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Exploring the Relationship Between Digital Usage and Physical Activity Among Senior High School Students

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Abstract
Aim: This study aimed to explore the relationship between digital usage and physical activity engagement among senior high school students in Iligan City National High School. Specifically, it sought to determine the students' levels of digital usage, assess their physical activity engagement, and examine whether a significant relationship exists between these two variables.
Methodology: The study employed a descriptive-correlational design with a quantitative approach. A total of 220 senior high school students participated. The Media and Technology Usage and Attitudes Scale (MTUAS) was used to assess digital behavior, while the Physical Activity Questionnaire for Adolescents (PAQ-A) evaluated physical activity levels. Descriptive statistics such as mean and adjectival ratings were used to analyze behavioral patterns, and Pearson's Product-Moment Correlation was applied to examine the relationship between digital usage and physical activity.
Results: The findings revealed very high levels of digital engagement, particularly in social media, video streaming, and messaging (M = 4.3–4.5). Physical activity engagement was moderate, with notably lower scores after school hours (M = 2.6–2.8). The correlation between digital usage and physical activity was negligible ($r = 0.017$, $p > 0.05$), indicating that the two behaviors are statistically independent.
Conclusion: There is no significant relationship between digital usage and physical activity engagement. Based on these results, context-specific guidelines were developed to support students in cultivating mindful digital habits while sustaining physical movement. These findings contribute to educational practice and community health promotion by guiding school-based behavioral strategies rooted in actual student patterns.
Keywords: digital usage, physical activity, adolescent wellness, correlation

INTRODUCTION

In today's digital era, adolescents are increasingly immersed in online environments that shape their communication, learning, and leisure activities. According to Atske (2024), 95% of U.S. teenagers have access to a smartphone, with nearly half reporting being online "almost constantly," primarily on platforms like YouTube, TikTok, and Instagram. Similarly, the Youth Risk Behavior Surveillance System (YRBSS, 2025) reveals that over 50% of adolescents spend more than four hours daily on screens, excluding school-related tasks. While digital technologies offer educational and social benefits, their overuse is associated with disrupted sleep, anxiety, and diminished time management issues that raise concerns about adolescents' long-term well-being and behavioral balance.

Global trends also highlight a troubling decline in adolescent physical activity. According to the World Health Organization (2024), 81% of adolescents aged 11 to 17 do not meet the recommended 60 minutes of daily moderate-to-vigorous physical activity, with inactivity more prevalent among girls. In the United States, the 2024 Youth Physical Activity Report Card gave a D- grade for youth activity levels, with only 20–28% consistently meeting guidelines (Schoenherr, 2024). Notably, screen time and sedentary lifestyles are closely linked; Robinson et al. (2017) emphasized that adolescents who spend more time on screens tend to engage in less physical movement. These behavioral patterns

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point to urgent and interconnected health risks that may persist into adulthood if left unaddressed by schools, families, and policy makers.

Excessive screen time and social media use are now recognized as significant contributors to reduced physical activity among adolescents. Kolle et al. (2025) found that screen exposure increases with age and is tied to sedentary habits that affect sleep, mental health, and physical well-being. Their review suggests that digital activities are displacing time that could be spent on physical movement or other wellness-related activities. Supporting this, Fomby et al. (2019) analyzed adolescent time diaries and found that digital technology often replaces opportunities for sleep and exercise. Health sources such as News-Medical (2025) also report that excessive screen use leads to increased stress, emotional strain, and disrupted daily routines. These findings underscore the need for digital mindfulness and structured movement, particularly among school-aged youth who are still forming lifelong habits.

Schools serve as strategic platforms for shaping lifelong habits, especially in developing contexts. The World Health Organization (2022) stresses that school-based initiatives are effective in improving adolescent health behaviors. Media Literacy Now (Amanda, 2024) and EVERFI's Digital Wellness Network (2024) advocate embedding digital responsibility into curricula, while integrated programs that link physical education and digital literacy can reduce sedentary patterns and enhance student well-being.

