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# Goal Orientation as a Predictor of Perceived Physical Literacy Among Fitness Participants: Application of Achievement Goal Theory

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**ABSTRACT (**Times New Roman typeface and 10 points)

This study investigates the relationship between exercise goal orientation and perceived physical literacy among fitness center members, grounded in the Achievement Goal Theory. This study posits that goal orientation significantly influences how individuals engage in fitness activities, thus impacting their intrinsic motivation and physical literacy. Using a cross-sectional design, data were collected from 393 participants via an online survey that assessed their goal orientation and perceived physical literacy. Statistical analyses included the normality test, independent sample t-test, analysis of variance (ANOVA), and regression analysis. The findings indicate that mastery-oriented goals, which focus on personal growth and competence, are significant predictors of higher perceived physical literacy than performance-oriented goals that emphasize external validation. The study also identified notable demographic differences: younger individuals and those who frequently exercise exhibit stronger mastery orientations and higher levels of perceived physical literacy. Specifically, younger participants (18-24 years) reported higher confidence and knowledge in physical literacy than older participants (35 and above). Additionally, males score higher on the perceived knowledge component of physical literacy than females. Frequent exercisers (4 or more times per week) demonstrate higher levels of both goal orientation and perceived physical literacy. These insights underscore the need for tailored interventions that promote mastery goals while fostering lifelong engagement in physical activities. By bridging existing research gaps, this study contributes to the development of more effective fitness programs that enhance health and well-being through personalized approaches that account for individual differences in motivation and literacy.

**Keywords:** Exercise, goal orientation, leisure, physical literacy, recreation

## Introduction

The increasing number of fitness centers highlights the growing interest in health and physical well-being, emphasizing the importance of understanding the factors that contribute to successful exercise adherence and outcomes. Within this context, goal orientation has emerged as a crucial element that influences individuals' fitness routines. Goal orientation refers to the framework within which individuals set their exercise objectives, focusing either on personal improvement and mastery or on external validation and comparison with others (Klain et al., 2014). This study explores the predictive power of exercise goal orientation on perceived physical literacy among fitness center members. This topic integrates psychological and physiological perspectives to enhance the understanding of exercise behaviors and their outcomes. Physical literacy is defined as the ability to move with competence and confidence in a wide variety of physical activities that benefit the healthy development of the individual. This involves understanding and appreciating the significance of physical activity and its contributions to a healthy lifestyle (Edwards et al., 2016).

The need for this study arises from a limited understanding of how goal orientation influences perceived physical literacy, which is crucial for developing effective interventions in fitness settings. Previous research has primarily focused on the direct effects of goal orientation on exercise adherence and motivation (Cid et al., 2020; Moreno et al., 2010). However, the relationship between these motivational constructs and the concept of physical literacy, which encompasses an individual's understanding and awareness of their body's needs, capabilities, and signals (Edwards et al., 2016), remains underexplored. Physical literacy is essential for promoting long-term health and well-being because it encourages individuals to engage in physical activities that are not only effective but also sustainable and enjoyable (Teixeira et al., 2012). By investigating this relationship, the current study seeks to fill this gap in the literature and provide insights that could inform the design of personalized fitness programs.

Current trends in the fitness industry underscore the relevance of this study. There is a growing shift from traditional fitness paradigms, which emphasize physical appearance and performance, to a more holistic approach that values health, well-being, and body awareness (Raaijmakers et al., 2015). This trend is driven by a broader societal movement toward mindfulness and self-compassion, encouraging individuals to develop a deeper connection with their bodies and exercise in a way that aligns with their personal values and goals (Ebbeck & Austin, 2018). Furthermore, technological advancements have facilitated the personalization of fitness programs, allowing individuals to set and track goals tailored to their specific needs and preferences. This personalized approach is aligned with the principles of goal orientation and physical literacy as it empowers individuals to take control of their health and fitness journeys.

The variables' goal orientation and physical literacy were selected due to their potential impact on exercise adherence and overall fitness experience. Goal orientation influences how individuals perceive success and failure in their fitness endeavors, which in turn affects their motivation and engagement levels (Lower et al., 2014). Physical literacy, on the other hand, enhances individuals' ability to interpret their body signals and make informed decisions about their health and fitness routines (Brown et al., 2017). The specific research problem addressed in this study is the extent to which goal orientation can predict perceived physical literacy among fitness center members. The problem statement guiding this research is: "To what extent does exercise goal orientation predict perceived physical literacy among fitness center members?" By addressing this issue, this study aims to provide actionable insights that can enhance the design of fitness programs and interventions, ultimately supporting individuals in achieving health and fitness goals.

