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DIGITAL STRESS AMONG SENIOR HIGH SCHOOL LEARNERS IN A PRIVATE SCHOOL IN NORTHERN LUZON: BASIS FOR A GUIDANCE INTERVENTION PROGRAM

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Abstract

This descriptive-comparative study examined the level of digital stress among senior high school students at Saint Ferdinand College, Ilagan Campus, during School Year 2025–2026 and used the findings to inform a proposed guidance intervention program. Using a G*Power-derived, stratified random sample of 159 students from the Academic Track (ABM, HUMSS, and STEM strands, Grades 11 and 12), digital stress was measured with the 24-item Digital Stress Scale for Adolescents across five domains: availability stress, approval anxiety, fear of missing out (FoMO), connection overload, and online vigilance. Descriptive statistics showed that respondents generally experienced an average level of digital stress overall (58.5%) and across all five domains, with connection overload (28.9% “high”) and approval anxiety (10.1% “very high”) showing the largest proportions of students at elevated stress levels. Chi-square tests of independence found no statistically significant association between digital stress and sex, grade level, or average daily screen time in any domain (all $p > .05$), indicating that digital stress was broadly distributed across these socio-demographic groups rather than concentrated within them. These findings, anchored on Hall et al.'s (2021) digital stress framework and Lazarus and Folkman's (1984) Transactional Model of Stress, informed the development of “Digital Balance,” a five-session, school-based guidance intervention program designed to build students' awareness of digital stress, self-regulation skills, and healthy digital habits. The results support a preventive, universal (rather than targeted) approach to digital well-being programming in senior high school guidance and counseling services.

Keywords: *digital stress, senior high school students, availability stress, approval anxiety, fear of missing out, connection overload, online vigilance, guidance intervention program, Philippines*

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Introduction

Background of the Study

Digital technologies and social media have become deeply embedded in the daily lives of adolescents, particularly among senior high school students who rely on online platforms for academic activities, communication, entertainment, and self-expression. While these technologies provide significant benefits in terms of access to information and social connection, their pervasive use has also introduced new forms of psychological strain. The constant demand to stay connected, respond to messages, and remain socially visible online has contributed to growing concerns about digital stress among students (Angelini et al., 2025).

Digital stress refers to the psychological tension and emotional strain arising from sustained engagement with digital technologies. It encompasses experiences such as information overload, constant notifications, social comparison, and perceived pressure to be continually available and responsive in online environments (Nick et al., 2022). Adolescents are particularly susceptible to digital stress due to developmental factors, including heightened sensitivity to peer evaluation, increased reliance on social validation, and a strong need for belonging during this stage of life (Grunewald et al., 2022).

Recent literature suggests that digital stress is not a single, uniform experience but rather a multifaceted phenomenon composed of several interrelated dimensions. Studies on technology use and psychological well-being have identified recurring patterns of stress related to constant availability, the need for online approval, fear of missing out, excessive social connections, and persistent attentiveness to digital cues (Hall et al., 2021; Khetawat & Steele, 2023). These dimensions reflect how digital environments place continuous cognitive and emotional demands on users, particularly adolescents.

Availability stress arises from the expectation of being constantly reachable through digital communication, often blurring boundaries between academic, social, and personal life. Approval anxiety emerges from the emphasis on online feedback such as likes, comments, and reactions, which can intensify social comparison and self-evaluative concerns. Fear of missing out reflects apprehension that others are experiencing rewarding events without one's participation, leading to compulsive monitoring of social media platforms. Connection overload refers to the overwhelming number of digital interactions and social demands across multiple platforms that may exceed an individual's capacity to cope effectively. Online vigilance involves a sustained cognitive focus on digital spaces, characterized by frequent checking and anticipation of notifications even during offline activities. Together, these domains represent commonly recognized components of digital stress as discussed in contemporary research, including the framework articulated by Hall et al. (2021).

Empirical evidence consistently links high levels of digital stress with negative mental health outcomes among adolescents, including increased anxiety, depressive symptoms, emotional exhaustion, and reduced psychological well-being (Nick et al., 2022). With adolescents spending extended periods engaged in digital activities, often exceeding several hours of non-academic screen time daily, exposure to these stress-related demands has become increasingly prevalent (CDC, 2023). Senior high school students may be especially vulnerable as they navigate academic pressures alongside intensive online social engagement during a critical developmental period.

In the Philippine context, digital technologies have become central to students' academic and social experiences, particularly with the expansion of online and blended learning modalities. Filipino senior high school students frequently encounter continuous digital engagement, academic demands, and heightened social comparison within online environments, which may intensify experiences of digital stress (Cruz et al., 2021; Gómez et al., 2022). Despite the increasing relevance of digital stress in adolescents' lives, local empirical studies that examine these interconnected dimensions of digital stress remain limited.

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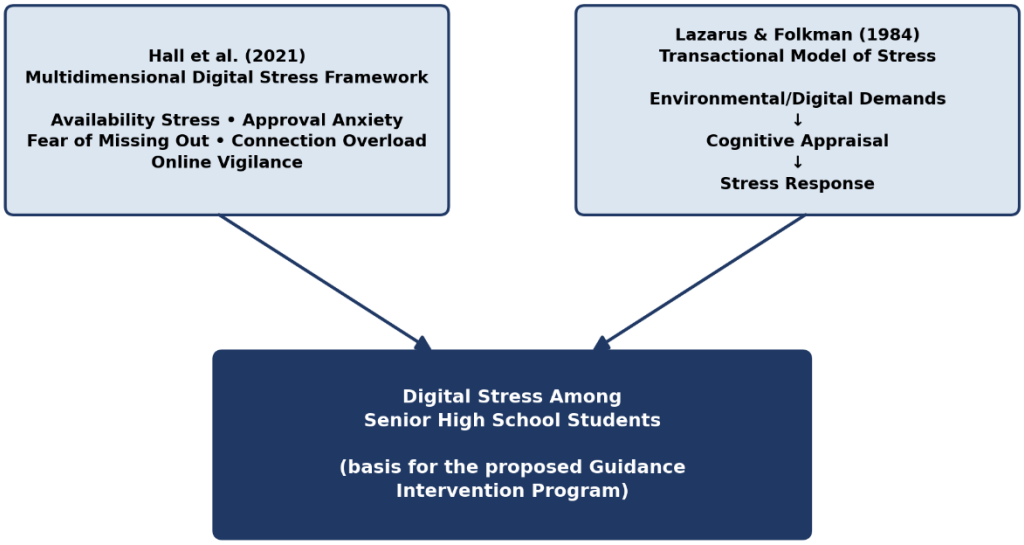
Given these conditions, there is a need to further examine digital stress among Filipino senior high school students by considering the various domains through which it is commonly experienced. Exploring availability-related stress, approval-related anxiety, fear of missing out, connection overload, and online vigilance as components of digital stress may provide valuable insights for educators, school counselors, and guidance professionals to better understand students' digital experiences and support their psychological well-being.

Theoretical Background and Framework

This study is primarily anchored on the concept of digital stress as articulated by Hall et al. (2021). Hall and colleagues describe digital stress as a form of psychological strain that arises from sustained engagement with digital technologies, particularly in environments characterized by constant connectivity, online social expectations, and continuous information flow. Digital stress is viewed as a multidimensional experience shaped by ongoing digital demands that require individuals to remain attentive, responsive, and socially present in online spaces. This perspective provides a contemporary framework for understanding how stress manifests in digitally mediated contexts, especially among adolescents who are highly immersed in technology use.

Figure 1. Theoretical Framework Illustration



The independent variables of the study include sex, grade level, and average screen time per day, while the dependent variable is digital stress, measured across five domains (availability stress, approval anxiety, fear of missing out, connection overload, and online vigilance). These variables illustrate how socio-demographic factors may influence students' level of digital stress.