In the Philippine context, digital connectivity is deeply embedded in adolescents' daily routines. Kemp (2025) reported that 90.8 million Filipinos were active social media users in early 2025 equivalent to 78% of the population. This level of connectivity is particularly prevalent among youth, who use digital platforms for both academic and recreational purposes. However, this online engagement has also led to prolonged sedentary behavior. National data reinforce this concern: Cagas et al. (2022) found that only 15.4% of Filipino adolescents meet WHO-recommended activity levels. In response, initiatives like Project B.T.S. 2.0 promote both digital skills and student health through hybrid learning approaches. These efforts support global goals such as SDG 3 (Good Health and Well-being) and the OECD Learning Compass 2030, which call for producing well-rounded, digitally literate, and physically active learners in the 21st century.

Despite growing research on adolescent screen use and physical activity, few studies examine how these behaviors intersect in daily life particularly in the Philippine context. Much of the literature treats these concerns separately: screen time is often linked to mental health or academic decline, while physical activity is studied for its general health outcomes (Campoamor-Olegario et al., 2025). This siloed perspective overlooks how excessive digital use may coexist with, and contribute to, reduced physical activity. Moreover, research is typically drawn from urban or international populations, leaving localized areas like Iligan City underrepresented. Without such region-specific data, school-based interventions and educational policies may lack cultural relevance, inclusivity, or contextual effectiveness.

The rationale for this study arises from the urgent need to understand how digital behaviors influence physical activity patterns among adolescents in school settings. As technology becomes more integrated into daily life, the simultaneous decline in physical movement poses significant risks for adolescent health and cognitive development. Yet, few studies explore this interplay within the Philippine education system, particularly outside of major urban centers. This research seeks to address that gap by investigating digital usage and physical activity among senior high school students in Iligan City. The study aims to generate localized evidence that will inform the design of a school-based set of guidelines. Ultimately, it strives to promote digital mindfulness and active living, contributing to the holistic well-being of Filipino youth through data-informed behavioral support.

Objectives

The primary objective of this research is to examine the influence of teachers' competence in artificial intelligence on their students' academic performance in Science.

The research sought to answer the following research questions:

1. What is the teachers' artificial intelligence (AI) level of competence?
2. What is the level of students' academic performance?
3. Is there a significant relationship between teachers' level of AI competence and level of students' academic performance?
4. What recommendation may be offered based on the results of the study?

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Hypothesis

Given the stated research problems, the following hypotheses were tested at 0.05 level of significance:

H_0: There is no significant relationship between the level of digital usage and the level of physical activity engagement among senior high school students.

H_a: There is a significant relationship between the level of digital usage and the level of physical activity engagement among senior high school students.

Review of Related Literature and Studies

Digital media usage is increasingly prominent among Filipino adolescents. Dominado et al. (2024) reported that senior high school learners frequently use mobile phones for entertainment and social media, with limited engagement in academic or wellness-oriented applications. This unbalanced digital consumption raises concerns about its effects on students' productivity and overall well-being. Parallel to this, physical activity engagement remains low among Filipino youth. Palad et al. (2023) emphasized that although national policies exist to promote adolescent physical activity, school-level implementation remains weak. This supports the need for structured guidelines that can translate these policies into practical routines for students.

International studies provide further insights into the risks of screen-dominant lifestyles. Prakoso et al. (2024) found that higher screen time was significantly linked to reduced physical fitness among Indonesian students. Similarly, Deng et al. (2024) observed that excessive screen time combined with low physical activity was associated with increased psychological symptoms, such as stress and low mood, among university students. Rasmussen et al. (2025) further confirmed that adolescents with high screen exposure and limited movement faced increased risks of suicidality, underlining the urgent need for balanced health behaviors. These findings point to a consistent trend: excessive digital usage and physical inactivity coexist and negatively affect adolescent health. The present study builds on this evidence by proposing behavioral guidelines that treat screen time and physical activity as distinct yet equally important domains offering schools a dual approach to improve student

Theoretical Framework

This study is anchored in Bandura's Social Cognitive Theory (SCT), which emphasizes that behavior is influenced by the dynamic interaction between personal factors, environmental conditions, and behavioral patterns. SCT is particularly relevant in examining adolescent behavior, as it highlights how students develop digital and physical activity habits through self-efficacy, observational learning, and social reinforcement.