### *Literature Review*

The exploration of goal orientation in exercise and its relationship with perceived physical literacy is a burgeoning area of interest (Cornish et al., 2020; Li et al., 2021), yet there are notable research gaps that this study aims to address. One significant gap is the lack of comprehensive studies examining how demographic factors such as gender, age, exercise frequency, and session duration impact goal orientation and physical literacy. Current literature has predominantly focused on individual variables in isolation rather than integrating them into a holistic framework that considers how these factors

collectively influence the development of physical literacy in fitness center members (Jean de Dieu & Zhou, 2021; Liu et al., 2017). Additionally, while substantial evidence exists on the influence of goal orientation on motivation and engagement in educational settings (Miller et al., 2021; Yi & Huebner, 2020), less is known about its predictive power concerning physical literacy in adult fitness environments. This study intends to fill these gaps by examining the interplay between these demographic factors and their combined effects on the development of physical literacy, thereby offering a more nuanced understanding of how these elements interact to foster lifelong engagement in physical activity.

The theoretical framework guiding this study is anchored in the Achievement Goal Theory, which delineates that individuals are motivated by mastery and performance goals (Elliott & Dweck, 1988). Mastery goals, which emphasize personal improvement and competence, enhance physical literacy by fostering intrinsic motivation and self-efficacy (Morgan, 2019). In contrast, performance goals that focus on outperforming others (Poortvliet & Darnon, 2010) may not contribute to the same extent toward the development of physical literacy (Edwards et al., 2016). This study hypothesizes that demographic factors modulate the relationship between goal orientation and physical literacy and that goal orientation exerts a direct influence on physical literacy. The hypotheses are formulated to explore these dynamics in depth, with each hypothesis addressing a specific demographic variable to ascertain its role in shaping the relationship between goal orientation and physical literacy.

Existing literature suggests that gender may play a significant role in shaping exercise goal orientation (Guan et al., 2022) and perceived physical literacy (Li et al., 2020). Studies have consistently demonstrated that gender differences influence motivational constructs, with males typically displaying a higher inclination toward performance goals and females leaning more toward mastery goals (Theis & Fischer, 2017). These differences could impact physical literacy and affect how individuals engage in physical activities. Research indicates that females are often more focused on personal growth and intrinsic motivation, whereas males may prioritize competition and external validation (Tomczak et al., 2021). Understanding these dynamics can inform the development of gender-specific interventions that cater to the unique needs and preferences of each gender and promote more effective engagement in physical activities. Thus, the following hypothesis is proposed: $H^1$. *Exercise goal orientation and perceived physical literacy significantly differ by gender*.

Research has revealed that younger individuals are often more engaged in mastery-oriented activities, focusing on personal development and skill acquisition (Rubtsov & Ulanovskaya, 2020). In contrast, older adults may prioritize performance-related outcomes, such as achievement of specific fitness goals or competition with peers (Choi et al., 2018). These age-related differences in motivational dynamics can impact physical literacy, influencing how individuals perceive and engage in physical activities over time. Understanding these variations is crucial for designing age-appropriate interventions that encourage sustained physical activity and literacy throughout life. Tailoring fitness programs to cater to the changing motivations and needs of different age groups can enhance engagement and promote lifelong physical literacy. Thus, the following hypothesis is proposed: $H^2$. *Exercise goal orientation and perceived physical literacy significantly differ by age*.

Regular exercise engagement has been linked to enhanced mastery orientation and higher levels of physical literacy, as individuals who consistently participate in physical activities are more likely to develop intrinsic motivation and competence (Sum et al., 2016). This relationship underscores the importance of regular physical activity for fostering positive motivation and developing physical literacy. Frequent exercisers tend to demonstrate stronger mastery orientation (Liu et al., 2019), which, in turn, enhances their physical literacy and overall engagement with exercise. Encouraging consistent participation in physical activities through structured programs and supportive environments can promote mastery-oriented goals and foster lifelong physical literacy. Thus, the following hypothesis is proposed: $H^3$. *Exercise goal orientation and perceived physical literacy differ significantly according to weekly exercise frequency*.

The relationship between exercise goal orientation and perceived physical literacy is crucial for understanding how individuals develop the skills and motivation necessary for lifelong engagement in

physical activities (Choi et al., 2020; Rudd et al., 2020). Goal orientation, particularly mastery-oriented goals, is a significant predictor of physical literacy. Individuals with a higher mastery orientation are more likely to exhibit intrinsic motivation, competence, and confidence, which are essential components of physical literacy (Liu et al., 2017). This relationship highlights the importance of fostering mastery-oriented goals within fitness environments to promote physical literacy and encourage sustained participation in physical activities. Understanding the predictive power of goal orientation on physical literacy can inform the development of targeted interventions that prioritize mastery over performance-oriented goals, ultimately enhancing physical literacy and promoting lifelong physical activity. Therefore, the following hypothesis is proposed: *$H^4$: Exercise goal orientation has a predictive effect on perceived physical literacy*.

