CHAPTER 4

RESULTS

In this chapter, the general findings of the research questions were explained respectively. The assumptions of normality, linearity, reliability and results for research question 1 and 2, and correlation analysis and result for research question 3 were given as well.

4.1. Research Question 1: What is the perceived physical literacy of high school students?

To address Research Question 1, the Perceived Physical Literacy Instrument was utilized. This self-report measure comprises 9 items, divided equally into three sub-dimensions: Knowledge and understanding, self-expression and communication with others, and sense of self and self-confidence. Each item is rated on a 5-point Likert scale, from strongly disagree to strongly agree. Therefore, the maximum possible score is 45 for the overall scale and 15 for each sub-dimension.

The overall mean score for the PLLI is 35.48 out of a possible 45. This suggests that, on average, participants reported a relatively high level of PPL. The mean score for knowledge and understanding sub-dimension is 10.84 out of 15. This indicates a moderate level of PPLI-KU sub-dimension. The mean score for self-expression and communication with others sub-dimension is 11.41 out of 15, suggesting a moderately high level of perceived effectiveness in PPLI-SC sub-dimension. The mean score for sense of self and self-confidence is 13.23 out of 15, indicating a high level of PPLI-SS Sub-dimension. Table 4.1 shows PPLI Total and sub-dimension scores of high school students.

Table 4.1. PPLI Total and Sub-dimension Scores

Scale	N	Mean	Std. Deviation
PLLI Total	417	35.48	4.68
PPLI-KU	417	10.84	2.53
PPLI-SC	417	11.41	1.97
PPLI-SS	417	13.23	1.61
Valid N (listwise)	417		

Table 4.2 shows the descriptive results for PPLI Total scores and sub-dimension scores of high school students by gender.

Table 4.2. PPLI Total and Sub-dimension Scores for Gender

Gender		PPLI Total	PPLI-SS	PPLI-SC	PPLI-KU
Female	N	224	224	224	224
	Mean	34.21	12.75	11.08	10.38
	Std. Deviation	4.55	1.63	1.96	2.50
	% of Total N	53.72	53.72	53.72	53.72
Male	N	193	193	193	193
	Mean	36.95	13.79	11.78	11.38
	Std. Deviation	4.40	1.41	1.91	2.46
	% of Total N	46.28	46.28	46.28	46.28

Table 4.3 shows the descriptive results for PPLI Total scores and sub-dimension scores of high school students by school type.

Table 4.3. PPLI Total and Sub-dimension Scores for School Type

School type		PPLI Total	PPLI-SS	PPLI-SC	PPLI-KU
Vocational High School	N	113	113	113	113
	Mean	34.33	12.81	11.27	10.24
	Std. Deviation	4.51	1.52	1.98	2.74
	% of Total N	27.10	27.10	27.10	27.10

Table 4.3. (continued)

Anatolian High School	N	304	304	304	304
	Mean	35.91	13.39	11.45	11.07
	Std. Deviation	4.67	1.62	1.96	2.41
	% of Total N	72.90	72.90	72.90	72.90

The normality assumption was checked by Skewness and Kurtosis. Considering the values in the scale as a whole and sub-dimensions, it is found that the distribution is normal. Therefore, parametric tests were used. Table 4.4 presents the normality results for PPLI.

Table 4.4. Skewness and Kurtosis for PPLI Total and Sub-dimensions

	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
PPLI-TOTAL	417	21	45	35.48	4.68	-.268	.120	-.174	.238
PPLI-KU	417	3	15	10.84	2.53	-.469	.120	.054	.238
PPLI-SC	417	5	15	11.41	1.97	-.238	.120	-.214	.238
PPLI-SS	417	8	15	13.23	1.61	-.539	.120	-.576	.238
Valid N (listwise)	417								

Figure 4.1 presents the histogram of the PPLI Total scores. The distribution appears approximately normal, with a mean score of 35.48 and a standard deviation of 4.68. The data is centered around the mean, and most values fall within one standard deviation [Std. Dev.] of the mean, indicating a relatively consistent spread. The sample size (N = 417) is enough for statistical analysis. Skewness and Kurtosis values were used to test the normality of distribution as well as statistical tests to determine the appropriateness of parametric analyses. The linearity assumption was also examined to determine if the relationships between variables track a linear pattern. While the histogram in Figure 4.1 shows the distribution of PPLI Total scores, additional scatter plots and correlation analyses were conducted to verify

linearity. According to the results, the data followed a sufficiently linear trend, supporting the appropriateness of parametric analyses such as Pearson correlation.

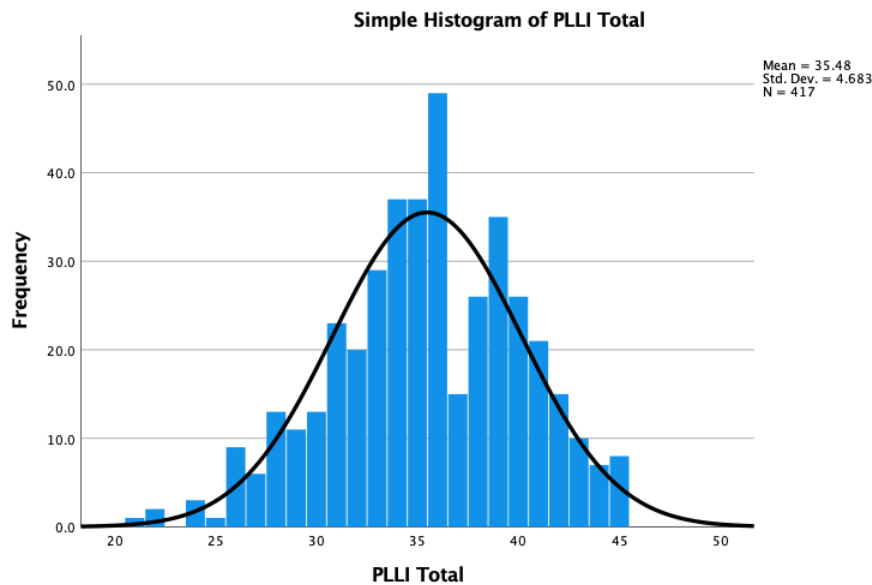


Figure 4.1. Histogram of PPLI Total

Figure 4.2 displays the normal Q-Q plot for the PPLI Total scores. This plot is used to assess whether the data follows a normal distribution. As the points generally gathered around the diagonal line, with only minor deviations observed in the figure, the distribution of the PPLI Total scores is approximately normally distributed.

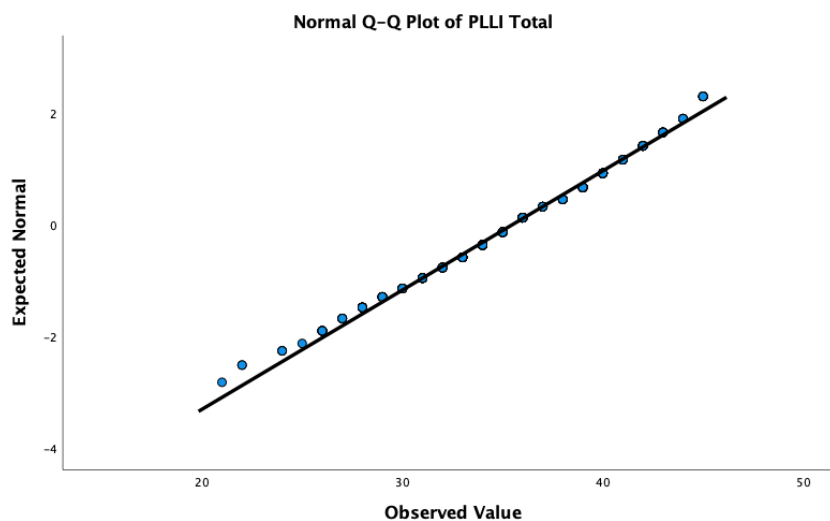


Figure 4.2. Normal Q-Q Plot of PPLI Total

Figure 4.3 displays the Detrended Normal Q-Q Plot of the PPLI Total scores. This plot represents a perfectly normal distribution. The data points are around the reference line (zero), with some deviations at the lower and upper extremes. While minor deviations are present, particularly in the tails, the overall distribution does not show extreme departures from normality.

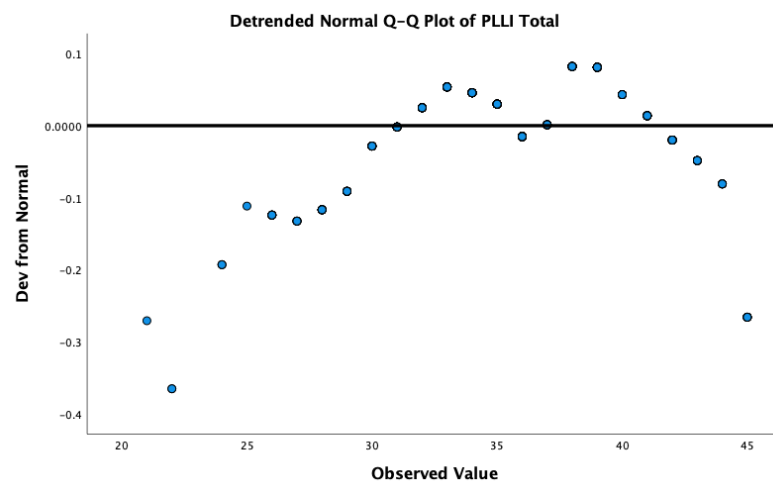


Figure 4.3. Detrended Normal Q-Q Plot of PPLI Total

Figure 4.4 presents the histogram of the PPLI-KU sub-dimension with a mean of 10.84 and a Std. Dev. of 2.53. In the histogram, the curve seems normal with some deviations in the upper and lower tails, slightly skewed to the left. The PPLI-KU sub-dimension has a normal distribution.

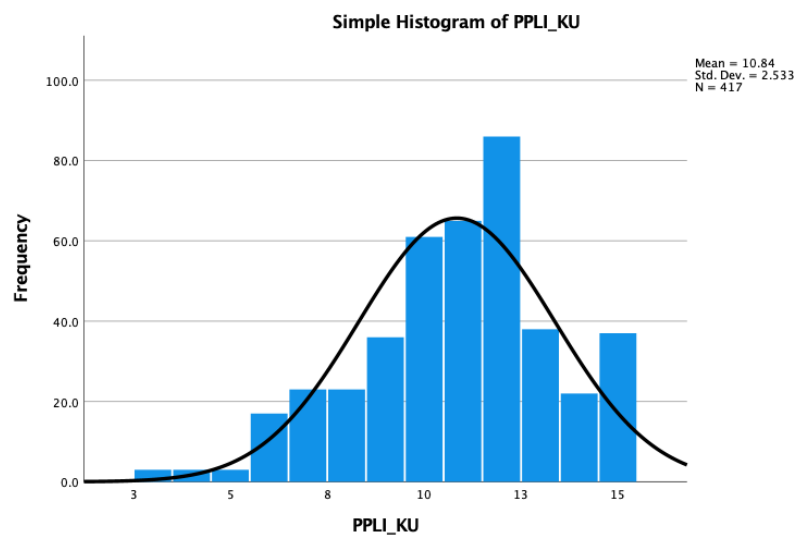


Figure 4.4. Histogram of PPLI Knowledge and Understanding Sub-dimension

Figure 4.5 shows the normal Q-Q plot for PPLI Sense of Self and Self-Confidence sub-dimension. There are some small number of deviations, especially at the extremes, but they are not a significant departure from normality. The points collected around the diagonal line indicate that PPLI-KU sub-dimension is normally distributed.

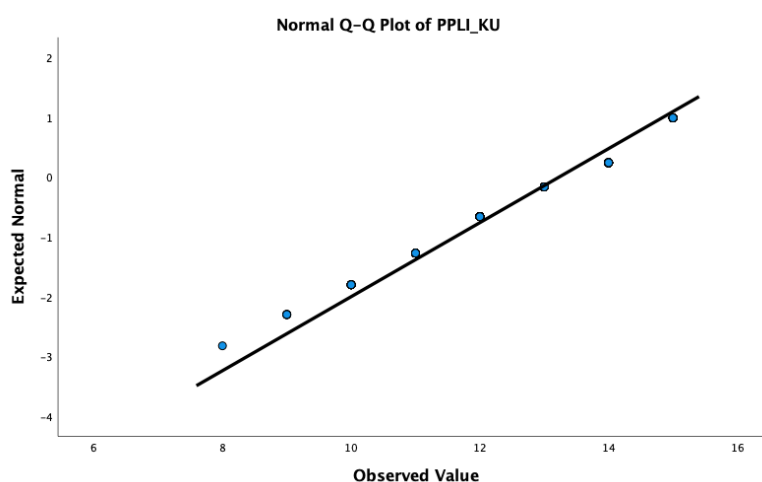


Figure 4.5. Normal Q-Q Plot of PPLI Knowledge and Understanding Sub-dimension

Figure 4.6 shows the detrended normal Q-Q plot for the PPLI-KU sub-dimension. This plot displays the deviations between the observed and the expected values under a normal distribution. The points around the horizontal line show that the data is closely normally distributed for the PPLI-KU sub-dimension.

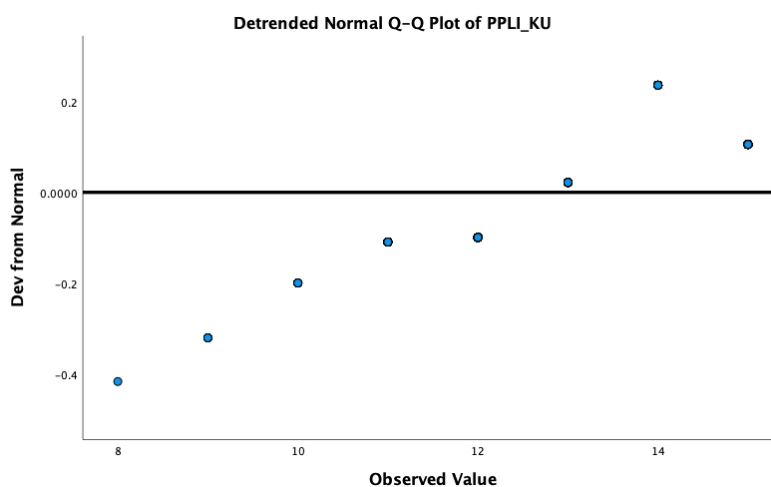


Figure 4.6. Detrended Normal Q-Q Plot of PPLI Knowledge and Understanding Sub-dimension

Figure 4.7 shows the distribution of the PPLI-SC sub-dimension with a mean of 11.41 and a standard deviation of 1.97. In the histogram, it is seen that the curve seems normal with the most of scores gathered around the mean value. The PPLI-SC sub-dimension has a normal distribution.

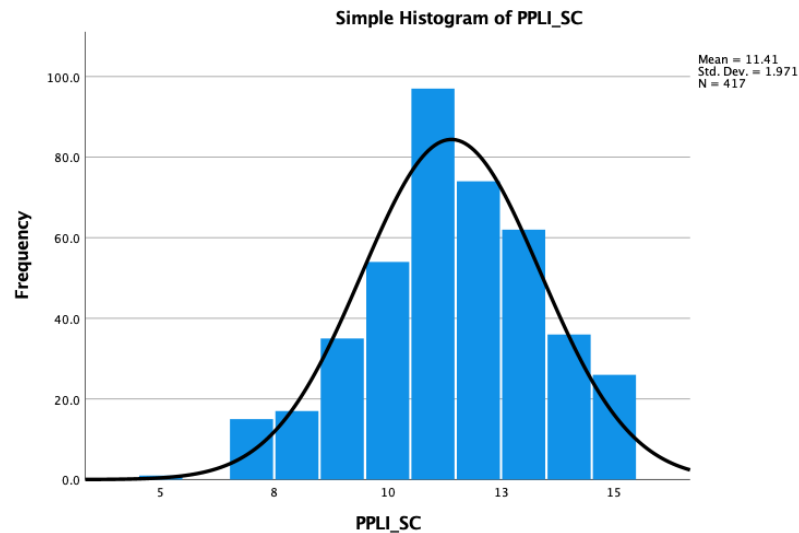


Figure 4.7. Histogram of PPLI Self-Expression and Communication with Others Sub-dimension

Figure 4.8 shows that the points generally fall closely along the diagonal line. This indicates that the distribution of the PPLI-SC sub-dimension is approximately normal. There are some minor deviations, particularly at the extremes, but they are not substantial enough to suggest a significant departure from normality.

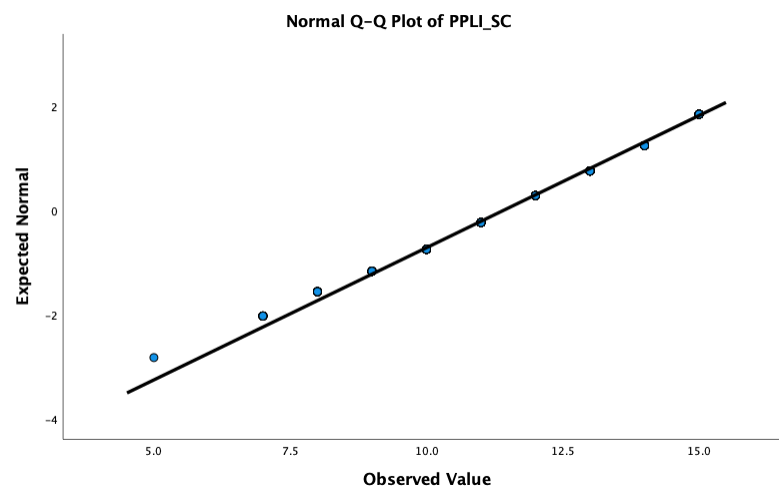


Figure 4.8. Normal Q-Q Plot of PPLI Self-Expression and Communication with Others Sub-dimension

In this detrended normal Q-Q plot, shown in Figure 4.9, a random scatter of points around the horizontal line (zero deviation) indicates that the distribution of the PPLI-SC sub-dimension is approximately normal.

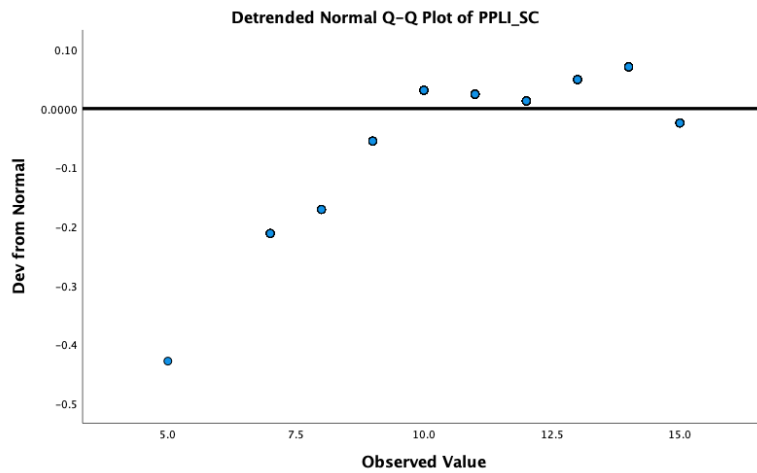


Figure 4.9. Detrended Normal Q-Q Plot of PPLI Self-Expression and Communication with Others Sub-dimension

Figure 4.10 displays the distribution of the PPLI-SS sub-dimension, which likely represents the Perceived Physical Literacy Instrument—Sense of Self and Self-Confidence sub-dimension with a mean of 13.23 and a Std. Dev. of 1.61. In the histogram, it is seen a bell-shaped curve with most of the scores gathered around the mean value. The PPLI-SC sub-dimension has a normal distribution. It shows a generally positive perception of the PPLI-SS sub-dimension related to PL within the sample.

