

**THE PSYCHOLOGICAL IMPACT OF SOCIAL MEDIA ON UNDERGRADUATE STUDENTS WITH SOCIAL ANXIETY: LITERATURE REVIEW****<sup>1</sup>Sun Ximeng, <sup>1</sup>Albattat Ahmad, <sup>2</sup>Asad Ur Rehman Sadiq and <sup>2</sup>Norhidayah Azman**<sup>1</sup>Graduate School of Management, Post Graduate Centre, Management and Science University, University Drive, Off Persiaran Olahraga, Section 13, 40100, Selangor, Malaysia<sup>2</sup>Faculty of Business Management and Professional Studies, Management and Science University, University Drive, Off Persiaran Olahraga, Section 13, 40100, Selangor, Malaysia**Received 11<sup>th</sup> July 2023; Accepted 20<sup>th</sup> August 2023; Published online 22<sup>nd</sup> September 2023**

---

**Abstract**

Social media is increasingly becoming a tool the public uses, providing convenience to individual's lives. Concurrently, previous studies have thoroughly investigated its potential impacts, mainly focusing on psychological well-being. Among these user segments, undergraduate students acknowledged as dedicated social media users, have garnered considerable scholarly attention. The main objective of this research is to further our comprehension of the complex correlation between psychological impact, social media involvement and social support. This study provides a practical reference for undergraduate student's psychological well-being and university management, aiming to address social anxiety among undergraduate students from psychological impact and social media use, which is relevant for undergraduate students' self-formation and college construction. This study will explore loneliness, self-esteem, fear of negative evaluations, social media use, and social support as observational factors contributing to undergraduate students' social anxiety. The foundational framework of this research is rooted in the self-determination theory, which underscores the importance of personal autonomy in decision-making and fulfilling psychological needs.

**Keywords:** Loneliness, Self-esteem, Fear of negative evaluations, social media use, social support, social anxiety.

---

**INTRODUCTION**

As Internet technology advances, social media is gradually becoming indispensable for daily communication (Abbas, Aman, Nurunnabi & Bano, 2019). As of December 2022, a report by the China Internet Network Information Centre revealed that over 99.8% of Internet users in China use mobile devices to access the Internet (Pang, Zhang, Guo, Yang & Qi, 2023). In the new media era, social media has transformed communication and information-sharing methods (Sapountzi, 2018). Simultaneously, the emergence of social media has significantly impacted the younger generation, particularly undergraduate students who have grown up in the era of the internet and social media. These individuals frequently refrain from social situations due to concerns spawned by social media usage. Additionally, they face various challenges associated with internet and social media usage (Baltaci, 2019). This phenomenon can be explained by social media, which provides users with autonomy and social freedom (Zsido, Arato, Lang, Labadi, Stecina & Bandi, 2021). The increase in social media use has raised concerns about its capacity to induce social anxiety (Jiang & Ngien, 2020). Social anxiety disorder is the third most prevalent psychological problem, following depression (17.4%) and alcohol dependency (14.1%). It should be noted that social anxiety disorder is significantly higher at 11.98% during adolescence (Yu, 2017). Within China, a survey among undergraduate students in Daqing found an 8.89% incidence of social anxiety disorder (Luan, Cao, Zhou, Yang & Yang, 2014).

