




Original article

Examining the Relationship Between High School Students' Fear of Missing Out (FoMO) on Social Media and Their Academic Procrastination Behaviors

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Abstract

As the digital ecosystem has expanded, adolescents' daily routines and academic engagement are increasingly structured within the digital framework of social media. Due to escalating anxieties about the cognitive and psychological impacts of heavy social media engagement, researchers have increasingly prioritised the examination of the Fear of Missing Out (FoMO) among adolescents. This study examines the correlation between Fear of Missing Out (FoMO) and academic procrastination among high school students, while also analyzing potential variations based on demographic factors such as gender, grade level, and school type. A total of 450 students, representing various high school categories within the central district of Çanakkale, participated in the current research. A correlational survey design was employed. To quantify the primary variables of the study, data collection involved the utilization of two standardized instruments: the Fear of Missing Out (FoMO) Scale and the Academic Procrastination Scale. To address the research questions, the study utilized a statistical framework comprising Pearson correlation coefficients for relational analysis and ANOVA and t-tests to evaluate demographic variances. The findings indicated that students' FoMO levels were generally low. In contrast, their academic procrastination levels were moderate. The analysis revealed that while FoMO scores fluctuated significantly by participants' gender and the type of institution they attended, the educational stage (grade level) did not yield a notable impact. Academic procrastination did not differ significantly across gender, grade level, or school type. A low-level yet statistically positive association was established, suggesting that as FoMO levels increase, there is a slight corresponding rise in academic procrastination behaviors. Considering the results obtained, practical recommendations for educational environments are presented, alongside a roadmap for future scholarly inquiries in this domain.

Keywords: FoMO, Academic Procrastination, Social Media Addiction.

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INTRODUCTION

The extensive adoption of digital tools has become an indispensable component of daily life, facilitating many routine activities while simultaneously introducing new psychological, social, and academic challenges. Within this digital living culture, excessive and disproportionate engagement with social media has been associated with behavioral addiction patterns characterized by compulsive use and difficulties in self-regulation (Griffiths, 2005; Pontes, Kuss, & Griffiths, 2015). Empirical research indicates that such patterns may erode face-to-face social interaction and family bonds, increase distractibility, and reduce productivity in academic contexts (Twenge & Campbell, 2018; Levine, Waite, & Bowman, 2012; Gül & Güneş, 2009). Moreover, digital addiction has been linked to adverse psychological outcomes, including loneliness, emotional distress, and depressive symptoms (Keles, Grealish, & Leamy, 2024). Increased screen time, particularly through smartphones and social media platforms, is closely associated with the emergence of social media dependency and the Fear of Missing Out (FoMO), a phenomenon that may compromise adolescents' social adjustment and academic engagement (Przybylski et al., 2013). Accordingly, adopting a balanced and mindful approach to digital media use is considered essential for supporting individual well-being and academic functioning.

In the digital era, as social media occupies an ever-increasing role in daily life, individuals may experience adverse psychological, social, and academic consequences. The Fear of Missing Out (FoMO) refers to a pervasive anxiety arising from the belief that others are experiencing more rewarding events or gaining superior information (JWT Marketing Communications, 2012). At its core, FoMO involves a perceived necessity for constant online connectivity to avoid potential social exclusion (Przybylski et al., 2013). Aytar (2019) identifies key indicators of FoMO, including a compulsive need to remain digitally connected, frequent monitoring of online updates, and emotional discomfort when expected social feedback, such as likes or messages, is not received. These behaviors reflect an ongoing concern about missing social interactions rather than isolated technology use. Supporting the prevalence of this phenomenon, Zhang, Li, and Yu (2021) reported that approximately 66% of individuals experience FoMO, with these feelings intensifying particularly during late-night hours and weekends.

To explain the underlying psychological mechanisms of the Fear of Missing Out (FoMO), researchers have frequently drawn on Self Determination Theory (SDT) (Deci & Ryan, 1985; Elhai et al., 2018). SDT emphasizes individuals' basic psychological needs, particularly the need for relatedness, which refers to feeling socially connected and valued. When this need is insufficiently satisfied, feelings of social alienation frequently result in elevated levels of interpersonal anxiety among adolescents, thereby increasing FoMO levels (Przybylski et al., 2013). From this perspective, FoMO can be interpreted as a response to unmet relatedness needs within digital social environments. Although some studies suggest that gender may influence FoMO experiences due to differences in social orientation (Kashdan et al., 2009; Alt, 2015), empirical findings remain inconsistent, with FoMO sometimes

reported as more prevalent among males (Przybylski et al., 2013). These inconsistencies indicate that FoMO is shaped by broader psychological needs rather than gender alone.