To further support this perspective, the study is informed by Lazarus and Folkman's (1984) Transactional Model of Stress, which explains stress as a product of the interaction between an individual and their environment. According to this model, stress occurs when individuals perceive environmental demands as exceeding their available resources. Applied to the present study, digital environments such as social media platforms, online academic systems, and constant digital communication may be appraised by senior high school students as overwhelming or demanding, thereby leading to experiences of digital stress. The model emphasizes the importance of individual perception in the stress process, which is particularly relevant in understanding how students experience stress in response to digital demands.

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Within the context of senior high school students, digital stress may emerge from continuous exposure to online academic requirements, social media engagement, virtual communication, and the pressure to remain constantly connected. These digital demands may contribute to feelings of mental fatigue, emotional strain, social pressure, and difficulty disengaging from digital platforms. As adolescents are in a developmental stage marked by heightened sensitivity to social evaluation and increased reliance on digital interaction, they may be especially vulnerable to the stress associated with digital environments.

By integrating the digital stress framework of Hall et al. (2021) with the stress appraisal principles of Lazarus and Folkman (1984), this study establishes a theoretical basis for examining digital stress among senior high school students. Together, these theories support the view that digital stress is a meaningful and distinct form of stress arising from the interaction between adolescents and their digitally saturated environments.

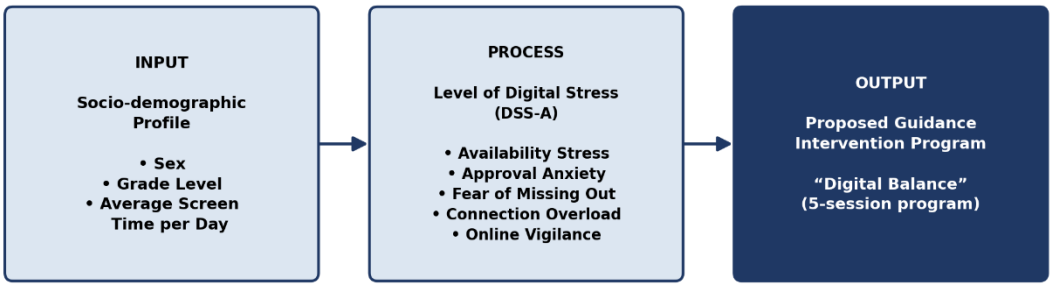
Conceptual Framework

This study is anchored on the concept that digital stress among senior high school students is influenced by selected socio-demographic factors and manifests through specific dimensions of digital stress, which can serve as a basis for the development of a guidance intervention program.

The independent variables of the study consist of the students' socio-demographic profile, specifically sex, grade level, and average daily screen time. These variables represent personal and contextual factors that may influence how students experience stress in digital environments. The dependent variable is digital stress among senior high school students, examined both as an overall construct and through its five specific dimensions: availability stress, approval anxiety, fear of missing out, connection overload, and online vigilance.

The study assumes that differences in students' socio-demographic characteristics may be associated with variations in their level of digital stress. The output of the study is a proposed guidance intervention program, grounded on the identified level of digital stress and any significant differences observed across socio-demographic groups, aimed at addressing digital stress-related concerns and supporting students' psychological well-being within the school setting.

Figure 2. Conceptual Paradigm of the Study



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Review of Related Literature

The rapid expansion of digital technology and social media has fundamentally transformed the daily experiences of adolescents, particularly senior high school students. While digital platforms facilitate academic engagement, social interaction, and personal expression, they also introduce unique stressors that can negatively affect mental health and well-being. This phenomenon, commonly referred to as digital stress, involves psychological strain arising from constant connectivity, social media pressures, information overload, and the need to maintain a curated online presence (Hall et al., 2021).

Understanding digital stress in adolescents is essential, especially in the Philippine context, where online learning and social media use have become integral to both academic and personal life. This section reviews international and local studies on digital stress, particularly regarding demographic factors such as sex, grade level, and average daily screen time, and synthesizes the literature on the multidimensional nature of digital stress.

Digital Stress

Over the past few years, the growing digitalization of students' academic and social lives has produced a phenomenon known as digital stress — psychological pressure caused by constant internet connectivity, social media pressure, and information overload. This kind of stress is especially pronounced among adolescents and high school students, whose developmental stage is characterized by heightened sensitivity to peer comments and social comparison. Digital stress is a set of emotions associated with the pressure to respond to messages in a timely manner, fear of missing out (FoMO), and anxiety about online impressions or reception (Nick et al., 2021).

According to a longitudinal study by Nick et al. (2021), digital stress in adolescents was predicted by exposure to various online stressors, including the need to respond promptly or maintain a favorable digital image, and this exposure elevated levels of depressive symptoms and reduced well-being over time. Similarly, De Groote et al. (2022) examined digital stress in friendships among early adolescents and found that digital communication, characterized by continuous messaging and social comparison, created relationship tension and emotional exhaustion.

Among upper-secondary or senior high school students, Qi (2024) found that over-exposure to technology-related academic pressures and social media communication contributed to higher levels of technostress, negatively impacting learners' digital resilience and academic motivation. A study by Siakas et al. (2024) among Finnish adolescents likewise found high rates of digital stress among both students and their parents, mainly attributable to unlimited digital access and difficulty defining boundaries around technology use. Angelini et al. (2025) investigated digital stress and friendship conflict in adolescents, demonstrating that online communication tends to increase relational stress, particularly when students feel compelled to remain online or resolve misunderstandings digitally.

To gain a clearer understanding of the components of digital stress, Hall, Steele, Christofferson, and Mihailova (2021) developed the Digital Stress Scale (DSS), a 24-item self-report questionnaire designed for administration to adolescents and young adults. The DSS distinguishes five related but distinct areas of digital stress: availability stress, approval anxiety, fear of missing out (FoMO), connection overload, and online vigilance. Availability stress is the pressure of being continuously available or responsive in digital space; research indicates that students in an apparently constant state of availability online are more likely to report elevated emotional exhaustion and lower academic engagement, as they are continually interrupted and get less rest (Angelini et al., 2025; Hall et al., 2021). Approval anxiety relates to the need for social validation or fear of how others will react to online posts, and has been associated with low self-esteem, body-image concerns, and increased vulnerability to depressive symptoms among adolescents who rely on online responses to assess their self-worth (Nick et al., 2021; Hall et al., 2021).

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Fear of missing out (FOMO) is the anxiety associated with not being part of an online social interaction or event; research has continuously shown that high-FOMO adolescents report more negative affect, poorer sleep, and reduced academic concentration (Siakas et al., 2024; Qi, 2024). Connection overload is the experience of being bombarded by messages, notifications, and digital tasks requiring attention, which can lead to cognitive fatigue and stress (De Groote et al., 2022; Hall et al., 2021). Online vigilance summarizes the habit of repeatedly checking one's phone or social media and the feeling of unease when offline, and is associated with distraction during classes, inability to focus, and poorer well-being (Hall et al., 2021).

The World Health Organization (2024) stated that although digital technologies can facilitate learning and connection, negative or excessive use of digital technology among teenagers is associated with increased anxiety, emotional difficulties, and disturbed sleep. The report noted that it is not the quantity of screen time but the quality of digital interactions and their emotional context that predetermines students' psychological outcomes.

Research has also shown that digital stress affects adolescents differently based on sex. Studies consistently demonstrate that female adolescents report higher emotional vulnerability to digital stress than males. In a large-scale study of 17,092 adolescents, excessive smartphone use was significantly associated with anxiety symptoms and frequent low mood, with females exhibiting stronger emotional effects than males (Piccardi et al., 2023); sleep reduction due to nighttime device use was also more strongly linked to emotional distress among girls, suggesting greater sensitivity to the psychological effects of digital overload.

