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Children of the digital age and sports: The attitudes of generation Alpha towards physical education classes

Los niños de la era digital y el deporte: Las actitudes de la generación Alfa hacia las clases de educación física

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Absract

In an era where digital engagement dominates children's lives, this study explores how Generation Alpha students perceive physical education and sports classes. The study was conducted using a survey model with 416 middle school students. Data were collected using the "Attitude Scale of Secondary School Students Towards Physical Education Course" as well as a demographic form. Descriptive and inferential statistical analyses were performed, including t-tests, ANOVA, and post-hoc comparisons, to identify significant differences based on demographic variables. Findings revealed that female students exhibited more positive attitudes toward lesson duration and engagement compared to males, while both genders demonstrated relatively neutral attitudes toward teachers. Additionally, interest in physical education declined with age and grade level, particularly among eighth-grade students. Parental education and income levels also showed significant associations with student attitudes, suggesting that socio-economic background influences perception of physical education. Despite generally moderate-to-low interest, students found lesson duration adequate. These findings underscore the importance of redesigning physical education curricula to align with the digital preferences of Generation Alpha. Integrating interactive methods and digital tools may help foster motivation and engagement in physical education classes.

Keywords: generation Alpha, physical education, attitudes

Resumen

En una era en la que el compromiso digital domina la vida de los niños, este estudio explora cómo los estudiantes de la Generación Alfa perciben las clases de educación física y deportes. El estudio se llevó a cabo mediante un modelo de encuesta con 416 estudiantes de enseñanza media. Los datos se recogieron utilizando la «Escala de actitudes de los estudiantes de secundaria hacia el curso de educación física», así como un formulario demográfico. Se realizaron análisis estadísticos descriptivos e inferenciales, incluyendo pruebas t, ANOVA y comparaciones post-hoc, para identificar diferencias significativas basadas en variables demográficas. Los resultados revelaron que las alumnas mostraban actitudes más positivas hacia la duración de las clases y el compromiso en comparación con los alumnos, mientras que ambos sexos mostraban actitudes relativamente neutras hacia los profesores. Además, el interés por la educación física disminuía con la edad y el curso, sobre todo entre los alumnos de octavo. La educación de los padres y los niveles de ingresos también mostraron asociaciones significativas con las actitudes de los estudiantes, lo que sugiere que el entorno socioeconómico influye en la percepción de la educación física. A pesar de que, en general, el interés era de moderado a bajo, los alumnos consideraban que la duración de las clases era adecuada. Estos resultados subrayan la importancia de rediseñar los planes de estudios de educación física para adaptarlos a las preferencias digitales de la Generación Alfa. La integración de métodos interactivos y herramientas digitales puede ayudar a fomentar la motivación y el compromiso en las clases de educación física.

Palabras clave: generación alfa, educación física, actitudes

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Introduction

Today's young people are a generation that was born and grew up with technology and experienced the opportunities offered by the digital world at an early age. This generation, which McCrindle et al. (2021) call the "Alpha generation", consists of individuals born in 2010 and after. This generation grows up directly interacting with technology, and digital devices and online platforms are considered an indispensable element of their daily lives (Tootell et al., 2014; Prensky, 2001; Topscott, 2008; Drugas, 2022; Riedling, 2007; Hutajulu et al., 2024). Bennett et al. (2008) stated that the alpha generation differs from previous generations because they have complex knowledge and skills in information technologies. While actively using digital tools such as social media platforms, mobile devices, and video games, the Alpha Generation is becoming more distanced from the physical world (Bennett et al., 2008; Danilova, 2023; Susanti, 2023). Therefore, traditional learning environments and educational approaches have become unable to meet the needs and expectations of this generation. Physical education and sports classes are also affected by this situation. The interest of today's youth and children in digital games has started to replace physical games and as a result, it has been observed that they are moving away from physical activities (Sirard et al., 2013; Kjellenberg et al., 2021; Sanz-Martin et al., 2022). In this context, it is clear that physical education and sports lessons should aim not only to develop physical skills but also to increase students' motivation and interest. However, innovative teaching approaches are necessary for these lessons to attract the interest of the Alpha generation (Kaplan-Berkley, 2021; La Rosa Feijoó, 2021; Jukic&Skojo; 2021; Suldikova, 2022). Fokides (2018) stated that technological and game-based pedagogical approaches contribute significantly to the primary education process compared to traditional teaching methods. Similarly, Федорчук (2024) stated that the inclusion of game mechanics in educational programs, integration of virtual and augmented reality technologies into the educational process increases the attractiveness of the educational process, improves teamwork and skills in solving educational problems.