Social anxiety disorder is a neurological disorder characterized by a transient and irrational fear or anxiety towards external factors or situations. This condition is not self-controlled, and the sufferer is often aware of its irrationality. Patients with social phobia often present with increased anxiety and significant autonomic nervous system symptoms, and the condition is chronic and may lead to misery. The patient usually tries to avoid the anxiety-provoking object or situation or faces it with fear (Baidu Library, 2022 ; Avcı, Dinç & Üztemur, 2023). Some studies have shown that communication through electronic media such as social media does not seem to directly trigger social anxiety compared to face-to-face communication (Eriksson, Lindner & Mörtberg, 2020). There is a relationship between online social anxiety, self-expression on social media, and the frequency of social networking. Social media self-expression plays a mediating role in online social anxiety, influencing the frequency of social network interactions (Zeng, 2022). Social anxiety might be related to the influence of friends on social media, fear of missing out on information, and online interactions (Hampton, Rainie, Lu, Shin, & Purcell, 2015). However, it has also been argued that social media can cause people to avoid social interactions and interfere with developing social communication skills, exacerbating anxiety. Individuals with social anxiety often display similar behavior on social media, which could potentially show observers their social anxiety tendencies. Therefore, online communication might lead to greater anxiety than offline communication (Wang & Zhang, 2020). Individuals with high levels of anxiety often engage in safety behaviors when using social media, such as deleting hashtags or monitoring the social media behavior of others (Carruthers, Warnock-Parkes & Clark, 2019). Higher social anxiety is associated with lower perceived risk when communicating online. However, there is still a gap regarding exploring the

---

**\*Corresponding Author: Albattat Ahmad,**

Graduate School of Management, Post Graduate Centre, Management and Science University, University Drive, Off Persiaran Olahraga, Section 13, 40100, Selangor, Malaysia.

psychological impact of social media on undergraduate students with social anxiety. Previous studies have proved that social media is associated with social anxiety, self-esteem, fear of negative evaluations, loneliness, and social support, which significantly supports the subsequent unfolding of this study (Lai, Wang, Zhang, Shan, Chen & Tian, 2023; Packer & Flack, 2023; Chang, Jixia, & Shen, 2023; McLaughlin & Sillence, 2023; Yang, Zhu & Hu, 2023).

College years are a critical period in the personal development of undergraduate students, involving rapid physiological and psychological changes and adapting to new environments within a finite timeframe. Furthermore, effective communication and interaction pervade all facets of undergraduate life, and it holds significance for students (Luan, Zhan-Ling, Mi, Ying, Lan & Tong, 2022). In general, undergraduate students are characterized by their autonomy and self-confidence and their ability to self-present and self-manage (Hajure & Abdu, 2020). However, during adolescence, social anxiety can surface in the form of delivering speeches or presentations in front of an audience, which is particularly prevalent in undergraduate students (Fahri Akçakoyun, 2018). Undergraduate students are a demographic with a high incidence of social anxiety. The primary factors contributing to the prevalence of social anxiety among undergraduates are exams, presentations, parental anger, language barriers, criticism in front of others, exaggerated protection, abuse, and family provocation (Desalegn, Getinet & Tadie, 2019). In addition, the rise in social anxiety is linked to being a first or only child, studying medical technology, being female, being younger, working in a particular profession, being unmarried, having a mental disorder, and having a positive family history of the condition (Alsaraireh, Althnaibat, Leimoon, Al-Mrayat & Al Dalaeen, 2023). In China, undergraduate students' psychological well-being is predominantly taught and managed from psychological, physiological, and social perspectives (Fan, 2019). However, compared to other countries, the management of psychological well-being among undergraduates and the corresponding research in China started late and required additional improvements in associated evaluations (Wang & Zhang, 2020). In addition, further research must be undertaken to properly decipher particular methodologies, experiences, relevant guidance, and impartial viewpoints. The study presents risk factors concerning psychological well-being based on the present state of social media use among Chinese undergraduate students (Holmberg, Berg, Dahlgren, Lissner, & Chaplin, 2019; Packer & Flack, 2023). This can aid in tackling the concerns relating to "social media use" among present-day undergraduate students. Chinese colleges ought to concentrate on the psychological well-being of their students in contemporary society (Wang, Huang, Yuan & Wu, 2023, June).

