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NAVIGATING THE DIGITAL TIDE: EXAMINING THE STRESSOR–STRAIN–OUTCOME MODEL OF SOCIAL MEDIA STRESSORS IN PREDICTING ACADEMIC RESILIENCE AMONG UNIVERSITY STUDENTS

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ABSTRACT

Resilient students are more likely to attain higher grades, complete their studies on time, and develop stronger problem-solving and critical-thinking skills, making academic resilience a key predictor of both short-term and long-term academic success. Yet, the means through which excessive social media use shapes or undermines academic resilience remain largely underexplored, particularly among undergraduate university students. This study utilizes the stress-strain-outcome framework (S-S-O) to examine the structural relationships among social media overload as an environmental stressor, psychosocial well-being as a strain, and academic resilience as an outcome among Lebanese university students. Using a quantitative research approach, data was collected from 327 students across three large universities in Lebanon, representing a mix of disciplines and demographic backgrounds. Structural Equation Modeling (SEM) and multiple regression analysis were employed to test the relationships between communication overload, information overload, psychological well-being, social well-being, and academic resilience. Findings reveal a significant negative impact of both information overload and communication overload on students' academic resilience. Psychological well-being and social well-being were identified as key mediators, buffering the detrimental effects of social media overload. These results highlight the importance of addressing digital overload in educational settings to enhance students' academic outcomes and mental health. The study offers valuable insights for educators and policymakers to develop strategies that reduce the adverse effects of social media on students.

KEYWORDS: Social Media Overload, Academic Resilience, Information Overload, Psychological Well-being, Communication Overload.

1. INTRODUCTION

Renowned for their determination and aspirations (Callard, 2018; Szabó-Morvai & Kiss, 2024), Lebanon's students are now confronted with an unprecedented convergence of crises that threaten both their academic progress and mental well-being. In one of the Middle East's most unstable contexts, university students have endured severe psychological trauma, ranging from heightened stress and anxiety, to memory difficulties alongside widespread displacement and disruptions to their studies caused by damaged infrastructure and unsafe learning environments (Abdallah et al., 2026). With many universities closing, students are struggling to secure both safe housing and a supportive educational setting, as the ongoing conflict and overlapping crises impose profound psychological and physical burdens. These challenges are increasingly compounded by the effects of excessive social media use. In times of crisis, students often rely heavily on digital platforms for news updates, emotional support, and peer interaction. However, constant exposure to distressing content, misinformation, and negative comparisons amplifies stress and anxiety, further undermining their mental health. Instead of serving solely as a coping mechanism, excessive engagement with social media often contributes to sleep disturbances, academic distraction, and heightened feelings of insecurity and hopelessness (He et al., 2019). Thus, the intersection of ongoing national crises and overreliance on social media creates a double burden that threatens both the well-being and academic resilience of Lebanon's youth.

Social media's rapid ascent has transformed global communication, engagement, and information availability. The "drowning in data" conundrum is caused by social media's information overload. González-Ibanez (2022) notes that contemporary search engines might upset even tech-savvy community developers. Social media provides fast connections and information. Binge eating, misleading information, and mental health issues increase, particularly among college students. Recent technological advances have emphasized the necessity to rethink social media's role in society. Social media is highly influential among younger generations, especially college students, in Lebanon, a diverse country with many cultures and socioeconomic strata. As of early 2023, Lebanon had an estimated 4.91 million social media users, representing about 90.5% of the total population (Bashir et al., 2024). A meta-analysis of 45 studies connected high social media use to memory, mental health, loneliness, and alexithymia. The YIAT identified 16.8% of students are addicted to social media (Younes, 2016). Technology is used for socializing, classroom collaboration, and political engagement by this age group. Given how widespread social media is in students' lives, it's important to understand its multifaceted effects on academic performance, social behavior, and health. Online peer pressure, social media addiction, and academic distraction are overemphasized in current research. There is a lack of comprehensive understanding on the impact of excessive usage of social media on Lebanese students, particularly on their academic progress and resilience. This study seeks to address that gap by focusing on the education context, examining the mechanisms through which communication and information overload affect students' academic resilience, highlighting these as potential drawbacks of excessive social media use among students in Lebanon. The study's findings may help educators, politicians, and parents navigate the digital age's opportunities and hazards.

Despite its prevalence, communication studies have no standard definition of "social media". Clear theories about its uses and consequences have been slow to develop due to this lack of clarity. Carr and Hayes (2015) describe social media as an online community where individuals may produce and share content with many audiences, communicate two-way, and design their online identity. Over 60% of the world's population uses social media daily for communication and collaboration, (Lipschultz, 2023; Okonkwo & Awad, 2023). While political mobilization, democracy, corporate promotion, and public relations often rely heavily on social media, excessive personal use can have significant drawbacks. Social media overload may cause stress, poor decision-making, and too much information, communication, and system features (Raza et al., 2020). According to the person-environment fit hypothesis, overload occurs when coping capacities are insufficient to meet environmental demands (Edwards & Cooper, 1990). Social media has expanded tech use and requires constant monitoring over informational and social demands, causing emotional and physical stress (Shi et al., 2020).