Despite the increasing scholarly attention to technology integration in education, a clear gap exists in understanding how Alpha Generation students perceive and engage with physical education. Most existing studies focus on digital competence or general

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educational adaptation but overlook how these technological orientations influence attitudes toward physical education specifically. Therefore, it is critical to investigate these students' perspectives to ensure physical education remains relevant, engaging, and effective for this new generation.

This study aims to examine the attitudes of Alpha Generation students toward physical education and sports lessons, identifying both the challenges and opportunities their digital upbringing presents. By exploring this issue, the research seeks to inform the development of more adaptive, student-centered physical education practices aligned with the expectations and realities of the digital age.

Method

Fraenkel et al. (2006) defined the research model that aims to describe a situation that existed in the past as it exists as a survey model. In this cross-sectional study, the survey model was used since it was aimed to examine the current attitudes of the students. The population of the study consists of students studying at the middle school level in the 2023-2024 academic year. The sample group of 416 middle school students was selected by simple random sampling.

Data Collection Tool

The data of the study were collected using the "Attitude Scale of Secondary School Students Towards Physical Education Course" developed by Kır (2012). The original version of the scale was used in the study. The scale consists of three sub-dimensions. "Interest in the lesson", 'Attitude towards the teacher' and 'Class time' are the sub-dimensions of the scale. The scale, which consists of 20 items in total, was developed in a five-point Likert type and was scored as "1 completely agree, 5 completely disagree". In the evaluation of the scale, the mean scores in the sub-dimensions of "Interest in the lesson" and "Class time" were interpreted as negative when they approached 5, while the mean scores in the sub-dimension of "Attitude towards the teacher" were interpreted as positive when they approached 5. The internal reliability coefficients of the scale for the three sub-dimensions were found to be 0.88, 0.80, and

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0.67, respectively. For this study, the internal reliability coefficients were 0.72, 0.77, and 0.91.

Analysis of Data

The data collected with the Scale of Attitudes of Secondary School Students towards Physical Education Lesson were analyzed with the help of the SPSS 26 program. Shapiro-Wilk normality test was applied to analyze the data. Curan, West, and Finch (1996) and Chou and Bentler (1995) stated that when kurtosis and skewness values are between ±2 and ±7, the data show normal distribution. Accordingly, due to the skewness and kurtosis values obtained, the Independent Sample T-test from parametric tests and One-way ANOVA were applied to the data that met the homogeneity assumption, and the Welch test was applied to the data that did not meet the homogeneity assumption. In cases where there was a significant difference in the analysis results, Tukey-Games Howell, one of the post-hoc tests, was used to determine the cause of the difference. The significance level was accepted as .05 in statistical analysis.

Ethical Approval

For this study, an ethics committee decision dated 27/09/2024 and numbered 321964 was obtained from Dumlupınar University Social and Human Sciences Scientific Research and Publication Ethics Board and was carried out following the principles of the Declaration of Helsinki. Voluntary participation in the study was ensured, voluntary participant consent forms were collected from the students and their parents, and it was stated that the participants' information would be kept confidential and that they could leave the study at any time.

Findings

Within the scope of the aim of the study, the attitudes of the students participating in the research towards physical education and sports courses were evaluated according to gender, age, grade, mother's education level, father's education level, and income level variables and the results of the data analysis were presented.