In the context of this study, self-efficacy refers to the belief of students in their capacity to control screen time or engage in physical movement, while observational learning refers to how behaviors are shaped by role models in their environment, such as peers, teachers, and family. The theory supports the notion that students' digital usage and physical activity habits are not random but are formed through social influence and personal belief in behavior regulation.

By using this theoretical lens, the study acknowledges that both digital behavior and physical activity are learned, modifiable actions influenced by both internal motivation and external environmental cues. This justifies the importance of understanding behavioral tendencies before proposing structured, student-centered guidelines to improve digital wellness and physical engagement.

Conceptual Framework

This study follows an Independent Variable–Dependent Variable (IV–DV) framework to examine the relationship between students' digital usage and their physical activity engagement. The independent variable (IV) is the level and pattern of digital usage among senior high school students, measured using the Media and Technology Usage and Attitudes Scale (MTUAS). The dependent variable (DV) is the students' physical activity engagement, assessed through the Physical Activity Questionnaire for Adolescents (PAQ-A).

The framework illustrates a directional relationship, wherein students' digital behavior is examined to determine whether it influences or is associated with their physical activity levels. This structure guided the development of the research objectives, the formulation of hypotheses, and the overall design of the study. It provides a focused lens for interpreting findings and generating behavior-specific recommendations.

The relationship between the independent and dependent variables is visually summarized in Figure 1.

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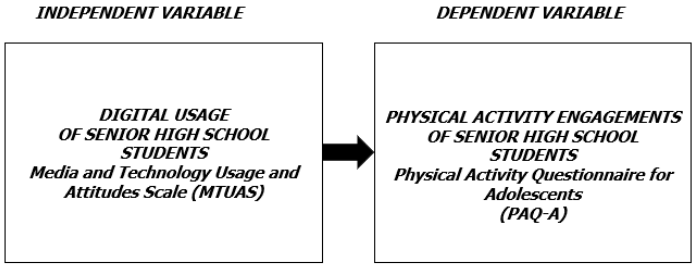
Figure 1. Schema of the Study



This diagram illustrates the hypothesized relationship between the independent variable digital usage of senior high school students and the dependent variable their physical activity engagements. The framework guided the direction of the study in analyzing whether digital usage is associated with levels of physical activity among adolescents.

Methods

Research Design

This study employed a descriptive-correlational research design to examine the relationship between digital usage and physical activity engagement among senior high school students at Iligan City National High School. The descriptive component determined the students' levels of digital engagement and physical activity, while the correlational component evaluated whether a statistically significant relationship exists between the two variables. No variables were manipulated in this study, and the research focused on naturally occurring behaviors.

Population and Sampling

The study involved 220 senior high school students officially enrolled at Iligan City National High School during the academic year 2024–2025. The participants were selected through purposive sampling to ensure representation across academic strands, grade levels, and levels of digital access. Inclusion criteria included: (1) current enrollment in senior high school, (2) belonging to any academic strand, and (3) access to at least one digital device. The total sample was drawn from a student population of 1,174, with a 5% margin of error and 95% confidence level.

Instruments

Two standardized instruments were used:

Media and Technology Usage and Attitudes Scale (MTUAS, 2013) – Developed by Rosen et al., this 40-item questionnaire measures the frequency and patterns of digital technology use, including messaging, social media, browsing, and multitasking behaviors. It was adapted to a 5-point Likert scale and has established internal consistency ($\alpha = 0.76$ to 0.87).

Physical Activity Questionnaire for Adolescents (PAQ-A, 2004) – Developed by Kowalski et al., this tool evaluates general physical activity over the previous week. It includes time segments for school and non-school periods, adapted to a 5-point Likert scale. Reported reliability falls between $\alpha = 0.70$ to 0.83.

Both instruments were pilot-tested and validated for local use.

Data Collection

Data were collected on-site at Iligan City National High School. The researchers first secured approval from the Schools Division Superintendent and the school principal. After obtaining necessary permissions, informed assent was distributed to participants. The survey instruments were administered in person in a classroom setting, and clarifications were provided as needed to ensure accurate completion. The completed responses were retrieved and organized for statistical analysis.