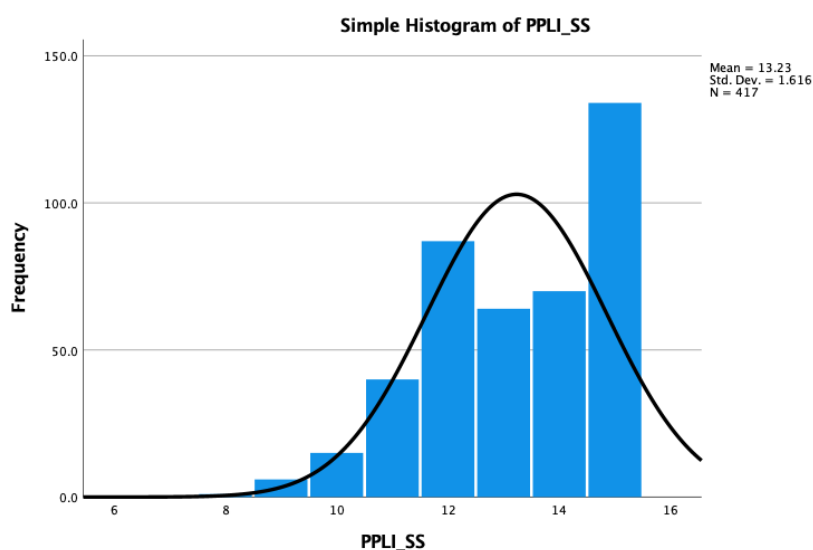


Figure 4.10. Histogram of PPLI Sense of Self and Self-Confidence Sub-dimension

Figure 4.11 shows the normal Q-Q plot for PPLI Sense of Self and Self-Confidence sub-dimension. There are some small number of deviations, especially at the extremes, but they are not a significant departure from normality. The points collected around the diagonal line indicate that PPLI-SS sub-dimension is normally distributed.

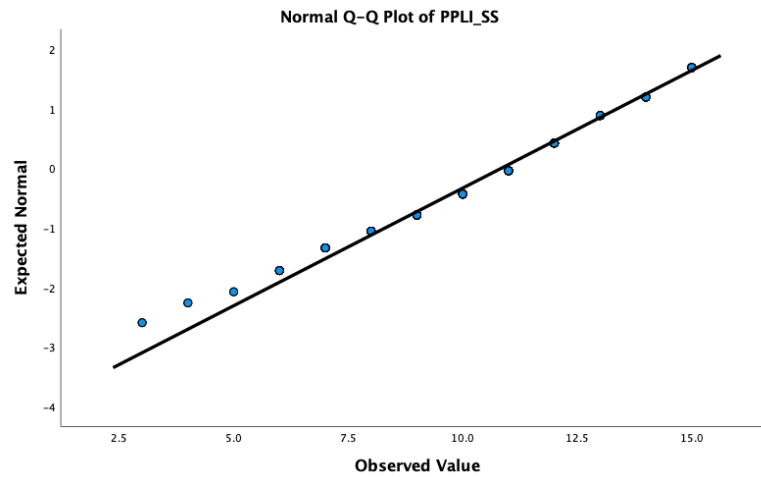


Figure 4.11. Normal Q-Q Plot of PPLI Sense of Self and Self-Confidence Sub-dimension

Figure 4.12 displays the detrended normal Q-Q plot for the PPLI-SS sub-dimension. In the figure, the points are scattered randomly and closely around the zero-deviation line with some fluctuations. These points around the horizontal line show that the data is approximately normally distributed for the PPLI-SS sub-dimension.

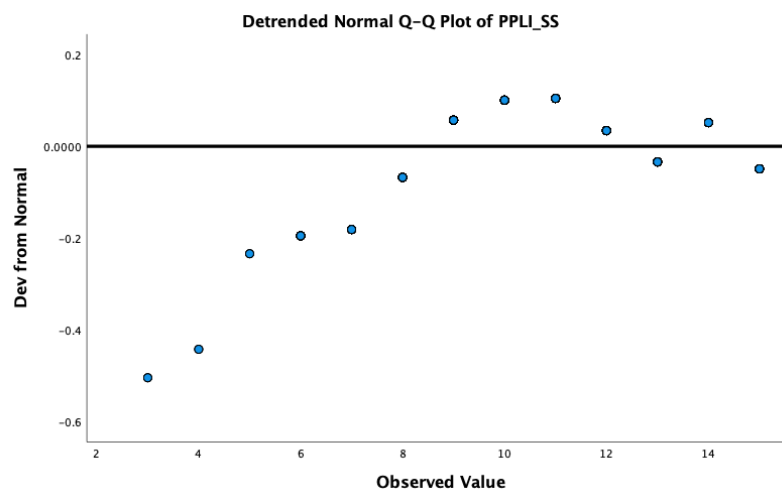


Figure 4.12. Detrended Normal Q-Q Plot of PPLI Sense of Self and Self-Confidence Sub-dimension

The reliability analysis of the study was conducted using Cronbach's Alpha and the Spearman-Brown Coefficient tests. While the PPLI Total and one sub-dimension demonstrated good reliability, the other two sub-dimensions showed low reliability on the Cronbach's Alpha test. A low alpha value in this study may result from too few items or weak inter-item correlations (Tavakol & Dennick, 2011). Each sub-dimension of the PPLI consists of only 3 items. PPLI total reliability was calculated as 0.750, with the "knowledge and understanding" sub-dimension at 0.769. However, the "self-expression and communication with others" sub-dimension had a low Cronbach's Alpha of 0.486 but showed a Spearman-Brown Coefficient of 0.551 (equal length) and 0.572 (unequal length). The "sense of self and self-confidence" sub-dimension, with a Cronbach's Alpha of 0.607, showed a Spearman-Brown Coefficient of 0.612 (equal length) and 0.632 (unequal length). Reliability analysis indicated that the overall PPLI and its sub-dimensions had an acceptable internal consistency.

4.2. Research Question 2: What are the physical self-perception of high school students?

The Physical Self-Description Questionnaire - Short Version was conducted to investigate the second research question of the study. This instrument consists of 40 items and 11 sub-dimensions. Each sub-dimension has a different number of items, such as health with 5 items, coordination with 5 items, activity with 4 items, body fat with 3 items, sports competence with 3 items, global physical self-concept with 3 items, appearance with 3 items, strength with 3 items, flexibility with 3 items, endurance/fitness with 3 items, and global esteem with 5 items. PSDQ-S is a 6-point Likert scale, ranging from 1 (false) to 6 (true). The total mean score of 168.15 on the PSDQ-S indicates a moderate level of overall physical self-perception among students. The Health sub-dimension has a relatively higher average with a mean score of 21.95 than the other sub-dimensions. As the maximum score is 30 with 5 items, the mean of 21.95 gives the highest perception to the health sub-dimension. Both sub-dimensions with 5 items, the coordination (mean 21.19) and the global esteem (mean 21.58), demonstrated high mean scores, indicating strong perceptions of coordination and global self-esteem, respectively, similar to the health sub-

dimension. Sub-dimensions with three or four items, including activity (mean 15.37), body fat (mean 13.55), sport competence (mean 12.19), global physical self-concept (mean 12.59), appearance (mean 12.77), strength (mean 12.86), and flexibility (mean 12.16), all demonstrated moderate levels of perceived attributes. The endurance/fitness sub-dimension, consisting of 3 items, showed a mean of 11.92, indicating a slightly lower perception of endurance/fitness among students. Table 4.5 shows PSDQ-S total and sub-dimension scores of high school students.

Table 4.5. Physical Self Perception Scores of High School Students

	N	Mean	Std. Deviation
PSDQ-S Total	417	168.15	30.28
Health	417	21.95	5.90
Coordination	417	21.19	4.44
Activity	417	15.37	5.11
Body Fat	417	13.55	3.94
Sport	417	12.19	3.84
Global Physical	417	12.59	3.78
Appearance	417	12.77	3.45
Strength	417	12.86	3.01
Flexibility	417	12.16	3.49
Endurance	417	11.92	3.50
Global Esteem	417	21.58	4.72
Valid N (list wise)	417		

Table 4.6 and 4.7 show the descriptive results for PSDQ-S Total scores and sub-dimension scores of high school students by gender.

Table 4.6. PSDQ-S Total and Sub-dimension Scores for Gender

Gender		PSDQ-S Total	Health	Coordination	Activity	Body Fat	Sport
Female	N	224	224	224	224	224	224
	Mean	162.65	21.21	20.26	14.37	14.03	11.09
	Std. Deviation	30.20	6.17	4.24	5.30	3.74	3.82
	% of Total N	53.72	53.72	53.72	53.72	53.72	53.72

Table 4.6. (continued)

Male	N	193	193	193	193	193	193
	Mean	174.54	22.80	22.27	16.53	13.00	13.48
	Std. Deviation	29.18	5.47	4.43	4.63	4.10	3.47
	% of Total N	46.28	46.28	46.28	46.28	46.28	46.28

Table 4.7. PSDQ-S Sub-dimension Scores for Gender

Gender		Global Physical	Appearance	Strenght	Flexibility	Endurance	Global Esteem
Female	N	224	224	224	224	224	224
	Mean	12.27	12.82	12.34	12.09	10.96	21.20
	Std. Deviation	4.01	3.46	2.88	3.46	3.40	4.93
	% of Total N	53.72	53.72	53.72	53.72	53.72	53.72
Male	N	193	193	193	193	193	193
	Mean	12.96	12.72	13.47	12.25	13.04	22.03
	Std. Deviation	3.48	3.44	3.04	3.53	3.29	4.44
	% of Total N	46.28	46.28	46.28	46.28	46.28	46.28

Table 4.8 and 4.9 shows the descriptive results for PSDQ-S Total scores and sub-dimension scores of high school students by school type.

Table 4.8. PSDQ-S Total and Sub-dimension Scores for School Type

School type		PSDQ-S Total	Health	Coordination	Activity	Body Fat	Sport
Vocational High School	N	113	113	113	113	113	113
	Mean	160.97	19.81	20.04	14.08	13.28	11.40
	Std. Deviation	26.96	6.69	4.19	4.97	4.16	3.66
	% of Total N	27.10	27.10	27.10	27.10	27.10	27.10

Table 4.8. (continued)

Anatolian High School	N	304	304	304	304	304	304
	Mean	170.82	22.75	21.62	15.86	13.65	12.49
	Std. Deviation	31.05	5.38	4.46	5.08	3.86	3.87
	% of Total N	72.90	72.90	72.90	72.90	72.90	72.90

Table 4.9. PSDQ-S Sub-dimension Scores for School Type

School brand		Global Physical	Appearance	Strenght	Flexibility	Endurance	Global Esteem
Vocational High School	N	113	113	113	113	113	113
	Mean	12.60	13.21	13.09	11.78	11.01	20.68
	Std. Deviation	3.75	3.34	2.85	3.24	3.39	4.56
	% of Total N	27.10	27.10	27.10	27.10	27.10	27.10
Anatolian High School	N	304	304	304	304	304	304
	Mean	12.58	12.61	12.78	12.31	12.26	21.92
	Std. Deviation	3.80	3.48	3.06	3.57	3.49	4.74
	% of Total N	72.90	72.90	72.90	72.90	72.90	72.90

The normality assumption was checked by Skewness and Kurtosis. Considering the values in the scale as a whole and its sub-dimensions, it is clear that the distribution is normal. Therefore, parametric tests were used. Table 4.9 presents the normality results for PSDQ-S.

Table 4.10. Skewness and Kurtosis for PSDQ-S Total for Sub-dimensions

	N	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
PSDQ-S Total	417	60	240	168.15	30.28	-.392	.120	.415	.238
Health	417	5	30	21.95	5.90	-.865	.120	.170	.238

Table 4.10. (continued)

Coordination	417	6	30	21.19	4.44	-.339	.120	.185	.238
Activity	417	4	24	15.37	5.11	-.271	.120	-.749	.238
Body Fat	417	3	18	13.55	3.94	-.709	.120	-.341	.238
Sport	417	3	18	12.19	3.84	-.514	.120	-.349	.238
Global Physical	417	3	18	12.59	3.78	-.676	.120	-.030	.238
Appearance	417	3	18	12.77	3.45	-.665	.120	.222	.238
Strenght	417	3	18	12.86	3.01	-.634	.120	.285	.238
Flexibility	417	3	18	12.16	3.49	-.385	.120	-.374	.238
Endurance	417	3	18	11.92	3.50	-.355	.120	-.302	.238
Global Esteem	417	5	30	21.58	4.72	-.549	.120	.492	.238
Valid N (listwise)	417								

Figure 4.13 shows the histogram of the PSDQ-S Total scores. The distribution appears approximately normal, with a mean score of 168.15 and a standard deviation of 30.28. The data is centered around the mean, with a small number of individuals obtained higher scores. The bell-shaped curve in the histogram shows that the distribution is slightly skewed to the right and there are some deviations from perfect normality. The sample size ($N = 417$) is sufficient for statistical analysis.

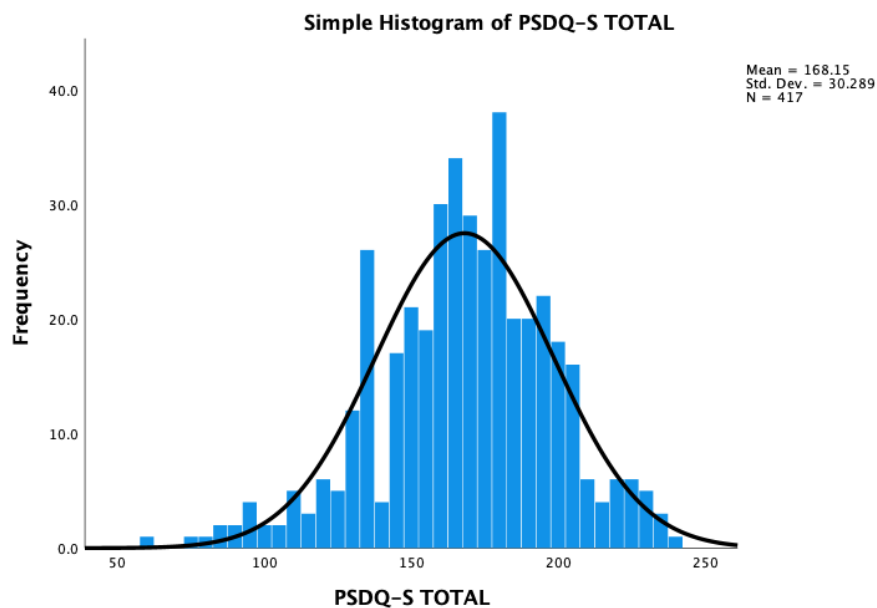


Figure 4.13. Histogram of PSDQ-S Total

Figure 4.14 shows the normal Q-Q plot of PSDQ-S Total scores visually estimating the normality of the data distribution. Most data points closely align with the diagonal line, indicating that the distribution is almost normal. However, slight deviations at both ends suggest the presence of minor skewness or kurtosis. The tails of the distribution show some deviation from normality, particularly in the higher values, which may indicate the presence of outliers or a slight right skew. Overall, the data exhibit a reasonable approximation to normality, supporting the usage of parametric statistical analyses.

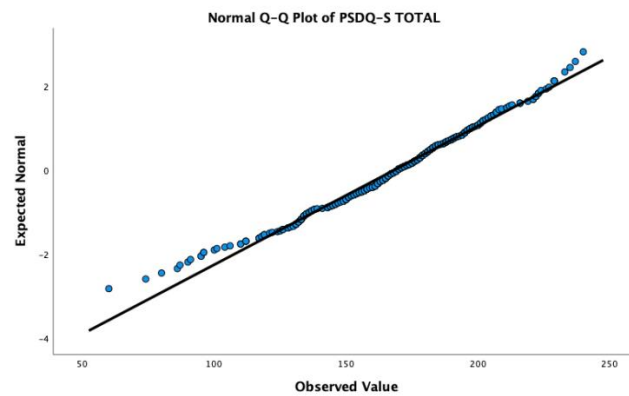


Figure 4.14. Normal Q-Q Plot of PSDQ-S Total

Figure 4.15 shows the detrended Q-Q plot of PSDQ-S Total illustrating deviations from normality. The points around the zero line, with noticeable deviations at both lower and upper ends, indicate some skewness or non-normality. While the central values are relatively close to normal, the tails suggest potential outliers or slight deviations from a perfect normal distribution.

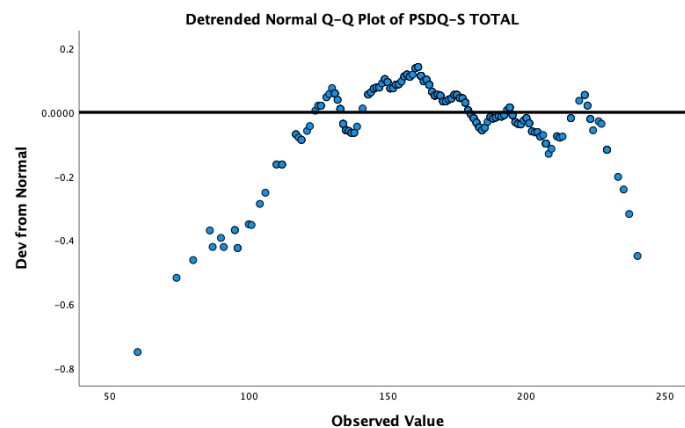


Figure 4. 15. Detrended Normal Q-Q Plot of PSDQ-S Total

Figure 4.16 illustrates the distribution of the PSDQ-S Health sub-dimension, which appears approximately normally distributed with a slight positive skew. The mean score of 21.95 and Std. Dev. of 5.90 suggest that students in general reported medium to high levels of perceived health within the PSDQ-S framework.

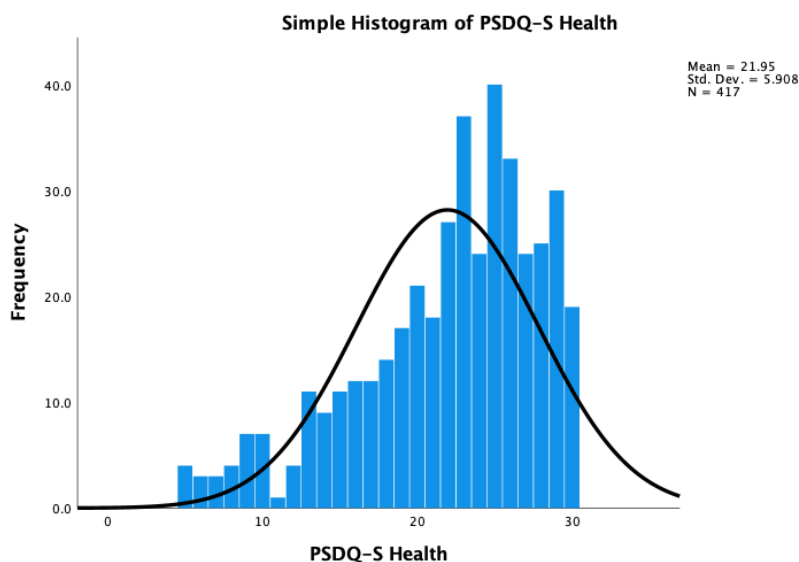


Figure 4.16. Histogram of PSDQ-S Health Sub-dimension

Figure 4.17 presents the normal Q-Q plot for the PSDQ-S Health sub-dimension. Most of the data points closely follow the diagonal line, indicating that the distribution is approximately normal. The data exhibit a reasonable approximation to normality, supporting the usage of parametric statistical analyses.