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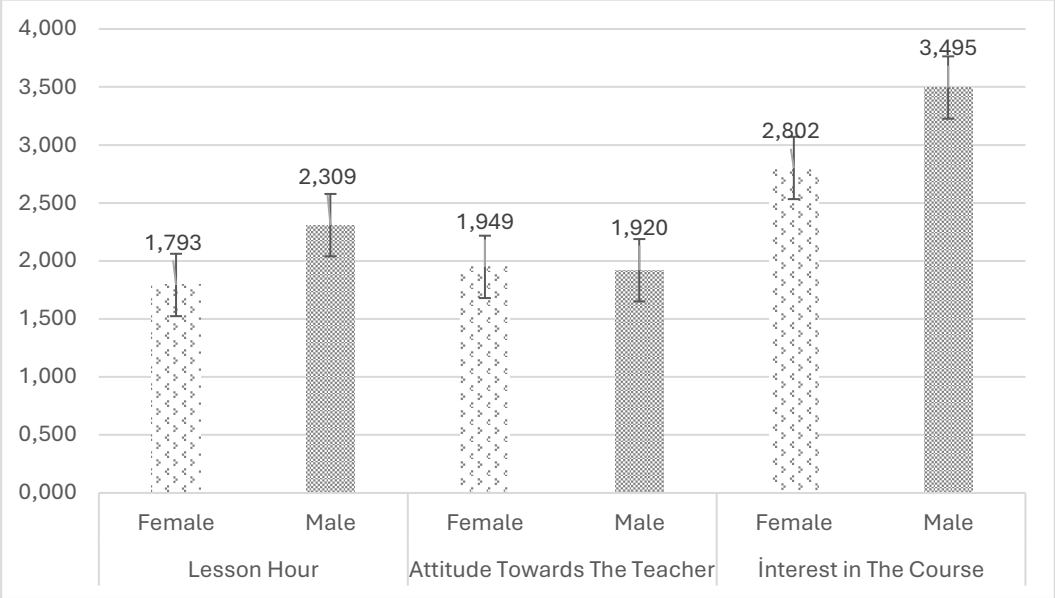

Figure 1. Comparison of attitudes towards physical education and sports courses according to gender variable

According to Figure 1, while there was a statistically significant difference between male and female students in the sub-dimensions of class hours (t (416) = -6.727; p<.05) and interest in the course (t (416) = -7.089; p<.05), there was no statistically significant difference in the sub-dimension of attitude towards the teacher (t (416)= .39; p>.05).

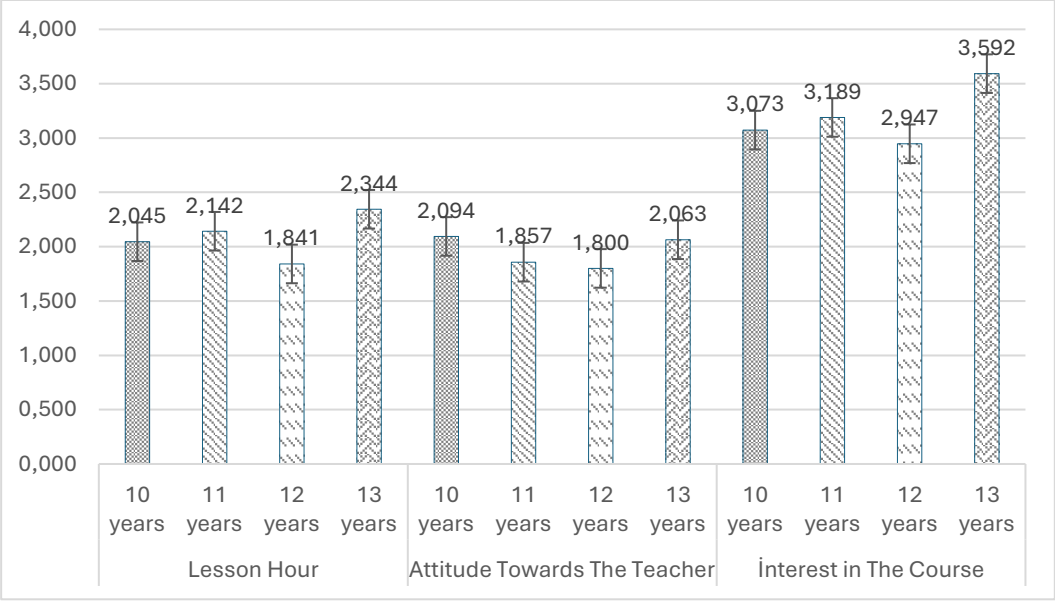

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Figure 2. Comparison of attitudes towards physical education and sports courses according to age variable

According to Figure 2, a statistically significant difference was found between the groups when the course hour sub-dimension values were analyzed depending on the age variable (F(3;215.718)= 6.919; p<.05). According to the second level test, there was a difference between the 12-year-old group and both the 11-year-old group and the 13-year-old group. When the values of the attitude towards teacher sub-dimension were analyzed, a statistically significant difference was observed between the groups (F(3;210.149)= 4.881; p<.05). When the difference between which groups was analyzed, a significant difference was found between the 10 and 12 age groups. When another sub-dimension, the interest factor, was analyzed, a significant difference was found between the groups (F(3;412)= 7.266; p<.05). When the source of the difference is examined, it is seen that there is a difference between the 13 age group and other age groups.

