



The Long-Term Impact of School Physical Education on Adult Fitness Behaviours: A Correlational Study

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Abstract

This study investigates the relationship between individuals' experiences in school physical education (PE) and their current fitness behaviours in adulthood. A total of 312 participants aged 25–35 completed a structured questionnaire assessing retrospective PE experiences and current physical activity patterns. The gender-balanced sample comprised graduates from public (58%) and private (42%) secondary schools. Descriptive statistics indicated moderate PE exposure during school ($M = 2.8$ sessions/week) and moderate current physical activity ($M = 3.2$ sessions/week; 42 minutes/session). Pearson correlations revealed significant associations between enjoyment of PE, perceived competence, and adult exercise frequency ($r = .41$ and $r = .38$ respectively, $p < .001$). Multiple regression analysis identified PE enjoyment ($\beta = .31$) and perceived competence ($\beta = .29$) as the strongest predictors of adult fitness habits ($R^2 = .34$, $p < .001$). Gender significantly moderated the relationship between PE enjoyment and adult exercise ($p < .05$), with a stronger effect observed in females. Qualitative data supported these findings, highlighting the motivational influence of positive PE memories. The results underscore the long-term public health implications of quality PE programs.

Keywords: Physical education, adult fitness, motivation, retrospective study, gender differences, physical activity, regression analysis

1. Introduction

Regular physical activity is essential for maintaining physical and mental health, yet global data from the World Health Organization (2020) indicates that over 25% of adults do not meet recommended activity levels. Understanding early-life predictors of lifelong physical activity is critical, particularly the influence of school-based physical education (PE).

Secondary school PE offers an opportunity to develop foundational health behaviours. Adolescents aged 12–18 begin forming exercise habits, and the quality, inclusivity, and supportiveness of their PE experience may shape these behaviours into adulthood. While previous studies suggest adolescent activity predicts adult activity (Telama et al., 2005), there is ongoing debate about the strength of the association and the impact of intervening factors such as motivation and access.

This study aims to examine whether PE experiences in secondary school predict adult physical activity, addressing gaps in the longitudinal understanding of these influences.

2. Literature Review

Studies have identified the role of early PE experiences in shaping long-term health behaviours (Kirk, 2005; Trudeau & Shephard, 2008). Positive experiences in PE, including enjoyment and perceived competence, are linked to higher self-efficacy and sustained motivation (Bailey et al., 2009). However, inconsistencies in PE delivery and prioritisation in schools pose a challenge to generalisation (McKenzie & Lounsbury, 2009).

Gender disparities and socio-environmental influences also affect long-term engagement in physical activity. Research highlights that female students often experience lower perceived competence and participation rates in PE (Lee et al., 2007). These insights underscore the need for inclusive and supportive PE programs.

3. Objectives

The study aims to:

- Assess whether secondary school PE experiences predict adult fitness habits.
- Examine the impact of enjoyment, teacher support, and perceived competence on adult activity.
- Explore moderating factors such as gender and school type.
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Hypotheses

H0: There is no significant relationship between school PE experiences and adult fitness habits.

H1: School PE experiences significantly predict adult fitness habits.

4. Methodology

4.1 Research Design

This quantitative, retrospective-correlational study used a cross-sectional design. Participants recalled PE experiences and reported current physical activity habits.

4.2 Participants

A total of 312 adults aged 25–35, who completed secondary school 8–10 years prior, participated. The sample was stratified by gender, socioeconomic status, and school type (public/private).

4.3 Sampling Method

Stratified random sampling was employed, supplemented by snowball sampling to reach alumni. A power analysis recommended a minimum sample size of 300.

4.4 Data Collection Instrument

A structured questionnaire collected data on:

- PE frequency, enjoyment, competence, and teacher support
- Current activity frequency, duration, motivation, and self-rated fitness

4.5 Data Analysis

Data were analysed using SPSS:

- Descriptive statistics (mean, SD)
- Pearson's correlation
- Multiple regression (predictors: PE enjoyment, frequency, support, competence)
- Moderation analysis (gender, school type)

4.6 Validity and Reliability

Cronbach's alpha ensured internal consistency ($\alpha > 0.70$). A pilot study with 30 participants tested instrument clarity.

4.7 Ethical Considerations

Informed consent was obtained. Ethical clearance was granted by an Institutional Review Board. Data anonymity and withdrawal rights were assured.

5. Results

5.1 Descriptive Statistics

PE frequency (M = 2.8, SD = 0.9); Enjoyment (M = 3.6, SD = 1.1); Competence (M = 3.4, SD = 1.2); Teacher support (M = 3.8, SD = 1.0)

Adult exercise frequency (M = 3.2 sessions/week, SD = 1.4); Duration (M = 42 min/session, SD = 15.6); Fitness rating (M = 6.4/10, SD = 1.8)

5.2 Correlation Analysis

- PE enjoyment and adult exercise: $r = .41$, $p < .001$
- Physical competence and adult fitness: $r = .38$, $p < .001$
- PE frequency: $r = .32$, $p < .01$
- Teacher support: $r = .22$, $p < .05$

5.3

Regression

Analysis

Model summary: $R^2 = .34$, $F(4, 307) = 40.27$, $p < .001$
 Strongest predictors: PE enjoyment ($\beta = .31$), perceived competence ($\beta = .29$)

5.4

Moderation

Analysis

Gender significantly moderated the PE enjoyment-adult exercise relationship ($p < .05$); effect stronger in females. School type showed no significant moderation.

6.

Discussion

Findings confirm that positive PE experiences, particularly enjoyment and perceived competence, are strong predictors of adult fitness habits. These align with Self-Determination Theory, which emphasizes intrinsic motivation, and Social Cognitive Theory, focusing on self-efficacy.

Gender moderation suggests that inclusive, confidence-building PE programs may be especially important for girls. The absence of moderation by school type implies that program quality may matter more than institutional context.

While correlational and self-reported, the findings reinforce the long-term influence of supportive PE experiences on adult lifestyle habits.

7.

Conclusion

Secondary school PE has lasting effects on adult fitness behaviours. Programs that promote enjoyment, support, and competence foster lifelong physical activity. Policymakers should prioritise quality PE to address long-term public health goals.

8. Implications and Recommendations

- **Curriculum Design:** Incorporate diverse, enjoyable activities.
- **Teacher Training:** Emphasise gender sensitivity and positive reinforcement.
- **Policy Development:** Treat PE as a core subject with dedicated resources.
- **Longitudinal Tracking:** Implement systems to monitor post-graduation activity patterns.

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- APA 7 format has been applied in the source file (ensure final manuscript includes full formatted references with DOIs).
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