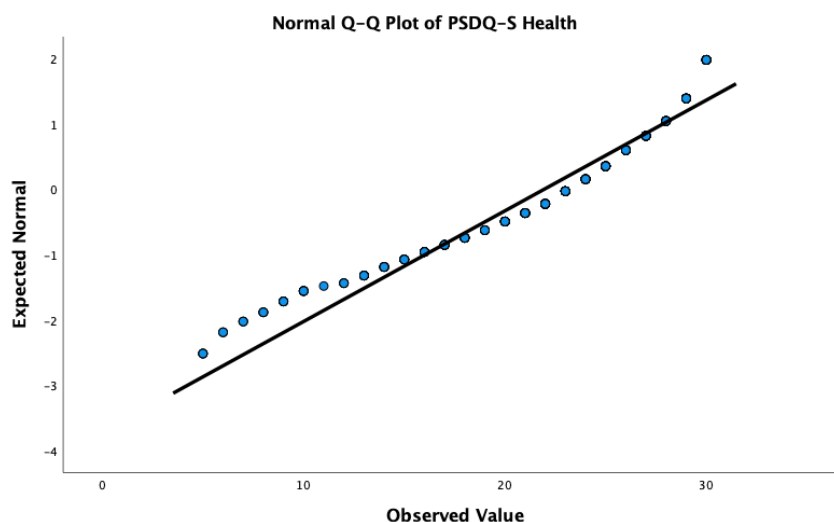


Figure 4.17. Normal Q-Q Plot of PSDQ-S Health Sub-dimension

Figure 4.18 presents the detrended normal Q-Q plot for the PSDQ-S Health sub-dimension, revealing a slight systematic deviation from perfect normality, particularly in the tails. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

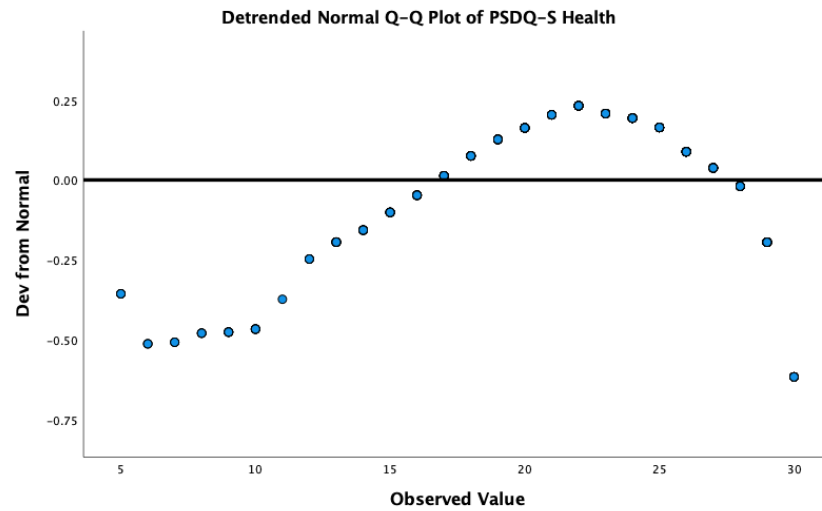


Figure 4.18. Detrended Normal Q-Q Plot of PSDQ-S Health Sub-dimension

Figure 4.19 displays the distribution of the PSDQ-S Coordination sub-dimension. The mean score of 21.19 and Std. Dev. of 4.44 suggest that participants generally reported moderate to high levels of perceived coordination within the PSDQ-S framework.

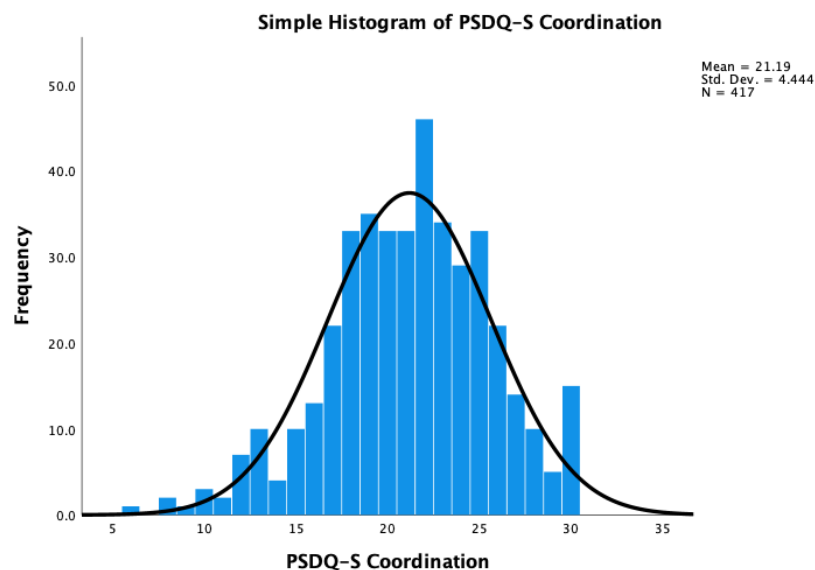


Figure 4.19. Histogram of PSDQ-S Coordination Sub-dimension

Figure 4.20 displays the normal Q-Q plot for the PSDQ-S Coordination sub-dimension. The histogram shows that data points that closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

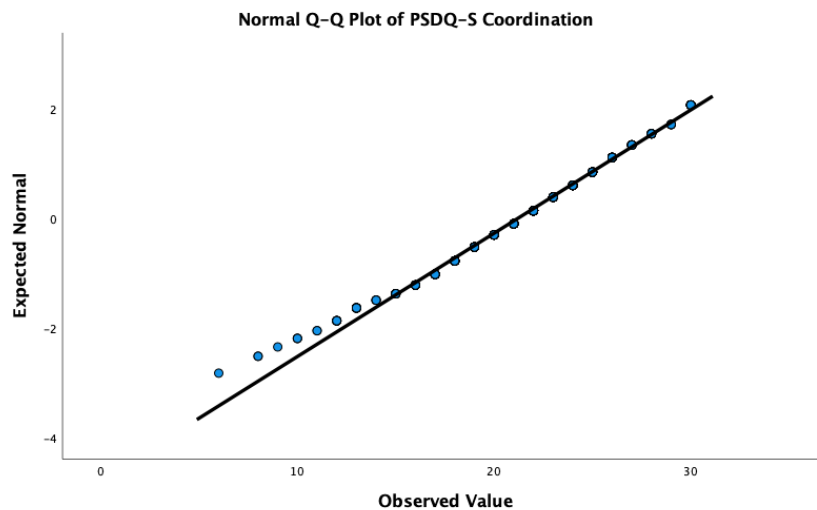


Figure 4.20. Normal Q-Q Plot of PSDQ-S Coordination Sub-dimension

Figure 4.21 presents the detrended normal Q-Q plot for the PSDQ-S Coordination sub-dimension, illustrating a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

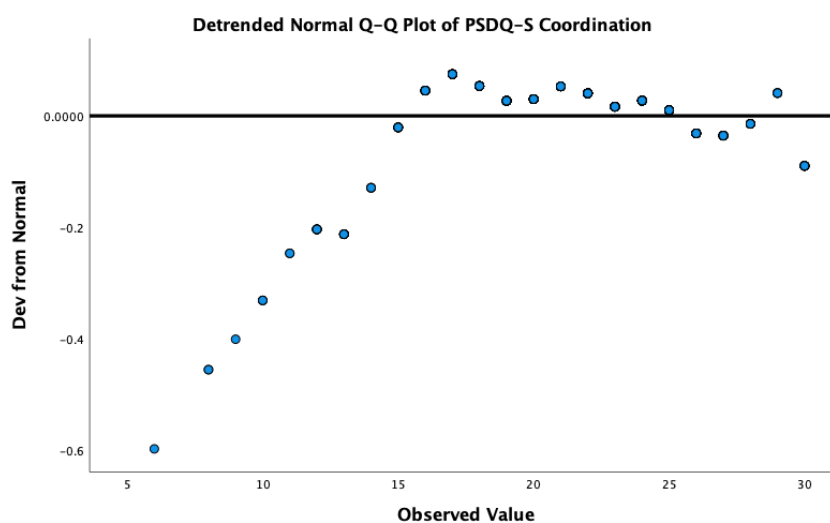


Figure 4.21. Detrended Normal Q-Q Plot of PSDQ-S Coordination Sub-dimension

Figure 4.22 shows the distribution of the PSDQ-S Activity sub-dimension, displaying an almost normal distribution with a mean of 15.37 and a Std. Dev. of 5.11. This suggests that students in general reported medium levels of perceived activity within the PSDQ-S framework.

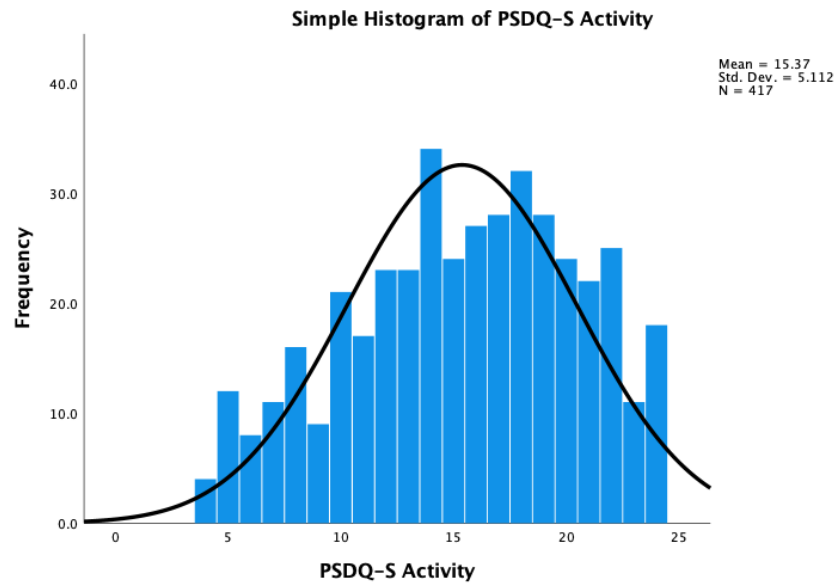


Figure 4.22. Histogram of PSDQ-S Activity Sub-dimension

Figure 4.23 presents the normal Q-Q plot for the PSDQ-S Activity sub-dimension. The histogram shows that data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

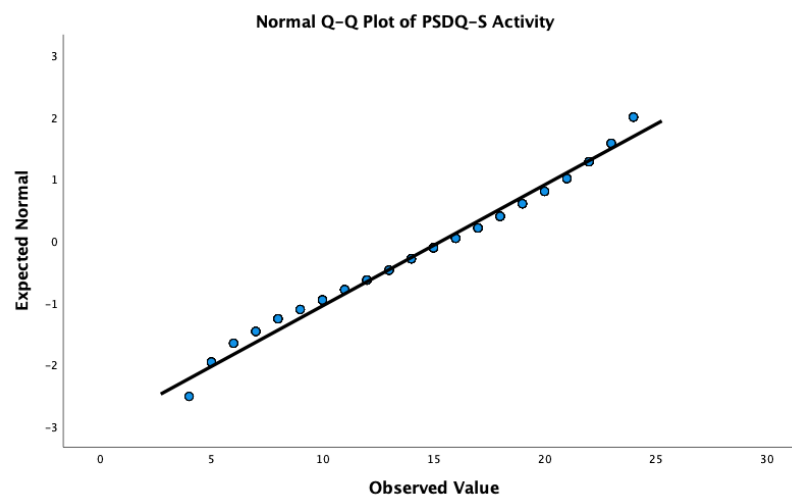


Figure 4.23. Normal Q-Q Plot of PSDQ-S Activity Sub-dimension

Figure 4.24 presents the detrended normal Q-Q plot for the PSDQ-S Activity sub-dimension, revealing a slight systematic deviation from perfect normality, particularly in the tails. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

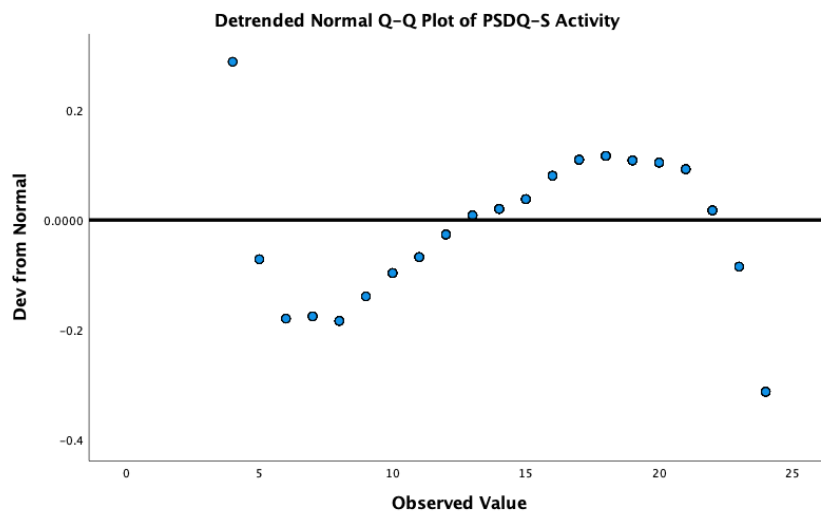


Figure 4.24. Detrended Normal Q-Q Plot of PSDQ-S Activity Sub-dimension

Figure 4.25 illustrates the distribution of the PSDQ-S Body Fat sub-dimension, showing an approximately normal distribution with a mean of 13.55 and a Std. Dev. of 3.94. This suggests that students in general reported medium levels of perceived body fat within the PSDQ-S framework.



Figure 4.25. Histogram of PSDQ-S Body Fat Sub-dimension

Figure 4.26 presents the normal Q-Q plot for the PSDQ-S Body Fat sub-dimension. The points closely around the diagonal line show that the data is normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

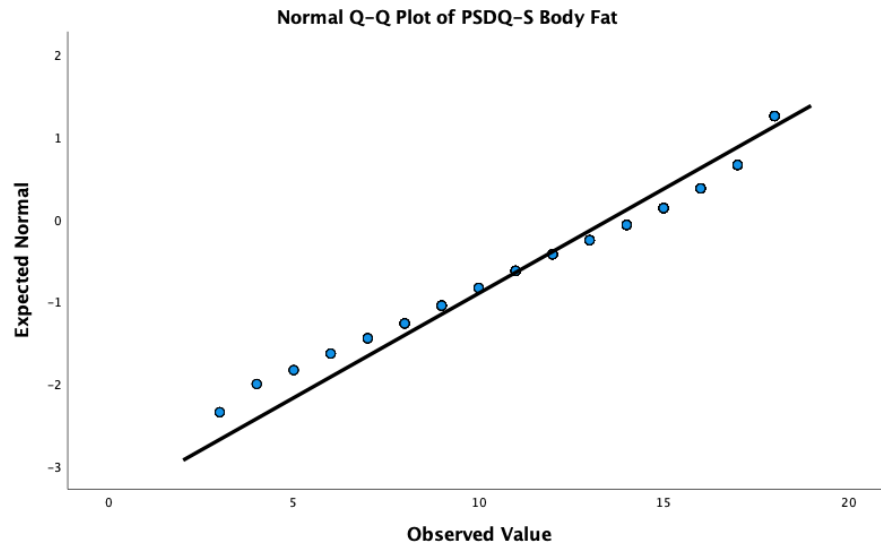


Figure 4.26. Normal Q-Q Plot of PSDQ-S Body Fat Sub-dimension

Figure 4.27 presents the detrended normal Q-Q plot for the PSDQ-S Body Fat sub-dimension, revealing a slight systematic deviation from perfect normality, particularly in the tails. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

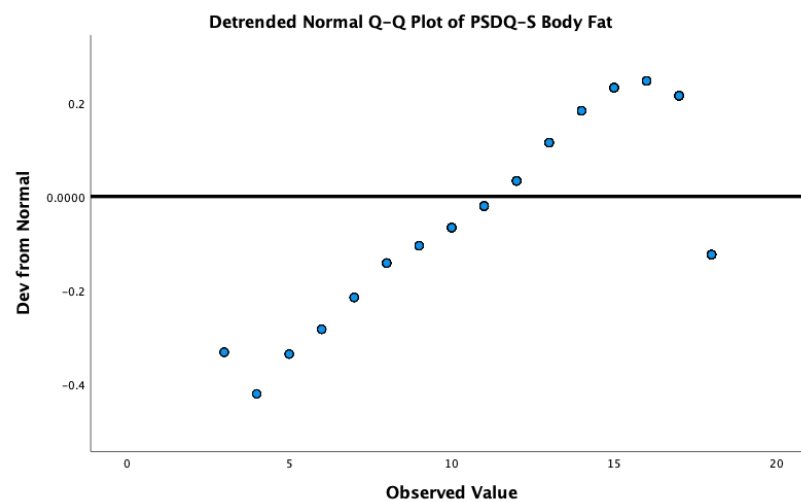


Figure 4.27. Detrended Normal Q-Q Plot of PSDQ-S Body Fat Sub-dimension

Figure 4.28 illustrates the distribution of the PSDQ-S Sport sub-dimension, showing an approximately normal distribution with a mean of 12.19 and a Std. Dev. of 3.84. This suggests that students in general reported medium levels of perceived sport activity within the PSDQ-S framework.

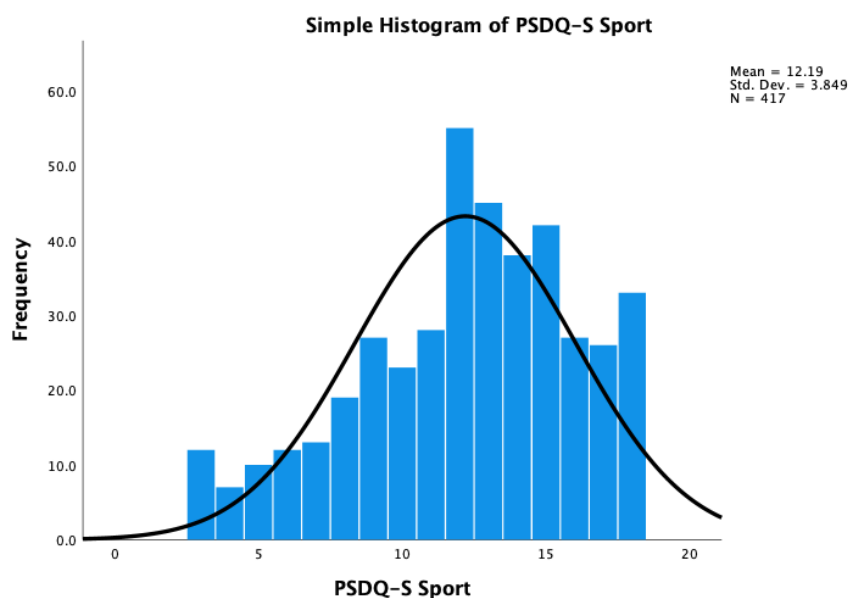


Figure 4.28. Histogram of PSDQ-S Sport Sub-dimension

Figure 4.29 presents the normal Q-Q plot for the PSDQ-S Sport sub-dimension. The data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

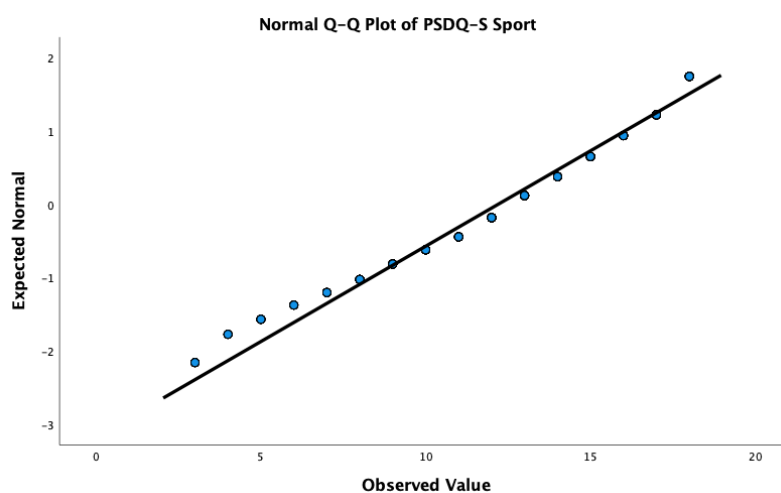


Figure 4.29. Normal Q-Q Plot of PSDQ-S Sport Sub-dimension

Figure 4.30 displays the detrended normal Q-Q plot for the PSDQ-S Sport sub-dimension. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

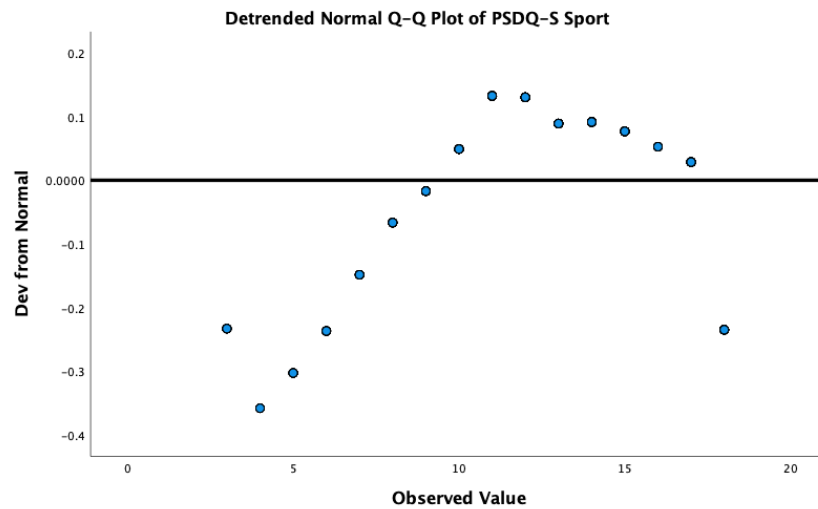


Figure 4.30. Detrended Normal Q-Q Plot of PSDQ-S Sport Sub-dimension

Figure 4.31 illustrates the distribution of the PSDQ-S Global Physical sub-dimension, showing an approximately normally distributed with a mean of 12.59 and a Std. Dev. of 3.78. This suggests that students in general reported medium levels of perceived global physical self-concept within the PSDQ-S framework.