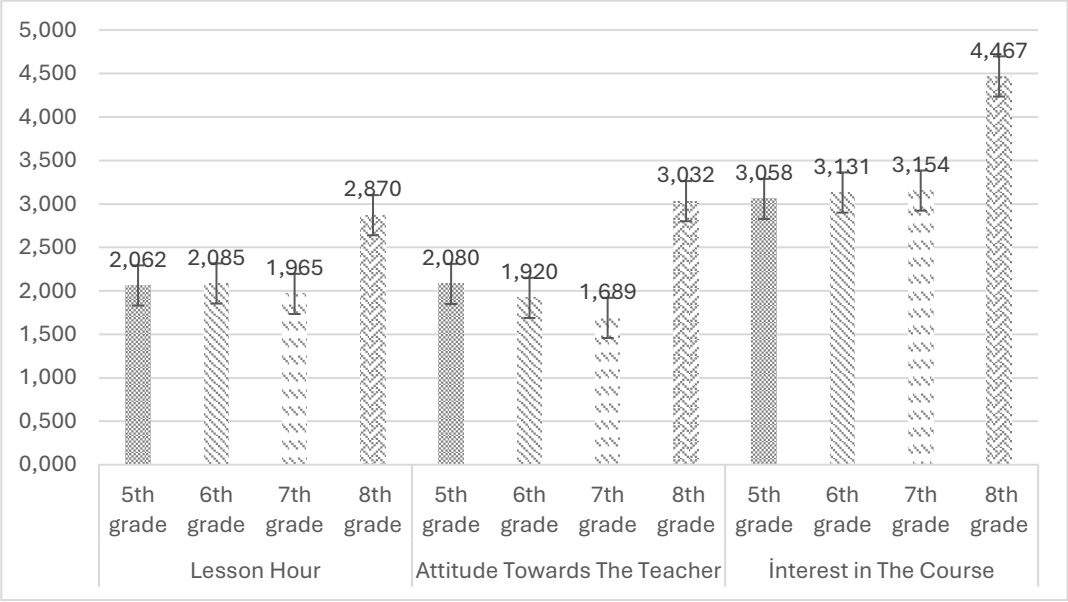

Figure 3. Comparison of attitudes towards physical education and sports courses according to class variable

When Figure 3 is examined, a statistically significant difference was found between the groups regarding the lesson hour sub-dimension (F(3;412)= 6.573 ; p<.05). According to the second level test, there is a significant difference between 8th grade and other grades. When the values of the attitude towards teacher sub-dimension were

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analyzed, a statistically significant difference was observed between the groups (F(3;73.273)= 13.200; p<.05). When it is examined between which groups the difference is between, it is seen that there is a difference between 5th grade, 7th grade, and 8th grade. There is also a significant difference between 6th grade 7th grade and 8th grade. In addition, a significant difference was also found between Grade 7 and Grade 8. When another sub-dimension, the interest in the lesson sub-dimension, was analyzed, it was found that there was a significant difference between the groups (F(3;150.02)= 99.186; p<.05). When the source of this difference was analyzed, it was found that there was a significant difference between 8th grade and other grades.