Excessive use of social media and other digital devices can negatively affect the mental health of teenagers and youth (Awang Kader, 2022; Hall, 2021; Hefner & Vorderer, 2016), causing anxiety, poor self-esteem, unhappiness, and loneliness (Lin et al., 2020; Smith et al., 2021). Defined as the capacity to recover swiftly from stress is crucial to mental health after

suffering, resilience helps youth manage stress, improving their health and happiness. Meta-analyses indicate that resilience and mental health are often strongest following significant adversity, suggesting that experiencing stress is essential for building resilience. Resilience is crucial not only for individual well-being but also for societal stability, particularly in the context of challenges such as the COVID-19 pandemic (Versteeg & Kappe, 2021).

Despite high levels of engagement in classroom communication and collaboration, as well as in news consumption and global interaction, little is known about how social media affects the academic resilience of Lebanese students. To address this gap, the current study investigates how social media overload affects students' academic resilience via the psychological and social well-being, aiming to shed light on the broader educational and psychological implications of this growing phenomenon**.** This study is guided by the following core research question (1) What is the effect of communication and information overload on the psychological and social well-being of undergraduate Lebanese students? (2) In what ways does social media overload influence the academic resilience of Lebanese undergraduate students? (3) To what extent do psychological and social well-being mediate the relationship between social media overload and academic resilience among Lebanese undergraduates? The premise that undergraduate students' psychological and social well-being is influenced by excessive social media use provides a valuable and important research perspective for examining how these aspects of well-being affect academic resilience. Academic resilience, an essential component of student performance and engagement, reflects students' capacity to cope with academic stress, maintain engagement, and achieve learning outcomes despite adversity. Research indicates that resilient students are more likely to attain higher grades, complete their studies on time, and develop stronger problem-solving and critical-thinking skills, making academic resilience a key predictor of both short-term and long-term academic success. Extensive research underscores the pivotal role of social networking in modern education, revealing its capacity to significantly enhance and accelerate learning by facilitating connections with diverse learning groups and institutions (Grieve, 2013; Baym, 2012). Through these connections, students gain access to the latest information, efficiently solve problems, and exchange ideas online, thereby increasing their engagement and driving their motivation to showcase their abilities. Additionally, social networking empowers learners to tailor their educational experiences to their needs and fosters meaningful interactions beyond the classroom, creating a collaborative and dynamic learning environment (Helm, 2017). Social media, coined in 1994, has become integral to daily life, offering unique avenues for interaction and learning that extend beyond traditional classroom settings (J. B., 2010). Researchers such as Grieve (2013) and Baym (2012) highlight the educational benefits of social networking, emphasizing enhanced learning engagement and collaborative opportunities among students (Helm, 2017). Platforms like Facebook and Twitter further facilitate interactive learning experiences (Roblyer et al., 2010; Forkosh-Baruch & Hershkovitz, 2012). Conversely, ethical concerns surrounding social media use emerge, including distractions from academic goals and exposure to misinformation and cyberbullying (Salo et al., 2020). Studies indicate detrimental effects on mental health, with excessive use linked to anxiety, depression, and social isolation (Bonni, 2023). Accordingly, this study aims to examine the structural relationships among communication overload (CO) and information overload (IO) as primary social media stressors, psychological well-being (PWB) and social well-being (SWB) as key strain variables, and students' academic resilience (AR) as a detrimental outcome, using data from undergraduate students enrolled in Lebanese universities.

2. THEORETICAL AND CONCEPTUAL FRAMEWORK

The stressor–strain–outcome (SSO) model provides a framework for understanding stress, defining stressors as environmental stimuli that trigger stress, strains as the psychological and behavioral responses to these stressors, and outcomes as the effects of these strain. Information overload occurs when the amount of information exceeds a person's processing capacity whereas communication overload arises when communication demands exceed their abilities (Shi et al., 2020). Drawing on the Stress-Strain-Outcome (S-S-O) framework (Koeske, 1993), this study examines how information and communication overload from social media impact students' academic resilience. Accordingly, stressors such as information overload and constant connectivity through social media platforms create psychological strain and disrupt students' cognitive-emotional balance (Cheung & Tang, 2010; Tang, 2016). These challenges may lead to techno-exhaustion, invasion of privacy, and reduced academic outcomes among students who are overwhelmed by digital stimuli. Koeske's (1993)

three-layered S-S-O model provides a structured approach to understanding how stressors manifest in students' lives and influence their academic outcomes. By exploring the interplay between stress, strain, and academic resilience, this framework illuminates the complex relationship between social media use and students' well-being.