While it is true that some studies have provided evidence for the correlation between social media and social anxiety among undergraduate students, it is important to address a few remaining concerns. Firstly, a proportion of students may still require some time to adapt to utilizing new digital communication platforms for socializing. It has been confirmed that excessive social media use or the fear of not having a mobile phone (nomophobia) can lead to psychological repercussions for undergraduate students (Tung, Gan, Chen, Ruckwongpatr, Pramukti, Nadhiroh, ... & Griffiths, 2022). Secondly, the experience of social anxiety in new media environments is affected by different related factors. Previous

research has proposed interventions and highlighted the significance of an integrated approach (Yu, Li, Xiao, Li, Wang, Liu, ... & Wan, 2023). Some students cannot adapt to some functions of social media activities because changes in some factors affect their cognition of themselves (Yang, Holden, Carter & Webb, 2018). It may become a factor that hinders their life, or it may be the reason for the decreasing depression, anxiety, and happiness (Hunt, Marx, Lipson & Young, 2018). Social media might cause psychological problems for the new generation of students. This research will address these issues that benefit undergraduate students' psychological well-being (Benjamin & Potts, 2018; Ugwu, Idemudia, Chukwu & Onyedibe, 2023). Relevant college departments should focus on a motivational system to improve undergraduate students' psychological well-being. It is noted in an Egyptian survey that a sudden discomfort with independent living could cause high rates of social anxiety among undergraduate students after a long period of dependence on the family for financial support (Rabie Shorab, ElGabry, Aziz, Sabry, Aufa, ... & Nagy, 2019).

Combined with previous research, we conclude that psychological factors such as loneliness, self-esteem, and fear of negative evaluations are closely related to undergraduate students' psychological well-being, especially social anxiety (Li, Jia, Wang, Zhang & Chen, 2023; McLaughlin & Sillence, 2023). In addition, social media use as a mediator and the moderating role of social support has been well-established in previous related studies. Thus, the present study utilized these factors to construct a conceptual Framework. However, the comprehensive investigation of these variables' cumulative impact and interaction concerning social anxiety among undergraduate students has not yet been undertaken, mainly attributable to the inadequacy of an overarching research framework (Moreton, Kelly & Sandstrom, 2023). Therefore, in-depth research must combine these factors and examine how they interact to influence college students' social anxiety. As the main theory of this study, self-determination theory is commonly used to study the psychological well-being and behavior of individuals, especially the regulation of psychological needs (autonomy, competence, and relatedness) (Avc *et al.*, 2023). Furthermore, although previous research has established that all variables in this study can be supported by self-determination theory (Huésca, Moreno-Murcia, 2017), the specific role and moderating mechanisms of self-determination theory in the theoretical framework of this study have not yet been fully applied and explored.

## LITERATURE REVIEW

### Social Media Use

Based on Web 2.0 technologies and concepts, social media offers a platform for content creation and user interaction (Hou, Zhao, Su, Rong, Situ & Cui, 2022). Users can share different information like videos, images, and text on social media. Moreover, social media disseminates trending topics and social dynamics, gradually supplanting traditional media (Wumbie, Issah & Issifu, 2023). According to some statistics, most people spend more than two hours daily on social media (Arpaci & Aslan, 2023). Social media has significantly impacted interpersonal communication and information dissemination, breaking down temporal and geographical barriers and enabling the reception and creation of information anytime, anywhere (Shahwan, 2023). It enhances human

communication and overcomes traditional communication patterns' limitations, facilitating effective communication (McFarland & Ployhart, 2015). However, some people use social media to avoid socializing in real life to reduce their social stress (Xiao, Xu & Wang, 2016). Furthermore, the dimensions of social media use have been examined and validated regarding gender, education level, family background, and emotional state. Meanwhile, time investment, number of followers, use of different social media accounts, and various platforms have also been explored (Huang, 2021). Caplan (2006) investigated the association among social media use, loneliness, and insecurity, revealing that cognitive attitudes and preferences are behavior indicators (Andreassen, 2015). In addition, using Facebook as a case study, Ellison et al. (2007) analyzed social media use in terms of the intensity of use and relationship establishment or maintenance (Titilope & Muritala, 2023). Some studies classify social media use behavior into two dimensions: one based on user perceptions, for example, examining the preference of adolescents for mobile social network; the other examining the extent of use, such as the frequency of use and the addictiveness of the network (Jiang, Bai, Bai, Wu, 2019). Combining these two types of research, Zhou (2009) defines social media use behavior as a form of interaction between personal intensity of use and preference (Chen, 2022).