The psychological impact of FoMO on individuals can be profound, as it is associated with heightened anxiety and maladaptive emotional responses such as jealousy and perceived social exclusion (Beyens, Frison, & Eggermont, 2016). Increased FoMO is often a precursor to a range of diverse adverse mental states, including loneliness, emotional distress, depression, and chronic stress, ultimately contributing to lower life satisfaction (Dhir et al., 2018). As FoMO reinforces a persistent need for social validation and constant connectivity, individuals may gradually disengage from authentic social interactions, which can negatively affect overall psychological well-being. Accordingly, the literature emphasizes the importance of addressing FoMO to mitigate its adverse effects and to protect individuals' quality of life (Lee, 2021; Kaçık & Acar, 2020).

From a behavioral perspective, FoMO creates a perceived compulsion to remain constantly connected, often leading individuals to compromise their daily responsibilities. Research indicates that this persistent connectivity pressure is associated with academic procrastination and diminished academic performance, particularly among adolescents (Alt, 2015). Furthermore, Kırık, Arslan, Çetinkaya, and Gül (2015) argue that excessive and unregulated social media use undermines academic achievement and weakens time management skills. Accordingly, FoMO and social media addiction may be regarded as salient developmental risk factors contributing to adolescents' academic and psychological difficulties.

One of the primary academic consequences of FoMO is an increased tendency toward academic procrastination. Procrastination is widely conceptualized as a multifaceted construct involving cognitive, affective, and behavioral components, rather than merely a problem of poor time management (Solomon & Rothblum, 1984). Early psychoanalytic perspectives framed procrastination as an avoidance behavior (as cited in Birner, 1993), while later approaches emphasized the roles of parental expectations (Burka & Yuen, 1983), behavioral reinforcement (Ferrari, Jonhson, & McCown, 1995), and diminished self-efficacy (Bandura, 1997). Drawing on these perspectives, academic procrastination is characterized by the voluntary postponement of academic duties and is consistently associated with reduced student achievement (Balkıs, 2006; Aydoğan & Özbay, 2012; Steel, 2007).

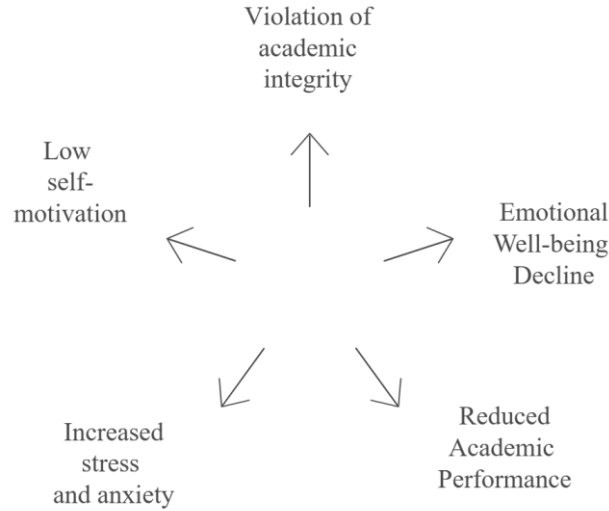


Figure 1. Key adverse outcomes of academic procrastination

Note. Developed based on the empirical findings of Christanti and Anwar (2019), Wicaksono (2017), Bu et al. (2021), and Patrzek et al. (2015).

Consistent with the literature summarized above, Figure 1 presents a conceptual overview of the key adverse outcomes associated with academic procrastination. Rather than resulting solely from inefficient scheduling, academic procrastination reflects underlying motivational difficulties (Aydoğan & Özbay, 2012). Empirical evidence indicates that it is linked to heightened stress and anxiety, reduced self-motivation, diminished academic self-worth and performance, and decreased effectiveness in teaching and learning processes (Wicaksono, 2017; Christanti & Anwar, 2019; Bu et al., 2021; Rahayu et al., 2024). In addition, academic procrastination has been associated with unethical academic behaviors, including cheating, improper citation, plagiarism, and data fabrication (Patrzek et al., 2015). Taken together, these findings demonstrate that academic procrastination constitutes a multifaceted risk factor that undermines students' academic potential, underscoring the need for empirical studies that identify its antecedents and informing effective preventive interventions (Goroshit, 2018).