The literature on goal orientation and physical literacy has revealed several key trends and patterns. Mastery-oriented climates, both in educational and fitness settings, are consistently linked to higher levels of intrinsic motivation, engagement, and physical literacy (Pulkka, 2016). These environments foster a supportive context where individuals are encouraged to pursue personal growth and competence, leading to more positive outcomes in physical activity engagement. Furthermore, the literature underscores the importance of tailoring interventions to individual needs and demographic factors because these factors significantly influence the effectiveness of goal orientation and physical literacy initiatives (Ryan et al., 2019; Schapira et al., 2017). Despite these insights, several gaps remain in the literature, particularly concerning the integration of demographic variables into a cohesive model that explains the interplay between goal orientation and physical literacy. This study aims to address this gap by incorporating demographic variables into the analysis to provide a more comprehensive understanding of how these factors shape physical literacy. Moreover, a scarcity of research has specifically explored the predictive power of goal orientation on physical literacy in adult fitness contexts. Although educational settings have been the focus of much research (Liu et al., 2017; Roetert & MacDonald, 2015), there is a need to extend these findings to fitness centers, where adult populations engage in exercise with different motivational dynamics. This study contributes to the literature by investigating these relationships within the context of fitness centers, offering evidence-based recommendations for promoting physical literacy through targeted interventions that account for demographic differences.

In summary, the existing literature lacks comprehensive studies exploring the interaction between goal orientation, physical literacy, and demographic factors, such as gender, age, exercise frequency, and duration, among adult fitness populations. There is ample evidence supporting the positive effects of mastery orientation (Cid et al., 2020)., the integration of these variables into a unified model is necessary to fully understand their complex interactions. This study seeks to bridge these gaps by providing a holistic analysis of these dynamics, thereby informing the development of more effective interventions aimed at fostering physical literacy and lifelong engagement in physical activity.

## Methods and Materials

## Research Model

This study employed a quantitative research design, utilizing a cross-sectional approach to collect data from a diverse sample of individuals. A cross-sectional design involves collecting data at a single time point, which allows researchers to examine relationships between variables and provide a snapshot of current trends and associations among participants (Levin, 2006). This approach is particularly suited to the research objectives, which aim to understand the predictive power of exercise goal orientation on perceived physical literacy among fitness center members.

## Data Collection

Data were collected using an online survey distributed via Facebook, Instagram, and WhatsApp. The survey was designed to gather information on the participants' exercise habits, goal orientation, and perceived physical literacy. Group administrators on these platforms were contacted to share the survey among fitness- and exercise-focused groups. Participants were informed about the study purpose and

provided with a link to complete the survey anonymously. This method ensured wide-ranging outreach and facilitated the participation of individuals from different regions of Türkiye.

## Measurement instruments

***Measurement of Goal Orientation in Exercise:*** The Goal Orientation in Exercise Measure (GOEM) assesses individuals' propensity to adopt tasks or ego goals within exercise contexts. The original version comprises 10 items divided into two subscales: task orientation and ego orientation. Participants responded to items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating stronger inclinations toward the respective orientation (Petherick & Markland, 2008). Turkish adaptation of the GOEM was undertaken to ensure cultural relevance and applicability. This version was validated in a study involving 408 regular exercisers aged 17–61 years. Exploratory factor analysis (EFA) revealed a two-factor structure, confirming the original model with task and ego orientations. Confirmatory factor analysis (CFA) further supported this structure, yielding fit indices such as $\chi 2/df = 1.83$, AGFI = .95, GFI = .97, CFI = .98, and RMSEA = .045. The internal consistency of the subscales was robust, with Cronbach's alpha values of .90 for ego orientation and .87 for task orientation, and a test-retest reliability coefficient of .88 for ego orientation and .87 for task orientation. The GOEM's convergent validity was demonstrated through its correlations with behavioral regulations, confirming its reliability and validity in the Turkish context (Ersöz et al., 2017).