2.1. Stressor–Strain Relationship: Link between Information Overload and Students' Psychological and Social Well-being

Psychological well-being plays a crucial role in predicting undergraduates' academic performance. Research by Michell (1999) emphasizes the importance of psychological factors across various disciplines, highlighting challenges in measuring these traits quantitatively. Wong et al. (2014) critiques social sciences for their methodological limitations, which persist today, influencing fields like education and health sciences. These challenges are exacerbated for undergraduates who face significant academic and social transitions (Chen & Zhou, 2019), impacting their psychological well-being and academic success (Porter, 2024). High dropout rates among undergraduates are often linked to psychological conditions such as anxiety and depression (Posselt, 2021), affecting academic performance globally, including in regions like West Africa (Shabbir, 2011). In medical education, emotional intelligence is increasingly recognized as vital for future healthcare professionals (Johnson, 2015), influencing qualities such as empathy and leadership skills critical for patient care. Understanding and nurturing these psychological attributes are essential for improving educational outcomes and preparing competent healthcare professionals. The concept of information overload has become increasingly significant as societies and institutions rely more on information for progress and understanding. Defined broadly, information overload occurs when individuals receive more data than they can effectively process, leading to cognitive challenges in filtering relevant from irrelevant information (Sevinc & D'Ambra, 2004). Social media plays a pivotal role in the lives of undergraduates, offering benefits such as academic enhancement and social connectivity. However, excessive social media use has been associated with mental health issues including anxiety, depression, and decreased academic performance (Varghese & Pistole, 2017). This is particularly pertinent in Lebanon, where undergraduates are highly engaged with social media, potentially exacerbating mental health challenges (Sposky, 2004). Depression, characterized by persistent feelings of sadness and loss of interest, has been linked to social media usage patterns among undergraduates (Scherr & Brunet, 2017; Ophir, 2017). It negatively impacts psychological and social development, hindering academic and personal growth (Prisniakova et al., 2023). Social media's impact on undergraduates is underscored by the Social Impact Theory, which posits that individuals are influenced by the behaviors and opinions of others in their social network (Latané, 1981). As undergraduates engage extensively with social media, they are both influenced by and influencers within their networks, shaping their social and psychological well-being (Nowak et al., 1990). Therefore, we hypothesized our H1a and H2b as,

H1a: There is a statistically significant relationship between information overload and students' psychological well-being.

H1b: There is a statistically significant negative relationship between information overload and students' social well-being.

2.2. Stressor–Strain Relationship: Link between Communication Overload and Students' Psychological and Social Well-being

Communication overload, akin to information overload, occurs when individuals are inundated with excessive communication demands that exceed their capacity to effectively engage (Karr-Wisniewski & Lu, 2010). Meier (1963) and Chung & Goldhaber (1991) provided foundational studies on communication overload, highlighting its effects on work performance and stress levels. This phenomenon is exacerbated in the context of social media, where constant interaction can lead to social fatigue and reduced productivity among undergraduates (Speier, 1999). Undergraduates often experience social media fatigue due to the overwhelming nature of continuous communication and interaction demands (Dhir et al. 2019). This can lead to disruptions in their daily routines and exacerbate feelings of stress and anxiety (Norman, 1975). Moreover, social media platforms facilitate the constant sharing of personal information and interactions, contributing to a sense of comparison and potential inadequacy among users (Joinson, 2008). This comparison can lead to lower self-esteem and increased psychological distress, particularly among undergraduates who spend significant time on these platforms (Chen & Lee, 2013). Undergraduates experience significant challenges due to communication overload, particularly through social media, which often exceeds their cognitive capacities, leading to what is termed as

social media overload (Barley, 2011). This phenomenon contributes to heightened social and psychological strain among users. Excessive social connections and tasks on social media platforms lead to increased time and effort investment, causing work burnout and fatigue (Gaudioso et al., 2017). Smartphone and mobile email use further blurs personal and professional boundaries, exacerbating stress (Barley, 2011). Increased exposure to social media exposes users to a multitude of communications, including irrelevant messages and solicitations for sympathy, contributing to perceived stress levels (Krasnova et al., 2010). This social stimulation leads to social overload, where individuals feel overwhelmed by the constant need for interaction (McCarthy & Saegert, 1978). On social media platforms, users receive numerous notifications and updates, intensifying feelings of social overload similar to real-world demands but amplified by online interactions (Evans, 1993). Despite these challenges, social media offers opportunities for undergraduates to build social capital beneficial connections and resources obtained through networks like Facebook, which enhance psychological well-being such as self-esteem and life satisfaction (Ellison et al., 2011; Johnston et al., 2013; Paxton, 1999). However, over-reliance on digital platforms can diminish academic and analytical skills as students increasingly depend on easily accessible online information, potentially limiting their ability to conduct independent research (Akram & Kumar, 2017). Moreover, excessive digital engagement reduces face-to-face interactions, impairing crucial interpersonal skills essential for professional settings, a concern highlighted by employers (Kumar, 2025). Therefore, we hypothesized our H2a and H2b as,

H2a: There is a statistically significant relationship between communication overload and students' psychological well-being.

H2b: There is a statistically significant relationship between communication overload and students' social well-being.

2.3. Link between Psychological and Social Well-being amid Exposure to Social Media Overload

Excessive social media usage among university students has been significantly associated with declines in both psychological and social well-being. Research by Versteeg and Kappe (2021) highlighted that increased exposure to social media content can exacerbate stress and anxiety, negatively impacting students' mental health and impairing their ability to form meaningful social connections. Similarly, findings from Azazz (2025) indicated that information overload stemming from constant social media engagement exacerbates feelings of isolation and depression among students, further hindering their social well-being. These psychological challenges make it increasingly difficult for students to build supportive peer networks. Additionally, a study published in BMC Psychology (2023) demonstrated that while social media usage is positively correlated with self-esteem and online social support, these benefits are mediated by the quality of interactions. Negative experiences, such as cyberbullying, can significantly undermine the positive effects of social media, thus posing risks to students' mental and social health. Consequently, while social media provides valuable avenues for connection, its excessive use without mindful engagement can lead to detrimental effects on students' mental and social well-being.

H3: There is a relationship between students' psychological well-being and students' social well-being.