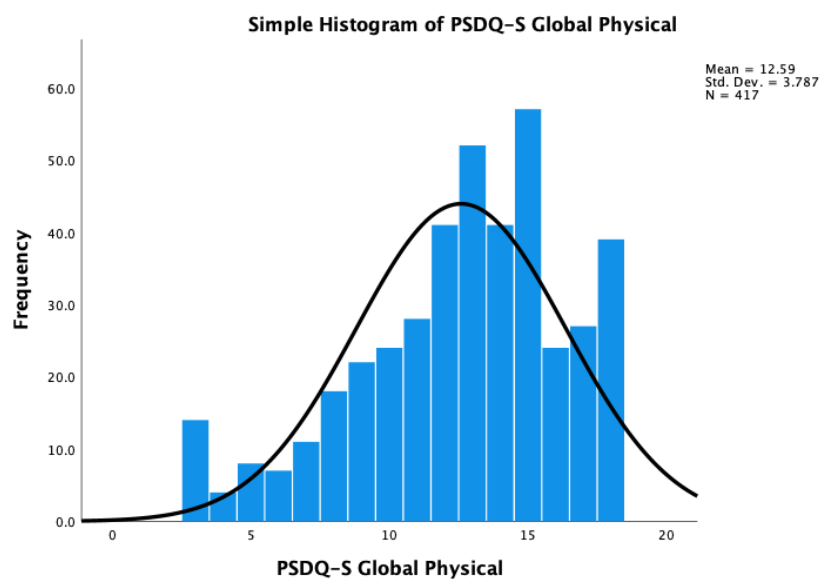


Figure 4.31. Histogram of PSDQ-S Global Physical Sub-dimension

Figure 4.32 presents the normal Q-Q plot for the PSDQ-S Global Physical sub-dimension. The data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

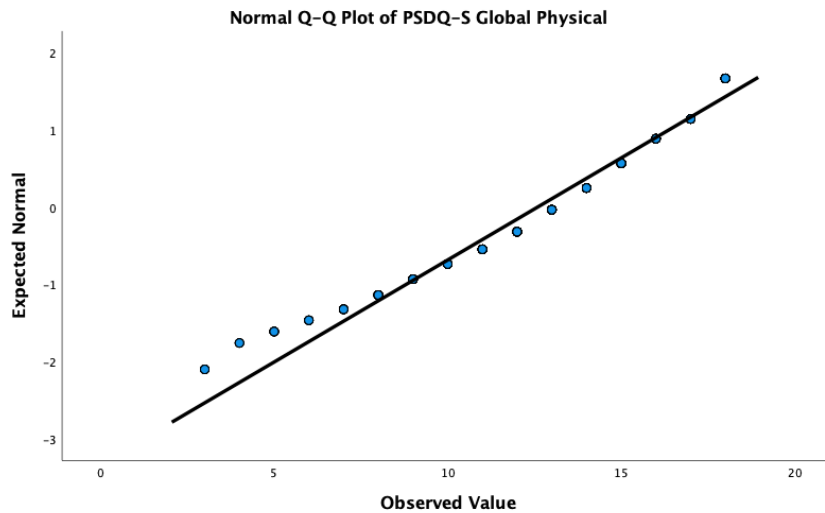


Figure 4.32. Normal Q-Q Plot of PSDQ-S Global Physical Sub-dimension

Figure 4.33 presents the detrended normal Q-Q plot for the PSDQ-S Global Physical sub-dimension. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

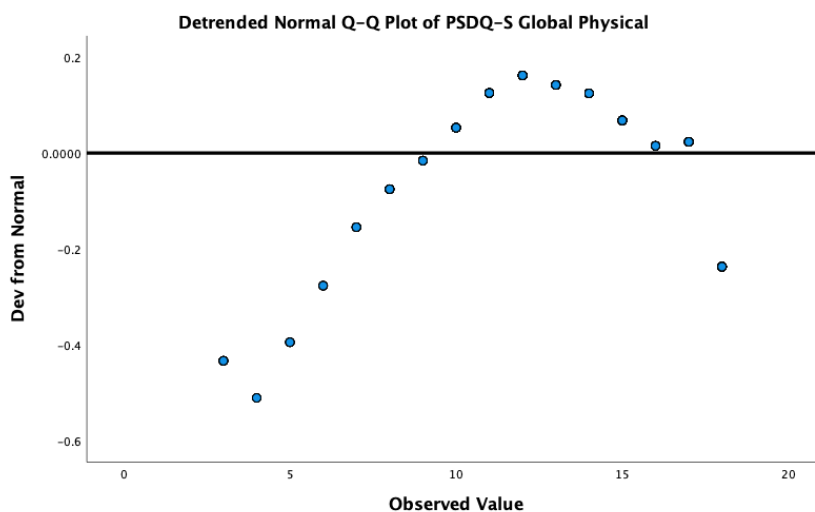


Figure 4.33. Detrended Normal Q-Q Plot of PSDQ-S Global Physical Sub-dimension

Figure 4.34 illustrates the distribution of the PSDQ-S Appearance sub-dimension, showing an approximately normal distribution with a mean of 12.77 and a Std. Dev. of 3.45. This suggests that students in general reported medium levels of perceived appearance within the PSDQ-S framework.

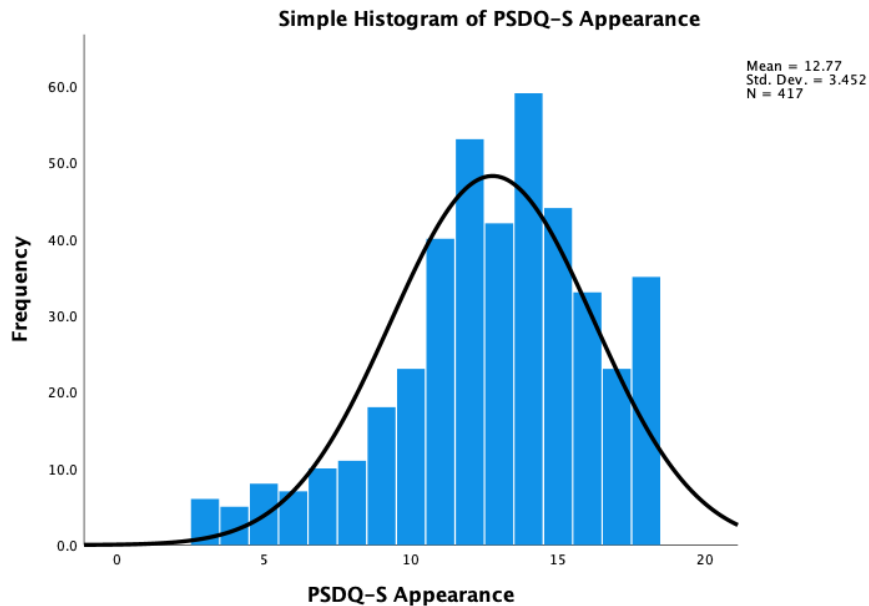


Figure 4.34. Histogram of PSDQ-S AppearanceSub-dimension

Figure 4.35 presents the normal Q-Q plot for the PSDQ-S Appearance sub-dimension. The data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

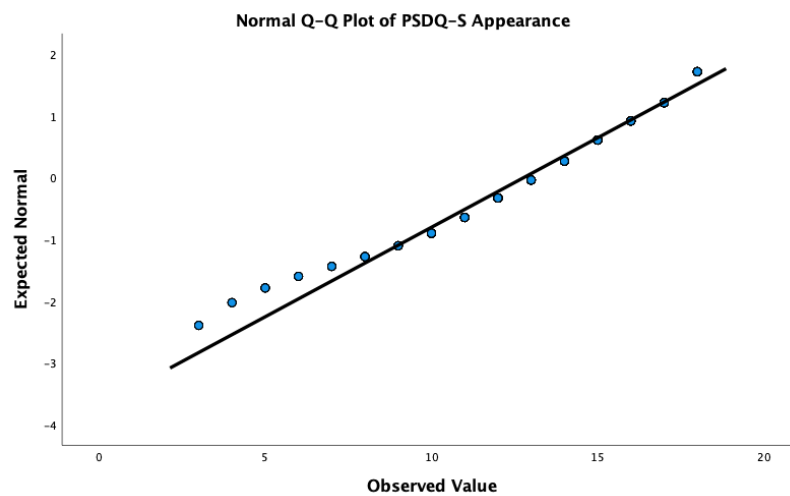


Figure 4.35. Normal Q-Q Plot of PSDQ-S Appearance Sub-dimension

Figure 4.36 presents the detrended normal Q-Q plot for the PSDQ-S Appearance variable. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

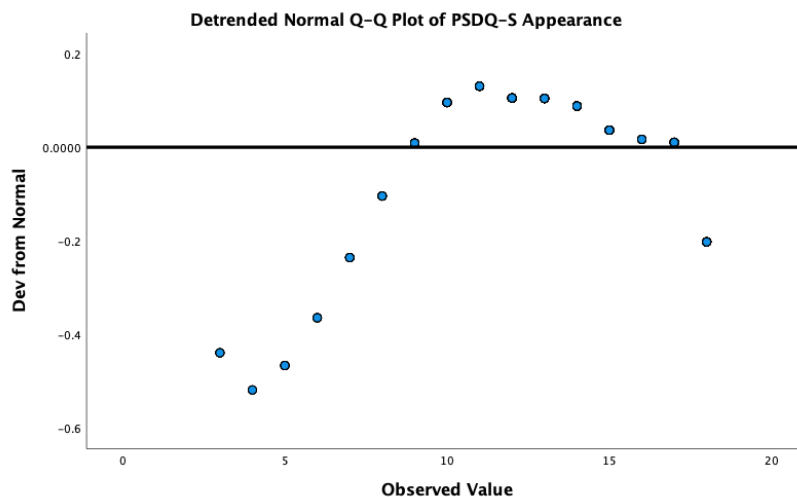


Figure 4.36. Detrended Normal Q-Q Plot of PSDQ-S Appearance Sub-dimension

Figure 4.37 illustrates the distribution of the PSDQ-S Strength sub-dimension, showing an approximately normal distribution with a mean of 12.86 and a Std. Dev. of 3.01. This suggests that students in general reported medium levels of perceived strength within the PSDQ-S framework.

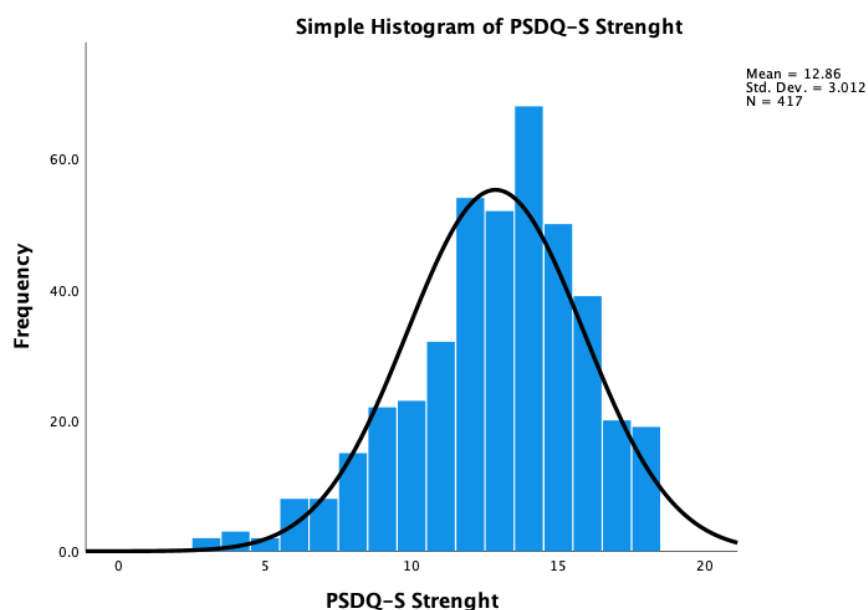


Figure 4.37. Histogram of PSDQ-S Strenght Sub-dimension

Figure 4.38 presents the normal Q-Q plot for the PSDQ-S Strength sub-dimension. The data points that are closely around diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

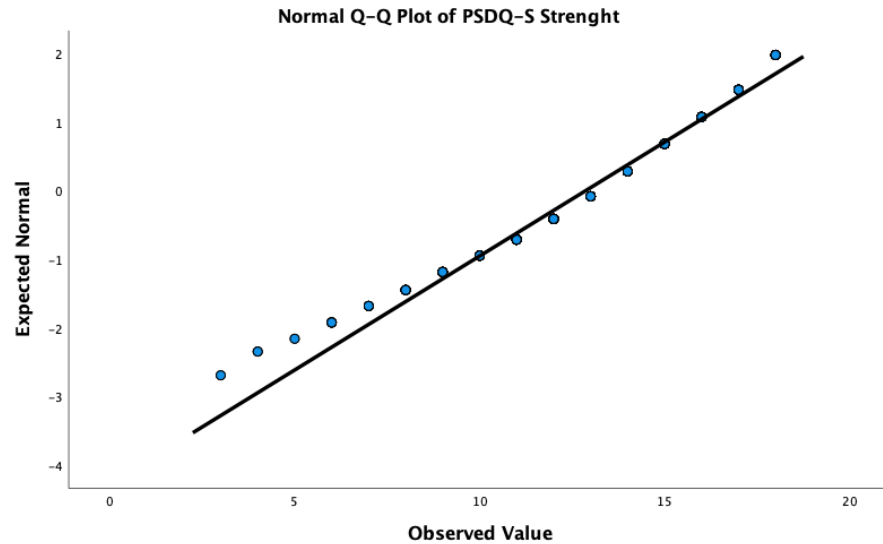


Figure 4.38. Normal Q-Q Plot of PSDQ-S Strength Sub-dimension

Figure 4.39 presents the detrended normal Q-Q plot for the PSDQ-S Strength sub-dimension. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

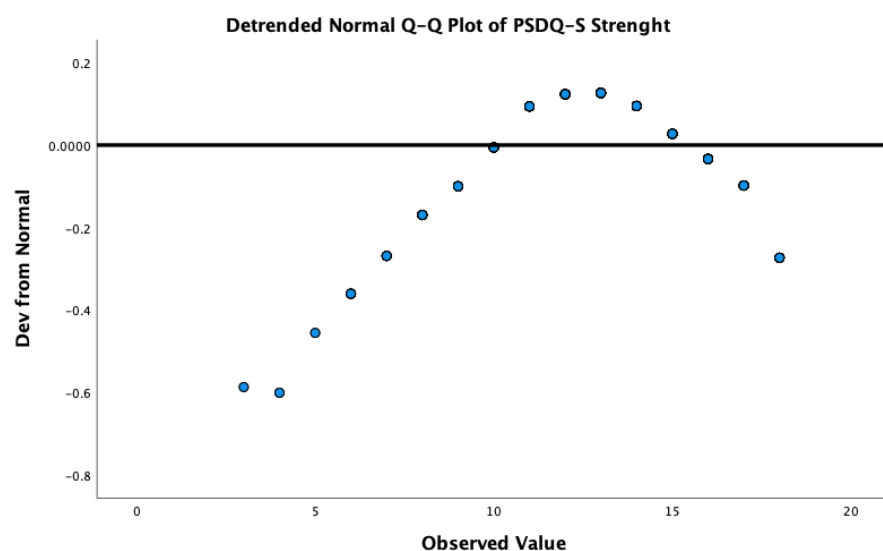


Figure 4.39. Detrended Normal Q-Q Plot of PSDQ-S Strength Sub-dimension

Figure 4.40 illustrates the distribution of the PSDQ-S Flexibility sub-dimension, showing an approximately normal distribution with a mean of 12.16 and a Std. Dev. of 3.49. This suggests that students in general reported medium levels of perceived flexibility within the PSDQ-S framework.