***Perceived Physical Literacy:*** The Perceived Physical Literacy Instrument (PPLI), originally constructed to evaluate physical education teachers' self-perceptions of physical literacy, comprises nine items across three factors: motivation, confidence, physical competence, and interaction with the environment. These items were assessed on a five-point Likert scale, with responses indicating levels of agreement from 1 (strongly disagree) to 5 (strongly agree) (Sum et al., 2016). The Turkish adaptation of the PPLI was conducted to evaluate its applicability and reliability in the Turkish educational context. In a study involving 218 physical education teachers, the CFA did not initially confirm the original structure. However, subsequent exploratory and confirmatory factor analyses resulted in a revised three-factor, nine-item structure that demonstrated a satisfactory fit, with fit indices surpassing reference values. The model explained 69.04% of the total variance, and the internal consistency, as indicated by a Cronbach's alpha of.81, confirmed its reliability and validity. This adaptation ensures the instrument's utility in assessing Turkish physical education teachers' physical literacy levels (Munusturlar & Yıldızer, 2020).

## Sampling

The study population comprised individuals residing in different provinces of Turkey who regularly exercise and have been members of a fitness center for at least six months. A sample of 393 participants was selected using convenience sampling. Convenience sampling is a non-probability sampling method in which participants are selected based on their availability and willingness to participate in the study, making it an efficient way to collect data when time and resources are limited (Etikan, Musa, & Alkassim, 2016). This involves selecting individuals who are easily accessible, reachable, and willing to participate. This approach involved initially contacting the group administrators of relevant social media groups, who then distributed the survey to their members. The sample included 223 males and 170 females, ensuring a diverse representation.

## Data Analysis

The collected data were analyzed using a range of statistical techniques to explore the relationships among variables. A frequency analysis was conducted to describe the demographic characteristics of the sample. Normality tests were performed to assess data distribution. Independent sample t-tests and ANOVA were used to investigate differences between groups based on demographic variables. Regression analysis was conducted to determine the predictive power of exercise goal orientation on perceived physical literacy. All statistical analyses were conducted using Jamovi software, which ensured accurate and reliable results.

## Findings

This section summarizes the results of the statistical analyses used to investigate the links between demographic characteristics, exercise frequency, and perceived physical literacy. The analyses included frequency analysis to describe the participants' demographic characteristics, normality test to assess data distribution, independent sample t-test and ANOVA to investigate group differences, and regression analysis to determine the predictive power of exercise goal orientation on perceived physical literacy. The studies were performed using Jamovi software to ensure precision and reliability. The important conclusions from these analyses are as follows.

## Descriptive Results

**Table 1.** Demographic Characteristics of the Sample Population

| Variables | N | % |
|---|---|---|
| **Gender** | | |
| Male | 223 | 56.7% |
| Female | 170 | 43.3% |
| **Age** | | |
| 18-24 | 210 | 53.4% |
| 25-34 | 132 | 33.6% |
| 35 and above | 51 | 13.0% |
| **Exercise Frequency** | | |
| 1 time per week | 53 | 13.5% |
| 2 times per week | 54 | 13.7% |
| 3 times per week | 120 | 30.5% |
| 4 times per week | 122 | 31.0% |
| 5 times per week or more | 44 | 11.2% |

Table 1 provides an overview of the demographic characteristics of the sample population. The sample comprises 393 individuals, of which 223 were men (56.7%) and 170 were women (43.3%). The age distribution indicates that the majority of participants were between 18 and 24 years (53.4%), followed by those aged 25-34 years (33.6%) and those 35 years and older (13.0%). In terms of exercise frequency, most participants engaged in physical activity 3-4 times per week (61.5%), with a smaller proportion exercising 1-2 times (27.2%) or 5 or more times per week (11.2%). These demographics suggest that the young and active sample predominantly engage in regular exercise routines.

## Normality Results

**Table 2.** Normality Distribution of the GOEM and PPLI Scales

| Statistics | GOEM Task | GOEM Ego | GOEM Total | PPLI Confidence | PPLI Knowledge | PPLI Communication | PPLI Total |
|---|---|---|---|---|---|---|---|
| Mean | 4.27 | 3.43 | 3.85 | 4.04 | 4.00 | 4.15 | 4.06 |
| Standard deviation | 0.777 | 0.987 | 0.727 | 0.855 | 0.876 | 0.802 | 0.713 |
| Skewness | -1.83 | -0.55 | -1.01 | -1.07 | -0.911 | -1.08 | -0.997 |
| Std. error skewness | 0.123 | 0.123 | 0.123 | 0.123 | 0.123 | 0.123 | 0.123 |
| Kurtosis | 4.18 | -0.194 | 1.81 | 1.30 | 0.387 | 1.22 | 1.31 |
| Std. error kurtosis | 0.246 | 0.246 | 0.246 | 0.246 | 0.246 | 0.246 | 0.246 |