2.4. Strain–Outcome Relationship: Link between Psychological Well-being and Academic Resilience

Resilience is widely recognized as a valuable asset that enhances various aspects of an individual's life, including academic achievement, overall well-being, and personal happiness (Bartley, 2024). Todd and Kashdan (2022) state that resilience is an important aspect of obtaining a satisfactory degree of psychological wellness. Within the context of academia, academic resilience is crucial as it enables students to effectively navigate and overcome the challenges they encounter during their educational journey. This resilience has been consistently linked to better academic performance and overall success at university (McLa□erty, 2012). Academic resilience encompasses the ability to adapt positively in the face of academic challenges and setbacks. Scholars such as Masten et al. (1990) and Riley (2005) define resilience as the capacity to maintain cognitive function and positive mental development despite adverse conditions. It involves not only bouncing back from difficulties but also thriving and growing amidst challenges (Breen, 2019). Research underscores the critical role of academic resilience and emotional intelligence in enhancing students' academic outcomes. Studies by Romano et al. (2021), and Sarrionandia et al. (2018) highlight how these attributes help students manage stressors, maintain motivation, and respond adaptively to academic

pressures. Academic resilience is influenced by various factors. For instance, individuals with high levels of academic self-efficacy, self-esteem, and long-term goals are better equipped to navigate academic challenges effectively (Gordon, 1996). These factors provide a foundation for students to persevere in the face of setbacks and setbacks and maintain a positive outlook on their academic journey.

H4: There is a positive relationship of statistical significance between students' psychological well-being and students' academic resilience.

2.5. Strain–Outcome Relationship: Link between Social Well-being and Academic Resilience

Academic resilience, crucial for navigating academic challenges, is influenced by both internal traits and external factors. Internal factors such as self-esteem, enthusiasm, and focus play a significant role, while external factors including social support from family, peers, instructors, and the broader community also contribute significantly (Thomson et al., 2015). Social support, defined as comfort, care, esteem, or assistance available to individuals, enhances resilience by helping students effectively cope with academic stress and challenges (Saam, 2010). Perceived social support, in particular, fosters feelings of acceptance and belonging, crucial for resilience in challenging academic environments (Sarafino & Smith, 2014). Family, peers, and instructors provide essential social environments that influence students' academic resilience. These relationships offer support, encouragement, and a sense of security that help students navigate academic difficulties and maintain motivation (Vedder, 2006). Anticipated social support motivates students to persist in the face of obstacles, contributing to higher academic achievements (Dupont et al., 2015). This form of support also enhances social interactions and assists individuals in managing adversity effectively (Cohen, 2014). The interaction between undergraduates' social well-beings and academic resilience underscores the importance of supportive environments and positive relationships in fostering student success. Various frameworks, such as those by Alva (1991), and Waxman (2003), define academic resilience as the ability to achieve academic success despite social challenges and adversity. Additionally, concepts like "grit" (Duckworth et al., 2007; 2013) and "mindset" (Dweck, 2006-2010) highlight the importance of perseverance and growth-oriented attitudes in fostering resilience and academic success (Snipes, 2012; Farrington et al., 2012). The interaction between undergraduates' social well-beings and academic resilience underscores the importance of supportive environments and positive relationships in fostering student success.

H5: There is a positive relationship of statistical significance between students' social well-being and students' academic resilience

Accordingly, the study develops the following four mediated hypotheses:

H6a: Psychological Well-being mediates the relationship between Information Overload and Students' Academic Resilience

H6b: Students' Psychological Well-being mediates the relationship between Communication Overload and Students' Academic Resilience

H6c: Social Well-being mediates the relationship between Information Overload and Students' Academic Resilience

H6d: Social Well-being mediates the relationship between Communication Overload and Students' Academic Resilience.

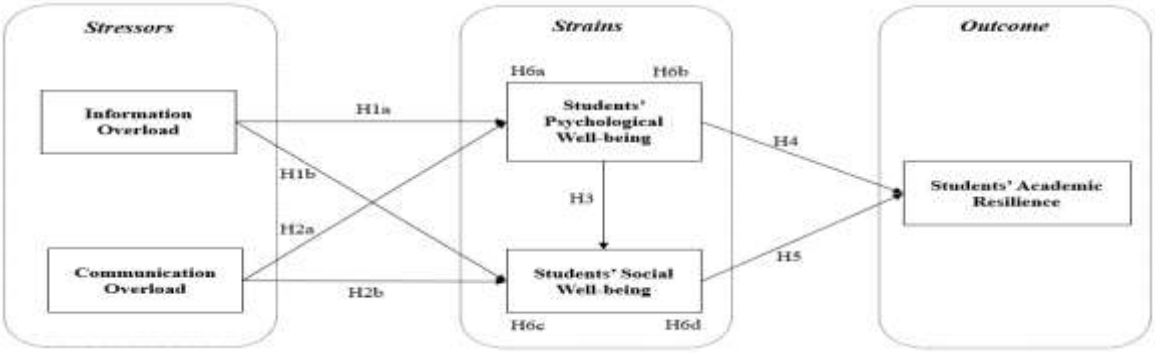

Figure 1: Conceptual Model

Figure 1 illustrates the conceptual model of the study, which is structured into three domains

stresses, strains, and outcomes. The model shows the relationships between social media overload as a stressor, the psychological and social well-being as strains, and academic resilience as the outcome.