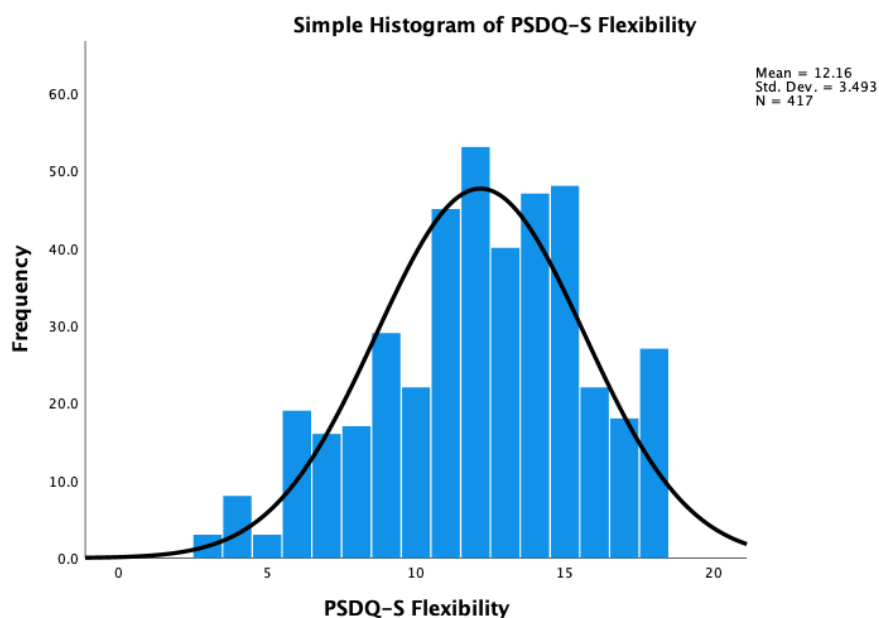


Figure 4.40. Histogram of PSDQ-S Flexibility Sub-dimension

Figure 4.41 presents the normal Q-Q plot for the PSDQ-S Flexibility sub-dimension. The data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

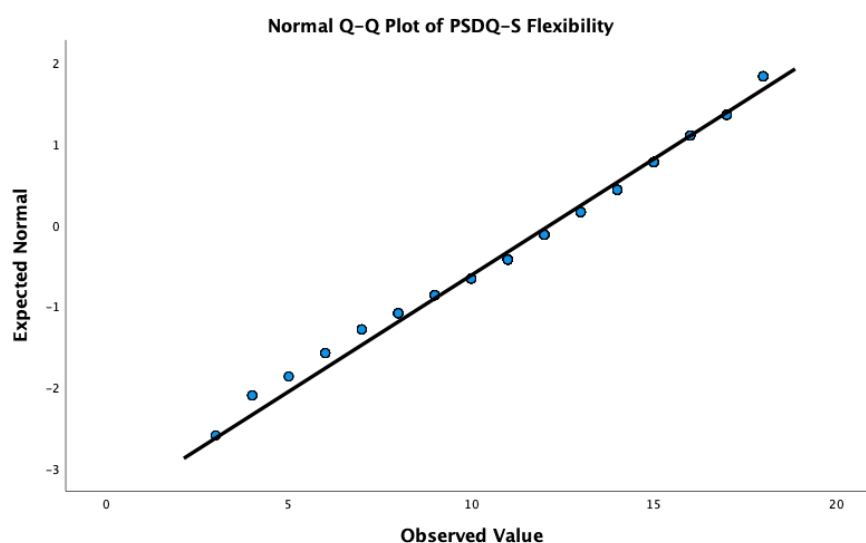


Figure 4.41. Normal Q-Q Plot of PSDQ-S Flexibility Sub-dimension

Figure 4.42 presents the detrended normal Q-Q plot for the PSDQ-S Flexibility sub-dimension. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

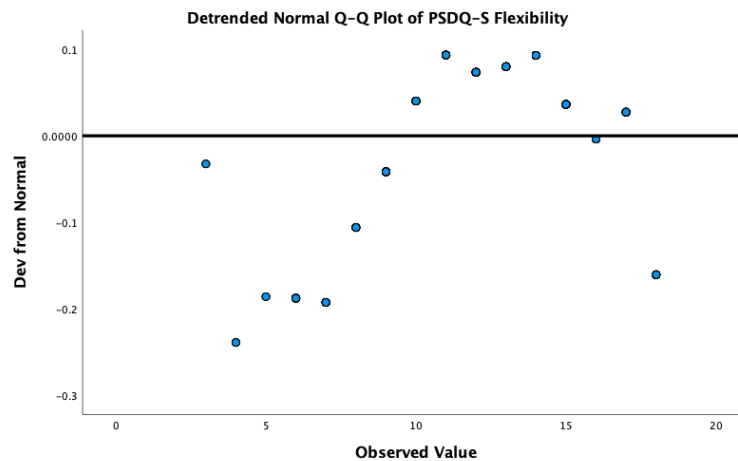


Figure 4.42. Detrended Normal Q-Q Plot of PSDQ-S Flexibility Sub-dimension

Figure 4.43 illustrates the distribution of the PSDQ-S Endurance variable, approximately normally distributed with a mean of 11.92 and a Std. Dev. of 3.50. This suggests that students reported medium levels of perceived endurance within the PSDQ-S framework.

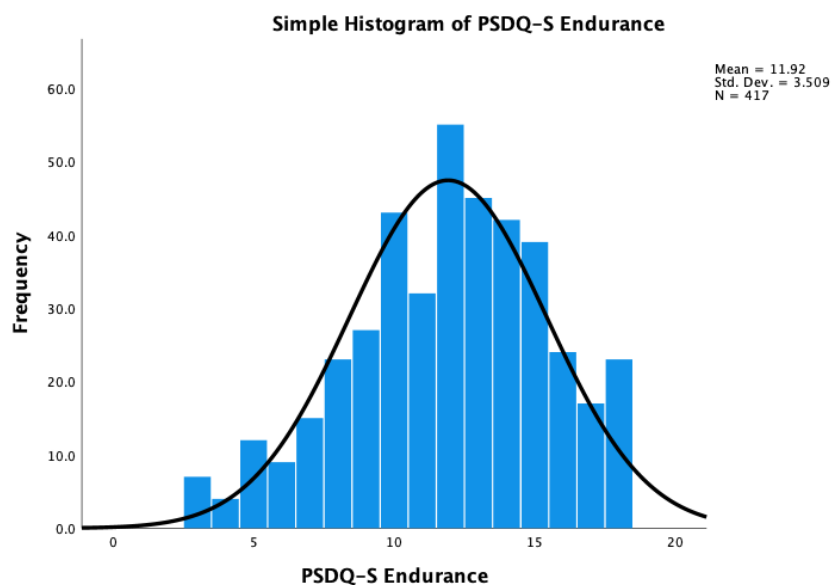


Figure 4.43. Histogram of PSDQ-S Endurance Sub-dimension

Figure 4.44 presents the normal Q-Q plot for the PSDQ-S Endurance sub-dimension. The data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

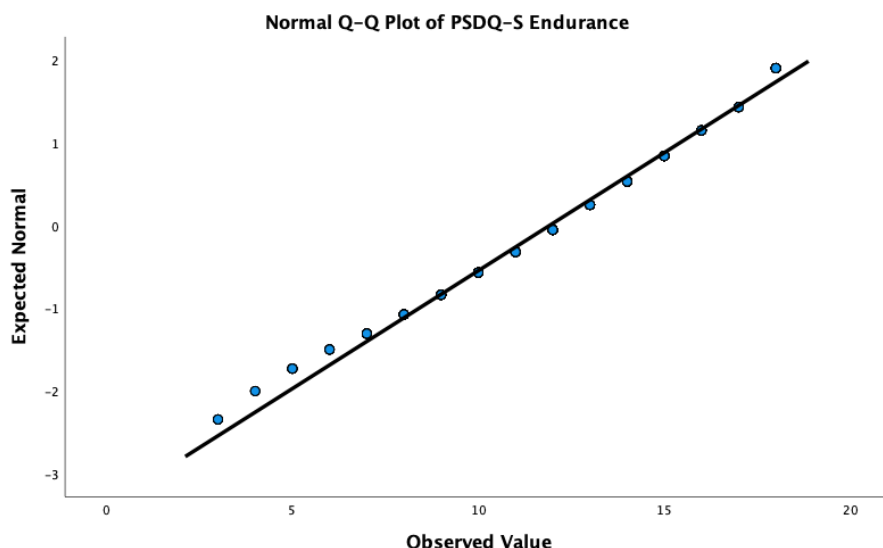


Figure 4.44. Normal Q-Q Plot of PSDQ-S Endurance Sub-dimension

Figure 4.45 presents the detrended normal Q-Q plot for the PSDQ-S Endurance sub-dimension. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

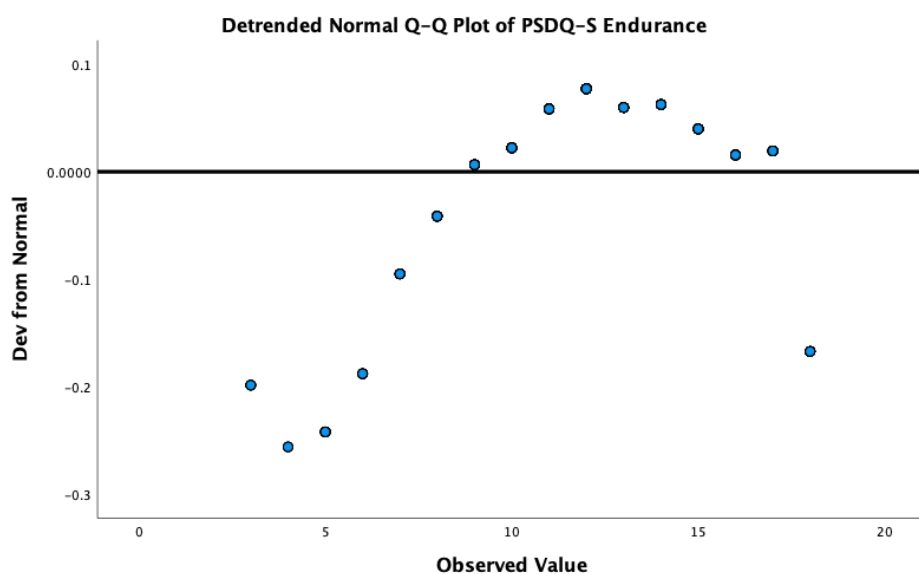


Figure 4.45. Detrended Normal Q-Q Plot of PSDQ-S Endurance Sub-dimension

Figure 4.46 illustrates the distribution of the PSDQ-S Global Esteem sub-dimension, approximately normally distributed with a mean of 21.58 and a Std. Dev. of 4.72. This suggests that students in general reported medium to high levels of perceived global esteem within the PSDQ-S framework.

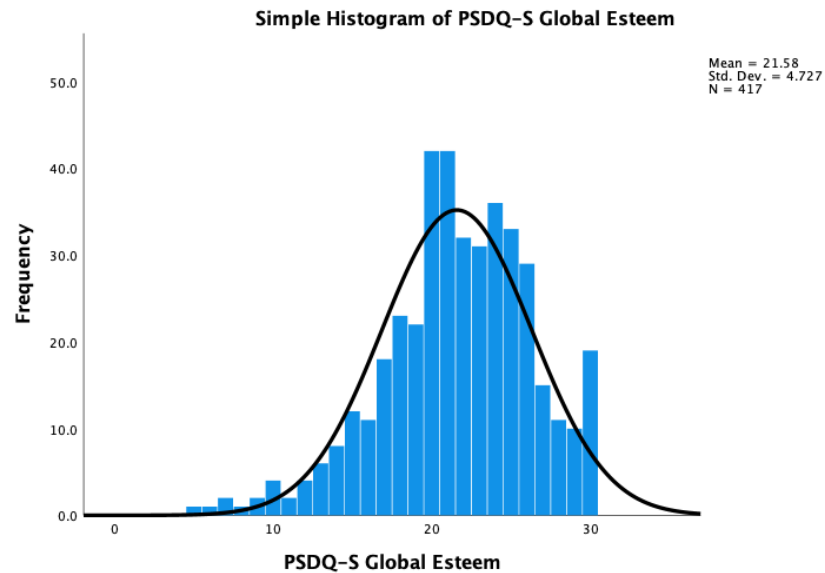


Figure 4.46. Histogram of PSDQ-S Global Esteem Sub-dimension

Figure 4.47 presents the normal Q-Q plot for the PSDQ-S Global Esteem sub-dimension. The data points that are closely around the diagonal line are normally distributed. The data supports the usage of parametric statistical analyses for this sub-dimension.

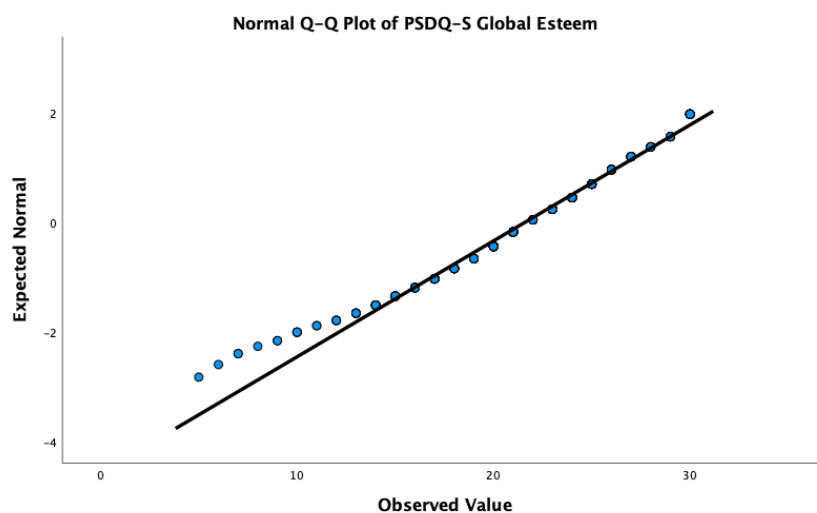


Figure 4.47. Normal Q-Q Plot of PSDQ-S Global Esteem Sub-dimension

Figure 4.48 presents the detrended normal Q-Q plot for the PSDQ-S Global Esteem sub-dimension. The plot reveals a slight systematic deviation from perfect normality, particularly in the lower tail. While not severely impacting parametric assumptions, this suggests a minor departure from a perfectly normal distribution.

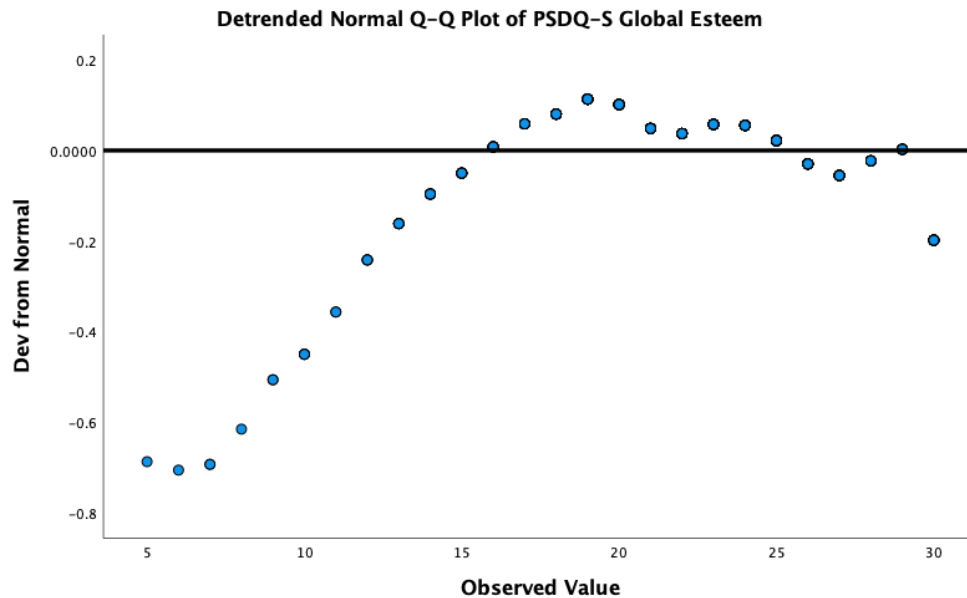


Figure 4.48. Detrended Normal Q-Q Plot of PSDQ-S Global Esteem Sub-dimension

Table 4.11 presents the reliability analysis results for the PSDQ-S and its sub-dimensions. The internal consistency of the PSDQ-S Total, checked by Cronbach's Alpha (0.942), indicated high reliability. This suggested that the overall PSDQ-S was highly reliable for assessing physical self-perception. Among the sub-dimensions, health ($\alpha=0.878$), sport ($\alpha=0.905$), global physical ($\alpha=0.880$), and flexibility ($\alpha=0.882$) demonstrated strong internal consistency, indicating that these subdomains were measured reliably. The coordination ($\alpha=0.817$), activity ($\alpha=0.836$), appearance ($\alpha=0.826$), endurance ($\alpha=0.806$), and global esteem ($\alpha=0.803$) sub-dimensions also showed good reliability. The body fat sub-dimension ($\alpha=0.874$) also demonstrated strong reliability. However, the strength sub-dimension ($\alpha=0.652$) showed relatively lower internal consistency, suggesting potential measurement variability or item inconsistencies. While this value was still within an acceptable range for exploratory research, it may require further investigation or revision in future studies. When the strength sub-dimension was analyzed using the Spearman-Brown coefficient, the

reliability values were 0.719 for equal-length and 0.737 for unequal-length measures. Additionally, when evaluated using McDonald's Omega, the reliability coefficient was checked to be 0.704.

Overall, the results supported the assumption that the PSDQ-S and its sub-dimensions exhibit strong reliability, making it a suitable instrument for assessing physical self-description among adolescents.

Table 4.11. Reliability Statistics for PSDQ-S Total and Sub-dimensions

	Cronbach's Alpha	N of Items
PSDQ-S Total	.942	40
Health	.878	5
Coordination	.817	5
Activity	.836	4
Body Fat	.874	3
Sport	.905	3
Global Physical	.880	3
Appearance	.826	3
Strength	.652	3
Flexibility	.882	3
Endurance	.806	3
Global Esteem	.803	3

4.3. Research Question 3: What is the relationship between perceived physical literacy and physical self-perception among high school students in İstanbul?

Before analyzing the correlation between PPL and PSP in high school students, assumptions for PPLI and PSDQ-S were examined to ensure the appropriateness of statistical tests. The assumptions of normality and linearity were assessed through descriptive statistics, visual inspections (histograms, Q-Q plots, and scatter plots), and statistical tests such as skewness and kurtosis values. These steps confirmed that

both datasets met the necessary statistical assumptions for further inferential analysis.

The table 4.12 presents the Pearson correlation results between PPLI Total and PSDQ-S Total among 417 high school students. A strong positive correlation is observed between PPLI Total and PSDQ-S Total, with a Pearson correlation coefficient of $r = .746$. The p-value ($< .001$) indicates that this correlation is significantly very large at the level of 0.01 (two-tailed).

Table 4.12. Pearson Correlation between PPLI and PSDQ-S

		PPLI Total	PSDQ-S Total
PPLI Total	Pearson Correlation	1	.746**
	Sig. (2-tailed)		<.001
	N	417	417
PSDQ-S Total	Pearson Correlation	.746**	1
	Sig. (2-tailed)	<.001	
	N	417	417

**. Correlation is significant at the 0.01 level (2-tailed).

These findings indicate a strong and statistically significant positive correlation between PPLI and PSDQ-S among high school students. The p-value of less than 0.001 indicates that relationship between the variables is strong and statistically significant and occurring by chance is low.

In practical terms, students perceiving themselves as more physically literate have a higher sense of PSP. This result aligns with theoretical expectations, suggesting that physical literacy plays a crucial role in shaping adolescents' self-perception of their physical abilities and competence.

CHAPTER 5

DISCUSSION

In this chapter, the findings of the research were discussed regarding the 3 research questions of this study. Implications and recommendation for future research were given at the end of this chapter.

5.1. Perceived physical literacy and physical self-perception of high school students

The purpose of this study was to investigate the relationship between perceived physical literacy and physical self-perception of high school students aged 14-19 in Kadıköy, İstanbul. Accordingly, three research questions were developed to guide the study.

The first research question of the study was that “What is the perceived physical literacy of high school students?”. The findings demonstrate that the students reported relatively high levels on the overall PLLI and the PLLI-SS sub-dimension, and moderately high levels on the PLLI-SC and PLLI-KU sub-dimensions. The high PL findings among high school students may be attributed to the fact that they study in Kadıköy, which is one of the most socioeconomically and culturally advanced districts in both İstanbul and Türkiye (Kadıköy Belediyesi Akademi, 2023). Additionally, the structured implementation of PE lessons based on an annual plan and curriculum could be a contributing factor. Moreover, adolescents' awareness of the significance of health may affect increasing their PL levels.