### **Social Anxiety**

Social anxiety is an easily overlooked neurological disorder yet significantly correlates with other mental health conditions. Left untreated, it might escalate the risk of other mental health disorders. The detrimental impact of social anxiety disorder on individuals and society should not be underestimated; it can diminish work proficiency, deteriorate academic achievement, induce financial dependence, and negatively affect quality of life. However, the symptoms and causes of social anxiety have been complicated by the rise of social media and changes in socialization patterns (Lipsitz & Schneier, 2000). It has been reported that approximately 12-14% of undergraduate students in China experience high levels of social anxiety (Lai, Wang, Zhang, Shan, Chen & Tian, 2023). Social media has become the primary mode of communication for undergraduate students. Research has indicated that undergraduate students who spend more time on social media platforms, such as Instagram, tend to experience more severe symptoms of anxiety and depression (Jiang & Ngien, 2020). It is crucial to note that a distinction exists between shyness and social anxiety. Heiser et al. (2009) discovered that individuals who suffer from social anxiety experience various negative encounters, such as cognitive distortions, fear, avoidant behaviors, and physical reactions. In contrast, reserved individuals do not have the same experience; although they consider themselves more introverted, they do not feel as intimidated in social situations as people with social anxiety disorder. Moreover, retiring individuals typically possess more social skills than those with social anxiety disorder, with more deficiencies in this field. These differences and other symptoms might suggest the presence of specific anxiety disorders in moderate populations (Epkins & Heckler, 2011; Ostrander, 2021).

### **Loneliness**

Loneliness is a psychological reaction when a person feels rejected or isolated from the external environment. Occasional

or short-term experiences of loneliness have minimal impact on individuals (Hutten, Jongen, Vos, van den Hout & van Lankveld, 2021). However, prolonged loneliness can significantly affect physical and psychological well-being, potentially leading to psychological disorders like anxiety, sadness, and depression (Käll, Shafran, Lindegaard, Bennett, Cooper, Coughtrey & Andersson, 2020). Letitia Anne Peplau and Daniel Perlman defined loneliness as an unpleasant and distressing subjective experience and emotion in 1982 (Perlman, Peplau & Goldston, 1984). Individuals who experience loneliness often hold themselves or others harshly and do not have adequate social skills to engage in healthy social interactions (Heinrich & Gullone, 2006). It is essential to research loneliness to determine its impact on individual well-being and promote effective interventions to mitigate its adverse effects (Anand & Mishra, 2021). Young individuals, including undergraduate students, experience a transitional phase in their lives where they confront multiple challenges that demand resolution independently, separated from the support of family and friends (Heinrich & Gullone, 2006; Vasana, Eikelis, Lim & Lambert, 2023). Consequently, this group is particularly at high risk for psychological well-being problems and loneliness (Vasana, Eikelis, Lim & Lambert, 2023). In a 2018 study conducted in Australia, 51% of adults reported feeling lonely at least one day per week (Abbott, Lim, Eres, Long & Matthews, 2018). Furthermore, among undergraduate students, studies have confirmed an association between loneliness and perceived stress (Stoliker & Lafreniere, 2015; Padmanabhanunni, Pretorius & Isaacs, 2023).