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Treatment of Data

Descriptive statistics (mean and adjectival ratings) were used to summarize the students' digital usage and physical activity levels. The Pearson Product-Moment Correlation Coefficient was applied to determine the strength and significance of the relationship between the two variables. Statistical analysis was conducted by a professional statistician using Microsoft Excel

Ethical Considerations

The study adhered to ethical principles including beneficence, respect for human dignity, and justice. Participation was voluntary, and informed assent was obtained from all students. Participants were assured of their right to withdraw at any time, and anonymity was maintained by omitting names from survey responses. Confidentiality waivers were provided, and all data were handled with discretion. Ethical clearance was granted by the College of Education Ethics Committee at Mindanao State University–Iligan Institute of Technology.

RESULTS and DISCUSSION

This section presents the findings on the digital usage patterns and physical activity engagement of senior high school students, followed by an analysis of the correlation between the two variables. The presentation is organized based on the research objectives.

Level of Digital Usage among Senior High School Students

The table below presents the digital usage patterns of senior high school students based on the Media and Technology Usage and Attitudes Scale (MTUAS). The instrument measured the frequency of engagement with various digital platforms and applications used for communication, entertainment, academic tasks, wellness, and productivity.

Table 1. Level of Digital Usage Among Senior High School Students Based on MTUAS (N = 220)

Media and Technology Usage and Attitudes Scale (MTUAS)	***Mean***	***Adjectival Rating***
Messaging Apps (e.g., Messenger, Viber)	*4.5*	*Very Frequent*
Video Streaming (e.g., YouTube, TikTok)	*4.4*	*Very Frequent*
Social Media (e.g., Facebook, Instagram)	*4.3*	*Very Frequent*
Online Gaming	*3.2*	*Moderate*
Content Creation (e.g., posting, editing)	*3.1*	*Moderate*
Academic Tools (e.g., Google Docs, LMS)	*3.0*	*Moderate*
Productivity Apps	*2.7*	*Occasionally*
Wellness Apps	*2.5*	*Occasionally*
Overall Mean	***3.4***	***Frequent***

	Mean Range	***Level of Digital Usage***
5	*4.20-5.00*	*Very Frequent*
4	*3.40-4.19*	*Frequent*
3	*2.60-3.39*	*Moderate*
2	*1.80-2.59*	*Occasionally*
1	*1.00-1.79*	*Rarely*

As shown in Table 1, the overall digital usage among senior high school students is classified as "Frequent," with a grand mean of 3.4. The most commonly used platforms were messaging apps (M = 4.5), video streaming (M = 4.4), and social media (M = 4.3), all rated as "Very Frequent." This indicates that students primarily engage with technology for communication and entertainment. Meanwhile, lower usage levels were observed in productivity (M =

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2.7) and wellness applications (M = 2.5), which suggests a limited inclination toward digital tools that promote self-management, academic organization, or mental well-being.

This pattern aligns with the findings of Rideout et al. (2022), who reported that adolescents devote a majority of their screen time to entertainment rather than educational purposes. Similarly, Giray et al. (2024) found that high levels of digital engagement among Filipino youth were often associated with digital stress and decreased focus, particularly when technology use lacked intentionality. Tang and Hew (2022) also highlighted that while mobile instant messaging can support engagement, its unregulated use may disrupt focus and reduce cognitive control in learning environments.

These findings emphasize the need to establish digital wellness guidelines in schools. Such guidelines should promote balanced and intentional digital use, encourage academic and wellness-related digital behaviors, and help students self-regulate their screen time in a way that supports both academic performance and mental health.

Physical Activity Engagement of senior high school students

The table below presents the levels of physical activity engagement among senior high school students based on the Physical Activity Questionnaire for Adolescents (PAQ-A). This tool assessed students' self-reported frequency of moderate to vigorous physical activity across school and non-school settings.