The findings of this study exhibit some similarities with some previous studies. In a study (Yılmaz et al., 2023) examined the relationship between perceived physical

literacy, behaviors toward extracurricular sports, and PA behaviors of adolescents between 12 and 18 years old, it was revealed that participants demonstrated high levels of perceived physical literacy across both the overall instrument and its sub-dimensions. A similar study was conducted by Gerger (2022) to examine the high school students' level of PA, PL, and e-health literacy. Variables such as gender, grade, school type, and economic status of parents were also examined in the study. Gerger's research demonstrated that high school students' PA levels are significant predictors of their PL levels. The study concluded that a positive and significant correlation exists between these students' PA and PL levels, both of which were found to be at moderate levels. Furthermore, the research showed an important difference in both PA and PL levels based on gender, with males scoring higher than females. However, when comparing PA levels across different types of high schools, no important difference was detected. In contrast, important differences in PL were noted among the various high school types.

The second research question of the study was, "What is the physical self-perception of high school students?" The results of this study demonstrate that the students reported a medium overall physical self-perception. Specifically, they exhibited strong perceptions of health, coordination, and global self-esteem. The students' perceptions of activity, body fat, sport competence, global physical self-concept, appearance, strength, and flexibility were reported as medium. Finally, endurance and fitness were perceived slightly lower among the students. The moderate overall physical self-perception results among high school students could be attributed to the developmental changes in adolescence, a period marked by significant physical, psychological, and social transformations (Baceviciene et al., 2019). It's possible that the moderate PSP of the students may be because of the effect of social media. While social media may have positive effects on self-perception, exposure to idealized images and videos can also result in negative comparisons and lower overall PSP among adolescents (Jiotsa et al., 2021; Hajat, 2024). The literature contains numerous studies on PSP and the factors affecting it, such as PA, age, and gender. For example, Mañano et al. (2004) found that age and sex affected global self-esteem and PSP, but those were not interacted with each other. When PSP variables were analyzed for their link to PA participation, it was revealed that adolescents with high

self-perception of sportive competence and physical condition more engaged in PA (Yıldız, 2018). In their research, Baydemir and colleagues (2018) found that when female and male students' physical self-descriptions were examined, similarities were observed in body fat, global physical self-concept, appearance, flexibility, and global esteem. However, male students reported higher values than female students in coordination, activity, sports competence, and appearance. A study comparing the physical self-concept of Puerto Rican female secondary school students found that they scored relatively high across all 11 sub-dimensions of the PSDQ (Aybar-Soltero, 1998). The findings indicated no important distinction in physical self-concept between basketball and volleyball players, and overall, adolescent athletes demonstrated a strong perception of their physical self.

Physical activity is widely emphasized in both scientific and popular literature as the most important tool for maintaining a healthy body. In the study by Godina and Zadorozhnaya (2016), weight was the primary concern for girls, whereas height was the key factor for boys in body self-perception. Low self-esteem was observed particularly in girls who responded "overweight" to the question about self-assessment of their weight. However, despite many girls expressing a desire to lose weight, no significant correlation was found between this desire and their engagement in sports. Instead, a significant correlation was found between this desire and dieting. In another study, while physical self-worth in boys was linked to exact total strength, it was not related to body fat percentage or relative total strength (Lubans & Cliff, 2011). In adolescent girls, no significant association was found with absolute total strength, whereas it was related to body fat percentage and relative total strength. In a different research study about the impact of puberty, body size, and PSP on long term modifies in PA, it was found that while body size didn't significantly forecast PA, sport competence and physical condition were key predictive factors for PA for adolescent females. The positive correlation displayed that girls with higher PSP were tend to be more active (Fawkner et al., 2014).

Positive physical self-concept is crucial for motivational processes. Therefore, adolescents who perceive themselves positively in PA domains tend to experience fulfillment of core psychological needs during PE (Núñez et al., 2021). For some

adolescents, PA levels significantly influence self-perception. Higher levels of PA are positively linked to improved social and sportive self-perception in both of girls and boys (Stein et al., 2007). While studies demonstrate that participation in PA enhances PSP, low PSP should also be recognized as a factor contributing to reduced participation in PA (Mañano et al., 2004; Scarpa, 2011). Adolescents with low motor competence often have lower physical self-perception and are therefore more likely to avoid PA, further reinforcing this cycle (McIntyre et al., 2015).

The third research question of the study was, “what is the relationship between perceived physical literacy and physical self-perception among high school students in Istanbul?” These findings indicate that higher levels of PPL are strongly related to higher levels of PSP among high school students. It might not be a surprise that the results indicate a positive and very large correlation between PPL and PSP among high school students, given the high PPL scores and moderate PSP scores. As a results of this study, conducted in four high schools in Kadıköy, students exhibited average to high levels of Perceived Physical Literacy (PPL) and Physical Self-Perception (PSP), with a significant positive relationship between the two. Since the study did not investigate age, gender, school type, grade level, participation in PA or sports, or the socio-economic status of families, it can be stated that the only common characteristic among the students is that they attend schools in the Kadıköy city center, which is one of the most socioeconomically and culturally advanced districts in both Istanbul and Türkiye (Kadıköy Belediyesi Akademi, 2023). As considered socio-economic and socio-cultural environment of the residency or studying in a central location influence the PL and PA (Sullivan et al., 2017; Mohammadi et al., 2023), findings of this study could be explained by the effect of the importance of the district. In this context, applying the same study in a different district or city could result in different findings.

Previous studies had some similar findings about PL and PSP. For example, the research conducted by Iğdır et al. (2024) on adolescents between 10 and 14 years old also indicated that as adolescents' PL levels increased, their self-perception also increased. Bilgiseven and Aksoy (2023) examined physical self-description and self-confidence levels among participants between 20 and 50 years old who engage in

exercise. A positive correlation was detected between physical self-description and self-confidence. Since self-confidence is one of the sub-dimensions of PPLI in this recent study, the two studies can be considered highly similar. Due to the fact that Bilgiseven and Aksoy (2023) did not examine age as a variable, it can be suggested that physical self-description and self-confidence also show a positive relationship in older age groups. Aşçı's (2002) study on Turkish late adolescents also supports this finding, indicating that physical self-concept varies by sex but not by age. Male participants showed a higher level of physical self-concept for all sub-dimensions except for body attractiveness. However, age difference did not affect the physical self-concept in this study. In another study, Açak and colleagues (2024) investigated the relationship between PL and self-esteem of high school in Florya, İstanbul. Age, gender, chronic disease, economic status, educational status of parents, sports participation, and health or fitness-related educational history of participants was the variables of the study. A positive but low-level relationship between PL and self-esteem of the students was found in the study.

In conclusion, most of the research in the literature on PL or physical self-perception examines their relationships with factors such as PA, sex, or age. Studies exploring the relationship between PL and physical self-perception, specifically, are quite limited. Therefore, this study contributes to Turkish literature by investigating the direct relationship between adolescents' PL and their PSP. Although the demographic questions of this study included age, gender, school type, grade level, and sports participation, these factors were not directly addressed in the research questions. Therefore, based on these results, a separate study could be conducted to explore these aspects.

5.2. Implications

This study provides several implications for policymakers, universities, school administrators, PE teachers, guidance counselors at schools, and parents.

Educational Implications

- The physical literacy concept should be integrated into PE programs at schools, beginning from first grade till the end of 12th grade.

- PE programs should be designed not only to increase physical skills but also to improve students' confidence and self-esteem, which can contribute to a generation with both higher PL levels and stronger self-perception.
- Universities that train physical education teachers should provide a compulsory course on PL principles and practices in their curriculum.
- A program should be designed for PE teachers to enhance the knowledge and understanding of PL.
- Schools should consider integrating physical literacy programs that address both physical and psychological well-being.
- Guidance counselors in schools should receive training and information to guide the students in terms of PL and physical self-perception.

Policy Implications

- Policymakers should take an action to design policies about PL and support the PL researches in Türkiye.
- Education policymakers and administrators should take an active role to promote PL awareness among teachers, parents, and students.
- Turkish Ministry of Health and Turkish Ministry of National Education should collaborate to promote information regarding PL and its significance to parents and students.

Health Implications

- It is essential to promote regular PA among children and adolescents in Türkiye, in line with the World Health Organization's (WHO, 2022) recommendations.
- Considering that studies in the literature show that PL and PSP increase with participation in PA, the Ministry of Health should promote PA by pointing to the significance of physical and mental health.

5.3. Recommendations for Future Research

- Further research is needed to examine the variables of age, gender, school type, PA, and sports participation on the relationship between PL and PSP

among adolescents. Students from other types of high schools can participate in the study, such as fine arts high schools, sports high schools, and private high schools.

- Further research is needed to conduct in other districts or cities with other socioeconomic and cultural backgrounds that could supply valuable comprehension into the factors that may affect PL and PSP.
- Future research should investigate the motor competence and actual PA levels of adolescents in addition to PPL and PSP.
- Future research should include parents and PE teachers, not only students, to gain a wider understanding of PL and physical self-perception.
- Longitudinal studies should be conducted to find out the long-term effects of PL on physical self-perception.
- Future studies could utilize qualitative research methods, such as interviews or focus groups, to explore experiences and perceptions individuals have regarding PL and physical self-perception. This would provide richer data to complement quantitative findings.

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APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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Konu: Değerlendirme Sonucu 29 KASIM 2023

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın İrmak Hürmeriç Altunsöz

Danışmanlığını yürüttüğünüz Nuriye Pınar Kırılmaz'ın *"Lise öğrencilerinin algılanan bedensel okuryazarlıkları, kendilerini fiziksel tanımlamaları ve fiziksel aktivite düzeyleri arasındaki ilişkinin incelenmesi"* başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek 0514-ODTÜİAEK-2023 protokol numarası ile onaylanmıştır.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN
Başkan

Prof. Dr. İ. Semih AKÇOMAK
Üye

Doç. Dr. Ali Emre Turgut
Üye

Doç. Dr. Şerife SEVİNÇ
Üye

Doç. Dr. Murat Perit ÇAKIR
Üye

Dr. Öğretim Üyesi Süreyya ÖZCAN KABASAKAL
Üye

Dr. Öğretim Üyesi Müge GÜNDÜZ
Üye

B. CONSENT LETTERS OF MINISTRY OF NATIONAL EDUCATION



T.C.
İSTANBUL VALİLİĞİ
İl Millî Eğitim Müdürlüğü



Sayı : E-59090411-20-96605228
Konu : Anket ve Araştırma İzni (Nuriye Pınar KIRILMAZ)

13/02/2024

VALİLİK MAKAMINA

İlgi : a) Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 21.01.2020 tarihli ve 2020/2 sayılı genelgesi.
b) Orta Doğu Teknik Üniversitesinin 22.01.2024 tarihli ve 54850036-605.01-E.553 sayılı yazısı.
c) Müdürlüğümüz Araştırma ve Anket Komisyonunun 29.01.2024 tarihli tutanağı.
ç) Nuriye Pınar KIRILMAZ'ın 12.02.2024 tarihli ve 90483337 gelen evrak sayılı dilekçesi.

Araştırma Konusu : Lise Öğrencilerinin Kendini Fiziksel Tanımlama, Algılanan Bedensel Okuryazarlık, Fiziksel Aktivite ve Sağlıkla İlgili Fiziksel Uygunluk Düzeylerinin İncelenmesi
Araştırma Türü : Anket
Araştırma Yeri : Kadıköy İstanbul Kadıköy Lisesi, Kemal Atatürk Anadolu Lisesi, Kadıköy Anadolu Lisesi, Kadıköy Mesleki ve Teknik Anadolu Lisesi
Araştırma Yapılacak Kişiler : Lise Öğrencileri
Araştırmanın Süresi : 2023 - 2024 Eğitim - Öğretim Yılı

Yukarıda bilgileri verilen araştırmanın; 6698 sayılı Kişisel Verilerin Korunması Kanununa aykırı olarak kişisel veri istenmemesi, öğrenci velilerinden açık rıza onayı alınması, bilimsel amaç dışında kullanılmaması, bir örneği Müdürlüğümüzde muhafaza edilen mühürlü ve imzalı veri toplama araçlarının kurumlarınıza araştırmacı tarafından ulaştırılarak uygulanması, katılımcıların gönüllülük esasına göre seçilmesi, araştırma sonuç raporunun kamuoyuyla paylaşılması ve araştırma bittikten sonra 2 (iki) hafta içerisinde Müdürlüğümüze gönderilmesi, okul idarelerinin denetim, gözetim ve sorumluluğunda, eğitim ve öğretimi aksatmayacak şekilde, ilgi (a) genelge esasları dâhilinde uygulanması kaydıyla Müdürlüğümüzce uygun görülmektedir.

Makamınızca da uygun görüldüğü takdirde olurlarınıza arz ederim.

Doç. Dr. Murat Mücahit YENTÜR
İl Millî Eğitim Müdürü

OLUR

Mustafa KAYA
Vali a.
Vali Yardımcısı

Ek:
1- İlgi (b) Yazı ve Ekleri (8 Sayfa)
2- İlgi (c) Tutanak (1 Sayfa)
3- İlgi (ç) Dilekçe (1 Sayfa)

Adres : Binbirdirek Mah. İnran Öktem Cad.No: 1 Sultanahmet Fatih İstanbul
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C. PARENT CONSENT LETTER

Veli Onay Mektubu

Sayın Veli;
Çocuğunuzun katılacağı bu çalışma, Orta Doğu Teknik Üniversitesi Beden Eğitimi ve Spor Bölümü, Yüksek Lisans öğrencisi Nuriye Pınar Kırılmaz tarafından “Lise öğrencilerinin algılanan bedensel okuryazarlıkları, kendilerini fiziksel tanımlamaları ve gerçek fiziksel aktivite düzeyleri arasındaki ilişkinin incelenmesi” adıyla, 02.01.2024 - 14.06.2024 tarihleri arasında yapılacak bir yüksek lisans tez araştırması uygulamasıdır.

Araştırmanın Hedefi: 9, 10, 11, ve 12. sınıf lise öğrencileridir.

Araştırma Uygulaması: Yaklaşık 20 dakika sürecek 3 adet anketten oluşmaktadır.

Araştırma T.C. Milli Eğitim Bakanlığı’nın ve okul yönetiminin de izni ile gerçekleştirilmektedir. Araştırma uygulamasına katılım tamamıyla gönüllülük esasına dayalı olmaktadır. Çocuğunuz çalışmaya katılıp katılmamakta özgürdür. Araştırma çocuğunuz için herhangi bir istenmeyen etki ya da risk taşımamaktadır. Çocuğunuzun katılımı **tamamen sizin isteğinize bağlıdır**, reddedebilir ya da herhangi bir aşamasında ayrılabilirsiniz. Araştırmaya katılmama veya araştırmadan ayrılma durumunda öğrencilerin akademik başarıları, okul ve öğretmenleriyle olan ilişkileri etkilemeyecektir.

Çalışmada öğrencilerden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplar tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir.

Uygulamalar, genel olarak kişisel rahatsızlık verecek sorular ve durumlar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden çocuğunuz kendisini rahatsız hissederse cevaplama işini yarıda bırakıp çıkmakta özgürdür. Bu durumda rahatsızlığın giderilmesi için gereken yardım sağlanacaktır. Çocuğunuz çalışmaya katıldıktan sonra istediği an vazgeçebilir. Böyle bir durumda veri toplama aracını uygulayan kişiye, çalışmayı tamamlamayacağını söylemesi yeterli olacaktır. Anket çalışmasına katılmamak ya da katıldıktan sonra vazgeçmek çocuğunuza hiçbir sorumluluk getirmeyecektir.

Onay vermeden önce sormak istediğiniz herhangi bir konu varsa sormaktan çekinmeyiniz. Çalışma bittikten sonra bizlere telefon veya e-posta ile ulaşarak soru sorabilir, sonuçlar hakkında bilgi isteyebilirsiniz. Saygılarımızla,

Araştırmacı : Nuriye Pınar Kırılmaz

İletişim bilgileri : e110061@metu.edu.tr

*Velisi bulunduğum sınıfı numaralı öğrencisi
.....’in yukarıda açıklanan araştırmaya katılmasına izin veriyorum.
(Lütfen formu imzaladıktan sonra çocuğunuzla okula geri gönderiniz*).*

.../.../.....

İmza:

Veli Adı-Soyadı:

Telefon Numarası :

D. INSTRUMENTS

KENDİNİ FİZİKSEL TANIMLAMA ENVANTERİ – KISA FORM

	Tamamen Yanlış	Genellikle Yanlış	Kısmen Yanlış	Kısmen Doğru	Genellikle Doğru	Tamamen Doğru
1. Koordinasyon gerektiren hareketleri yaparken kendimi rahat hissedirim.						
2. Fiziksel olarak güçlü biriyim.						
3. Vücudumu eğme, bükme ve döndürmede oldukça iyiyim.						
4. Hiç durmadan uzun mesafe koşabilirim.						
5. Genelde, yaptığım şeylerin çoğu iyi sonuç verir.						
6. Genellikle etrafta ne hastalık (grip, virüs, soğukalgınlığı vs) varsa yakalanırım.						
7. Vücut hareketlerimi kontrol etmek benim için kolaydır.						
8. Beni nefes nefese bırakacak egzersizleri/aktiviteleri sık sık yaparım.						
9. Belim çok kalındır.						

10. Birçok spor dalında iyiyimdir.						
11. Fiziksel olarak kendimden memnunum.						
12. Hoş görünen bir yüzüm var.						
13. Çok enerji doluyum.						
14. Vücudum esnektir.						
15. O kadar sık hasta oluyorum ki yapmak istediğim şeylerin çoğunu yapamıyorum.						
16. Koordinasyon gerektiren hareketlerde iyiyimdir.						
17. Vücudum yağlıdır.						
18. Arkadaşlarımın çoğundan daha iyi görünümlüyüm.						
19. Fiziksel aktivitelerdeki birçok hareketi akıcı olarak yapabilirim.						
20. Haftada en az üç kez fiziksel olarak aktif olacağım şeyler yaparım (örneğin; hafif tempolu koşu, dans, bisiklete binme, aerobik, cimnastik, yüzme vb.)						
21. Kiloluyum.						
22. İyi spor becerilerine sahibim.						
23. Fiziksel olarak kendimi iyi hissedirim.						

24. Genelde başarılı değilim.						
25. Çok hastalanırım.						
26. Koordineli hareketleri yaparken vücudumun zorlanmadığını hissedirim.						
27. Sporların çoğunu yaparım, dans ederim, cimnastik veya diğer fiziksel etkinlikleri yaparım.						
28. İyi bir görünüşe sahibim.						
29. Bir kuvvet testinde iyi sonuç alırım.						
30. Yorulmadan uzun bir süre fiziksel olarak aktif olabilirim.						
31. Yaptığım şeylerin çoğunu iyi yaparım.						
32. Hasta olduğumda iyileşmem uzun sürer.						
33. Hemen her gün spor yaparım, dans ederim veya diğer fiziksel hareketleri yaparım.						
34. Sporda başarılıyım.						
35. Fiziksel kimliğim konusunda kendimi iyi hissedirim.						
36. Bence bir esneklik testinde iyi sonuç alırım.						

37. Uzun mesafe koşusu, aerobik, bisiklete binme, yüzme gibi dayanıklılık gerektiren etkinliklerde başarılıyım.						
38. Genel olarak, kendimle gurur duyacağım çok şeye sahibim.						
39. Hastalıklar yüzünden yaşitlarımın çoğundan daha fazla doktora gitmek zorunda kalıyorum.						
40. Yaptığım hiçbir şey yolunda gitmeyecekmiş gibi görünüyor.						