On the whole, these findings indicate that digital stress among adolescents and high school students is complex and multidimensional, encompassing emotional, social, and cognitive stressors across the five domains of the Digital Stress Scale. Digital stress has a considerable impact on students' mental state, relationships, and school performance, underscoring the importance of school-based guidance and counseling interventions that help pinpoint specific sources of digital stress — such as approval anxiety or connection overload — and foster healthy digital behaviors and coping strategies.

Digital Stress Based on Sex in Senior High School Students

Research examining digital stress and related outcomes consistently finds that sex differences influence how adolescents experience technology-related stress, though patterns vary by study and specific outcome measure. Elhai et al. (2016) found that female adolescents generally reported higher levels of anxiety and depression connected to problematic smartphone use, a possible precursor to digital stress experiences. Similarly, Twenge and Martin (2020) observed that female adolescents experienced higher levels of internalizing symptoms associated with digital media engagement, suggesting that social evaluation and peer comparison may have a particularly strong impact on females in digital contexts.

Van der Schuur et al. (2020) reported minimal overall sex differences in digital stress but noted that the nature of stress experiences differed: females were more affected by interpersonal concerns and approval pressures online, while males showed higher stress related to privacy and performance. These findings suggest that while overall digital stress may be similar across sexes, different components of digital stress may be more salient for each sex.

More recent work by Shensa et al. (2017) similarly indicated that female adolescents had higher odds of experiencing depressive symptoms and social anxiety with increased social media use compared to males — outcomes that intersect with key dimensions of digital stress, such as approval anxiety and fear of missing out. These differential patterns underline the importance of examining sex as a demographic factor in digital stress studies.

Although Philippine research on digital stress specifically by sex is limited, studies on related phenomena indicate notable sex disparities in digital behaviors. For example, research on smartphone addiction among Filipino youth demonstrated that females exhibited more compulsive behaviors and emotional responses to digital engagement

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than males, which may indirectly contribute to higher digital stress for female adolescents (Labrague, 2014). Further local research is needed to directly examine digital stress by sex to confirm these patterns.

Digital Stress Based on Grade Level

Although few studies explicitly compare digital stress across grade levels within senior high school, developmental and educational research provides evidence that older adolescents experience distinct digital stress patterns. Reinecke et al. (2018) found that older adolescents and young adults exhibited heightened online vigilance and perceived communication overload compared to younger users, reflecting increased cognitive engagement with digital communication demands — outcomes that align with signs of digital stress, particularly among students approaching graduation or facing higher academic expectations.

Thomée et al. (2011) showed that greater mobile phone use, a proxy for digital engagement, was associated with increased perceived stress and sleep disturbances among older adolescents. This suggests that digital stress may intensify as students take on heavier academic workloads and social responsibilities, a pattern particularly relevant for Grade 12 students preparing for the transition to higher education or employment.

In the Philippine educational landscape, senior high school spans Grades 11 and 12 — a period characterized by heightened academic pressure and social expectations. Local studies on online learning stress that senior high school students frequently report emotional tension and fatigue related to constant use of technology for school requirements (Cleofas & Rocha, 2021). While these studies do not segment data by grade level, they provide context for understanding how prolonged academic demands intersect with digital engagement to elevate stress. The limited local evidence underscores the need for research that directly investigates digital stress across different senior high school grade levels.

Digital Stress Based on Average Screen Time Per Day

One of the most consistently replicated correlates of digital stress is screen time duration. International research demonstrates that higher daily screen time is associated with elevated digital stress and related psychological symptoms. In their validation of digital stress dimensions, Hall et al. (2021) found that increased digital engagement, reflected in longer hours of online activity, significantly predicted higher levels of availability stress and online vigilance.

Przybylski et al. (2013) reported that adolescents with greater social media engagement exhibited elevated fear of missing out, which in turn was associated with poorer self-reported well-being. Similarly, Shensa et al. (2017) found that higher screen exposure was linked to greater odds of depressive symptoms, and Sampasa-Kanyinga et al. (2018) reported a dose-response relationship between social media use and shorter sleep duration among adolescents — an outcome closely tied to online vigilance and connection overload.

Digital Stress: International and Local Perspectives

The construct of digital stress has been widely studied internationally, often within the broader context of technology-related stress and psychological functioning among adolescents and young adults. Hall et al. (2021) conceptualized digital stress through five interrelated domains — availability stress, approval anxiety, FOMO, connection overload, and online vigilance — demonstrating that these dimensions collectively contribute to psychological strain. Elhai et al. (2016) reported that fear of missing out and the need for social approval through digital platforms were predictive of problematic smartphone use and associated distress, while Reinecke et al. (2018) found that high communication load and online vigilance significantly predicted perceived stress and reduced well-being in digital contexts. Thomée et al. (2011) found that mobile phone overuse was associated with increased stress and depressive symptoms among young adults. Together, these studies emphasize that digital stress is a heterogeneous phenomenon with important implications for adolescent mental health worldwide.

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In the Philippines, research on digital stress as a distinct construct is emerging but still limited. Studies on related phenomena — such as online learning stress, smartphone addiction, and psychological distress associated with digital engagement — provide indirect evidence of digital stress processes among Filipino youth. Cleofas and Rocha (2021) examined the stress experienced by Filipino students in online learning environments and reported significant emotional strain associated with continuous digital engagement and academic workload. Datu et al. (2021) documented links between screen time and burnout among senior high school students, and Labrague (2014) highlighted that female Filipino adolescents experienced emotional reactivity and compulsive technology use, indicating potential vulnerabilities to digital stress for specific demographic groups. While these local studies do not uniformly measure digital stress across its multidimensional domains, they provide relevant context demonstrating that Filipino students experience psychological strain in relation to digital engagement, echoing patterns found internationally.

Collectively, international and local literature supports the validity of digital stress as a significant variable affecting adolescents' psychological well-being. The incorporation of demographic factors such as sex, grade level, and screen time provides further depth in understanding how digital stress is experienced across different subgroups.

Statement of the Problem

This study aims to examine the level of digital stress among senior high school students and to propose a guidance intervention program based on the findings. Specifically, it seeks to answer the following questions:

1. What is the socio-demographic profile of the participants in terms of (1.1) sex, (1.2) grade level, and (1.3) average screen time per day?
2. What is the level of digital stress of the senior high school students, specifically in terms of (2.1) availability stress, (2.2) approval anxiety, (2.3) fear of missing out, (2.4) connection overload, (2.5) online vigilance, and (2.6) overall level of digital stress?
3. Are there significant differences in the level of digital stress when respondents are grouped according to their socio-demographic profile?
4. What guidance intervention program can be proposed based on the findings of the study?

Research Hypothesis

H_0: There are no significant differences in the level of digital stress when students are grouped according to their profile variables.

Significance of the Study

The results of this study are expected to benefit the following stakeholders:

Respondents. This study can help students become more aware of how their use of digital technologies and online platforms may affect their mental and emotional well-being, and may help them recognize how continuous connectivity and online demands influence their daily functioning, academic performance, and overall well-being.

Parents/Guardians. The results can help parents and guardians gain a deeper understanding of the digital stress experienced by their children, enabling them to provide appropriate guidance, emotional support, and supervision, and to promote healthier digital routines.

Teachers. This study can provide teachers with insights into how digital stress may influence students' focus, motivation, emotional state, and classroom engagement, encouraging the creation of learning environments and academic practices that support students' mental well-being.