3. METHODOLOGY

3.1. Study Population and Data Collection

A survey research design was adopted, that included undergraduate students from three large universities in Beirut, including students from diverse backgrounds, academic specialties, economic levels, and age-group. It comprised students from arts, sciences, business, and engineering to ensure that the study's findings were applicable across diverse academic areas. The study used stratified random sampling to ensure a fair representation of years and disciplines of study in the final data collection. The students were grouped by academic year and major (arts, sciences, engineering, business). Stratification ensured that all demographic groupings were well-represented and that the final sample appropriately mirrored all three schools' student populations. Statistical power analysis required a 327-undergraduate sample size to ensure credibility and applicability. Data for this study were collected through an online survey designed using Google Forms, which was distributed to students via URL links. The survey was open during Spring 2024 – 2025 to allow sufficient time for responses. Participation in the survey was voluntary, and students were informed about the study's purpose and the confidentiality of their responses through an informed consent form that preceded the survey. To ensure the reliability and clarity of the survey instrument, a pilot study was conducted with 45 students from the same universities before the full-scale data collection began. The pilot study aimed to test the survey's structure, wording, and reliability. Feedback from the pilot participants was used to refine the survey, rephrase any ambiguous or unclear questions, and eliminate any repetitive items. The pilot study also helped to assess the reliability of the scales used in the survey, which were adapted from established instruments measuring constructs like information overload, communication overload, social well-being, psychological well-being and academic resilience.

3.2. Study Instruments

The survey instrument consisted of a structured questionnaire divided into several sections, each designed to measure a key construct of the study. These constructs included Information Overload (IO), Communication Overload (CO), Social Well-being (SWB), Psychological Well-being (PWB), and Academic Resilience (AR). The items in the questionnaire were adapted from validated scales used in previous research, ensuring that the instrument would capture the relevant variables accurately. Each section contained statements that respondents rated on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), providing a detailed measure of students' experiences with social media and their academic resilience. Communication Overload was measured using a total of four items, adapted from Yu et al. (2019). Sample items included "I feel that I generally receive too many notifications on new postings, push messages, and news feeds, among others from social media as I perform other tasks"; "I often feel overloaded with social media communication". Information Overload was measured using a total of three items, adapted from Yu et al. (2019). Sample items included "I am often distracted by the excessive amount of information in social media"; "I am overwhelmed by the amount of information that I process on a daily basis from social media". Students' psychological wellbeing was measured using five items derived from Jiao et al. (2017). Sample items included "I lead a purposeful and meaningful life with the help of others," "My social relationships are supportive and rewarding in social media. Students' social wellbeing was measured using the Social Well-being Scale Short-Form (SWS-SF) (Keyes, 1998). The scale included 15 items designed to measure social well-being based on the five dimensions indicating how individuals appraise circumstances and functioning in society, namely, social integration, social contribution, social coherence, social actualisation and social acceptance. Sample items included; "I do not feel that I belong to anything that is called a community"; "My community is a source of comfort". Students' academic resilience was measured using the ARS MCV (Cassidy, 2016), using 18 items as adapted by Cui at al. (2023). ARS MCV is a context-specific instrument concerning three domains of academic resilience (cognitive, affective, and behavioral). Sample items included "I would use the feedback to improve my work"; "I would reflect on the possible problems in my learning methods". Participants received a detailed informed consent form before the survey.

3.3. Data Analysis and Results

SPSS was used to analyze the data. Descriptive statistics including means, standard deviations, and frequency distributions summarized participant characteristics and survey responses. The hypotheses

were tested using Pearson correlation, multiple regression, and mediation analysis. Structural Equation Modeling (SEM) assessed the model's fit and complex variable interactions.

Table 1: Demographic Statistics.

Variable	Category	Frequency (No)	Percentage (%)
Gender	Female	130	39.8
	Male	177	54.1
	Undefined	20	6.1
Age	18–19	50	15.3
	20–21	119	36.4
	22–23	108	33.0
	Others	50	15.3
Nationality	Lebanese	290	88.7
	Non-Lebanese	37	11.3
University Type	Private	194	59.3
	Public	133	40.7
Social Media Usage	Yes	166	50.8
	Somehow	70	21.4
	No	67	20.5
	Cannot decide	24	7.3

Table 1 depicts the sample distribution, where 39.8% of participants are female, 54.1% are male, and 6.1% identify as undefined gender. The age distribution reveals that 15.3% of participants are between 18–19 years old, 36.4% are 20–21 years old, 33.0% are 22–23 years old, and 15.3% fall into other age categories. A significant majority of respondents (88.7%) are Lebanese, while 11.3% are non-Lebanese. In terms of university type, 59.3% attend private institutions, while 40.7% are enrolled in public universities. Regarding social media usage, 50.8% of students report frequent usage, 21.4% moderate usage, 20.5% minimal usage, and 7.3% could not decide their level of engagement.

Table 2: Descriptive Statistics.