### **Self-esteem**

Self-esteem is the subjective evaluation and perception of an individual's internal worth, competence, and general social status, reflecting an evaluation of the social status manifested through self-worth and performance (Tarawneh, Tarawneh, Sulaiman, Alnasraween & Nawafleh, 2023). Additionally, self-esteem includes an emotional response arising from the expectation of respect by society, others, and groups (De Witte & Van Regenmortel, 2019). Self-esteem plays a crucial role in individuals' beliefs, motivations, and social interactions. It is considered a key determinant of mental health, primarily formed through social comparisons. It develops primarily through social comparison and originates from various sources, such as personal achievement, social comparison, external feedback, and cultural norms (Ollivaud, Galharret & Roussiau, 2023). Notably, the impact of self-esteem on overall psychological functioning is significant, whereby low self-esteem leads to feelings of intrinsic inadequacy, self-doubt, and vulnerability. In contrast, high self-esteem is strongly associated with greater psychological resilience, positive emotions, and personal efficacy. Self-esteem reflects the perception of intrinsic worth in individuals and profoundly affects the formation of self-concept (Cichocka, Marchlewska & Cislak, 2023). Numerous studies have shown a negative correlation between self-esteem as an indicator of self-worth and social anxiety disorder. Veissière and Stendel (2018) maintain that individuals who feel lonely and have low self-esteem are more likely to seek social approval through social media, establishing interactions that fulfill their desire to be recognized and appreciated by others (Smith, 2022). In online environments, individuals with low self-esteem often utilize self-presentation as a means of coping. This strategy enables them to manage how others perceive them and craft an online persona or image (Sun, Zhu & So, 2017; Smith, 2022).

## Fear of Negative Evaluations

"Fear of Negative Evaluations" pertains to anxiety and concern regarding negative evaluations or feedback others might have about a person (Liao, Xia, Xu & Pan, 2023). This apprehension might include worries regarding performance in social situations and fear of being criticized or judged by others (Li *et al.*, 2023). It may also include concern about potentially unfavorable assessments and could result in avoiding situations that might lead to negative evaluations (Portillo & Fernández Baena, 2020; Li, *et al.*, 2023). Apprehension of negative evaluations is often associated with social anxiety and self-esteem levels. Specific cognitive models suggest that social anxiety might be attributed, at least in part, to fear of negative evaluations and excessive self-concern (Clark & Wells, 1995; Rapee & Heimberg, 1997; Li, *et al.*, 2023). Fear of negative evaluations is frequently viewed as a multidimensional concept, with one dimension being "social appraisal worry", which refers to anxiety about being judged negatively by others. Another dimension is negative self-evaluation, which reflects anxiety about harboring negative self-evaluations and engaging in self-denial. These two dimensions are interconnected and significantly influence the comprehension of individuals' social interactions and psychological well-being (Kocovski & Endler, 2000). It has been suggested that "fear of judgment" is one of the contributing factors to the onset of social anxiety. This is where individuals worry about how they are viewed by others, leading to negative anxiety (Li, Xu & Cao, 2023).

## Social Support

Social support refers to the aid or assistance that individuals receive from others through genuine empathy, acceptance, or shared experiences (Moreton, Kelly & Sandstrom, 2023). Specifically, social support can be defined as the material and psychological resources a person receives from their social network to cope with stress effectively (Ledel, 2023). Hupcey (1998) has categorized social support into five definitions based on the nature of social support, the purpose or methods employed by the providers of social support, the individual perspective of the recipients of social support, the exchange of resources between the recipients and providers of social support, and the social network of relationships. This support might come from different sources such as spouses, partners, family, friends, colleagues, and professionals (Entilli, Leo, Aiolli, Polato, Gaggi & Cipolletta, 2023). A significant impact on perceived social support is the extent to which an individual is involved in different relationships or organizations (Jolly, Kong & Kim, 2021). Perceived social support encompasses a variety of psychological and material resources categorized into three main types: informational support, including advice and guidance provision; instrumental support, comprising material or financial resources provision, as well as assistance with daily tasks; and emotional support, involving empathy expression, reassurance provision, and enabling individuals to process their feelings (Nisbet, Jamshidi, Andrews, Stewart, Shields, & Teckchandani... & Carleton, 2023). Other studies have also classified social support into three types: perceived support, enacted support, and situational influence (Qin, 2015). Based on previous research, Zimet *et al.* (1988) described sources of social support and developed the Perceived Social Support Scale (PSSS) (Yenen & Carkit, 2023). The PSSS consists of three dimensions: friends, family, and other significant people. The scale is frequently used to evaluate a

comprehensive understanding of the social support system of an individual and applies to undergraduate students. (Wang, Cai, Qian, & Peng, 2014).