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Guidance Counselors/Advocates. The findings may serve as a useful basis for guidance counselors and advocates to identify digital stress-related concerns among students and to develop school-based guidance programs, counseling services, and preventive initiatives.

School Administrators. The results may be valuable to school administrators as they review and enhance existing policies, curricula, and student support services related to digital well-being.

Psychologists. This study may contribute empirical information useful in assessment, research, and the development of mental health programs addressing technology-related stress among adolescents.

Future Researchers. The study can serve as a reference for future researchers who wish to further explore digital stress among adolescents, and may encourage further research in this emerging area.

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METHODS

This section presents the methods and procedures used in conducting the study, including the research design, participants, instruments, data-gathering procedures, data analysis, and ethical considerations.

Research Design

This study utilized a descriptive-comparative research design to examine the level of digital stress among senior high school students of Saint Ferdinand College, Ilagan Campus, and to serve as a basis for proposing a guidance intervention program. The descriptive component described the socio-demographic profile of the participants in terms of sex, grade level, and average daily screen time, as well as their level of digital stress across the five DSS-A domains. The comparative component assessed whether significant differences in digital stress levels existed when students were grouped by their socio-demographic characteristics. The findings served as the foundation for developing a guidance intervention program to promote students' mental health and well-being.

Study Site and Participants

The study was conducted among senior high school students of Saint Ferdinand College, Ilagan Campus, during School Year 2025–2026. Participants included students from different strands under the Academic Track to ensure diversity in responses. The school was selected as the study site because of its accessibility and relevance to the research topic, as students there are active users of digital devices and social media.

Population, Sample Size, and Sampling Method

The study population consisted of senior high school students enrolled at Saint Ferdinand College, Ilagan Campus, during School Year 2025–2026. Respondents belonged to the Academic Track, specifically the Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), and Science, Technology, Engineering, and Mathematics (STEM) strands, across Grade 11 and Grade 12.

Based on official school records, the total senior high school population covered by the study was 447 students, with 215 in Grade 11 and 232 in Grade 12, distributed across the three academic strands. Section assignment was not considered as a basis for sampling, as the study focused on representation by strand and grade level.

A representative sample of 159 respondents was drawn from the population. Sample size was determined using G*Power 3.1 software through an a priori power analysis based on one-way ANOVA (fixed effects, omnibus test), using a medium effect size ($f = 0.25$), a significance level of $\alpha = 0.05$, and statistical power of 0.80, yielding a minimum required sample size of 159.

To ensure adequate representation across academic strands and grade levels, the study employed stratified random sampling with proportionate allocation. The population was first stratified by grade level and then by academic strand, with the number of respondents in each stratum determined in proportion to the actual population distribution. Within each stratum, participants were selected using simple random sampling.

Table 1. Distribution of Population and Sample by Grade Level and Academic Strand

Grade Level	Strand	Population	Sample Size
Grade 11	**ABM**	**32**	**11**
	HUMSS	**69**	**24**

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Grade Level	Strand	Population	Sample Size
	STEM	**114**	**41**
Grade 11 Total		**215**	**75**
Grade 12	**ABM**	**36**	**13**
	HUMSS	**71**	**25**
	STEM	**125**	**45**
Grade 12 Total		**232**	**84**
OVERALL TOTAL		**447**	**159**

Research Instrument

Digital Stress Scale for Adolescents (DSS-A)

The Digital Stress Scale for Adolescents (DSS-A) was used to measure overall digital stress and its five specific domains among participants. Developed by Hall et al. (2021), the DSS-A was designed to assess adolescents' stress experiences associated with digital device use and engagement in online environments. The instrument demonstrated strong psychometric properties, with a reported Cronbach's alpha of .89, indicating high reliability. Research has shown that higher scores on the DSS-A are significantly associated with elevated levels of anxiety, depression, and perceived stress among adolescents (Hegarty et al., 2025). Participants responded to each item using a 5-point Likert-type scale, ranging from 1 (Never) to 5 (Always), and total scores were computed to classify students' digital stress levels as very low, low, average, high, or very high.

Digital Stress Scale (DSS): Interpretation Table per Domain

The Digital Stress Scale assessed five domains of digital stress. Scores were interpreted using percentile-based qualitative descriptors derived from normative data, with higher scores indicating greater digital stress.

Table 2. Availability Stress

Percentile Range	Category	Summary Interpretation
≤10th percentile	**Very Low**	The individual experiences minimal pressure to be constantly accessible online. Digital communication demands rarely cause distress.
>10th to ≤25th percentile	**Low**	The individual generally manages expectations for availability well and experiences limited stress related to responsiveness.
>26th to ≤75th percentile	**Average**	The individual experiences a typical level of stress related to being reachable online, comparable to most peers.

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Percentile Range	Category	Summary Interpretation
>76th to ≤90th percentile	**High**	The individual feels significant pressure to respond quickly and remain available, which may interfere with wellbeing.
>91st percentile	**Very High**	The individual experiences intense distress related to constant availability, potentially contributing to anxiety or burnout.

High availability stress suggests difficulty setting boundaries in digital communication and may coexist with feelings of obligation toward peers or authority figures.

Table 3. Approval Anxiety

Percentile Range	Category	Summary Interpretation
≤10th percentile	**Very Low**	The individual is largely unconcerned with online approval or feedback from others.
>10th to ≤25th percentile	**Low**	Minor concern about online evaluation, with little emotional impact.
>26th to ≤75th percentile	**Average**	A normal level of concern about how others respond to online self-presentation.
>76th to ≤90th percentile	**High**	Significant anxiety about online feedback, which may affect self-esteem and mood.
>91st percentile	**Very High**	Intense fear of negative evaluation online is strongly linked to psychological distress, such as anxiety or depressive symptoms.

Approval anxiety is a social dimension of digital stress and shows strong associations with emotional difficulties, particularly among adolescents.

Table 4. Fear of Missing Out (FoMO)

Percentile Range	Category	Summary Interpretation
≤10th percentile	**Very Low**	The individual rarely worries about missing out on social events or experiences.
>10th to ≤25th percentile	**Low**	Occasional concern about exclusion, but not distressing.
>26th to ≤75th percentile	**Average**	Typical levels of FoMO are consistent with peers.

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Percentile Range	Category	Summary Interpretation
>76th to ≤90th percentile	**High**	Frequent worry about social exclusion, possibly driving excessive social media use.
>91st percentile	**Very High**	Persistent and intense FoMO that may contribute to anxiety, low mood, or compulsive checking behaviors.

FoMO is strongly linked to problematic social media engagement and emotional distress, especially during adolescence.

Table 5. Connection Overload

Percentile Range	Category	Summary Interpretation
≤10th percentile	**Very Low**	Digital communication volume is easily managed and rarely overwhelming.
>10th to ≤25th percentile	**Low**	Occasional feelings of overload, but generally manageable.
>26th to ≤75th percentile	**Average**	Typical experience of managing multiple digital communications.
>76th to ≤90th percentile	**High**	Frequent feelings of being overwhelmed by messages, alerts, and online demands.
>91st percentile	**Very High**	Severe overload that exceeds coping capacity and may impair concentration and daily functioning.

Connection overload reflects technological strain rather than social evaluation and may indicate a need for digital boundary-setting.

Table 6. Online Vigilance

Percentile Range	Category	Summary Interpretation
≤10th percentile	**Very Low**	The individual is comfortable disengaging from digital devices.
>10th to ≤25th percentile	**Low**	Mild attentiveness to digital connectivity without distress.
>26th to ≤75th percentile	**Average**	Typical monitoring of digital devices consistent with peers.

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Percentile Range	Category	Summary Interpretation
>76th to ≤90th percentile	**High**	Strong urge to stay connected, with difficulty disengaging.
>91st percentile	**Very High**	Persistent preoccupation with connectivity that interferes with offline activities and psychological wellbeing.