Table 2. Normality distribution results suggest that some variables deviate significantly from a normal distribution, as indicated by skewness and kurtosis. According to Kline (2016), skewness values greater than ±3 and kurtosis values greater than ±10 indicate significant deviations from normality. In this analysis, the GOEM task scale had skewness and kurtosis values outside the range suggested by the Kline for normality, with skewness of -1.83 and kurtosis of 4.18, suggesting moderate non-normality. Despite these deviations, the skewness and kurtosis values did not exceed the thresholds for severe non-normality, implying that parametric tests can still be appropriate. It is generally recommended to apply

parametric tests when skewness is less than ±2 and kurtosis is less than ±7, indicating that the assumptions of normality are adequately met when conducting parametric analyses on these data.

## Independent Samples T-Test Results

**Table 3.** Independent Samples T-Test Results for Gender Differences

| Variables | Group (Gender) | N | Mean | Standart deviation | t | p |
|---|---|---|---|---|---|---|
| GOEM - Task | Male | 223 | 4.30 | 0.724 | 1.021 | 0.308 |
| | Female | 170 | 4.22 | 0.841 | | |
| GOEM - Ego | Male | 223 | 3.50 | 0.967 | 1.541 | 0.124 |
| | Female | 170 | 3.35 | 1.009 | | |
| GOEM Total | Male | 223 | 3.90 | 0.699 | 1.594 | 0.112 |
| | Female | 170 | 3.78 | 0.758 | | |
| PPLI - Confidence | Male | 223 | 4.11 | 0.806 | 1.889 | 0.060 |
| | Female | 170 | 3.95 | 0.91 | | |
| PPLI - Knowledge | Male | 223 | 4.09 | 0.827 | 2.209 | 0.028 |
| | Female | 170 | 3.89 | 0.927 | | |
| PPLI - Communication | Male | 223 | 4.13 | 0.797 | -0.647 | 0.518 |
| | Female | 170 | 4.18 | 0.809 | | |
| PPLI Total | Male | 223 | 4.11 | 0.677 | 1.412 | 0.159 |
| | Female | 170 | 4.01 | 0.756 | | |

*Note.* $H_a$ $\mu_{erkek} \neq \mu_{kadın}$

The independent sample t-test (Table 3) examined gender differences in various dimensions of goal orientation and perceived physical literacy. The results show no significant gender differences in the GOEM Task, GOEM Ego, or PPLI Total scores, with all p values exceeding 0.05. The only significant gender difference was observed in the PPLI Knowledge Scale, where males scored higher (mean = 4.09) than females (mean = 3.89), t(391) = 2.209, p = 0.028. This suggests that although gender does not significantly influence most dimensions of goal orientation and perceived physical literacy, males may perceive themselves as having more knowledge about physical literacy than females.

## ANOVA Results

**Table 4.** ANOVA Results for Age Differences in Goal Orientation and Perceived Physical Literacy

| Variables | Group (Age) | *N* | Mean | Sd | *F* | *p* | Sig. |
|---|---|---|---|---|---|---|---|
| GOEM - Task | (1) 18-24 | 210 | 4.34 | 0.704 | | | |
| | (2) 25-34 | 132 | 4.25 | 0.81 | 2.33 | 0.102 | |
| | (3) 35 and above | 51 | 4.05 | 0.933 | | | |
| GOEM - Ego | (1) 18-24 | 210 | 3.41 | 0.965 | | | |
| | (2) 25-34 | 132 | 3.53 | 0.995 | 1.24 | 0.292 | |
| | (3) 35 and above | 51 | 3.28 | 1.044 | | | |
| GOEM Total | (1) 18-24 | 210 | 3.87 | 0.677 | | | |
| | (2) 25-34 | 132 | 3.89 | 0.752 | 1.51 | 0.224 | |
| | (3) 35 and above | 51 | 3.66 | 0.836 | | | |
| PPLI - Confidence | (1) 18-24 | 210 | 4.1 | 0.816 | | | |
| | (2) 25-34 | 132 | 4.08 | 0.895 | 5.35 | 0.006 | 3 - 1,2 |
| | (3) 35 and above | 51 | 3.68 | 0.841 | | | |
| PPLI - Knowledge | (1) 18-24 | 210 | 3.99 | 0.873 | 6.76 | 0.002 | 3 - 1,2 |
| | (2) 25-34 | 132 | 4.17 | 0.818 | | | |