Construct	Min	Max	Mean	Std. Dev.	Cronbach's Alpha	Sample Size per Item
Information Overload	1	5	3.32	0.80	0.86	327
Communication Overload	1	5	3.37	0.91	0.88	327
Social Well-being	1	5	3.42	0.95	0.89	327
Psychological Well-being	1	5	3.02	0.88	0.90	327
Academic Resilience	1	5	2.91	0.86	0.85	327

Table 2 depicts the descriptive statistics, which indicate that the constructs of Information Overload and Communication Overload have means close to 3.32 and 3.37, respectively, with moderate standard deviations (0.80 and 0.91). This suggests a consistent perception of overload among participants. Social Well-being has a slightly higher mean of 3.42 and a standard deviation of 0.95, reflecting a moderate level of variability in perceptions. Psychological Well-being shows a mean of 3.02 with a standard deviation of 0.88, indicating a moderately high perception of Psychological Well-being. Academic Resilience, with a mean of 2.91 and a standard deviation of 0.86, is somewhat lower, suggesting that students experience moderate challenges in students' academic resilience. Cronbach's alpha values for all constructs range from 0.84 to 0.90, demonstrating good internal consistency and reliability for the scales used.

Table 3: Pearson Correlation Matrix.

Variable	Information Overload	Communication Overload	Social Well-being	Psychological Well-being	Academic Resilience
Information Overload	1.00				
Communication Overload	0.50**	1.00			
Social Well-being	-0.25**	-0.42**	1.00		
Psychological Well-being	-0.28**	-0.38**	0.40**	1.00	
Academic Resilience	-0.40**	-0.50**	0.43**	0.56**	1.00
Significance levels for correlations (e.g., $p < 0.01$).					

Table 3 depicts the Pearson correlation matrix, which reveals several significant relationships among the variables. Information Overload is moderately positively correlated with Communication Overload (r = 0.50) and negatively associated with Social Well-being (r = -0.25), Psychological Well-being (r = -0.28), and Academic Resilience (r = -0.40), indicating that higher levels of

information overload are linked to lower psychological well-being. Communication Overload shows a similar pattern, with moderate negative correlations with Psychological Well-being (r = -0.38) and Academic Resilience (r = -0.50), and a stronger negative correlation with Social Well-being (r = -0.42). Social Well-being is positively correlated with both Psychological Well-being (r = 0.40) and Academic Resilience (r = 0.43), suggesting that stronger social well-being contributes positively to psychological well-being and academic success. Psychological Well-being is also positively correlated with Academic Resilience (r = 0.56), highlighting the importance of psychological well-being in fostering resilience. All correlations are statistically significant at the $p < 0.01$ level.

Table 4: Multiple Regression Analysis (Direct Effects).

Hypothesis	Relationship	Beta	t-Statistic	p-Value	Result
H1a	IO → PWB	-0.26	-4.25	< 0.01	Supported
H1b	IO → SW	-0.22	-3.80	< 0.01	Supported
H2a (Direct)	CO → PWB	-0.34	-5.02	< 0.01	Supported
H2b (Direct)	CO → SW	-0.40	-6.19	< 0.01	Supported
H3	PWB → SW	0.41	6.12	< 0.01	Supported
H4	PWB → AR	0.45	7.01	< 0.01	Supported
H5	SW → AR	0.38	5.64	< 0.01	Supported
Where: IO = Information Overload; CO = Communication Overload; PWB = Psychological well-being; SW = Social well-being; AR = Academic Resilience					

Table 4 provide insights from the multiple regression analyses showing that all supposed direct relationships (H1a–H5) were statistically significant and confirmed down to $p < 0.01$. First, Information Overload (IO) has a significant negative impact on Psychological Well-being (PWB) ($\beta = -0.26$, $t = -4.25$, $p < 0.01$) which confirmed H1a. This implies that the greater the information overload, the worse the psychological well-being of students. In the same way, Information Overload (IO) negatively affects Social Well-being (SW) ($\beta = -0.22$, $t = -3.80$, $p < 0.01$) which confirmed H1b, showing that students' social well-being is diminished by too much information. Moreover, CO shows an even greater negative effect on well-being. CO also shows significant and negative impact on Psychological Well-being (PWB) ($\beta = -0.34$, $t = -5.02$, $p < 0.01$), which confirmed H2a and indicates that the more communication is needed, the worse the mental health of students. In addition, CO is significant and negatively impacts Social Well-being (SW) ($\beta = -0.40$, $t = -6.19$, $p < 0.01$), which confirmed H2b. This is, unsurprisingly, the greatest negative impact in the model which implies that communication overload is the greatest factor in detriment to students' social functioning. Here we elaborate on the model relationships and well-being and resilience positive relationships. Psychological Well-being (PWB) is influenced by Social Well-being (SW) ($\beta = 0.41$, $t = 6.12$, $p < 0.01$), supporting H3. Thus, students with greater psychological health have stronger social well-being. Furthermore, Psychological Well-being (PWB) positively influences Academic Resilience (AR) ($\beta = 0.45$, $t = 7.01$, $p < 0.01$), supporting H4. This is the most significant positive relationship in the model indicating psychological well-being is significant in developing students' coping skills with academic challenges. Social Well-being (SW) is also positively influences Academic Resilience (AR) ($\beta = 0.38$, $t = 5.64$, $p < 0.01$), supporting H5. Thus, students with greater social well-being are more academically resilient. It has been established with these hypotheses (H1a, H1b, H2a, H2b, H3, H4, H5) that Academic resilience is positively influenced by psychological and social well-being and that Information and Communication Overload negatively and significantly affect the aforementioned well-being.