The literature includes an expanding volume of studies examining the relationships among FoMO, social media addiction, and academic procrastination. Empirical findings indicate that FoMO is associated with increased internet dependency, academic burnout, and procrastination tendencies (Manap et al., 2024; Barry, 2023; Wang et al., 2019). However, the nature of this relationship appears to be complex and context-dependent, as some studies report indirect or mediated effects through variables such as cognitive failure, sensation seeking, self-control, and parenting styles (Li & Ye, 2022; Putri & Dewi, 2023), while others fail to identify a direct association between FoMO and academic outcomes (Ozer, 2020). These mixed findings suggest that FoMO does not operate as a uniform predictor of academic procrastination, but rather interacts with developmental, psychological, and contextual factors.

Despite the growing body of research on FoMO, social media use, and academic procrastination, empirical studies specifically examining the direct relationship between FoMO and academic procrastination among high school students remain limited. This gap is particularly noteworthy given that recent reviews emphasize the need for clearer conceptualization and population-specific evidence regarding the relationship between FoMO, digital technology use, and academic functioning, especially among adolescents (Groenestein et al., 2024). Moreover, the transition through teenage years serves as a pivotal phase where an acute awareness of one's social standing and a deep-seated immersion in virtual spaces become central to the adolescent experience, which may shape both FoMO experiences and procrastination tendencies in ways that differ from those observed in older populations. Accordingly, further research is needed to clarify how FoMO relates to academic procrastination within the high school context, while also considering demographic and institutional variables that may influence this relationship.

In alignment with this theoretical perspective, the present inquiry is structured around the following specific research questions:

1. To what extent do high school students experience Fear of Missing Out (FoMO)?
2. To what extent do students' FoMO levels fluctuate when analyzed in relation to their gender, academic grade, and the category of high school they attend?
3. To what degree do high school students exhibit academic procrastination behaviors?
4. Do academic procrastination behaviors among high school students vary by gender, institutional category, and year of study?
5. Does a statistically significant relationship exist between the Fear of Missing Out (FoMO) and levels of academic procrastination?

MATERIALS and METHODS

Method

Employing a correlational research design, this inquiry focuses on examining the associative links between social media-induced FoMO and the procrastinatory tendencies of high school students, while accounting for various demographic factors. A correlational research framework was adopted to evaluate the interconnectedness of the selected variables. In this descriptive approach, the researcher refrains from exercising direct control or influence over the subjects, focusing instead on identifying existing patterns of relationship (Büyüköztürk et al., 2013; Creswell, 2002). The main goal of this framework is to evaluate the extent and nature of statistical associations existing between various constructs, facilitating a deeper understanding of how these elements interact within the proposed model (Karasar, 2019).

Study Sample

The research population comprises all high school students currently registered in Türkiye. However, as attaining such a broad target population is practically infeasible (Büyüköztürk et al., 2013), the accessible population is restricted to high school students in Çanakkale city centre, situated in the western region of Türkiye. A total of 450 students were selected through stratified sampling from diverse school environments. The strata were created based on the official high school categories defined by the Ministry of National Education in the central district of Çanakkale (AHS, SSSH, SHS, VTAHS, IHHS). A proportional stratified sampling approach was used by considering the total number of students in each school type, and the number of participants selected from each stratum reflected its proportion within the population. In accordance with the permission obtained from the Provincial Directorate of National Education, at least one public school representative of each school type was included in the sample, and the schools were selected based on administrative accessibility and institutional approval. This procedure ensured that the sample accurately represented both the distribution of school types and the student populations within them. This method ensures that the research sample maintains the structural integrity of the population, allowing for a balanced analysis across all identified subgroups (Büyüköztürk et al., 2013).

Table 1. Distribution of articles by country

		f	%
Gender	Female	217	48
	Male	233	52
Grade Level	9	130	26
	10	104	24
	11	98	23
	12	118	27
School Type	AHS	90	20
	SSHS	79	17
	SHS	93	21
	VTAHS	95	21
	IHHS	93	21
Total		450	100

Note: AHS: Anatolian High School; SSSH: Social Sciences High School; SHS: Science high School; VTAHS: Vocational and Technical Anatolian High School; IHHS: Imam Hatip High School.

Table 1 illustrates the distribution of participants across various demographic variables, providing a frequency and percentage-based overview of the study group's composition.