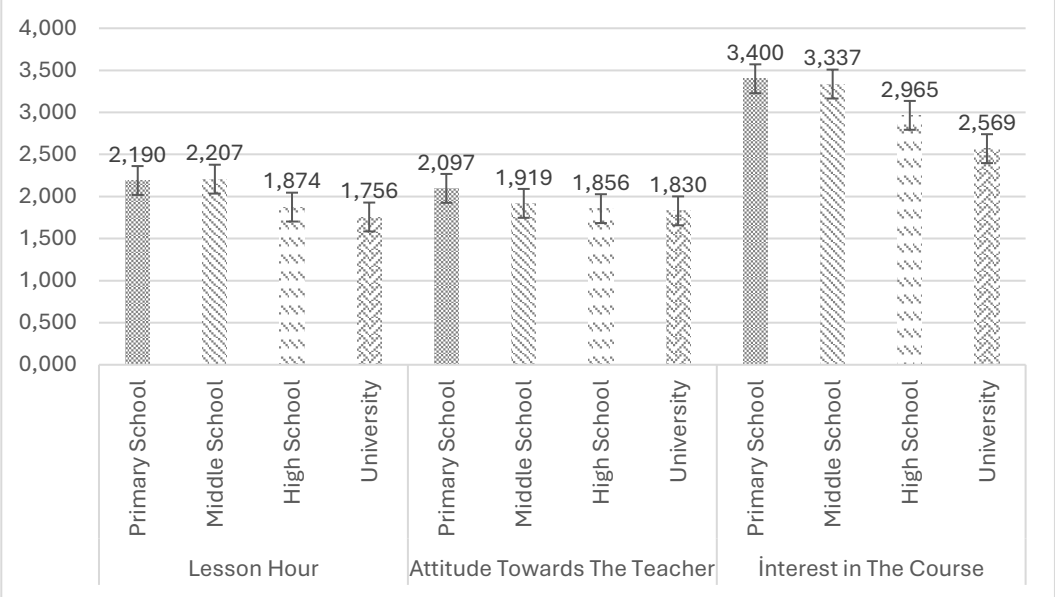

Figure 4. Comparison of attitudes towards physical education and sports course according to mother's education level

When Figure 4 is examined, a statistically significant difference was found between the groups regarding the lesson hour sub-dimension (F(3;174.896)= 6.640; p<.05). According to the second level test, there is a significant difference between the primary school group and the high school and university group. Likewise, there was a significant difference between middle school high school, and university groups. On the other hand, there was no statistically significant difference between the groups in the attitude towards the teacher sub-dimension (F(3;395)= 2.645; p>.05). In the sub-dimension of interest in the lesson, a statistically significant difference was found between

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the groups (F(3;395)= 10.494; p<.05). When the difference between which groups was examined, it was seen that there was a difference between primary school and high school and university. In addition, a significant difference was found between secondary school high school, and university.

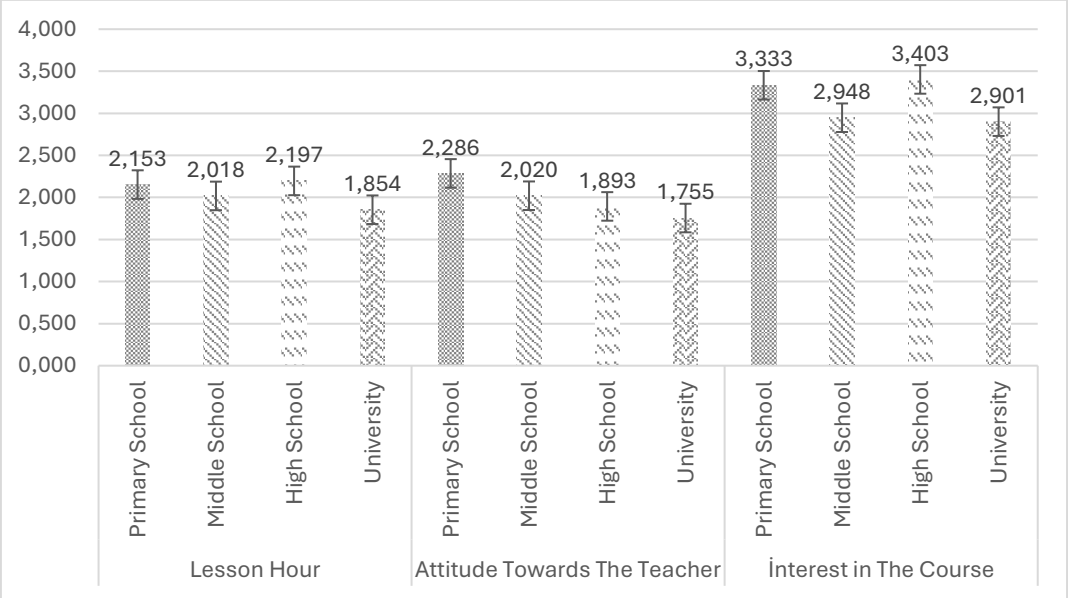

Figure 5. Comparison of attitudes towards physical education and sports course according to father's education level