**Table 4.** ANOVA Results for Age Differences in Goal Orientation and Perceived Physical Literacy

| Variables | Group (Age) | *N* | Mean | Sd | *F* | *p* | Sig. |
|---|---|---|---|---|---|---|---|
| | (3) 35 and above | 51 | 3.63 | 0.928 | | | |
| PPLI - Communication | (1) 18-24 | 210 | 4.2 | 0.746 | | | |
| | (2) 25-34 | 132 | 4.14 | 0.815 | 1.3 | 0.276 | |
| | (3) 35 and above | 51 | 3.97 | 0.964 | | | |
| PPLI Total | (1) 18-24 | 210 | 4.1 | 0.663 | | | |
| | (2) 25-34 | 132 | 4.13 | 0.734 | 4.51 | 0.013 | 3 - 1,2 |
| | (3) 35 and above | 51 | 3.76 | 0.793 | | | |

**Table 5.** ANOVA Results for Exercise Frequency in Goal Orientation and Perceived Physical Literacy

| Variables | Group (Exercise Frequency) | *N* | Mean | Sd | *F* | *p* | Sig. |
|---|---|---|---|---|---|---|---|
| GOEM - Task | (1) One per week | 53 | 3.98 | 0.763 | | | |
| | (2) 2 times per week | 54 | 4.04 | 0.77 | | | |
| | (3) 3 times per week | 120 | 4.26 | 0.801 | 5.23 | < 0.001 | 5,4 - 1,2 |
| | (4) 4 times per week | 122 | 4.44 | 0.754 | | | |
| | (5) 5 times per week or more | 44 | 4.44 | 0.649 | | | |
| GOEM - Ego | (1) One per week | 53 | 3.15 | 0.959 | | | |
| | (2) 2 times per week | 54 | 3.25 | 0.825 | | | |
| | (3) 3 times per week | 120 | 3.54 | 1.002 | 2.48 | 0.066 | |
| | (4) 4 times per week | 122 | 3.55 | 1.006 | | | |
| | (5) 5 times per week or more | 44 | 3.4 | 1.042 | | | |
| GOEM Total | (1) One per week | 53 | 3.57 | 0.627 | | | |
| | (2) 2 times per week | 54 | 3.65 | 0.645 | | | |
| | (3) 3 times per week | 120 | 3.9 | 0.77 | 5.27 | < 0.001 | 4,3 - 1,2 |
| | (4) 4 times per week | 122 | 3.99 | 0.73 | | | |
| | (5) 5 times per week or more | 44 | 3.92 | 0.68 | | | |
| PPLI - Confidence | (1) One per week | 53 | 3.7 | 0.848 | | | |
| | (2) 2 times per week | 54 | 3.77 | 0.88 | | | |
| | (3) 3 times per week | 120 | 3.99 | 0.849 | 7.22 | < 0.001 | 5,4 - 1,2 |
| | (4) 4 times per week | 122 | 4.31 | 0.799 | | | |
| | (5) 5 times per week or more | 44 | 4.18 | 0.766 | | | |
| PPLI - Knowledge | (1) One per week | 53 | 3.42 | 0.809 | | | |
| | (2) 2 times per week | 54 | 3.94 | 0.692 | | | |
| | (3) 3 times per week | 120 | 3.96 | 0.944 | 10.59 | < 0.001 | 5 - 1,2,3,4 |
| | (4) 4 times per week | 122 | 4.23 | 0.818 | | | |
| | (5) 5 times per week or more | 44 | 4.27 | 0.78 | | | |
| PPLI - Communication | (1) One per week | 53 | 3.94 | 0.676 | | | |
| | (2) 2 times per week | 54 | 4.11 | 0.741 | | | |
| | (3) 3 times per week | 120 | 4.03 | 0.891 | 4.36 | 0.002 | 4 - 1 |
| | (4) 4 times per week | 122 | 4.36 | 0.719 | | | |
| | (5) 5 times per week or more | 44 | 4.18 | 0.87 | | | |
| PPLI Total | (1) One per week | 53 | 3.69 | 0.657 | | | |
| | (2) 2 times per week | 54 | 3.94 | 0.65 | | | |
| | (3) 3 times per week | 120 | 3.99 | 0.754 | 9.48 | < 0.001 | 5, 4 – 1,2,3 |
| | (4) 4 times per week | 122 | 4.3 | 0.665 | | | |
| | (5) 5 times per week or more | 44 | 4.21 | 0.619 | | | |