Instruments and Procedures

The data collection process was conducted by the researchers during the 2024–2025 academic year. Data were gathered using online survey tools, allowing participants to complete the questionnaires

voluntarily in a digital environment. The online format facilitated access to students from different school types and ensured standardized administration conditions. Anonymity and voluntary consent were the foundational principles shared with the students, who were briefed on the research's aims before any data collection took place. Participation was based on informed consent, and no identifying personal information was collected.

The data collection process involved the administration of a demographic form alongside two validated psychological measures: Çakıcı's (2003) Academic Procrastination Scale and the social media-focused FoMO scale, which was adapted for the Turkish context by Çelik and Özkara (2022). Measuring both personal and social FoMO through 9 items, this 7-point Likert type instrument provides a total score range of 9 to 63. Although Çelik and Özkara (2022) suggest that the scale can be evaluated either through sub-dimensions or total scores, the current study utilized the total FoMO score as the primary unit of analysis. Internal consistency for the scale was confirmed by Cronbach's alpha values of .85 for the personal sub-dimension, .85 for the social sub-dimension, and .89 for the entire instrument, indicating strong reliability. (Çelik & Özkara, 2022).

This 19-item Academic Procrastination Scale (Çakıcı, 2003) utilizes a 5-point Likert format and includes 12 inverse and 7 regular items, where total scores (ranging from 19 to 95) correlate positively with the level of procrastination. The scale's psychometric strength was evidenced by an overall Cronbach's alpha of .92, indicating excellent internal consistency.

Data Analysis

Statistical processing of the gathered information was conducted through the SPSS software package. The raw data underwent an initial screening phase focused on detecting extreme values and verified that the distribution met the necessary normality assumptions. Prior to conducting the analyses, the dataset was examined for the presence of outliers. Using the ± 3 z score criterion, a total of 7 observations were identified as extreme values and subsequently removed from the dataset. Comparative checks were performed before and after the exclusion of these observations, and no meaningful differences were observed in the distributional characteristics, mean scores, or the results of the parametric tests. Therefore, the removal of outliers did not affect the overall interpretation of the findings, and the cleaned dataset was used for all subsequent analyses.

Normality assumptions for the social media FoMO and Academic Procrastination instruments were verified through an assessment of distributional indices. Skewness and kurtosis values for all variables remained between the thresholds of -1.0 and +1.0; thus, the dataset was deemed suitable for parametric analysis, aligning with the normality criteria established by Hair et al. (2013). Descriptive statistics were then computed for demographic variables, including frequencies and percentages. The statistical significance of differences between various cohorts was examined through independent samples t-tests and one-way ANOVA procedures, conducted as part of the broader parametric analysis

framework. Beyond the post hoc comparisons necessitated by significant ANOVA findings, the interrelationship between digital FoMO and academic procrastination was evaluated using Pearson's r to indicate the precise strength of their correlation.

RESULTS

This chapter delineates the empirical findings obtained from the data processing stage, utilizing structured tables to highlight key statistical trends.

Findings Regarding the First Research Question

Table 2. Descriptive statistics of high school students' FoMO levels

	N	Min.	Max.	X	SD
FoMO	450	9	44	20.57	8.3

Based on the results presented in Table 2, high school students attained an average score of 20.57 on the Social Media Fear of Missing Out (FoMO) Scale. Given that the scale yields scores ranging from 9 to 63, this finding indicates that high school students manifest a low propensity for FoMO related to social media.

Findings Regarding the Second Research Question

The second area of inquiry in this study was defined as follows: To what extent do students' FoMO levels fluctuate when analyzed in relation to their gender, academic grade, and the category of high school they attend? Tables 3, 4, and 5 detail the outcomes of the independent samples t-test and one-way ANOVA performed to explore the variables associated with this research question.

Table 3. Comparison of students' FoMO scores by gender

	Gender	n	X	S.d	t	df	p
FoMO	Female	217	22.44	8.696	4.651	432	.000
	Male	233	18.82	7.710			

Table 3 presents the comparison of high school students' FoMO levels according to gender. Accordingly, a statistically significant disparity was observed between the mean FoMO scores of female students ($X = 22.44$, $SD = 8.69$) and male students ($X = 18.82$, $SD = 7.71$) representing a moderate effect (Cohen's $d = 0.44$). [$t_{(432)} = 4.651$; $p < .05$].