When Figure 5 is examined, a statistically significant difference was found between the groups regarding the lesson hour sub-dimension (F(3;412)= 3.934; p<.05). According to the second level test, there is a significant difference between high school and university groups. In another sub-dimension, attitude towards the teacher, a statistically significant difference was found between the groups (F(3;157.477)= 6.759; p<.05). According to the second level test, this difference is between primary school and high school and university. In the sub-dimension of interest in the course, a statistically significant difference was found between the groups (F(3;155.035)= 6.809; p<.05). When the difference between which groups is analyzed, it is seen that there is a difference between the high school, secondary school, and university.

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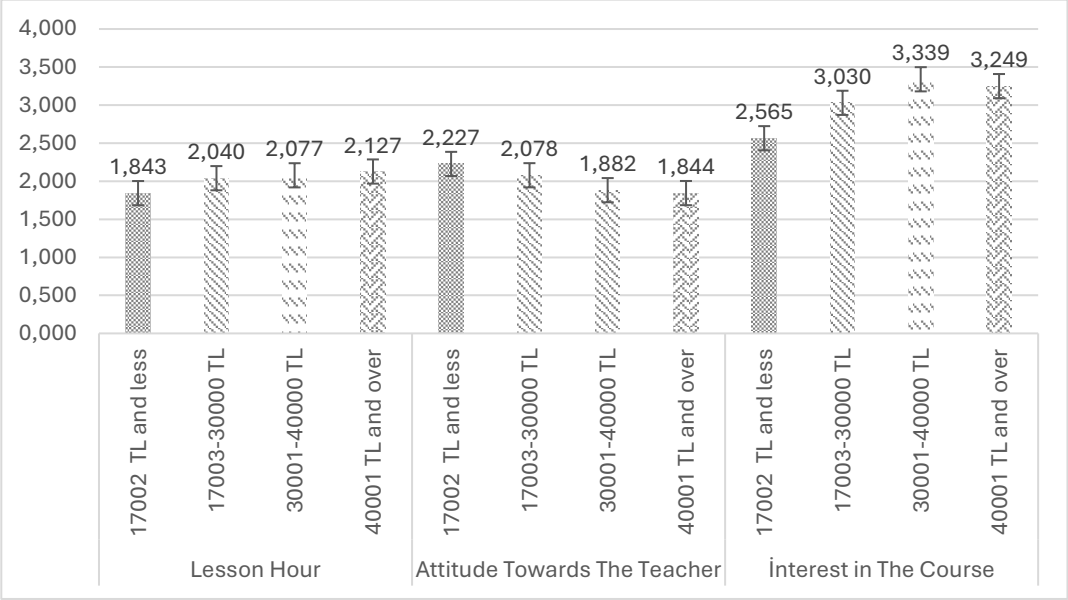

Table 6. Comparison of attitudes towards physical education and sports course according to income level variable

When Figure 6 is examined, no statistically significant difference was found between the groups in the sub-dimension of lesson hours according to the income level variable ($F(3;131.486)= 1.248$; $p>.05$). On the other hand, a statistically significant difference was found between the groups in the attitude towards the teacher sub-dimension ($F(3;412)= 3.968$; $p<.05$). According to the second level test, there is a significant difference between 170002 TL and below and 400001 and above ($F(3;134.476)= 7.793$; $p<.05$). A statistically significant difference was found between the groups in the sub-dimension of interest in the course. When the second level tests were analyzed, it was determined that there was a difference between 170002 TL and below, 30001-40000 TL, and 40001 and above.

Discussion

This study examined the attitudes of Generation Alpha students toward physical education and sports lessons in relation to several demographic variables. When analyzed by gender, a statistically significant difference was found in the sub-dimensions of class time and interest in the lesson. Female students demonstrated more positive attitudes than male students, which is consistent with previous findings involving Generations Y and Z (Kır, 2012; Altay & Özdemir, 2006; Koçak & Hürmeriç, 2006; Güllü et al., 2016).