The ANOVA results for age differences (Table 4) across goal orientation and perceived physical literacy dimensions indicate significant differences in PPLI Confidence, Knowledge, and Total Scores across age groups. Specifically, individuals aged 18-24 years reported higher confidence and knowledge scores than those aged 35 and above. The F-tests for PPLI Confidence ($F = 5.35$, $p = 0.006$) and Knowledge ($F = 6.76$, $p = 0.002$) suggest that younger individuals perceive higher levels of physical literacy. These findings highlight the importance of considering age when assessing physical literacy and goal orientation. Furthermore, the results for exercise frequency (Table 5) across goal orientation and perceived physical literacy dimensions revealed significant differences. More frequent exercisers (4-5 times per week) scored higher on the GOEM Task and PPLI Total than those who exercise 1-2 times per week. For example, PPLI Confidence shows significant variance ($F = 7.22$, $p < 0.001$), suggesting that those who exercise more frequently perceive higher confidence in their physical literacy. These results underscore the impact of exercise frequency on both goal orientation and perceived physical literacy.

## Regression Results

**Table 6.** Model Coefficients of - Perceived Physical Literacy

| Predictor | Estimate | *t* | *p* | Standartized Estimate | Lower | Upper |
|---|---|---|---|---|---|---|
| *Intercept* | 0.551 | 1.45 | 0.147 | | | |
| GOEM - Task | 0.777 | 8.82 | < 0.001 | 0.568 | 0.472 | 0.663 |
| GOEM - Ego | 0.380 | 2.77 | 0.006 | 0.086 | 0.006 | 0.165 |
| Task ✻ Ego | -0.074 | -2.43 | 0.015 | -0.080 | -0.144 | -0.015 |

*Note*. Model Fit Measures - $R = 0.671$, $R^2 = 0.450$

Regression analysis showed that a higher exercise goal orientation significantly predicted better perceived physical literacy, suggesting that individuals who set and pursue exercise goals are likely to view their physical abilities more favorably. In this table, the regression analysis reveals that both the GOEM task and ego orientations significantly predicted perceived physical literacy. Task orientation ($\beta = 0.568$, $p < 0.001$) demonstrated stronger predictive power than ego orientation ($\beta = 0.086$, $p = 0.006$). The interaction between task and ego orientations was negative and significant ($\beta = -0.080$, $p = 0.015$), suggesting that the relationship between these orientations and physical literacy is complex and may involve moderating effects. The model explains 45% of the variance in perceived physical literacy ($R^2 = 0.450$), indicating a moderate level of predictive power.

## Discussion

This study significantly advances the understanding of how exercise goal orientation predicts perceived physical literacy among fitness center members, thereby filling a critical gap in existing research. By examining this relationship within the context of fitness centers, this research offers new insights into how motivational constructs, like goal orientation, can influence individuals' understanding and interpretation of their physical capabilities and needs. Similar findings have been reported in studies indicating that goal orientation significantly affects self-perception in physical activities, suggesting that individuals with mastery-oriented goals tend to have a more positive self-concept regarding their physical abilities (Gómez-López et al., 2015). The findings underscore the importance of fostering mastery-oriented goals in fitness settings to enhance individuals' perceived physical literacy. This approach contributes to a growing body of literature that advocates for a more holistic approach to fitness, one that prioritizes personal development and well-being over competitive performance. Research in educational settings has also supported the emphasis on mastery goals for better learning outcomes, which aligns with the broader benefits of this approach in fitness environments (Rose et al., 2016). By emphasizing personal growth and competence, fitness programs can be tailored to meet the diverse needs of their participants, ultimately leading to more sustainable and enjoyable fitness experiences.

The findings of this study reveal noteworthy gender differences in the perceived knowledge component of physical literacy, as evidenced by the independent sample t-test results. Specifically, male participants scored higher on the PPLI Knowledge scale than female participants, indicating a gender disparity in self-reported knowledge about physical literacy. This finding is consistent with previous research that highlighted similar gender disparities in self-perceived physical competencies, which are often attributed to differences in socialization and access to physical activity resources (Rose et al., 2016). This discrepancy highlights the need for gender-sensitive approaches in the development and implementation of fitness programs. While the other dimensions of goal orientation and perceived physical literacy did not show significant gender differences, the variance in perceived knowledge suggests that females may benefit from targeted interventions designed to boost their confidence and understanding of physical literacy concepts. Interventions such as educational workshops have been shown to effectively enhance women's engagement and confidence in sports and physical activities (Oktadinata et al., 2023). These interventions could include educational workshops or tailored fitness sessions that address common barriers faced by females in accessing and engaging with physical literacy resources. By addressing these disparities, fitness centers can promote a more inclusive environment that encourages all individuals to fully engage in their health and fitness journeys (Tomczak et al., 2021).