In the mediated analysis presented in Table 5, Psychological Well-Being (PWB) and Social Well-Being (SW) results show all indirect effects (H6a–H6d) to be significant at $p < 0.01$. To begin with PWB, the mediation of the connection between Information Overload (IO) and AR is significant ($\beta = -0.12$, $t = -3.60$, $p < 0.01$), thereby confirming H6a. The negative effect suggests that as IO increases, PWB decreases, and in turn AR decreases. In support of H6b, it should also be noted that Psychological Well-Being (PWB) significantly mediates the association between Communication Overload (CO) and AR ($\beta = -0.15$, $t = -4.10$, $p < 0.01$). The assertion made is that communication overload demonstrates a decline in the psychological well-being of students, and therefore also in the AR. Moreover, it is worthy to mention that the mediation effect of PWB is stronger in the case of CO compared to IO.

Moreover, Social Well-being (H6c) mediates Information Overload (IO) and Academic Resilience (AR) ($\beta = -0.08$, $t = -2.95$, $p < 0.01$). This indicates that excessive information negatively affects students' social well-being and therefore lessens Academic Resilience. Besides this, Social Well-being also mediates Communication Overload and Academic Resilience (H6d) ($\beta = -0.15$, $t = -3.85$, $p < 0.01$). This demonstrates that communication overload leads to a decline in students' social well-being, which consequently reduces their academic resilience. Psychological Well-Being and Social Well-Being are significant mediating variables between Information Overload, Communication Overload, and Academic Resilience. All mediation hypotheses (H6a, H6b, H6c, and H6d) are confirmed, indicating that the effect on academic resilience occurs through overload combined with psychosocial well-being.

Table 5: Mediation Analysis

Hypothesis	Independent Variable	Mediator	Dependent Variable	Indirect Effect (β)	t-Value	p-Value	Result
H6a	IO	PWB	AR	-0.12	-3.60	< 0.01	Supported
H6b	CO	PWB	AR	-0.15	-4.10	< 0.01	Supported
H6c	IO	SW	AR	-0.08	-2.95	< 0.01	Supported
H6d	CO	SW	AR	-0.15	-3.85	< 0.01	Supported

Table 6: SEM Model Fit Indices

Fit Index	Value	Recommended Threshold
Chi-Square (χ^2)	145.32	$p > 0.05$
CFI (Comparative Fit Index)	0.94	> 0.90
RMSEA (Root Mean Square Error of Approximation)	0.05	< 0.08
TLI (Tucker-Lewis Index)	0.92	> 0.90

Table 6 presents the Structural Equation Modeling (SEM) fit indices indicate that the model fits the data well. The Chi-Square value of 145.32 suggests an acceptable fit, as the p-value is greater than 0.05. The Comparative Fit Index (CFI) is 0.94, which exceeds the recommended threshold of 0.90, indicating a good fit. The Root Mean Square Error of Approximation (RMSEA) is 0.05, which is below the threshold of 0.08, suggesting a close fit between the model and the data. Finally, the Tucker-Lewis Index (TLI) is 0.92, which also exceeds the recommended threshold of 0.90, further supporting the adequacy of the model fit. These indices collectively suggest that the SEM model is a robust representation of the relationships in the study.

4. DISCUSSION

The study on the impact of social media overload on academic resilience among Lebanese undergraduates provides several critical insights into the relationship between digital stressors and students' academic and psychological well-being. This research contributes to the existing body of literature by examining the effects of excessive social media usage within the context of Lebanon, offering a nuanced understanding of how communication and information overload influence students' academic resilience through psychological well-being. The results of this study both support and extend previous research, offering new perspectives on how these overloads interact with students' academic and psychosocial well-being. Results align with Raza's et al. (2020) results who found that university students' life happiness and psychological well-being are significantly affected by social media overload. Fu et al. (2020) and Shi et al. (2020) showed that social media overload hurts academic achievement, emphasizing the need to prevent information and communication overload. This study extends on prior research by seeing overload as a combination of connected but different stressors, including information and communication overload, to better understand how these variables affect students' health. This study contributes to the field by studying how social and psychological factors influence academic resilience. Instead of studying the causes of social media overload and low academic outcomes, where previous research treated it as an outcome, this study's mediation analysis found social and psychological well-being factors mediating communication overload and academic resilience. Communication overload affects students' academic resilience and psychological factors like anxiety and stress. This suggests that students who encounter greater communication overload may struggle with psychological well-being and academic issues, which might affect their academic resilience. The study's results help us understand how students' social support system and psychological well-being affect their academic achievement. Academic resilience

was favorably connected with psychological well-being related various factors, but social factors like social support were also important. In their COVID-19 epidemic study, Versteeg and Kappe (2021) stressed the importance of social support and resilience in preventing academic stress and depression. Furthermore, the experiences of Lebanese students, particularly in relation to social media overload, are shaped by a unique set of socio-political and cultural factors that distinguish them from their counterparts in Western or Asian contexts. Beyond the geopolitical instability that Lebanon faces, which undeniably amplifies stressors like displacement, infrastructure challenges, and personal insecurity (El Hajaly, 2023; Zreik, 2024), Lebanese students are also deeply influenced by their socio-cultural environment (Ghazal et al., 2024; Danageuzian et al., 2025). The significant reliance on social media as both a coping mechanism and a primary source of information in Lebanon (Al Zoubi, 2023), due to limited access to reliable news outlets and ongoing socio-political turmoil, exacerbates the impact of communication and information overload. This phenomenon is further intensified by the country's high levels of political engagement and activism among youth, which leads to greater exposure to emotionally charged content and heightened online interaction (Melki & Kozman, 2021). In contrast to Western or Asian contexts where social media is more commonly used for entertainment or educational purposes, Lebanese students face a compounded effect of digital stressors as they navigate the dual burden of academic challenges and socio-political instability (Gonzales, 2021). This creates a unique environment where the negative impact of social media overload on academic resilience is amplified, making it crucial to consider these specific contextual factors when interpreting the results of the study.