## Self-determination Theory

Desi and Ryan (1980) introduced the self-determination theory, which explains the motivational processes associated with self-determined behavior in humans. The theory highlights how the social environment augments intrinsic motivation, encourages the internalization of extrinsic incentives, and fosters individual well-being by satisfying three basic psychological needs: competence, autonomy, and relatedness (Montgomery, Montgomery & Montgomery, 2023). However, self-determination theories have yet to be as successful in China as in Western countries, even though they are effective in psychological well-being studies. This could be explained by the Chinese cultural tradition of emphasizing parental authority, which causes individuals to lean towards external control even as they age. (Khalid, Gao, Lianyu, Lu, Xiuyu & Tadesse, 2023). Moreover, the research on self-determination in China prioritizes theoretical development and requires more empirical studies to establish a fully rounded framework (Zhao, Zhang, Liu & Ding, 2016; Tao, Chen Qin & Cheng, 2023, May).

## METHODOLOGY

In terms of research methodology, this study details the application of various techniques to ensure the smooth running of the study. Furthermore, this study explores how data were collected, organized, and evaluated to meet our research objectives and address the issues. The section covers several sub-parts, including research design, primary and secondary data collection methods, sample construction, research instruments, structural measures, data processing, and data analysis. The study contains three independent variables: loneliness, self-esteem, and fear of negative evaluations. The dependent variable is social anxiety, considering social media use as a mediating variable and social support as a moderating variable.

## DISCUSSION

Currently, studies have revealed that social media can alleviate individual loneliness by fostering connections within the community (Hajek & König, 2021). However, excessive use of social media may detrimentally impact individuals' psychological well-being. For instance, social or digital media addiction has been shown to correlate with negative emotions (Tian, Bi, & Chen, 2023). Moreover, those experiencing loneliness perceive social media as enhancing their interaction opportunities and sense of belonging, inferring that loneliness is a pivotal risk factor and predictor for increased social media use (Boursier, Gioia, Musetti & Schimmenti, 2020). A study involving young individuals (including undergraduate students) indicated that those spending more time on social media often experience feelings of loneliness and lower happiness levels. Conversely, those experiencing loneliness tend to engage in social activities with like-minded individuals on social media, considering this mode of interaction as more friendly and comfortable (Bodhi, Singh & Joshi, 2022). The association between problematic internet use and loneliness has been substantiated, and this finding was corroborated by

other studies (Ceyhan & Ceyhan, 2008; Morahan-Martin, 2005). Synthesizing prior literature, despite evidence of a positive correlation between loneliness and social media use, Xu et al. (2012) found this relationship insignificant. Hence, despite compelling evidence, the precise interaction between loneliness and social media usage remains uncertain and subject to environmental influences (Bodhi, Singh & Joshi, 2022). Individuals with low self-esteem tend to enhance their engagement with social media, aiming for recognition and interactions to satisfy their yearning for approval and appreciation, thereby mitigating emotional distress tied to their self-esteem (Veissière & Stendel, 2018). Those with diminished self-esteem often extensively present themselves on social media platforms to garner acknowledgment from others (Ruan, Lu, Li, Lin, Li & Yuan, 2023). Compelling evidence establishes a link between low self-esteem and social media use (Sun *et al.*, 2017; Peris, de la Barrera, Schoeps & Montoya-Castilla, 2020; Smith, 2022). Recent findings indicate that specific dissatisfied adolescents tend to selectively unveil positive attributes, including attractive photos, on social media as a self-protective approach, aimed at restoring confidence and eliciting positive feedback, thereby fostering a constructive self-perception (Hollett, Panaia & Smart, 2023). These idealized self-protective motives correlate with advantageous outcomes (Xiao, Chu, Wang & Yang, 2021). Studies pertinent to undergraduate students additionally affirm a strong connection between self-esteem and social media use (Vagka, Gnardellis, Lagiou & Notara, 2023; Collates, 2023).