Table 2. Level of physical activity engagement of Senior High School students (N = 220)

Physical Activity Engagement Among Senior High School Students (PAQ-A)	***Mean***	***Adjectival Rating***
PE Class Participation	*3.5*	*Active*
After-School Physical Activity	*3.1*	*Moderately Active*
Weekend Physical Activity	*3.0*	*Moderately Active*
General Activity Over the Past 7 Days	*2.9*	*Moderately Active*
Physical Activity at Home	*2.8*	*Moderately Active*
Participation in Sports or Physical Activity Clubs	*2.7*	*Moderately Active*
Activity During School Breaks (e.g., recess, lunch)	*2.3*	*Occasionally Active*
Grand Mean	***2.9***	***Moderately Active***

	Mean Range	***Level of Physical Activity***
5	*4.20-5.00*	*Very Active*
4	*3.40-4.19*	*Active*
3	*2.60-3.39*	*Moderately Active*
2	*1.80-2.59*	*Occasionally Active*
1	*1.00-1.79*	*Inactive*

As shown in Table 2, the overall physical activity level of senior high school students is classified as "Moderately Active," with a grand mean of 2.9. The highest activity level was recorded during physical education (PE) classes (M = 3.5), indicating that students are most physically engaged when movement is structured and mandated within the school curriculum. However, lower engagement was observed in unstructured settings such as during breaks (M = 2.3) and at home (M = 2.8), suggesting that students are less inclined to be active outside of scheduled PE.

These results mirror global trends in adolescent inactivity. According to Guthold et al. (2019), 81% of school-going adolescents aged 11–17 years worldwide are insufficiently physically active, with rates particularly high in Asia. The findings also align with Uddin et al. (2020), who emphasized that regular participation in PE classes significantly increases adolescents' odds of meeting recommended activity levels. However, reliance on school programs alone may not be sufficient to sustain long-term physical engagement.

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The data highlight the need to encourage consistent physical activity beyond PE classes. Schools should consider integrating short movement routines during class transitions or encouraging after-school programs that are enjoyable and accessible. Cultivating active habits outside of structured periods may help address the inactivity trend and promote lifelong wellness behaviors among Filipino adolescents.

Relationship between Digital Usage and Physical Activity Engagement

This section presents the correlation between students' digital usage and their physical activity engagement. The analysis aims to determine whether high levels of screen time are statistically related to low levels of physical activity among senior high school students.

Table 3. Correlation between Digital Usage and Physical Activity Engagement (N = 220)

Variable 1	***Variable 2***	***Correlation Coefficient***	***Interpretation***	***P-value***	***Interpretation***
Digital Usage	Physical Activity Engagement	*0.017*	*Negligible Correlation*	*0.801*	*Not Significant*

As shown in Table 3, the computed correlation coefficient of 0.017 indicates a negligible relationship between digital usage and physical activity engagement. The p-value of 0.801 exceeds the standard significance level of 0.05, suggesting that the correlation is not statistically significant. Thus, the null hypothesis is retained: no significant relationship exists between students' screen time and their level of physical activity.

These findings challenge the displacement hypothesis, which posits that screen time replaces time for physical activity. In this case, the data suggest that digital usage and physical activity may operate independently in students' daily routines. Ji et al. (2024) observed a similar trend in their large-scale survey of Chinese residents, where increased internet use did not necessarily reduce participation in physical activity. Likewise, Nagata et al. (2024) found that while screen time is associated with elevated cardiovascular risk, it does not directly inhibit physical activity engagement when structured routines, such as school-based programs, are in place.

This insight underscores the importance of treating digital usage and physical activity as separate behavioral domains. Instead of assuming that reducing screen time will increase physical activity, schools should implement dual-focused wellness guidelines that promote responsible digital engagement alongside sustained physical movement. Such strategies ensure that both behaviors are addressed without relying on trade-offs.

Guidelines for Students to Balance Digital Usage and Physical Activity

This section presents the guideline objectives based on the results of the Media and Technology Usage and Attitudes Scale (MTUAS) and the Physical Activity Questionnaire for Adolescents (PAQ-A). The findings emphasize the need for structured behavioral strategies that address excessive digital engagement and insufficient physical activity among senior high school students.

Table 4. Guidelines Objectives Based on MTUAS and PAQ-A Findings

Assessment Area	***Key Findings***	***Guideline Objective***
Digital Usage	*Very frequent engagement in messaging, social media, and video streaming (M = 4.3–4.5); low use of academic and wellness apps (M = 2.5–3.0)*	*Promote intentional and balanced digital habits through structured weekly wellness guidelines.*

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Physical Activity	*Low to moderate activity during post-school hours (M = 2.6–2.7), particularly on weekends*	*Increase voluntary physical activity among students beyond PE classes through school-supported aerobic dance sessions.*
Combined Behavior	*No significant correlation (r = 0.017, p > .05) between digital usage and physical activity*	Develop parallel and complementary strategies that treat screen time and movement as distinct yet coexisting behavioral targets.