Table 4. Comparison of students' FoMO scores by grade level

	Source of Variance	SS	df	MS	F	p
FoMO	Between Groups	274.842	3	91.614	1.305	.272
	Within Groups	31317.658	446	70.219		
	Total	31592.500	449			

As shown in Table 4, no statistically significant differences were observed among high school students' FoMO levels across grade levels ($F_{(3-446)} = 1.305$; $p > .05$; $\eta^2 = .009$).

Table 5. Comparison of students' FoMO scores by school type

	Source of Variance	SS	df	MS	F	p	Diff.*
FoMO	Between Groups	1091.801	4	272.950	3.982	.003	1-2
	Within Groups	30500.699	445	68.541			2-4
	Total	31592.500	449				

*1: Anatolian High School, 2: Social Sciences High School, 3: Science High School, 4: Vocational and Technical High School, 5: Imam Hatip High School

As presented in Table 5, high school students' Fear of Missing Out (FoMO) levels related to social media vary significantly by type of high school ($F_{(4-445)} = 3.982$; $p < .05$; $\eta^2 = .035$). Initial evaluations using Levene's test revealed a significant disparity in group variances ($F = 3.471$, $p < .05$), suggesting that the requirement for homogeneity was not met. Consequently, to account for these unequal variances, the Games–Howell procedure was selected for post hoc comparisons. Post hoc analyses using the Games–Howell procedure revealed a statistically significant difference between students attending Anatolian High Schools ($X = 19.17$, $SD = 7.3$) and those attending Social Sciences High Schools ($X = 23.62$, $SD = 9.5$), favoring the latter group ($p < .05$). Likewise, a significant difference was observed between students attending SSHS ($X = 23.62$, $SD = 9.5$) and those attending VTAHS ($X = 19.41$, $SD = 7.1$) ($p < .05$).

Findings Regarding the Third Research Question

The third research question of the study was formulated as follows: To what degree do high school students exhibit academic procrastination behaviors? Data on the descriptive characteristics associated with this question are presented in Table 6.

Table 6. Statistical overview of high school students' academic procrastination scores

	N	Min.	Max.	X	SD
Academic Procrastination	450	38	74	55.31	7.5

According to the statistical summary provided in Table 6, high school students' mean score on the Academic Procrastination Scale was $X = 55.31$. Given that the scale yields scores ranging from 19 to 95, the data demonstrates a moderate prevalence of academic procrastination among the participants.

Findings Regarding the Fourth Research Question

The research question of the study was formulated as follows: Do academic procrastination behaviors among high school students vary by gender, institutional category, and year of study? The independent samples t-test and ANOVA results concerning these variables are detailed in Tables 7, 8, and 9, respectively.

Table 7. Comparison of students' academic procrastination scores by gender

	Gender	n	X	S.d	t	df	p
Academic Procrastination	Female	217	54.71	7.317	-1.646	448	.101
	Male	233	55.87	7.635			

Table 7 displays the examination of high school students' academic procrastination behaviors by gender. The findings reveal that no statistically significant variation exists among the average academic procrastination scores of female students ($X = 54.71$) and male students ($X = 55.87$) [$t_{(448)} = -1.646$; $p > .05$; $d = .16$].

Table 8. Comparison of students' academic procrastination scores by grade level

	Source of Variance	SS	df	MS	F	p
Academic Procrastination	Between Groups	307.017	3	102.339	1.831	.141
	Within Groups	24932.663	446	55.903		
	Total	25239.680	449			

An evaluation of Table 8 suggests a lack of statistically meaningful variation in academic procrastination scores when categorized by grade level, with all cohorts exhibiting similar behavioral patterns. ($F_{(3-446)} = 1.831$; $p > .05$; $\eta^2 = .012$).

Table 9. Comparison of students' academic procrastination scores by school type

	Source of Variance	SS	df	MS	F	p
Academic Procrastination	Between Groups	418.652	4	104.663	1.876	.113
	Within Groups	24821.028	445	55.778		
	Total	25239.680	449			

An evaluation of Table 9 suggests that there is no statistically significant difference in academic procrastination scores across school types, ($F_{(4-445)} = 1.876$; $p > .05$; $\eta^2 = .017$).

Findings Regarding the Fifth Research Question

The fifth research question of the study was formulated as follows: Does a statistically significant relationship exist between the Fear of Missing Out (FoMO) and levels of academic procrastination? The Pearson correlation coefficients concerning this relationship are presented in Table 10.