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However, contrary results also exist in the literature, indicating that male students can sometimes exhibit more favorable attitudes (Kangangil et al., 2006; Hazar et al., 2021; Ekici et al., 2011; Arabacı, 2009). Despite these variations, both genders displayed similarly negative attitudes toward teachers, suggesting a possible disconnect in student-teacher interaction during physical education classes.

Moreover, students of both genders reported moderate-to-low interest in physical education and sports lessons. This points to a broader concern regarding motivation and engagement, potentially influenced by external factors such as increased screen time and sedentary lifestyles. The decline in student enthusiasm appears to intensify with age and grade level. Specifically, eighth-grade students (approximately 13 years old) showed the most negative attitudes toward lesson time and interest, consistent with literature indicating a drop in physical activity engagement during adolescence (Sirard et al., 2013; Biddle & Mutrie, 2001; Subramaniam & Silverman, 2007; Lago-Ballesteros et al., 2018).

When parental education level was considered, students whose parents had higher levels of education reported more positive attitudes toward lesson time and interest. However, paradoxically, their attitudes toward physical education teachers were more negative. This may be attributed to elevated expectations or differing educational values (Ruedl et al., 2021; Muñoz-Galiano et al., 2020). Similarly, higher family income was associated with improved attitudes toward teachers and lesson time, but a decreased interest in the subject matter. These findings are consistent with prior research suggesting that higher socioeconomic status may afford students more access to structured physical activity outside of school, which could lessen the perceived value of school-based physical education (Kızılkaya, 2009; Yıldız, 2015; Sivrikaya & Kılçık, 2017; Kotan et al., 2009).

Overall, these findings emphasize the complexity of student attitudes toward physical education, influenced by intersecting variables of gender, age, and socioeconomic context. A more nuanced understanding of these factors is essential for developing inclusive and motivating physical education programs.

Conclusion

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In summary, the study highlights that Generation Alpha's attitudes toward physical education and sports lessons are shaped by a variety of demographic and socioeconomic factors. While girls and younger students tend to show more favorable attitudes, older students and those from higher-income or higher-education households demonstrate more neutral or negative perceptions, particularly regarding teachers and lesson content (Ekici et al., 2011; Arabacı, 2009; Hazar et al., 2021).

Despite reporting generally moderate levels of interest, students considered the current physical education lesson duration (two hours per week) to be adequate. This may reflect a low expectation rather than genuine satisfaction, indicating the need for pedagogical strategies that both engage and challenge students. Teachers play a key role in fostering a supportive and stimulating environment, and negative perceptions toward them suggest the importance of improving relational dynamics and instructional methods (Sivrikaya & Kılçık, 2017).

Future curriculum design should focus on integrating digital tools and interactive methods—such as gamification, augmented reality, or mobile-based movement tracking—that resonate with the digital orientation of Generation Alpha (Kotan et al., 2009; Kızılkaya, 2009). Additionally, involving families and offering professional development for teachers could strengthen student engagement and motivation.

Further research could benefit from qualitative or mixed-methods designs to explore students' lived experiences and contextual influences in more depth. Comparative studies across different regions or cultures would also help generalize findings and identify best practices for the evolving needs of digital-native students.

Recommendations

Considering the results of the study, physical education lessons should include innovative approaches that can attract students' interest in this generation growing up in the digital world. In addition, lessons can be made more interactive by using digital games and mobile applications in physical education and sports lessons. In-service training seminars can be organized for physical education and sports teachers on innovative teaching approaches and effective use of digital tools. In addition, the role of families in

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encouraging physical activity should be increased. Awareness-raising activities can be conducted especially for parents with lower education levels. For future research, conducting studies in which the qualitative dimension is active can provide a clearer understanding of the views of the alpha generation.

Limitations

It should also be taken into consideration that these results, which are based entirely on the evaluations of the individuals within the scope of the research, may also vary consistently with personal characteristics, regions, and conditions. Since the data of the study was obtained through a scale, it should be taken into account that it may not fully reflect the students' thoughts and experiences on the subject. In addition, the study group consists of students studying in Turkey's education curriculum. It should be kept in mind that the attitudes of students studying in the education curricula of different countries towards physical education lessons may differ.

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