High online vigilance suggests compulsive digital habits and difficulty tolerating disconnection, which may affect attention and emotional regulation.

Table 7. Overall Level of Digital Stress

Percentile Range	Category	Summary Interpretation
≤10th percentile	**Very Low**	Indicates minimal overall digital stress. The individual experiences very little distress related to digital technology use, notifications, or social media engagement compared to most people.
>10th to ≤25th percentile	**Low**	Indicates less digital stress than most individuals. The person likely has effective digital boundaries and coping strategies for managing online demands.
>26th to ≤75th percentile	**Average**	Indicates a typical, moderate level of digital stress relative to peers.
>76th to ≤90th percentile	**High**	Indicates more digital stress than most individuals. Elevated stress related to technology use may be affecting emotional well-being, concentration, or daily functioning.
>91st percentile	**Very High**	Indicates significantly elevated digital stress. This level suggests a substantial psychological burden related to digital technology use, which may contribute to or exacerbate anxiety, depression, or reduced well-being.

Data Gathering Procedures

In conducting the study, a formal request letter was sent to the school principal to seek permission to administer the research instruments. Upon approval, coordination was made with the class advisers to identify their students' available schedules. Prior to data collection, informed consent was secured from parents or legal guardians, and informed assent was obtained from the student-respondents, as they are minors. These forms were distributed and explained before the administration of the research instruments to ensure that participation was voluntary and that respondents fully understood the study's purpose, procedures, and ethical considerations.

Data gathering was carried out in a single phase. The DSS-A was administered to the stratified random sample of senior high school students, with clear instructions provided prior to administration. The instrument took approximately 20–30 minutes to complete and was administered during students' scheduled classroom time. After

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completion, all questionnaires were collected, checked for completeness, and organized for data encoding and statistical analysis.

Data Analysis

Data collected from the respondents were analyzed using both descriptive and inferential statistical techniques consistent with the descriptive-comparative research design.

Descriptive statistics — frequency counts and percentages — were used to describe respondents by sex, grade level, and average daily screen time, and to determine the number and proportion of respondents within each level of digital stress for each DSS-A domain and the overall digital stress score.

For each respondent, domain scores were first averaged to obtain a domain mean, and an overall digital stress score was computed by averaging responses across all 24 items (range: 1.00–5.00, with higher scores indicating greater digital stress). Following the DSS-A's recommended scoring procedure, each respondent's domain and overall mean scores were converted to percentile ranks using normative values established by Hall et al. (2021) and Hegarty et al. (2025). Percentile ranks were computed by transforming obtained mean scores into standardized z-scores using the formula $z = (X - \mu) / \sigma$, where X represents the respondent's obtained mean score, μ the normative mean, and σ the corresponding normative standard deviation. Resulting z-scores were converted into percentile ranks using the cumulative normal distribution, and respondents were classified into one of five qualitative categories: Very Low (≤10th percentile), Low (11th–25th percentile), Average (26th–75th percentile), High (76th–90th percentile), and Very High (≥91st percentile) digital stress.

To examine whether digital stress varied by respondents' demographic characteristics, contingency tables were constructed showing the distribution of respondents across the five digital stress categories by sex, grade level, and average daily screen time. The Chi-square Test of Independence (χ^2) was then employed to determine whether a significant association existed between respondents' demographic profile and their level of digital stress across the five domains and the overall DSS-A score, as both the independent and dependent variables were categorical. All statistical analyses were conducted using a 0.05 level of significance.

Ethical Considerations

The study strictly adhered to established ethical research standards to protect the rights, privacy, and welfare of all participants. Prior to data collection, the research proposal was submitted to the University of La Salette, Inc. – Office of Research and Development for ethics review and clearance, in compliance with institutional requirements for research involving human participants. All required documents, including the Ethics Review Application Form, informed consent and assent forms, the research protocol, and the study instruments, were obtained and approved prior to the conduct of the study.

Because participants were senior high school students, informed assent was obtained from the students, while informed consent was secured from their parents or legal guardians. The consent and assent forms clearly explained the purpose of the study, research procedures, potential risks and benefits, the voluntary nature of participation, and participants' right to refuse or withdraw at any point without penalty or academic consequence.

Confidentiality and anonymity were strictly maintained throughout the research process. No personally identifiable information was collected, and results were reported in aggregate form. The study involved minimal risk, as it required participants to complete only a self-report questionnaire on digital stress experiences; participants were informed that they could skip any question they found uncomfortable.

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RESULTS

Table 8. Distribution of the Senior High School Students According to Their Demographic Profile

Sex	**f**	**%**
Male	75	47.2
Female	84	52.8
Grade Level	**f**	**%**
Grade 11	75	47.2
Grade 12	84	52.8
Average Screen Time Per Day	**f**	**%**
2 hours or less	7	4.4
2.01–4 hours	31	19.5
4.01–8 hours	69	43.4
More than 8 hours	52	32.7

Table 8 presents the demographic profile of the respondents by sex, grade level, and average daily screen time. Of the 159 respondents, 84 (52.8%) were female, while 75 (47.2%) were male. In terms of grade level, 84 (52.8%) respondents were from Grade 12 and 75 (47.2%) from Grade 11.

Regarding average screen time, the majority of respondents reported spending 4.01–8 hours per day (43.4%), followed by more than 8 hours (32.7%), 2.01–4 hours (19.5%), and 2 hours or less (4.4%). This indicates that most respondents are engaged in moderate-to-high levels of daily digital exposure.

Table 9. Overall Distribution of the Senior High School Students According to Their Level of Digital Stress in terms of Availability Stress

Category	**f**	**%**
Very Low	8	5.0
Low	10	6.3
Average	100	62.9
High	28	17.6
Very High	13	8.2

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The majority of respondents were classified as average (62.9%), followed by high (17.6%), very high (8.2%), low (6.3%), and very low (5.0%). This indicates that most respondents experience a moderate level of pressure related to constant digital availability.

Table 10. Overall Distribution of the Senior High School Students According to Their Level of Digital Stress in terms of Approval Anxiety

Category	f	%
Very Low	10	6.3
Low	17	10.7
Average	93	58.5
High	23	14.5
Very High	16	10.1

The majority of respondents (58.5%) were categorized as average, followed by high (14.5%), very high (10.1%), low (10.7%), and very low (6.3%). This suggests that most respondents experience a moderate level of concern regarding online social evaluation.

Table 11. Overall Distribution of the Senior High School Students According to Their Level of Digital Stress in terms of Fear of Missing Out

Category	f	%
Very Low	13	8.2
Low	37	23.3
Average	82	51.6
High	22	13.8
Very High	5	3.1

Overall, 51.6% of respondents were categorized as average, followed by low (23.3%), high (13.8%), very low (8.2%), and very high (3.1%). This indicates that most respondents experience a moderate level of FoMO, with fewer respondents experiencing extreme levels.

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Table 12. Overall Distribution of the Senior High School Students According to Their Level of Digital Stress in terms of Connection Overload

Category	f	%
Very Low	5	3.1
Low	15	9.4
Average	81	50.9
High	46	28.9
Very High	12	7.5

Most respondents were categorized as average (50.9%), followed by high (28.9%), low (9.4%), very high (7.5%), and very low (3.1%). This suggests that a considerable number of respondents experience moderate to high levels of digital communication demands.

Table 13. Overall Distribution of the Senior High School Students According to Their Level of Digital Stress in terms of Online Vigilance

Category	f	%
Very Low	11	6.9
Low	34	21.4
Average	85	53.5
High	23	14.5
Very High	6	3.8

The majority of respondents (53.5%) were categorized as average, followed by low (21.4%), high (14.5%), very low (6.9%), and very high (3.8%). This indicates that most respondents experience moderate attentiveness to digital environments.