Table 4 highlights that students are heavily engaged in non-academic digital activities like messaging and streaming, with minimal use of educational or wellness tools. This reflects Burnell et al. (2022), who emphasized that unstructured digital time often correlates with reduced academic focus. In response, the guidelines aim to enhance self-regulation, encourage screen-time monitoring, and promote intentional digital use.

PAQ-A results show that students are mostly active during PE classes, with limited activity beyond school hours. This aligns with Demetriou et al. (2017), who advocated for after-school programs like dance to increase adolescent physical activity. Thus, the guidelines recommend culturally relevant and enjoyable routines, such as aerobic dance, to be included in school wellness efforts.

Given the negligible correlation between digital usage and physical activity, the study proposes parallel but distinct strategies. Anchored in local data and international research, these dual guidelines support schools in fostering balanced digital habits and active lifestyles among students.

Digital Usage Guidelines Based on MTUAS Findings

The following table outlines eight digital usage guidelines crafted in response to MTUAS results, which showed frequent student use of messaging, streaming, and social media, but minimal engagement with educational or wellness technologies. These guidelines aim to address key behavioral concerns by encouraging intentional, productive, and health-oriented digital habits among senior high school students.

Table 5. Eight Digital Usage Guidelines Based on MTUAS Findings

Guideline	***Description***
1. Establish Screen-Time Limits Using Digital Tools	*Use tools like iOS Screen Time and Digital Wellbeing to manage app usage; apply the 20-20-20 rule to reduce screen fatigue.*
2. Practice Mindful Internet Use	*Identify triggers of aimless scrolling and adopt digital mindfulness techniques such as reset pauses and self-checks.*
3. Create Tech-Free Time Zones	*Designate tech-free periods (e.g., meals, bedtime) to promote rest, sleep, and real-life interaction.*
4. Curate Positive and Purposeful Social Media Feeds	*Follow positive, educational content; unfollow distracting or negative pages to build an intentional feed.*
5. Integrate Academic and Productivity Tools into Daily Routines	*Use apps like Google Classroom and Trello; apply Pomodoro technique to improve focus and time management.*
6. Incorporate Wellness Apps for Stress and Mood Regulation	*Use apps like Headspace or Finch for meditation, breathing, and mood tracking to manage digital stress.*
7. Use Self-Tracking Logs for Digital Reflection	*Track daily screen time and reflect on its effects to increase awareness and guide healthier digital use.*
8. Set and Review SMART Goals for Digital Balance	*Set realistic tech-use goals and conduct regular reviews to reinforce sustainable digital habits.*

As shown in Table 5, the Media and Technology Usage and Attitudes Scale (MTUAS) revealed that students frequently engaged with messaging apps, video streaming platforms, and social media, but rarely used digital tools for

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academic productivity or wellness. This imbalance indicates that digital use among students is more habitual than intentional, often lacking structure or health-oriented purpose.

To address this concern, eight digital usage guidelines were formulated. These include setting screen-time limits using built-in digital tools, creating tech-free time zones, practicing mindful internet use, curating purposeful content, and using apps that support academic focus and emotional regulation. The guidelines also encourage self-tracking and goal setting to foster responsible and reflective screen habits.

These recommendations are supported by Maftei and Merlici (2023), who emphasized the value of structured digital boundaries and monitoring. Taba et al. (2022) found that digital health literacy and self-efficacy were key predictors of healthy screen use among adolescents. Similarly, Firth et al. (2025) advocated for school and family-based strategies such as behavior-tracking apps and digital routines that enhance attention, sleep, and academic performance.

These findings suggest that when schools implement clear digital wellness guidelines, students are more likely to develop balanced screen habits that promote both well-being and learning.