Table 10. Correlation between FoMO levels and academic procrastination behaviors

	Academic Procrastination
FoMO	0.233**

**0.01 (statistically significant)

Table 10 displays statistically significant yet weak positive links emerged from the Pearson analysis, confirming that FoMO and academic procrastination are interconnected constructs within the high school cohort, $r(448) = .23$, $p < .01$, 95% CI [.14, .32]. This result indicates that FoMO and academic procrastination share approximately 5% common variance ($r^2 = .05$).

DISCUSSION

By aligning the study's results with established scholarly work, this section offers a critical analysis of how social media-induced FoMO influences academic procrastination among high school learners. The discussion draws on existing empirical evidence to contextualize the variations found in procrastination behaviors according to different variables.

Regarding the first objective of the study, the findings indicate that high school students experience Fear of Missing Out (FoMO) at a relatively low level. Although FoMO research spans a wide age range, existing studies have largely concentrated on undergraduate populations, resulting in limited empirical evidence concerning adolescents in secondary education (Groenestein et al., 2024). In contrast to the moderate FoMO levels frequently reported among university students (Hoşgör et al., 2017), the lower levels observed in the present study may reflect the more structured academic and social environments of high schools, which potentially constrain constant digital monitoring and reduce the autonomy driven pressures characteristic of higher education contexts. From a contextual perspective, this finding may also suggest that high school students' digital engagement is more externally regulated by school routines, parental monitoring, and institutional expectations, which may buffer against the continuous connectivity pressure commonly observed in university settings. Accordingly, this result underscores the importance of extending FoMO research to younger populations to better capture its developmental and contextual dimensions.

When demographic variables were considered, FoMO levels displayed selective sensitivity rather than uniform variation. Consistent with some prior studies, female students reported significantly higher FoMO scores than their male counterparts (Balıcı & Bal, 2022; Beyens et al., 2016; Kartol & Peker,

2020; Özdemir, 2024; Sarıtaş, Balcı, & Solak, 2024); however, the broader literature remains inconclusive, as several studies have reported no gender based differences (Ciritbeyi, 2024; Arslan, 2024; Ünübol & Sayar, 2020; Coşkun & Karayağız Muslu, 2019; Hoşgör et al., 2017), and others have even suggested higher FoMO levels among males (Przybylski et al., 2013). From an interpretive standpoint, these inconsistencies indicate that observed gender differences should not be viewed as inherent or deterministic, but rather as reflections of socially patterned digital behaviors and interaction norms during adolescence. In this respect, males' greater tendency to use digital platforms for initiating new interactions and females' more frequent use of these platforms to maintain existing relationships (Mazman & Usluel, 2011; Herring & Kapidzic, 2015) may partially account for the variability in reported FoMO levels. From a developmental perspective, adolescence is marked by heightened needs for social recognition and belonging, and digital platforms play a central role in identity formation during this period (Güney & Taştepe, 2020; Oberst et al., 2017), which may explain why FoMO emerges as a shared psychosocial experience across genders despite observed mean differences.

In contrast, FoMO levels did not differ significantly across grade levels, aligning with the limited body of research suggesting that age or academic progression alone may not be a decisive determinant of FoMO (Al Nasah & Shadid, 2024). While some studies have reported grade specific variations in both high school and university settings (Taş, 2022; Çınar & Mutlu, 2018), the absence of such differences in the present study supports the view that FoMO is more strongly rooted in individual psychological needs and contextual factors than in chronological age (Przybylski et al., 2013). This finding may suggest that FoMO represents a relatively stable psychosocial experience throughout the high school years, rather than a phenomenon that systematically intensifies or diminishes in parallel with grade progression. School type, however, emerged as a meaningful contextual variable, with students attending Social Sciences High Schools (SSHS) reporting significantly higher FoMO levels than those in AHS and VTAHS. This finding contrasts with several recent studies reporting non significant institutional differences (Arslan, 2024; Özdemir, 2024; Taş, 2022), yet it resonates with evidence suggesting that educational contexts emphasizing social engagement and current affairs may intensify sensitivity to digital connectedness (Çapuk, 2025). From an interpretive perspective, the higher FoMO levels observed among SSHS students may reflect an academic and social climate that places greater emphasis on social awareness, interpersonal engagement, and current events, potentially amplifying students' sensitivity to digital social cues.