Table 14. Overall Distribution of the Senior High School Students According to Their Level of Digital Stress (Overall)

Category	f	%
Very Low	8	5.0
Low	18	11.3

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Category	f	%
Average	93	58.5
High	24	15.1
Very High	16	10.1

Most respondents (58.5%) were categorized as average, followed by high (15.1%), very high (10.1%), low (11.3%), and very low (5.0%). This suggests that the general level of digital stress among respondents is moderate.

Table 15. Chi-square Test of Independence on the Differences in the Level of Digital Stress in Terms of Sex

Availability Stress										
Sex	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	4	2.50%	6	3.80%	46	28.90%	12	7.50%	7	4.40%
Female	4	2.50%	4	2.50%	54	34.00%	16	10.10%	6	3.80%
Computed $\chi^2 = 1.183$ (df = 4), p = .881 — not significant at the 5% level.										
Approval Anxiety										
Sex	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	3	1.90%	8	5.00%	47	29.60%	11	6.90%	6	3.80%
Female	7	4.40%	9	5.70%	46	28.90%	12	7.50%	10	6.30%
Computed $\chi^2 = 2.211$ (df = 4), p = .697 — not significant at the 5% level.										
Fear of Missing Out										
Sex	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	5	3.10%	12	7.50%	42	26.40%	14	8.80%	2	1.30%
Female	8	5.00%	25	15.70%	40	25.20%	8	5.00%	3	1.90%

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Computed $\chi^2 = 6.657$ (df = 4), p = .155 — not significant at the 5% level.										
Connection Overload										
Sex	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	2	1.30%	7	4.40%	42	26.40%	16	10.10%	8	5.00%
Female	3	1.90%	8	5.00%	39	24.50%	30	18.90%	4	2.50%
Computed $\chi^2 = 5.480$ (df = 4), p = .241 — not significant at the 5% level.										
Online Vigilance										
Sex	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	4	2.50%	15	9.40%	43	27.00%	11	6.90%	2	1.30%
Female	7	4.40%	19	11.90%	42	26.40%	12	7.50%	4	2.50%
Computed $\chi^2 = 1.506$ (df = 4), p = .826 — not significant at the 5% level.										
Overall Level of Digital Stress										
Sex	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Male	5	3.10%	6	3.80%	44	27.70%	13	8.20%	7	4.40%
Female	3	1.90%	12	7.50%	49	30.80%	11	6.90%	9	5.70%
Computed $\chi^2 = 2.685$ (df = 4), p = .612 — not significant at the 5% level.										

Table 15 presents the results of the Chi-square test of independence for differences in digital stress levels by respondents' sex. There were no significant differences in the respondents' level of digital stress in terms of availability stress ($\chi^2 = 1.183$, p = .881), approval anxiety ($\chi^2 = 2.211$, p = .697), fear of missing out ($\chi^2 = 6.657$, p = .155), connection overload ($\chi^2 = 5.480$, p = .241), online vigilance ($\chi^2 = 1.506$, p = .826), and overall digital stress ($\chi^2 = 2.685$, p = .612), as all obtained p-values were greater than the 0.05 level of significance.

These findings indicate that male and female senior high school students experience comparable levels of digital stress across all dimensions measured. Hence, the null hypothesis is accepted for sex, indicating that sex is not significantly associated with the level of digital stress among the respondents.

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Table 16. Chi-square Test of Independence on the Differences in the Level of Digital Stress in Terms of Grade Level

Availability Stress										
Grade Level	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Grade 11	3	1.90%	7	4.40%	45	28.30%	12	7.50%	8	5.00%
Grade 12	5	3.10%	3	1.90%	55	34.60%	16	10.10%	5	3.10%
Computed $\chi^2 = 3.867$ (df = 4), p = .424 — not significant at the 5% level.										
Approval Anxiety										
Grade Level	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Grade 11	2	1.30%	9	5.70%	44	27.70%	10	6.30%	10	6.30%
Grade 12	8	5.00%	8	5.00%	49	30.80%	13	8.20%	6	3.80%
Computed $\chi^2 = 4.825$ (df = 4), p = .306 — not significant at the 5% level.										
Fear of Missing Out										
Grade Level	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Grade 11	5	3.10%	19	11.90%	36	22.60%	12	7.50%	3	1.90%
Grade 12	8	5.00%	18	11.30%	46	28.90%	10	6.30%	2	1.30%
Computed $\chi^2 = 1.817$ (df = 4), p = .769 — not significant at the 5% level.										
Connection Overload										
Grade Level	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Grade 11	1	0.60%	5	3.10%	40	25.20%	24	15.10%	5	3.10%
Grade 12	4	2.50%	10	6.30%	41	25.80%	22	13.80%	7	4.40%

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Computed $\chi^2 = 3.401$ (df = 4), p = .493 — not significant at the 5% level.										
Online Vigilance										
Grade Level	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Grade 11	5	3.10%	13	8.20%	39	24.50%	16	10.10%	2	1.30%
Grade 12	6	3.80%	21	13.20%	46	28.90%	7	4.40%	4	2.50%
Computed $\chi^2 = 6.249$ (df = 4), p = .181 — not significant at the 5% level.										
Overall Level of Digital Stress										
Grade Level	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Grade 11	4	2.50%	5	3.10%	45	28.30%	11	6.90%	10	6.30%
Grade 12	4	2.50%	13	8.20%	48	30.20%	13	8.20%	6	3.80%
Computed $\chi^2 = 4.323$ (df = 4), p = .364 — not significant at the 5% level.										

Table 16 presents the results of the Chi-square test of independence for differences in digital stress levels by respondents' grade level. There were no significant differences in availability stress ($\chi^2 = 3.867$, p = .424), approval anxiety ($\chi^2 = 4.825$, p = .306), fear of missing out ($\chi^2 = 1.817$, p = .769), connection overload ($\chi^2 = 3.401$, p = .493), online vigilance ($\chi^2 = 6.249$, p = .181), and overall digital stress ($\chi^2 = 4.323$, p = .364), since all computed p-values exceeded the 0.05 level of significance.

This indicates that Grade 11 and Grade 12 students have similar levels of digital stress across all domains. Therefore, the null hypothesis is accepted for grade level, indicating that grade level does not significantly influence respondents' digital stress.

Table 17. Chi-square Test of Independence on the Differences in the Level of Digital Stress in Terms of Average Screen Time Per Day

Availability Stress										
Average Screen Time Per Day	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
2 hours or less	0	0.00%	0	0.00%	4	2.50%	3	1.90%	0	0.00%

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2.01–4 hours	1	0.60%	2	1.30%	20	12.60%	5	3.10%	3	1.90%
4.01–8 hours	5	3.10%	3	1.90%	48	30.20%	11	6.90%	2	1.30%
More than 8 hours	2	1.30%	5	3.10%	28	17.60%	9	5.70%	8	5.00%
Computed $\chi^2 = 13.353$ (df = 12), p = .344 — not significant at the 5% level.										
Approval Anxiety										
Average Screen Time Per Day	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
2 hours or less	0	0.00%	0	0.00%	4	2.50%	2	1.30%	1	0.60%
2.01–4 hours	3	1.90%	6	3.80%	13	8.20%	6	3.80%	3	1.90%
4.01–8 hours	7	4.40%	4	2.50%	46	28.90%	8	5.00%	4	2.50%
More than 8 hours	0	0.00%	7	4.40%	30	18.90%	7	4.40%	8	5.00%
Computed $\chi^2 = 17.745$ (df = 12, corrected from df = 4 in source), p = .124 — not significant at the 5% level. [see editorial note below]										
Fear of Missing Out										
Average Screen Time Per Day	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
2 hours or less	0	0.00%	1	0.60%	6	3.80%	0	0.00%	0	0.00%
2.01–4 hours	3	1.90%	7	4.40%	17	10.70%	3	1.90%	1	0.60%
4.01–8 hours	8	5.00%	18	11.30%	31	19.50%	11	6.90%	1	0.60%
More than 8 hours	2	1.30%	11	6.90%	28	17.60%	8	5.00%	3	1.90%
Computed $\chi^2 = 9.368$ (df = 12), p = .671 — not significant at the 5% level.										
Connection Overload										