ERGENLER İÇİN ALGILANAN BEDEN OKURYAZARLIĞI ÖLÇEĞİ

	Ergenler İçin Algılanan Beden Okuryazarlığı Ölçeği	H i ç K a t ı l m ı y o r u m	K a t ı l m ı y o r u n	K a r a s ı z ı n	K a t ı l m ı y o r u n	T a n ı m e n K a t ı l ı y o r u m
	Bilgi ve kavrama					
1	Yaşıma göre fiziksel olarak formdayım	1	2	3	4	5
2	Formda kalabilmek için yeterli öz-yönetim becerisine sahibim	1	2	3	4	5

3	Sağlıklı olmak için öz-değerlendirme becerisine sahibim.	1	2	3	4	5
Başkaları ile iletişim kurma ve kendini ifade etme						
4	Sosyal ilişkilerim güçlüdür	1	2	3	4	5
5	Vahşi/doğal hayatta kalma konusunda kendime güvenirim	1	2	3	4	5
6	Problem ve güçlüklerin üstesinden gelebilirim.	1	2	3	4	5
Benlik algısı ve özgüven						
7	Spora karşı ilgilim ve olumlu tutuma sahibim.	1	2	3	4	5
8	Kendimi veya spor yapan insanları takdir ederim.	1	2	3	4	5
9	Sporun sağlığa olan faydalarının farkındayım.	1	2	3	4	5

E. TURKISH SUMMARY / TRKE ZET

GİRİŞ

Fiziksel aktivite, iskelet kaslarının rettięi ve enerji harcayan her trl bedensel harekettir (Caspersen vd., 1985). Kemik ve kas gcn artırır, vcut yaęını azaltır, kardiyometabolik saęlıęı desteklerken ocuk ve ergenlerde motor becerileri ve bilişsel gelişime katkıda bulunur (WHO, n.d.). Dzenli fiziksel aktivite ruh saęlıęı iin de nemlidir. COVID-19 pandemisiyle artan hareketsizlik ve kısıtlamalar ruh saęlıęı sorunlarını tetiklemiştir (Harangi-Rkos vd., 2022). Trkiye'deki bir arařtırma, azalan fiziksel aktivitenin kadınlarda, uzun uyku srelerinde, sigara ienlerde ve yksek depresyon, anksiyete, stres dzeylerinde duygusal iyilik halinin azalmasıyla iliřkili olduęunu gstermiřtir (Karartı vd., 2023). Kresel Durum Raporu'na gre, 11-17 yař arası ergenlerin %81'i yeterince fiziksel olarak aktif deęildir ve Dnya Saęlık rgt'nn nerilerini karřılamamaktadır. Bu oran kızlarda %85, erkeklerde %78'dir (WHO, 2018). Kresel Eylem Planı [GAPPA], 2030'a kadar fiziksel hareketsizlięi %15 azaltmayı hedeflemektedir (WHO, 2018). Ergenlerde fiziksel hareketsizlik; yař, cinsiyet, sosyo-ekonomik durum, sosyal destek eksiklięi, bireysel ilgi, tutum, farkındalık ve uygulamalar gibi faktrlerden etkilenirken, yetersiz spor tesisleri ve uygunsuz ortamlar da katkıda bulunmaktadır (Ahmad vd., 2021). Fiziksel aktiviteyi srdrmek destekleyici sosyal ortamlar ve artan yeterlilik duygusuyla baęlantılıyken, dřř olumsuz geri bildirim ve eriřim engelleriyle iliřkilidir (Belanger vd., 2011). "Fiziksel Okuryazarlık" kavramı 1993'te Margaret Whitehead tarafından tanıtılmıřtır (IPLA, n.d.). O tarihten beri bu konuda arařtırmalar artmıř ve eřitli etkinlikler dzenlenmiřtir. Whitehead (2010), fiziksel aktivitenin nemini vurgulayan bir kitap yayınlayarak, bireyleri fiziksel aktiviteye katmanın yollarını arařtırmaya teřvik etmiřtir (Whitehead, 2019). Fiziksel okuryazarlık farklı tanımlara sahip olsa da znde benzerdir. Whitehead (2010) bunu, "yařam boyu fiziksel aktiviteyi srdrmek iin motivasyon, gven, fiziksel yeterlilik, bilgi ve anlayıř" olarak tanımlarken, IPLA (2017) benzer řekilde ifade

etmektedir. Aspen Enstitüsü, fiziksel okuryazarlığı "yaşam boyu fiziksel olarak aktif olma yeteneği, güveni ve arzusu" olarak tanımlamaktadır (SHAPE America, n.d.). Avustralya Fiziksel Okuryazarlık Çerçevesi (2019) bunu aktif ve sağlıklı yaşam için gerekli beceri, bilgi ve davranışları geliştirmekle ilişkilendirir. İngiltere için Fiziksel Okuryazarlık Uzlaşma Beyannamesi (2023) "yaşam boyu hareket ve fiziksel aktivite ile ilişkimiz" derken, PHE Canada (n.d.) fiziksel olarak okuryazar bireylerin çeşitli aktivitelerde yeterli olduğunu belirtir. Kanada'nın Fiziksel Okuryazarlık Uzlaşma Beyannamesi (2015) duygusal, fiziksel, bilişsel ve davranışsal olmak üzere dört temel unsur içerir. Benzer unsurlar Avustralya çerçevesinde fiziksel, psikolojik, sosyal ve bilişsel alanlar olarak belirtilmiştir (Australian Sports Commission, 2019).

Son yıllarda fiziksel okuryazarlığa artan bir ilgi vardır (Cairney vd., 2019). Fiziksel okuryazarlık, sağlık okuryazarlığından ayrı düşünülemez. Dünya Sağlık Örgütü sağlığı sadece hastalık olmaması değil, tam bir iyilik hali olarak tanımlar (WHO, n.d.). Fiziksel okuryazarlık, fiziksel potansiyeli ve aktiviteyi bir yaşam tarzı olarak teşvik eder (Whitehead vd., 2018). Fiziksel aktivite yaşla azalırken hareketsizlik artar (Demirci vd., 2024), bu nedenle fiziksel okuryazarlık çocukluk ve ergenlikte aktif yaşam temeli için önemlidir (Grauduszus vd., 2023). Fiziksel okuryazarlık, eğitimciler ve liderler için refahın farklı boyutlarını anlamada değerli bir çerçeve sunar (Fox, 2010). Fiziksel olarak okuryazar bir nüfus iyi bir öğretimle başlar (Silverman & Mercier, 2015). Beden eğitimi öğretmenleri ve programları önemlidir (Mandigo vd., 2009; Silverman & Mercier, 2015). Erken bırakılan fiziksel aktivite, beceri farklılıklarına yol açar ve uzun vadeli olumsuz etkileri olabilir (Fox, 2010).

Dünya Sağlık Örgütü ergenliği 10-19 yaş arası geçiş dönemi olarak tanımlar (WHO, n.d.). Bu dönemde fiziksel benlik kavramı önemlidir (Scarpa, 2011). Görünüm, yeterlilik ve sosyal katılımı içeren bu kavram, genel refah ve öz-saygıya katkıda bulunur (Fox, 2010; Palenzuela-Luis vd., 2022). Ergenlik, fiziksel benlik algılarının şekillendiği ve yaşam boyu fiziksel aktivite katılımını etkilediği kritik bir dönemdir (Fox, 2010). Çocuklar 11 yaşına kadar fiziksel görünümeleri hakkında algı oluşturmaya başlarlar (Fox, 1997). Fiziksel görünümünden memnun olmayan ergenler öz saygılarını artırmak için interneti kullanabilir, ancak bu sorunlu internet kullanımına yol açabilir (Öztürk & Özmen, 2016). Aşırı internet kullanımı

hareketsizliğe ve obeziteye neden olabilir (Peltzer vd., 2014; Durkee vd., 2016; Bozkurt vd., 2018). Fiziksel aktivite yönergelerine uyan çocuklar daha düşük vücut ölçülerine sahiptir (Demirci vd., 2024). Obezitesi olan ergenlerin öz saygıları genellikle düşüktür (Mohammed vd., 2019). Sağlık eğitimi, dengeli beslenme, uyku ve egzersizin önemini vurgulamalıdır (Moon, 2012). Fiziksel okuryazar bireyler sağlık ilkelerini anlar ve performanslarını geliştirebilir (Whitehead, 2010), güçlü bir öz farkındalık geliştirerek öz saygı ve öz güveni artırır (Whitehead, 2010). Fiziksel okuryazarlık, sağlıklı bir fiziksel benlik kavramıyla bağlantılıdır (Fox, 2010). Fiziksel aktiviteye katılım öz değeri artırabilir ve olumlu öz algı katılımı teşvik edebilir (Kim & Ahn, 2021). Daha yüksek algılanan zindelik düzeyi, daha yüksek fiziksel okuryazarlık düzeyine işaret edebilir (Pastor-Cisneros, 2021).

Sonuç olarak, fiziksel okuryazarlık ergenlerde fiziksel aktiviteyi teşvik etmede ve olumlu öz algıları geliştirmede kritik bir role sahiptir.

Çalışmanın amacı

Bu çalışmanın amacı, İstanbul Kadıköy'deki 14-19 yaş arası lise öğrencilerinin algılanan fiziksel okuryazarlık düzeyleri ile fiziksel benlik algısı düzeyleri arasındaki ilişkiyi araştırmaktır.

Araştırma soruları

Bu çalışma için aşağıdaki araştırma soruları incelenmiştir:

- 1- Lise öğrencilerinin algılanan fiziksel okuryazarlık düzeyi nedir?
- 2- Lise öğrencilerinin fiziksel benlik algıları nelerdir?
- 3- İstanbul'daki lise öğrencilerinde algılanan fiziksel okuryazarlık ve fiziksel benlik algısı arasındaki ilişki nedir?

Çalışmanın önemi

Fiziksel okuryazarlık, özellikle sağlık alanında (Cairney vd., 2019) son yıllarda giderek artan bir ilgi konusu haline gelmiştir. Yükseköğretim, fiziksel okuryazarlığın

toplumda nasıl tanımlandığı, desteklendiği ve uygulandığına şekil vererek bilimsel çerçevenin ilerletilmesinde hayati bir rol oynamaktadır (Lundvall, 2015). Küresel olarak yapılan araştırmaların çoğu ilkokul ve ortaokul çocuklarına odaklanırken, lise öğrencilerini kapsayan nispeten az çalışma bulunmaktadır. Türkiye'de de durum benzerdir. Ancak, özellikle lise öğrencileri arasında fiziksel okuryazarlık ve fiziksel benlik algısı arasındaki ilişkiyi araştıran bir çalışma tespit edilememiştir, bu da bu çalışmayı özellikle önemli kılmaktadır.

Bulgular, lise öğrencilerinin fiziksel benlik kavramları göz önüne alındığında, beden eğitimi müfredatının geliştirilmesinde ve lise öğrencileri arasında fiziksel aktivite ve okuryazarlığı artırmaya yönelik müdahalelerin oluşturulmasında özellikle değerli olabilir. Spor, çocuklar ve/veya ergenler arasında genellikle rekabet, kazanma veya kaybetme terimleriyle ilişkilendirilirken, fiziksel okuryazarlık kişisel gelişime, bireysel potansiyelin gerçekleştirilmesine ve sporun gerçek anlamına odaklanır (Lundvall, 2015).

YÖNTEM

Bu çalışmanın amacı, Kadıköy, İstanbul'da 14-19 yaş arası lise öğrencilerinin algılanan fiziksel okuryazarlık ve fiziksel benlik algısı düzeyleri arasındaki ilişkiyi araştırmaktır. Bu bölüm, çalışmanın tasarımını, katılımcılarını, veri toplama araçlarını, veri toplama prosedürlerini, veri analizini ve sınırlamalarını açıklamaktadır.

Araştırma tasarımı

Bu çalışma, nicel yöntem araştırma tasarımını kullanmış ve kesitsel tasarım seçilmiştir.

Katılımcılar

Çalışma Kadıköy, İstanbul'da gerçekleştirilmiştir. Veriler, Kadıköy Anadolu Lisesi, İstanbul Kadıköy Lisesi, Kemal Atatürk Lisesi ve Kadıköy Mesleki ve Teknik Lisesi

öğrencilerinden toplanmıştır. Bu dört lise, birbirine çok yakın ve erişilebilir oldukları için araştırmacı tarafından seçilmiştir. Çalışmaya 14-19 yaş arası toplam 485 ergen katılmıştır. Ancak, 441 yanıt tamamlanmış ve ileri analizler için geçerli veri olarak kabul edilmiştir. Normallik testinde belirlenen aykırı değerlerin çıkarılmasından sonra, çalışmaya toplam 417 yanıt dahil edilmiştir.

Veri toplama araçları

Bu çalışmada üç farklı araç kullanılmıştır. Bu üç anket, SurveyMonkey adlı çevrimiçi anket platformunda tek bir anket olarak oluşturulmuştur. Çevrimiçi anket, demografik sorularla başlayacak şekilde tasarlanmış ve ardından Algılanan Fiziksel Okuryazarlık Ölçeği ve Fiziksel Kendini Tanımlama Anketi ile devam etmiştir. Anketlerin bu çalışmada kullanılabilmesi için yazarlarından e-posta ile izin alınmıştır. Katılımcıların cinsiyet, sınıf düzeyi, doğum yılı, okul türü ve bir spor kulübüne üye olup olmadıkları gibi demografik bilgileri de toplanmıştır.

Algılanan Fiziksel Okuryazarlık Ölçeği

Algılanan Fiziksel Okuryazarlık Ölçeği, öğrencileri yaşam boyu fiziksel aktiviteye yönlendirmeyi amaçlayan beden eğitimi öğretmenlerinin kendi algıladıkları fiziksel okuryazarlıklarını keşfetmek için başlangıçta 18 maddelik bir araç olarak geliştirilmiştir (Sum vd., 2016). Daha sonra, orijinal ölçeğe dayalı olarak ergenler için uyarlanmış bir versiyon geliştirilmiştir (Sum ve diğerleri, 2018). Bu ölçek 9 madde ve 3 alt boyuttan oluşmaktadır: "bilgi ve anlayış" (3 madde), "kendini ifade etme ve başkalarıyla iletişim" (3 madde) ve "benlik algısı ve özgüven" (3 madde). Ölçek, 5'li Likert olarak, 1 (Kesinlikle Katılmıyorum) ile 5 (Kesinlikle Katılıyorum) arasında değişen puanlarla derecelendirilmiştir. Yüksek puanlar, yüksek algılanan fiziksel okuryazarlık düzeyini gösterir. Tüm maddeler olumlu ifade edilmiştir, olumsuz ifade bulunmamaktadır. Ergenler için Algılanan Fiziksel Okuryazarlık Ölçeği'nin Türkçe uyarlaması Yılmaz ve Kabak (2021) tarafından yapılmış ve 2019 yılında 12-19 yaş arası 585 katılımcıdan elde edilen veriler kullanılarak geçerlilik ve güvenilirlik analizleri yapılmıştır. Toplam ölçeğin iç tutarlılık katsayısı 0.85 olarak raporlanırken, alt boyut güvenilirlik katsayıları öz-farkındalık ve özgüven alt boyutu

için 0.73, başkalarıyla iletişim ve kendini ifade alt boyutu için 0.76 ve bilgi ve anlayış alt boyutu için 0.76 olarak hesaplanmıştır.

Fiziksel Kendini Tanımlama Anketi Kısa Formu

Fiziksel Kendini Tanımlama Anketi, fiziksel benlik kavramını değerlendirmek için tasarlanmış çok boyutlu bir araçtır. Başlangıçta, Marsh vd.(1994) 11 alt boyuttan oluşan 70 maddelik bir anket olarak geliştirmiştir: güç, vücut yağı, aktivite, dayanıklılık/fitness, spor yeterliliği, koordinasyon, sağlık, görünüm, esneklik, küresel fiziksel benlik kavramı ve küresel öz-saygı. Daha sonra, Marsh (1996) anketi aynı 70 maddeyi kullanarak fiziksel benlik kavramının çok boyutlu yapısını ölçmek için revize etmiş, ancak bunları iki küresel ölçüm (küresel fiziksel benlik kavramı ve küresel öz-saygı) ile birlikte 9 alt boyutta (güç, vücut yağı, dayanıklılık/fitness, spor yeterliliği, koordinasyon, sağlık, görünüm ve esneklik) düzenlemiştir. 2010 yılında, Marsh vd. orijinal araçtan seçilen 11 alt boyutu koruyan 40 maddelik bir versiyon olan anketin kısa bir formunu tanıtmıştır. Anketin kısa formu Avustralyalı ergenler, elit sporcular, yaşlı yetişkinler, İspanyol ergenler ve İsrailli üniversite öğrencileri dahil olmak üzere çeşitli popülasyonlarda doğrulanmıştır. Her madde bildirimsel bir ifade olarak sunulur ve 6'lı Likert ölçeğinde (1 = Yanlış, 6 = Doğru) puanlanır (Marsh vd., 1994). 12-18 yaş arası ergenler için tasarlanan Fiziksel Kendini Tanımlama Anketi Kısa Formunun Türkçe versiyonu, alt boyutları için güçlü iç tutarlılık raporlayan Urfa vd. (2019) tarafından değerlendirilmiştir; katsayılar özgüven alt boyutu için 0.73'ten spor yeteneği alt boyutu için 0.93'e kadar değişmektedir. Ölçeğin 40 maddesi ve 11 alt boyu bulunmaktadır: güç, vücut yağı, aktivite, dayanıklılık/fitness, spor yeterliliği, koordinasyon, sağlık, görünüm, esneklik, küresel fiziksel benlik kavramı ve küresel öz-saygı.

Veri toplama prosedürü

Çalışma 2023-2024 akademik yılında, 26 Şubat 2024 ile 12 Mart 2024 tarihleri arasında çevrimiçi bir anket ile gerçekleştirilmiştir. Veri toplama prosedürü altı aşamadan oluşmaktadır. İlk aşamada, Orta Doğu Teknik Üniversitesi İnsan Araştırmaları Etik Kurulu'ndan etik onay alınmıştır (Ek A). Bir sonraki aşamada, İstanbul İl Milli Eğitim Müdürlüğü'nden yasal izin alınmıştır (İstanbul İl Milli Eğitim

Müdürlüğü) (Ek B). Daha sonra, çalışmaya katılmadan önce tüm öğrenciler için ebeveynlerden bilgilendirilmiş onam ve katılımcılardan onay alınmıştır (Ek C). Tüm katılımcılar, herhangi bir aşamada araştırmadan çekilmekte serbesttir. Seçilen okulların müdürlerine, öğretmenlerine ve öğrencilerine ölçüm protokolünün tüm yönleri, çalışmanın amacı ve önemi açıklanmıştır.

Veri analizi

Bu çalışmada çevrimiçi anket yapılmıştır. Ankete toplam 485 öğrenci katılmıştır. 44 katılımcı anketi tamamlamadığı için 441 yanıt analize dahil edilmiştir. Tanımlayıcı sonuçlar (frekans analizi, normallik analizi), güvenilirlik analizi ve iki araç ile alt boyutlarının korelasyonu incelenmiştir. Pearson korelasyon analizini yapmadan önce normallik ve doğrusallık varsayımları test edilmiştir. Verilerin normal dağılım gösterip göstermediğini anlamak için çarpıklık ve basıklık değerleri incelenmiştir. Başlangıçta 441 vakadan oluşan veri seti, normallik testi sırasında belirlenen aykırı değerlerin çıkarılmasından sonra 417'ye düşürülmüştür. ± 1.5 aralığındaki verilerin normal dağıldığı kabul edilmiştir (George & Mallery, 2019; Tabannick & Fidell, 2013). Araçların ve alt boyutların güvenilirliğini test etmek için Cronbach Alfa ve Spearman Brown Katsayısı analizleri yapılmıştır. Algılanan Fiziksel Okuryazarlık ve Fiziksel Kendini Tanımlama düzeyleri arasındaki ilişki Pearson korelasyon testi kullanılarak analiz edilmiştir. İstatistiksel anlamlılık düzeyi $p < 0.01$ olarak ele alınmıştır. Hesaplanan Pearson korelasyon katsayıları (r) için PPLI ve PSDQ düzeyleri ile alt boyutları arasındaki ilişkilerin gücü şu kriterlere göre yorumlanmıştır: $r < 0.1$: Trivial; $r < 0.1$: Önemsiz; $0.1 \leq r < 0.3$: Küçük; $0.3 \leq r < 0.5$: Orta, $0.5 \leq r < 0.7$: Büyük, $0.7 \leq r < 0.9$: Çok büyük, $r \geq 0.9$: Neredeyse mükemmel (Hopkins, Marshall, Batterham, & Hanin, 2009). Nicel verilerin analizi için Microsoft Office/Excel ve SPSS 28.0 sürümü kullanılmıştır.