6. CONCLUSION

This study addresses the impact of social media overload on Lebanese students, filling a gap in the literature. Unlike previous studies that focused on Western or technologically advanced countries, this research sheds light on Lebanese geopolitical and cultural challenges faced by students. First, it examines how social media overload affects academic resilience in Lebanon's universities, this study fills a gap in the literature. Communication and information overload predicted psychological well-being difficulties and worse academic resilience, showing that Lebanese students are especially vulnerable to social media overload. This research also expands the theoretical boundaries of Stressor-Strain-Outcome (SSO) model, which has been widely used to study digital stressors' effects on wellbeing. This approach has been used to analyze how overload impacts occupational stress and productivity (Koeske, 1993; Shi et al., 2020), but this research views information and communication overload as different but linked pressures. The study's mediation analysis shows how overloads affect students' academic outcomes. Research reveals that psychological and social health regulate the relationship between communication overload and academic resilience, affecting students' academic resilience. Psychological well-being through factors such as social support should be prioritized in academic performance efforts, particularly given growing social media usage. These variables matter, and university's digital welfare needs to be highlighted. Social media may lead to digital tiredness and burnout, but it also improves communication and information availability. Similar to previous research, social media addiction may cause depression, anxiety, and loneliness (Bonni, 2023; Lin et al., 2020). However, this research shows how these negative effects accumulate over time, affecting students' academic outcomes. By illustrating how psychological and social qualities mediate overload and academic resilience, the study emphasizes the need for targeted interventions.

7. THEORETICAL AND MANAGERIAL IMPLICATIONS

Previous studies on the impact of information and communication overload's consequences on students' well-being and academic outcomes has largely examined these pressures in isolation. By treating information and communication overload as distinct but connected issues, this research aggregates our understanding of current student concerns. It gives a deeper theoretical study of digital stress by showing how an overload in one domain (like communication) may increase the effects of an overload in another (like information), creating a vicious cycle of stress that attacks academic resilience. The study also advances resilience theory by examining how social and psychological variables affect resilience. Resilient adolescents can endure scholastic demands, but this research shows that psychological factors including stress, anxiety, and emotional well-being buffer the link between digital stresses and academic resilience. This study also expands the person-environment fit hypothesis for digital contexts. This theory states that stress occurs when a person's coping skill is insufficient to meet

environmental demands. Since students' emotional and psychological resources can't handle digital interaction and information, social media overload lowers academic resilience, according to this study. This relationship expands person-environment fit theory by showing how digital settings, including social media, may overburden students' and affect their academic outcomes and psychological well-being. Furthermore, since most digital stressor research has focused on Western contexts, this study contributes to the theoretical understanding of social media's role in Lebanon's students' well-being. This study fills a gap in the literature by focusing on Lebanon and revealing socio-cultural issues like students' high social media usage. This contextualization illuminates Lebanon's social media dynamics and its impact on students' academic resilience, providing theoretical insights for regional and global digital stress research.

8. PRACTICAL CONTRIBUTIONS

From a practical perspective, the study offers valuable data that higher education policymakers and administrators may employ to reduce student social media overload. A major finding of the research is that communication and information overload harms students' well-being and academic outcomes. Since social media is becoming more integrated into students' lives, universities should help them manage their use to prevent overload. One way may be to develop campaigns alerting students about the consequences of social media overuse and giving advice on healthy technology use. Digital health lectures at colleges and universities may help students manage their time online while doing schoolwork. University administrators may consider offering psychological and psychological well-being counselling to assist students deal with social media stress. Furthermore, anxiety and stress reduce academic resilience, hence improving students' psychological well-being may improve academic resilience. Therapy, stress management, and digital overload coping skills may help students. Digital weariness may be more common during stressful academic periods like tests, thus this may be useful. Psychological well-being should also address students' social media issues to prepare them for today's digital classroom. Students need better social support and psychological well-being counselling at universities. This will help students handle social overload from constant web use. This study suggests that students who have survived digital overload should aid others via peer mentoring programs funded by colleges and institutions. If this occurs, social media-related loneliness and isolation may decrease. University students with strong social networks may be better equipped to manage academic challenges.

9. FUTURE RECOMMENDATIONS

Future studies should focus on longitudinal studies to examine the long-term effects of social media overload on students' well-being and academic resilience. This would show how digital stressors affect students' academic achievement throughout schoolwork. Since usage patterns and pressures vary across platforms, future study may examine how different social media sites affect academic resilience. Expanding the sample to include students from different countries is necessary to study social media overload in diverse cultures. Digital literacy, resilience, and emotional management therapies may help students' academic performance and health by lowering the negative effects of social media overload.

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