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Average Screen Time Per Day	Very Low		Low		Average		High		Very High	
	f	%	f	%	f	%	f	%	f	%
2 hours or less	0	0.00%	0	0.00%	4	2.50%	1	0.60%	2	1.30%
2.01–4 hours	2	1.30%	2	1.30%	14	8.80%	11	6.90%	2	1.30%
4.01–8 hours	2	1.30%	11	6.90%	36	22.60%	17	10.70%	3	1.90%
More than 8 hours	1	0.60%	2	1.30%	27	17.00%	17	10.70%	5	3.10%
Computed $\chi^2 = 14.669$ ($df = 12$), $p = .260$ — not significant at the 5% level.										
Online Vigilance										
Average Screen Time Per Day	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
2 hours or less	1	0.60%	0	0.00%	4	2.50%	2	1.30%	0	0.00%
2.01–4 hours	3	1.90%	8	5.00%	15	9.40%	2	1.30%	3	1.90%
4.01–8 hours	4	2.50%	18	11.30%	39	24.50%	6	3.80%	2	1.30%
More than 8 hours	3	1.90%	8	5.00%	27	17.00%	13	8.20%	1	0.60%
Computed $\chi^2 = 16.451$ ($df = 12$), $p = .171$ — not significant at the 5% level.										
Overall Level of Digital Stress										
Average Screen Time Per Day	**Very Low**		**Low**		**Average**		**High**		**Very High**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
2 hours or less	0	0.00%	0	0.00%	4	2.50%	1	0.60%	2	1.30%
2.01–4 hours	2	1.30%	5	3.10%	15	9.40%	7	4.40%	2	1.30%
4.01–8 hours	4	2.50%	11	6.90%	42	26.40%	9	5.70%	3	1.90%

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More than 8 hours	2	1.30%	2	1.30%	32	20.10%	7	4.40%	9	5.70%
Computed $\chi^2 = 15.863$ (df = 12), p = .198 — not significant at the 5% level.										

Table 17 presents the results of the Chi-square test of independence for differences in the level of digital stress by respondents' average daily screen time. There were no significant differences in availability stress ($\chi^2 = 13.353$, p = .344), approval anxiety ($\chi^2 = 17.745$, p = .124), fear of missing out ($\chi^2 = 9.368$, p = .671), connection overload ($\chi^2 = 14.669$, p = .260), online vigilance ($\chi^2 = 16.451$, p = .171), and overall digital stress ($\chi^2 = 15.863$, p = .198), as all computed p-values were greater than the 0.05 level of significance.

These findings suggest that respondents' average daily screen time was not significantly associated with their level of digital stress. Regardless of whether students reported shorter or longer daily screen time, their levels of digital stress were generally comparable across all dimensions. Thus, the null hypothesis is accepted for the average daily screen time.

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Proposed Guidance Intervention Program

In response to Research Question 4, the following guidance intervention program was developed based on the descriptive and comparative findings presented above.

Digital Balance: A Guidance Intervention Program for Managing Digital Stress Among Senior High School Students

Rationale

The findings revealed that senior high school students generally experience an average level of digital stress across all domains, with relatively higher proportions of students at elevated levels of connection overload and approval anxiety. Although no significant differences were found by sex, grade level, or average daily screen time, digital stress was a common, ongoing experience among students, suggesting that a preventive, school-wide program — rather than one targeted only at specific subgroups — is warranted.

Anchored in the Digital Stress Scale (Hall et al., 2021) and the Transactional Model of Stress (Lazarus & Folkman, 1984), this program aims to address the psychological demands of constant digital engagement by equipping students with coping strategies, self-regulation skills, and awareness of healthy digital behaviors.

General Objective

To help senior high school students develop healthy digital habits to manage digital stress effectively. At the end of the program, students will be able to: (1) identify sources and signs of digital stress; (2) understand the five domains of digital stress; (3) develop strategies to manage online pressure and expectations; (4) improve self-regulation in digital device usage; and (5) practice healthy digital habits and boundaries.

Session	Objectives	Activities/Strategies	Time Frame	Materials Needed	Expected Output	Evaluation
Session 1: Understanding Digital Stress	To help students identify and understand digital stress and its domains	• Introduction of the program • Discussion of digital stress and DSS domains • Self-assessment activity • Sharing of experiences	60–90 min	PowerPoint, DSS handouts, reflection sheets	Increased awareness of digital stress	Reflection paper, participation
Session 2: Managing Availability Stress & Connection Overload	To help students set boundaries and manage digital demands	• Discussion on constant connectivity • Identifying sources of pressure • Activity: "Digital Boundary Plan" • Time management strategies	60–90 min	Worksheets, pens, visual aids	Personal digital boundary plan	Output evaluation, facilitator observation

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Session	Objectives	Activities/Strategies	Time Frame	Materials Needed	Expected Output	Evaluation
Session 3: Coping with Approval Anxiety & FoMO	To help emotional regulation and reduce social comparison	• Discussion on social validation • Cognitive restructuring activity • Activity: "Real vs. Online Self" • Group sharing	60–90 min	Reflection forms	Improved awareness of self-worth beyond online validation	Reflection journal, sharing
Session 4: Reducing Online Vigilance	To help students reduce constant checking behaviors and improve focus	• Discussion on effects of constant checking • Mindfulness exercises • Activity: "No Phone Challenge" • Focus training techniques	60–90 min	Timer, activity sheets	Reduced urge to constantly check devices	Observation, feedback
Session 5: Integrating Healthy Digital Habits	To integrate learning and promote sustainable digital habits	• Review of previous sessions • Creation of Digital Wellness Plan • Commitment activity • Program evaluation	60–90 min	Templates, evaluation forms	Personal digital wellness plan	Post-test, evaluation forms

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DISCUSSION

This study examined the level of digital stress among senior high school students, determined whether significant differences existed when respondents were grouped by socio-demographic profile, and used the findings to develop a guidance intervention program.

In terms of the respondents' socio-demographic profile, the findings showed that the majority of participants were female (52.8%), while males comprised 47.2% of the sample. A slightly larger proportion of respondents were enrolled in Grade 12 (52.8%) than in Grade 11 (47.2%). Regarding average daily screen time, most students reported spending 4.01–8 hours on digital devices, followed by those spending more than 8 hours per day. These findings indicate that senior high school students are regularly exposed to digital technologies, reflecting the increasing integration of digital devices into their academic, social, and personal lives — a context in which students are likely to encounter various forms of digital stress.

Across the five domains of digital stress, the majority of respondents were likewise classified under the average level. Availability stress (62.9%) indicated that most students experience moderate pressure to remain constantly available and responsive in digital communication. Approval anxiety (58.5%) suggests that students generally experience a moderate level of concern regarding online feedback and social evaluation. Fear of missing out (51.6%) revealed a typical level of concern about missing online activities or social interactions, and online vigilance (53.5%) demonstrated a moderate level of attentiveness to digital environments and online notifications. These findings are consistent with Hall et al. (2021) and Nick et al. (2021), who identified these dimensions as central components of adolescents' experiences of digital stress.