The ANOVA analysis of age differences across goal orientation and perceived physical literacy dimensions revealed significant variations that are pivotal for tailoring age-appropriate interventions for fitness programs. Younger participants, specifically those aged 18-24, reported higher confidence and knowledge scores than older participants aged 35 and above. This finding resonates with research showing that younger adults often exhibit greater physical literacy because of recent exposure to comprehensive physical education curricula (Roetert & Ortega, 2019). This trend suggests that younger individuals may have a more robust understanding and confidence in their physical literacy, potentially due to their more recent exposure to educational systems that emphasize physical education. Conversely, older adults may face declining physical literacy, partly because of reduced access to continuing education and physical activity resources (Huang et al., 2020). These findings are critical for developing targeted strategies that address the unique needs of different age groups. For older adults, fitness programs can incorporate elements that enhance their understanding and confidence in their physical capabilities, such as workshops focused on developing skills for lifelong physical activity. Additionally, understanding these age-related differences can aid in designing programs that maintain engagement and motivation across lifespans, ensuring that individuals continue to benefit from physical activity regardless of age (Choi et al., 2018).

The results of the ANOVA examining exercise frequency indicate a strong correlation between frequent exercise and higher levels of both goal orientation and perceived physical literacy. Participants who exercised four or more times per week scored significantly higher in both the GOEM Task orientation and PPLI Total scores than those who exercised less frequently. These findings are in line with previous studies demonstrating that regular physical activity enhances not only physical health but also cognitive and emotional health, thereby boosting overall physical literacy (Passarello et al., 2022). This finding suggests that regular engagement in physical activity is not only beneficial for physical health but also enhances individuals' understanding and competence regarding physical literacy. The relationship between consistent exercise and increased mastery orientation highlights the role of habitual physical activity in promoting intrinsic motivation and competence. Moreover, the motivational benefits of regular exercise are well documented, reinforcing the development of mastery-oriented goals in physically active individuals (Cecchini-Estrada & Méndez-Giménez 2017). Fitness programs that encourage regular participation can foster an environment that supports mastery-oriented goals, leading to improved physical literacy. By providing structured programs and supportive environments, fitness centers can motivate individuals to maintain regular exercise routines, thereby enhancing their overall engagement and satisfaction with their fitness experiences (Sum et al., 2016).

## Conclusion

This study highlights the significant role that exercise goal orientation plays in predicting perceived physical literacy among fitness center members. The findings emphasize the need for fitness programs to adopt a holistic approach that prioritizes personal growth and competence, which aligns with the principles of physical literacy. By addressing the unique needs of different demographic groups, such as sex and age, fitness centers can create inclusive environments that foster lifelong physical activity. The insights gained from this research contribute to a deeper understanding of the factors that influence physical literacy, paving the way for more effective interventions that promote health and well-being in diverse populations. Overall, this study underscores the importance of integrating psychological and physiological perspectives to enhance the design and implementation of fitness programs, ultimately supporting individuals in achieving their health and fitness objectives.

## Limitations

Although this study provides valuable insights into the relationship between exercise goal orientation and perceived physical literacy, several limitations must be acknowledged. First, the cross-sectional design limits the ability to establish causality between the variables. Future research could benefit from longitudinal studies that track changes in goal orientation and physical literacy over time, providing a more comprehensive understanding of how these constructs interact. Additionally, the sample was drawn from a specific population of fitness center members in Turkey, which may limit the generalizability of the findings to other cultural or demographic groups. Expanding the research to include more diverse populations could enhance the applicability of the results. Another limitation is the reliance on self-reported measures, which may be subject to social desirability bias or inaccurate self-assessment. Future studies could incorporate objective measures of physical literacy and goal orientation to further validate the findings and provide a more nuanced understanding of these relationships.

Additionally, future research could address these limitations by conducting longitudinal studies to track changes in goal orientation and physical literacy over time, offering a clearer picture of their interactions. Additionally, including more diverse populations beyond fitness center members in Turkey would enhance the generalizability of the findings, ensuring that they can be applied to various cultural and demographic groups.

### Future Research

Future research should aim to address the limitations identified in this study by employing longitudinal designs and expanding the sample diversity to include participants from various cultural backgrounds and age groups. Investigating how goal orientation and perceived physical literacy evolve over time could provide deeper insights into the dynamics of these constructs. Additionally, exploring the role of technology and digital platforms in promoting physical literacy and goal orientation could be a fruitful area of inquiry, especially given the increasing reliance on digital tools for fitness and health management. Research could also examine the impact of specific interventions designed to enhance physical literacy and goal orientation, such as personalized coaching and virtual reality-based training programs. By identifying the most effective strategies for fostering these constructs, future studies can inform the development of innovative approaches to support individuals in achieving fitness and health goals.

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