The empirical data demonstrates a moderate prevalence of academic procrastination among the sampled learners, suggesting that academic procrastination is a common but not extreme phenomenon. This finding is broadly congruent with existing literature reporting similar moderate trends in secondary education (Demir, 2024; Kamas, 2024; Çetin, 2016). Comparable results have been observed in both high school and university populations (Ozer, 2009; Çayır, 2024), although some studies have reported higher levels of procrastination (Gürültü & Deniz, 2017), while others have identified relatively low

levels in higher education settings (Rahayu et al., 2024). Taken together, these findings suggest that academic procrastination is best understood not as a pathological deviation, but as a situationally moderated and developmentally common behavior during adolescence. From an interpretive perspective, the persistence of moderate procrastination levels across diverse samples may reflect a dynamic interplay between individual characteristics (e.g., motivation and self-regulation) and contextual demands, rendering single-factor explanations insufficient for capturing its multifaceted nature. Accordingly, the relative empirical consistency in moderate prevalence rates underscores the importance of developing awareness-based and preventive intervention programs aimed at strengthening students' self-regulatory capacities rather than treating procrastination as an isolated behavioral deficit.

With respect to demographic variables, academic procrastination behaviors displayed a notable invariance across gender, grade level, and school type, suggesting that these structural characteristics exert limited explanatory power. The absence of a significant gender effect aligns with wide array of empirical evidence indicating that gender is not a decisive predictor of academic procrastination (Klassen & Kuzucu, 2009; Ak Yıldız, 2024; Demirel, 2024), despite some studies reporting higher tendencies among males (Gürültü, 2016; Arslan, 2013). From a conceptual standpoint, these inconsistencies reinforce the view that procrastination is not rooted in gender itself, but rather reflects broader individual differences in motivation, self-regulatory skills, and environmental influences (Özer, 2009; Demir, 2024). Similarly, the lack of grade-level differences corresponds with findings reported by Ak Yıldız (2024), Kara & Yıldırım (2020), and Yiğit & Dilmaç (2011), even though other studies have identified grade-specific fluctuations (Çetin, 2016; Ekinci, 2011; Kamas, 2024). This pattern may indicate that academic procrastination represents a relatively stable behavioral tendency throughout the high school years, shaped more by enduring psychosocial and contextual factors than by academic seniority alone.

In parallel, academic procrastination did not vary significantly across school types, despite minor descriptive differences. Although previous studies have reported school type based variations in academic procrastination (Ekinci, 2011; Kamas, 2024; Akdemir, 2013), the absence of statistically significant differences in the present study may reflect shared structural and contextual pressures within the Turkish secondary education system, such as the centralized examination framework and standardized academic expectations. These systemic similarities may limit the influence of institutional characteristics, leading to relatively homogeneous academic stressors and coping behaviors among students across different school types (Akdemir, 2013). Consequently, these findings suggest that interventions targeting academic procrastination may be more effective when designed at a system wide or skill based level rather than being tailored exclusively to specific school categories.

Digital-age issues, specifically social media dependency and the Fear of Missing Out (FoMO), have emerged as focal points of intensive academic inquiry over the past decade (Shuvo, 2024). The

current study identifies a statistically significant, albeit weak, positive correlation between high school students' FoMO levels and their academic procrastination behaviors. Although the strength of this association is modest, it nonetheless indicates that FoMO functions as a meaningful, albeit limited, risk factor within adolescents' academic self-regulation processes. This suggests that as students' anxiety regarding missed social opportunities intensifies, their likelihood of engaging in academic procrastination similarly increases. From an interpretive perspective, this relationship may reflect the way persistent connectivity concerns divert attentional and motivational resources away from academic tasks, thereby increasing susceptibility to delay behaviors.

A review of the literature offers multifaceted insights into this dynamic. Manap et al. (2024) highlight a predictive pathway between social media-driven FoMO and procrastinatory habits, noting that internet addiction acts as an aggravating factor that strengthens this association. This line of evidence suggests that FoMO may indirectly undermine time management and task prioritization skills, rendering students more vulnerable to postponing academic responsibilities. Furthermore, Wang et al. (2019) discuss how sensation-seeking traits exacerbate smartphone addiction and trigger procrastination, with FoMO serving as a key mediating variable in this process. Additionally, the interplay between FoMO, self-control, and parenting styles has been shown to influence procrastination levels (Putri & Dewi, 2023). Taken together, these findings indicate that the impact of FoMO on academic behavior should not be interpreted in isolation, but rather as part of a broader network of internal self-regulatory mechanisms and external contextual influences that jointly shape adolescents' academic functioning.