Sınırlamalar

Bu tez aşağıdaki durumlarla sınırlıdır:

Çalışmaya katılan ergenler 14-19 yaşları arasındadır. Katılımcı grubu, İstanbul Kadıköy'deki dört liseye kayıtlı öğrencilerle sınırlıdır. 12. sınıf öğrencilerinin

çalışmaya katılımı sınırlıydı. Bunun nedeni, Mesleki ve Teknik Lise öğrencilerinin haftada üç gün staj yapmaları ve Anadolu Lisesi öğrencilerinin üniversite giriş sınavı hazırlığına odaklanmalarıydı.

SONUÇLAR

Bu bölümde, araştırma sorularının genel bulguları sırasıyla açıklanmıştır. Normallik, doğrusallık, güvenilirlik varsayımları ve 1. ve 2. araştırma sorularının sonuçları ile 3. araştırma sorusunun korelasyon analizi ve sonucu da verilmiştir.

Araştırma Sorusu 1: Lise öğrencilerinin algılanan fiziksel okuryazarlığı nedir?

Araştırma sorusu 1'i yanıtlamak için Algılanan Fiziksel Okuryazarlık Ölçeği kullanılmıştır. Bu ölçek, 9 madde ve 3 alt boyuttan oluşmaktadır: bilgi ve anlayış, kendini ifade ve başkalarıyla iletişim ve benlik algısı ve özgüven. Bu 3 alt boyut da üçer maddeden oluşmaktadır. Her madde, 1 (kesinlikle katılmıyorum) ile 5 (kesinlikle katılıyorum) arasında değişen 5'li Likert ölçeğinde derecelendirilmiştir. Bu nedenle, genel ölçek için olası maksimum puan 45 ve her alt boyut için 15'tir. Algılanan fiziksel okuryazarlık için genel ortalama puan, olası 45 üzerinden 35.48'dir. Bu, ortalama olarak katılımcıların nispeten yüksek bir algılanan fiziksel okuryazarlık düzeyi bildirdiğini göstermektedir. Bilgi ve anlayış alt boyutu için ortalama puan 15 üzerinden 10.84'tür. Bu, orta düzeyde bir algılanan fiziksel okuryazarlık bilgi ve anlayış alt boyutunu göstermektedir. Kendini ifade ve başkalarıyla İletişim alt boyutu için ortalama puan 15 üzerinden 11.41'dir ve bu, algılanan fiziksel okuryazarlık kendini ifade ve başkalarıyla iletişim alt boyutunda orta derecede yüksek bir algılanan etkililik düzeyini göstermektedir. Benlik algısı ve özgüven için ortalama puan 15 üzerinden 13.23'tür ve bu, yüksek düzeyde bir algılanan fiziksel okuryazarlık benlik algısı ve özgüven alt boyutunu göstermektedir.

Normallik varsayımı çarpıklık ve basıklık ile test edilmiştir. Ölçeğin genelindeki ve alt boyutlarındaki değerlere göre dağılımın normal olduğu görülmüştür. Bu sebeple, araştırmada parametrik testler kullanılmıştır.

Araştırma Sorusu 2: Lise öğrencilerinin fiziksel benlik algıları nedir?

Araştırma sorusu 2'yi yanıtlamak için Fiziksel Kendini Tanımlama Anketi - Kısa Versiyon kullanılmıştır. Bu ölçek, 11 alt boyuta ayrılmış 40 maddeden oluşmaktadır: sağlık (5 madde), koordinasyon (5 madde), aktivite (4 madde), vücut yağı (3 madde), spor yeterliliği (3 madde), küresel fiziksel benlik kavramı (3 madde), görünüm (3 madde), güç (3 madde), esneklik (3 madde), dayanıklılık/fitness (3 madde) ve küresel özsaygı (5 madde). Her madde, 1 (yanlış) ile 6 (doğru) arasında değişen 6'lı Likert ölçeğinde derecelendirilmiştir. Fiziksel Kendini Tanımlama Anketi Kısa Formundaki 168.15'lik genel ortalama puan, öğrenciler arasında orta düzeyde bir genel fiziksel benlik algısını göstermektedir. Sağlık alt boyutu en yüksek ortalama sahiptir ve güçlü bir sağlık algısını göstermektedir. Toplam 5 madde ile olası maksimum puan 30'dur ve 21.95 nispeten yüksek bir ortalama puanıdır. Her biri 5 maddeye sahip olan koordinasyon (ortalama 21.19) ve küresel öz-saygı (ortalama 21.58) alt boyutları, sağlık alt boyutuna benzer şekilde, sırasıyla güçlü koordinasyon ve küresel öz-saygı algılarını gösteren yüksek ortalama puanlar göstermektedir. Aktivite (ortalama 15.37), vücut yağı (ortalama 13.55), spor yeterliliği (ortalama 12.19), küresel fiziksel benlik kavramı (ortalama 12.59), görünüm (ortalama 12.77), güç (ortalama 12.86) ve esneklik (ortalama 12.16) dahil olmak üzere üç veya dört maddeli alt boyutlar, algılanan niteliklerin orta düzeylerini göstermektedir. Toplam 3 maddeden oluşan dayanıklılık/fitness alt boyutu, öğrencilerin dayanıklılık ve fitness algısının biraz daha düşük olduğunu gösteren 11.92 ortalama puanı göstermiştir.

Araştırma Sorusu 3: İstanbul'daki lise öğrencileri arasında algılanan fiziksel okuryazarlık ve fiziksel benlik algısı arasındaki ilişki nedir?

Lise öğrencilerinde algılanan fiziksel okuryazarlık ve fiziksel benlik algısı arasındaki korelasyonu analiz etmeden önce, istatistiksel testlerin uygunluğunu sağlamak için algılanan fiziksel okuryazarlık ve fiziksel benlik algısı varsayımları incelenmiştir. Normallik ve doğrusallık varsayımları, tanımlayıcı istatistikler, görsel incelemeler (histogramlar, Q-Q grafikleri ve saçılım grafikleri) ve çarpıklık ve basıklık değerleri gibi istatistiksel testler aracılığıyla değerlendirilmiştir. Bu adımlar, her iki veri setinin

de daha fazla çıkarımsal analiz için gerekli istatistiksel varsayımları karşıladığını doğrulamıştır.

Tablo 4.12, toplam 417 lise öğrencisi arasında algılanan fiziksel okuryazarlık toplam puanları ve fiziksel benlik algısı toplam puanları arasındaki Pearson korelasyon sonuçlarını sunmaktadır. Algılanan fiziksel okuryazarlık toplam ve fiziksel benlik algısı toplam arasında, Pearson korelasyon katsayısı $r=.746$ olan güçlü bir pozitif korelasyon gözlenmektedir. Bu çalışmada p-değeri ($< .001$), bu korelasyonun 0.01 düzeyinde son derece anlamlı olduğunu göstermektedir. Bu bulgular, lise öğrencileri arasında algılanan fiziksel okuryazarlık ve fiziksel benlik algısı arasında güçlü ve istatistiksel olarak anlamlı pozitif bir korelasyon olduğunu göstermektedir. Bu çalışmada p-değeri ($< .001$), bu ilişkinin tesadüfen meydana gelme olasılığının çok düşük olduğunu doğrulayarak, bu değişkenler arasındaki ilişkinin geçerliliğini güçlendirmektedir.

Kendi fiziksel okuryazarlık düzeylerini yüksek olarak algılayan öğrenciler, yüksek bir fiziksel benlik algısına sahip olma eğilimindedir. Bu sonuç, teorik beklentilerle uyumludur ve fiziksel okuryazarlığın ergenlerin fiziksel yetenekleri ve yeterlilikleri hakkındaki benlik algılarını şekillendirmede çok önemli bir rol oynadığını göstermektedir.

TARTIŞMA

Bu bölümde, araştırmanın üç sorusuna ilişkin bulgular detaylı şekilde tartışılmış, elde edilen veriler ışığında gelecekteki araştırmalar için çıkarımlar ve öneriler sunulmuştur.

Çalışmanın ilk sorusu "Lise öğrencilerinin algılanan fiziksel okuryazarlık düzeyleri nedir?" şeklindedir. Araştırma bulguları, öğrencilerin genel PLLI skorlarının yanı sıra, PLLI-SS (özgüven ve kendini ifade) alt boyutunda nispeten yüksek seviyelerde, PLLI-SC (sosyal etkileşim) ve PLLI-KU (bilgi ve anlayış) alt boyutlarında ise orta düzeyde yüksek algıya sahip olduklarını göstermektedir. Bu sonuçlar, öğrencilerin İstanbul'un Kadıköy ilçesinde, yani Türkiye'nin sosyoekonomik ve kültürel olarak en

gelişmiş bölgelerinden birinde öğrenim görmeleriyle ilişkilendirilebilir. Kadıköy'deki okulların yapısal olarak daha donanımlı olması, öğrencilerin eğitim olanaklarına daha fazla erişebilmesi ve ailelerin genel olarak fiziksel aktiviteye daha fazla önem vermesi gibi faktörler bu durumu açıklayabilir. Bununla birlikte, yapılandırılmış ve müfredata uygun şekilde uygulanan beden eğitimi dersleri de öğrencilerin fiziksel okuryazarlık düzeylerini olumlu etkileyebilir. Ayrıca, ergenlik döneminde olan bu yaş grubundaki bireylerin sağlık bilinci ve sağlıklı yaşam tarzlarına olan ilgileri de fiziksel okuryazarlık düzeylerinin yükselmesinde etkili olabilir. Bu bulgular, Yılmaz ve diğerleri (2023) ile Gerger'in (2022) çalışmalarıyla benzerlik göstermektedir. Gerger'in araştırmasında, fiziksel aktivitenin fiziksel okuryazarlığın güçlü bir belirleyicisi olduğu ve erkek öğrencilerin her iki alanda da daha yüksek puanlar aldığı bulunmuştur. Ayrıca, farklı lise türleri karşılaştırıldığında fiziksel aktivite düzeylerinde anlamlı bir fark tespit edilmemiş; ancak fiziksel okuryazarlık düzeylerinde farklılıklar gözlemlenmiştir.

İkinci araştırma sorusu "Lise öğrencilerinin fiziksel benlik algısı nedir?" şeklindedir. Bu soruya ilişkin elde edilen veriler, öğrencilerin genel olarak orta düzeyde fiziksel benlik algısına sahip olduklarını göstermektedir. Özellikle sağlık, koordinasyon ve genel öz saygı alt boyutlarında öğrenciler güçlü algılar bildirirken; aktivite, vücut yağı, görünüm, spor yeterliliği, güç, esneklik, genel fiziksel benlik kavramı gibi alanlarda algılar orta seviyede kalmıştır. Dayanıklılık ve zindelik alt boyutları ise öğrenciler tarafından daha düşük algılanmıştır. Bu durumun nedeni ergenlik dönemine özgü fiziksel ve psikolojik değişimlerle açıklanabilir. Özellikle bu dönemde yaşanan hormonal değişimler, bedensel farklılıklar ve sosyal karşılaştırmalar, öğrencilerin kendilerini değerlendirme biçimlerini doğrudan etkileyebilir. Sosyal medya kullanımı da bu algılar üzerinde önemli bir faktör olarak değerlendirilmektedir. Özellikle idealize edilmiş beden imgelerine maruz kalan gençler, kendi bedenlerine dair olumsuz düşünceler geliştirebilirler. Bu da genel fiziksel benlik algısını düşürebilir. Literatürde de fiziksel benlik algısı üzerine yapılan birçok çalışmada yaş, cinsiyet, fiziksel aktivite düzeyi gibi değişkenlerin etkisi sıklıkla vurgulanmaktadır. Örneğin, Maïano ve arkadaşları (2004), yaş ve cinsiyetin fiziksel benlik algısı ile öz saygı üzerinde anlamlı etkiler yarattığını belirtmiştir. Yıldız (2018) ise sportif yeterliliği ve fiziksel kondisyon algısı yüksek

olan öğrencilerin daha aktif olduklarını ve fiziksel benlik algılarının da daha gelişmiş olduğunu ortaya koymuştur. Benzer şekilde, Aybar-Soltero (1998) ve Baydemir ve arkadaşları (2018) yaptıkları çalışmalarda, erkek öğrencilerin özellikle koordinasyon, spor yeterliliği ve görünüm gibi alt boyutlarda kızlara göre daha yüksek puanlar aldıklarını bildirmiştir.

Üçüncü araştırma sorusu ise "İstanbul'daki lise öğrencilerinin algılanan fiziksel okuryazarlığı ile fiziksel benlik algısı arasında nasıl bir ilişki vardır?" şeklindedir. Analizler sonucunda, algılanan fiziksel okuryazarlık ile fiziksel benlik algısı arasında anlamlı ve pozitif bir korelasyon olduğu ortaya konmuştur. Bu durum, fiziksel okuryazarlık düzeyi yüksek olan öğrencilerin fiziksel benlik algılarının da yüksek olduğunu göstermektedir. Başka bir deyişle, öğrencilerin bedenleri hakkında daha fazla bilgi sahibi olmaları, hareket etmeye istekli olmaları ve fiziksel aktivitelerde başarılı olabileceklerine dair inançları, kendilerini daha olumlu algılamalarına katkı sağlamaktadır. Bu bulgular, Kadıköy gibi sosyoekonomik açıdan gelişmiş bölgelerde eğitim gören öğrencilerin fiziksel farkındalıklarının daha yüksek olabileceğini desteklemektedir. Sullivan ve arkadaşlarının (2017) bulguları da bu durumu doğrular niteliktedir. Benzer şekilde, Bilgiseven ve Aksoy (2023), Iğdır ve arkadaşları (2024) ile Aşçı'nın (2002) çalışmaları da fiziksel benlik algısı ile fiziksel okuryazarlık arasında pozitif ilişki olduğunu ortaya koymuştur. Bununla birlikte, bu çalışmada yaş, cinsiyet, okul türü, sınıf düzeyi, fiziksel aktiviteye katılım gibi değişkenler analiz edilmemiştir. Bu nedenle, gelecekte yapılacak araştırmalar bu demografik değişkenleri de kapsayarak daha ayrıntılı sonuçlar ortaya koyabilir. Aynı zamanda, araştırmanın farklı şehir ve bölgelerde tekrarlanması, fiziksel okuryazarlık ve fiziksel benlik algısının bölgesel ve kültürel farklılıklar bağlamında değerlendirilmesini mümkün kılacaktır. Bu çalışma, fiziksel okuryazarlık ile fiziksel benlik algısı arasındaki doğrudan ilişkiyi ergenler özelinde inceleyerek Türk literatürüne önemli bir katkı sağlamaktadır.

Çalışmanın çıkarımları

Eğitimsel çıkarımlar

- Fiziksel okuryazarlık kavramı 1. sınıftan 12. sınıfın sonuna kadar Beden Eğitimi ve Spor müfredatına katılmalıdır.

- Beden Eğitimi ve Spor müfredatı öğrencilerin sadece fiziksel becerilerini arttıracak şekilde değil aynı zamanda kendilerine güvenlerini de geliştirecek şekilde dizayn edilmelidir. Bu şekilde fiziksel okuryazarlığı ve fiziksel benlik algıları yüksek bir nesil yetiştirilebilir.
- Beden Eğitimi ve Spor öğretmenleri yetiştiren üniversiteler fiziksel okuryazarlık kavramını, ilkelerini ve uygulamalarını kapsayacak zorunlu bir dersi müfredatlarına eklemelidir.
- Beden Eğitimi ve Spor öğretmenlerini, fiziksel okuryazarlık konusunda bilgilendirecek bir eğitim programı hazırlanmalıdır.
- Okullar, hem bedensel hem de psikolojik sağlığı teşvik eden fiziksel okuryazarlık konusunu programlarına katmalıdır.
- Okullardaki rehberlik danışmanları, fiziksel okuryazarlık ve fiziksel benlik algısı hakkında eğitim ve bilgi almalıdır.

Politika çıkarımları

- Eğitim politika yapıcıları ve yöneticileri, öğretmenler, ebeveynler ve öğrenciler arasında fiziksel okuryazarlık farkındalığını teşvik etmek için aktif bir rol üstlenmelidir.
- Sağlık Bakanlığı ve Milli Eğitim Bakanlığı arasında ortak bir girişimle, ebeveynlere ve öğrencilere fiziksel okuryazarlık ve önemine ilişkin bilgilendirmeler yapılmalıdır.
- Eğitim politika yapıcıları, Türkiye’de fiziksel okuryazarlık politikalarını düzenlemek için harekete geçmeli ve konu ile ilgili araştırmaları desteklemelidir.

Sağlık çıkarımları

- Türkiye’de çocukların ve ergenlerin Dünya Sağlık Örgütü’nün (WHO, 2022) tavsiyeleri doğrultusunda düzenli fiziksel aktivite yapmaları teşvik edilmelidir.
- Literatürdeki çalışmaların fiziksel aktiviteye katılanlarda fiziksel okuryazarlık ve fiziksel benlik algısının arttığını göstermesi nedeniyle, Sağlık Bakanlığı bedensel ve zihinsel sağlığa vurgu yaparak fiziksel aktiviteye katılımı teşvik etmelidir.

Gelecekteki arařtırmalar İin neriler

- Ergenler arasında fiziksel okuryazarlık ve fiziksel benlik algısı arasındaki iliřkide yař, cinsiyet, okul tr, fiziksel aktivite ve spor katılımının etkisini arařtırmak iin daha fazla arařtırmaya ihtiya vardır. Bu arařtırmaya, gzel sanatlar liseleri, spor liseleri ve zel liselerden ğrenciler de katılabilir.
- Farklı sosyoekonomik ve kltrel gemiřlere sahip farklı ile veya řehirlerde benzer alıřmalar yapmak, fiziksel okuryazarlık ve fiziksel benlik algısını etkileyebilecek baėlamsal faktrler hakkında deėerli bilgiler saėlayabilir.
- Gelecekteki arařtırmalar, ergenlerin algılanan fiziksel okuryazarlık ve fiziksel benlik algısına ek olarak motor yeterliliklerini ve gerek fiziksel aktivite dzeylerini de deėerlendirmelidir.
- Gelecekteki arařtırmalar, fiziksel okuryazarlık ve fiziksel benlik algısının daha btncl bir řekilde anlařılması iin ğrencilere ek olarak ebeveynlerin ve beden eėitimi ğretmenlerinin bakıř aılarını da iermelidir.
- Fiziksel okuryazarlıėın fiziksel benlik algısı zerindeki uzun vadeli etkilerini keřfetmek iin uzun sreli alıřmalar yapılmalıdır.
- Nitel arařtırma yntemleri, rneėin grřmeler veya odak grupları kullanılarak bireylerin fiziksel okuryazarlık ve fiziksel benlik algısına iliřkin deneyimleri ve algıları derinlemesine incelenebilir. Bu, daha zengin veriler sunarak konunun daha iyi anlařılmasını saėlayabilir.

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