Among the five domains, connection overload appeared to be the area of greatest concern. Although most respondents were still classified at the average level (50.9%), this domain recorded the highest proportion in the high category (28.9%). Likewise, approval anxiety showed relatively higher proportions of respondents classified under the high (14.5%) and very high (10.1%) categories compared with the other domains. These findings suggest that while digital stress is generally moderate among senior high school students, some students experience a greater psychological burden due to excessive digital communication demands and the need for online social validation — supporting the findings of De Groote et al. (2022) and Angelini et al. (2025), who reported that frequent digital interactions, continuous messaging, and social pressures contribute to emotional exhaustion and heightened stress among adolescents. Hall et al. (2021) similarly described connection overload and approval anxiety as major contributors to adolescents' digital stress because they create continuous cognitive and emotional demands.

Regarding the overall level of digital stress, the findings indicated that respondents generally experienced an average level, with the majority (58.5%) falling in that category. This suggests that digital stress is a common and normative experience among senior high school students. Although the overall level was not considered high, students consistently experience psychological demands associated with their daily interactions in digital environments — a finding that supports Hall et al. (2021), who conceptualized digital stress as a multidimensional and common experience among adolescents due to continuous exposure to digital technologies and online demands.

Regarding differences in digital stress according to sex, the findings revealed no statistically significant differences across any domain ($p > .05$). This indicates that both male and female students experience comparable levels of digital stress despite possible differences in their patterns of technology use, supporting Van der Schuur et al. (2020), who reported minimal overall sex differences in digital stress, although males and females may differ in the specific nature of their digital stress experiences rather than in their overall level of stress.

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Similarly, no statistically significant differences were found when respondents were grouped according to grade level. Grade 11 and Grade 12 students exhibited comparable levels of digital stress across all dimensions ($p > .05$), suggesting that both groups are exposed to similar academic requirements, digital learning environments, and online social experiences throughout senior high school. This is consistent with Cleofas and Rocha (2021), who noted that Filipino senior high school students commonly experience similar levels of stress associated with continuous engagement in digital learning and online communication regardless of grade level.

The results further revealed no significant differences in digital stress across average daily screen time levels. Although previous research has suggested that prolonged screen exposure is associated with greater psychological distress and digital stress, the present findings indicate that the amount of time spent using digital devices alone may not be a significant determinant of digital stress among senior high school students, suggesting that digital stress is influenced not merely by the duration of digital engagement but also by the quality, purpose, and emotional demands of online experiences.

This finding is inconsistent with the studies of Hall et al. (2021), Sampasa-Kanyinga et al. (2018), and Datu et al. (2021), which reported that longer screen time was associated with higher levels of digital stress, psychological distress, emotional exhaustion, and reduced well-being among adolescents. One possible explanation is that students use digital technologies for diverse purposes, including academic learning, communication, entertainment, and social interaction; consequently, extended screen time does not necessarily translate into greater digital stress if students are engaging in meaningful, productive, or well-managed online activities. Conversely, students with relatively shorter screen exposure may still experience elevated digital stress when their digital interactions involve social comparison, constant availability, academic pressure, or fear of missing out.

This finding lends support to the World Health Organization (2024), which emphasized that the psychological impact of digital technology depends more on the quality, emotional context, and nature of digital engagement than on screen time duration alone. Collectively, these findings suggest that interventions aimed at reducing digital stress should focus less on limiting screen time per se and more on promoting healthy digital behaviors, responsible technology use, effective coping strategies, and digital well-being among adolescents.

Overall, the findings demonstrate that digital stress among senior high school students is a moderate, multidimensional, and commonly experienced phenomenon. Although respondents generally reported average levels of digital stress and no significant differences by sex, grade level, or average daily screen time, the relatively high proportions of students experiencing connection overload and approval anxiety indicate that some students remain vulnerable to the psychological demands of digital environments. These findings underscore the need for a comprehensive school-based guidance intervention program that promotes healthy digital habits, strengthens students' coping strategies, enhances digital well-being, and addresses specific sources of digital stress, such as the “Digital Balance” program proposed above.

CONCLUSION

Based on the study's findings, senior high school students are regularly exposed to digital technologies, with most respondents spending between 4.01 and 8 hours per day on digital devices. The respondents consisted of nearly equal proportions of male and female students, as well as Grade 11 and Grade 12 students, providing a balanced representation of the target population. These findings indicate that digital technology has become an integral part of students' academic and social lives, making them susceptible to the psychological demands associated with continuous digital engagement.

The study further concludes that senior high school students generally experience an average or moderate level of digital stress across the five dimensions of the Digital Stress Scale — availability stress, approval anxiety, fear of missing out, connection overload, and online vigilance — indicating that digital stress is a common and normative

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experience among adolescents. Although students generally appear capable of managing the demands of digital technology, these stressors remain a constant in their daily lives. Among the five domains, connection overload and approval anxiety emerged as the areas with relatively higher proportions of students reporting high or very high levels of digital stress, suggesting that excessive demands of digital communication and concerns about online social evaluation pose greater psychological challenges for some students.

The findings also revealed no significant differences in digital stress levels when respondents were grouped by sex, grade level, and average daily screen time, indicating that digital stress is experienced similarly across these socio-demographic characteristics rather than being concentrated in any particular subgroup. The absence of significant differences based on screen time further suggests that digital stress is influenced more by the quality, nature, and psychological demands of digital interactions than by the amount of time spent using digital devices.

Anchored on the Digital Stress Framework of Hall et al. (2021) and the Transactional Model of Stress of Lazarus and Folkman (1984), the findings support the view that digital stress is a multidimensional form of psychological strain resulting from adolescents' continuous interaction with digitally mediated environments, and that students' appraisal of digital demands and their ability to cope with these demands play a more important role than demographic characteristics in determining their level of digital stress.

Finally, the findings provide a strong basis for developing a school-based guidance intervention program to promote digital well-being among senior high school students. Since digital stress is prevalent across the student population regardless of sex, grade level, or screen time, interventions should adopt a preventive and developmental approach that benefits all students, emphasizing healthy digital habits, responsible technology use, effective coping strategies, emotional regulation, digital boundary-setting, and balanced online and offline engagement.

RECOMMENDATIONS

Based on the findings of the study, the following recommendations are proposed:

1. Students are encouraged to develop healthy and balanced digital habits, particularly in managing their engagement with digital devices and online platforms. Although the overall level of digital stress was average, the consistent presence of stress across all domains suggests the need for self-regulation strategies, such as setting boundaries around device use, limiting unnecessary notifications, and practicing mindful digital consumption.

2. School administrators are encouraged to integrate digital well-being initiatives into school programs and policies, including seminars, workshops, and awareness campaigns focused on responsible digital use, mental health promotion, and stress management, to help address digital stress at a broader institutional level.

3. Guidance counselors are encouraged to design and implement structured intervention programs that address digital stress as a multidimensional concern, particularly helping students manage connection overload, approval anxiety, and online vigilance, as these domains showed noticeable proportions of respondents in the high category. The Digital Balance program proposed in this study may serve as a basis for such initiatives and can be adapted to the school context.

4. Teachers are encouraged to adopt balanced instructional practices that consider students' digital experiences, including managing the volume of online academic tasks, providing clear instructions and reasonable deadlines, and promoting a learning environment that supports both academic engagement and student well-being.

5. Parents and guardians are advised to provide guidance and supervision on their children's digital use, encouraging open communication about online experiences and promoting a balance between online and offline activities.

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6. Future researchers are encouraged to explore additional variables such as academic performance, emotional well-being, and coping mechanisms to further understand the factors influencing digital stress, and may conduct longitudinal studies to examine how digital stress develops over time.

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