CONCLUSION and RECOMMENDATIONS

The results of this study reinforce the theoretical connection between social media-induced FoMO and academic procrastination, contributing to the field through a direct assessment of these dynamics among participants in high schools. Consequently, the observed weak correlation suggests that while FoMO exerts a limited direct influence on academic procrastination, it remains a factor that warrants scholarly attention. These results imply that FoMO may not be a dominant predictor in isolation; rather, its impact is likely mediated and shaped by a nuanced interplay of internal self-regulatory mechanisms (e.g., self-control and self-regulation) and external environmental pressures (e.g., parenting styles, social media, and smartphone addiction). Therefore, addressing academic procrastination requires a holistic perspective that integrates digital anxieties like FoMO within the broader framework of a student's psychological and social ecosystem.

Limitations of the Study

Despite its contributions, the present study has several limitations that should be acknowledged when interpreting the findings. First, the sample was drawn from high school students in a single city, which may limit the generalizability of the results to adolescents in different geographical, cultural, or

socio-economic contexts. Therefore, the findings should be interpreted as reflecting a specific educational and regional setting rather than the entire high school population. Second, the study employed a cross-sectional research design, which precludes causal interpretations of the relationships identified between Fear of Missing Out (FoMO) and academic procrastination. While significant associations were observed, longitudinal designs would be necessary to clarify the directionality and developmental dynamics of these relationships over time. Third, the reliance on participants' self-perceptions introduces a potential for inaccurate reporting, particularly as individuals may subconsciously align their answers with prevailing social norms or expectations. Although the instruments used demonstrated strong psychometric properties, future research could benefit from incorporating multi-method approaches, including behavioral indicators or qualitative data. Finally, the present study focused on FoMO and academic procrastination without directly examining other potentially influential variables, such as smartphone addiction, academic stress, parenting styles, or self-regulation skills. Integrating these dimensions into subsequent inquiries would facilitate a more nuanced exploration of the hidden drivers that shape the procrastinatory habits of today's youth..

Future Research Directions

To further augment the contemporary discourse in this field, the study puts forward several methodological and conceptual pathways for future scholarly exploration. First, given the scarcity of data regarding FoMO levels in secondary education and the lack of consensus on gender-based differences, further interpretive and qualitative studies are needed to explore these phenomena beyond mere demographic variables. Although no significant variance was found across grade levels, conducting research in diverse geographical locations and employing longitudinal designs would be instrumental in understanding how FoMO and academic procrastination evolve from high school through university years. Moreover, the higher FoMO levels observed in Social Sciences High Schools, alongside the descriptive (though not statistically significant) differences in Vocational and Science High Schools, warrant further investigation. Future studies should employ qualitative methodologies to uncover the underlying socio-cultural and academic factors driving these institutional disparities. Ultimately, identifying the mediating roles of self-regulation and gender-based socialization remains crucial for a more comprehensive understanding of how digital anxieties translate into specific procrastinatory behaviors.

Regarding practical applications, it is recommended that educators and school counselors develop proactive interventions to mitigate the impact of digital anxieties on academic life. Since Social Sciences High School students exhibited higher FoMO levels, specialized guidance programs focusing on conscious social media consumption should be prioritized in these institutions. Furthermore, given that academic procrastination persists at a moderate level regardless of gender or grade, schools should implement comprehensive time management and self-regulation workshops. These initiatives should adopt a holistic approach by involving families in counseling sessions to address motivational issues

and enhance students' organizational capacities. Ultimately, schools should conduct awareness-raising activities to help students recognize the negative effects of FoMO on their academic performance and provide them with concrete strategies to minimize digital distractions, thereby fostering a more focused and productive learning environment.

Additional Declaration

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Author Contributions

In this study, the contribution of the authors was equal; both authors contributed equally to the development of the research idea, data analysis, writing and proofreading stages.

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Responsible Artificial Intelligence Statement

In this study, artificial intelligence tool Grammarly was utilized for language editing and linguistic refinement. We declare that we, as the authors, take full responsibility for the problems that may arise from the content produced by artificial intelligence.

Conflicts of Interest

The authors declare that there are no conflicts of interest related to the publication of this study.

Ethics Approval

In all processes of this study, the principles of Pen Academic Publishing Research Ethics Policy were followed.

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