Physical Activity Guidelines Based on PAQ-A Findings

This final section of the chapter presents physical activity guidelines developed from PAQ-A results, which showed low to moderate activity, particularly after school and on weekends. Using the FITT principle (Frequency, Intensity, Time, Type), the guidelines offer a practical framework to help students boost physical movement, minimize sedentary screen time, and enhance overall wellness.

Table 6. Physical Activity Guidelines Based on PAQ-A Findings

FITT Component	***Guideline for Senior High School Students***
Frequency	*Engage in dance-based aerobic activities at least 2 times per week in school (MAPEH or homeroom), and repeat routines at home 3–5 times weekly to meet the WHO recommendation of 60 minutes daily activity*
Intensity	*Maintain moderate to vigorous levels. Movements should elevate heart rate, induce light sweating, and be enjoyable.*
Time (Duration)	*Each session should last 10–15 minutes. Students can combine sessions to reach a total of 60 minutes daily.*
Type	*Full-body aerobic dance routines using culturally engaging music (e.g., Afrobeat, Dancehall), including warm-up, main dance, and cool-down.*
Timing of Exercise	*Recommended after classes or during school breaks when students are less academically burdened.*
Environment	*Suitable for classrooms, covered courts, or home settings. Requires minimal space and no special equipment.*
Sample Routine Structure	*Warm-up (3 mins), main dance (7–10 mins), and cool-down (2 mins) incorporating guided breathing and flexibility.*
Reminders	*Wear comfortable clothes and safe footwear. Stay hydrated. Exercise solo or with peers to boost consistency and motivation.*

As shown in Table 6, the Physical Activity Questionnaire for Adolescents (PAQ-A) revealed that students engaged in only low to moderate physical activity levels, especially during post-school hours and weekends. This pattern highlights a lack of structured and voluntary movement outside of PE classes, suggesting the need for a more accessible and engaging physical activity framework within the school context.

To address this, a guideline based on the FITT principle—Frequency, Intensity, Time, and Type—was developed. It recommends performing aerobic dance routines two to five times per week, maintaining moderate to vigorous intensity, and gradually building up to 60 minutes of daily activity. These routines include warm-up, choreographed movement, and cool-down, and are designed to be done in flexible settings such as classrooms, covered courts, or at home.

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This approach is supported by Demetriou et al. (2017), who noted that school-based programs can effectively increase adolescent physical activity and health. Marttinen and Fredrick (2017) emphasized the importance of routine, culturally relevant movement in after-school settings, while Babey et al. (2014) found that low-cost school initiatives yield measurable benefits in youth physical activity.

By embedding physical activity into regular school schedules and encouraging optional home participation, these guidelines offer a sustainable solution for addressing inactivity among adolescents.

Conclusions

This study concludes that senior high school students demonstrated very high levels of digital usage, particularly in messaging, video streaming, and social media platforms. In contrast, their physical activity engagement was only moderate, especially during unstructured periods such as after school and weekends. Notably, the Pearson correlation analysis revealed a negligible and statistically non-significant relationship ($r = 0.017$, $p = 0.801$) between digital usage and physical activity engagement, indicating that these behaviors function independently within the students' daily routines. This finding challenges traditional assumptions about an inverse relationship between screen time and physical activity and highlights the need for school guidelines that address each behavior separately. The study contributes to the academic discourse by offering updated, empirical evidence on student behavior in a post-pandemic digital era. It also provides a behavioral foundation for designing educational policies and health-promoting strategies tailored to adolescent lifestyles. These results are especially relevant for schools aiming to foster digital responsibility and physical well-being among learners.

Recommendations

In light of the findings and conclusion, the study recommends the adoption of the evidence-based behavioral guidelines developed through this research to help senior high school students regulate their digital usage and enhance their physical activity engagement. These guidelines should be integrated into homeroom and physical education programs to address students' distinct behavioral patterns. Schools are encouraged to institutionalize these guidelines through structured implementation, supported by teacher-facilitated sessions, digital wellness tools, and student activity logs. The Department of Education (DepEd), together with academic institutions, is urged to support the dissemination and use of the guidelines by incorporating them into wellness initiatives, teacher training, and local education planning. These efforts will promote mindful screen habits and active lifestyles, aligned with national goals on adolescent health and digital responsibility.

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