Individuals who harbor a fear of negative evaluations (FNE) often turn to social media platforms, perceiving them as safer and more conducive spaces compared to the real world (Casale, Akbari, Bocci Benucci, Seydavi & Fioravanti, 2022). The intersection of computer-mediated communication (CMC) and fear of negative evaluations (FNE) has been explored in terms of anxious communication tendencies, including shyness, social anxiety, and closeness, revealing a link between communication anxiety traits and social media behavior (Kelly, Keaten, & Millette, 2020). Moreover, the comfort level of posting content on various social media platforms can differ due to distinct usage patterns and motivations (Hayes *et al.*, 2016a; Alhabash & Ma, 2017). In the quest for understanding this phenomenon, research has shown that individuals valuing social connections may experience distress when these connections weaken. Their focus on social presence and relationships makes them exceptionally responsive to negative evaluations and the fear of rejection. These sensitivities significantly impact those struggling to establish connections on social media platforms (Lee, Chan, Lin, & Cheng, 2014). Individuals with high FNE tend to be sensitive to rejection and often resort to social media applications to alleviate these negative emotions (Ali, Ali, Iqbal, & Zafar, 2021).

The direct impact of social media on users' psychological well-being remains unclear. However, it has essential indirect consequences (Raza, Yousaf, Zaman, Khan & Core & Malik, 2023). Further research is needed, including on geographical aspects. Thorisdottir *et al.* (2019) explore the effects of social media by gender, with girls showing greater engagement, while the effects of active and passive engagement on the psychological well-being of adolescents remain understudied. Gilles (2020) reveals links between social media use, social well-being, anxiety, and depression. As the frequency of social

media use increases, the likelihood of anxiety and depression increases. The study suggests that social media may mediate social anxiety by weakening the protective role of natural interpersonal relationships through increased use (Dhir, Yossatorn, Kaur & Chen, 2018), despite the relatively weak mediating effect suggested by other variables (Gilles, 2020). In a Chinese survey, 48.89% of undergraduate students spend more than 3 hours on social media daily, indicating a solid addiction that might impact campus life (Shi & An, 2022). Excessive use of social media can crowd out sleep and face-to-face conversations, essential for mental well-being (Bae, 2023). The longer people engage in an activity, the stronger their dependence, increasing the risk of addiction (Huang, 2022). Research supports a positive relationship between social media addiction, social anxiety and time spent using social media (Kircaburun, Tosunt, Emirtekin, Bahtiyar & Griffiths, 2023).

Anxiety in undergraduate students might come from both internal and external factors (Hu, Zhang, He, Zhu, Shen & Liu, 2022). The causes of undergraduate students' psychological problems include interpersonal relationships, living environment, and learning methods (Liu, Guo & Xu, 2023). After entering college, students are separated from their family environment and gradually integrate into college life. Changes in interpersonal relationships, living environments, and learning methods can bring psychological problems for students (Chen, Fang & He, 2021). Through a sample survey and in-depth analysis of Chinese youth, Yang Qian's study showed that the causes of social media-induced social anxiety symptoms can be attributed to five aspects: social environment, technological factors, personal characteristics, social differentiation, and social environment. The study recommended changing communication styles and identifying patterns of difference (Yang, 2021). Previous research has emphasized social support as a moderating variable influencing the relationship between psychological factors such as stress and depression (Wang *et al.*, 2014). A strong social support network effectively enhances self-esteem and self-efficacy, alleviating negative emotions such as depression and anxiety. Under stress, social support reduces threats and a sense of reality and improves coping skills (Shrivastava & Desousa, 2016). Additionally, social support can provide individuals with problem-solving strategies to help mitigate the negative effects of psychological well-being (Wang *et al.*, 2014).

Social media use can reduce loneliness (Pittman, 2015). It positively impacts social support, self-esteem, well-being, and satisfaction (Carmel O'Rourke, Tovel, Raveis, Antler & Cohn-Schwartz, 2023, July). For example, young adults seek out recreational, social, and social interactions online to reduce feelings of isolation (Kraner, 2023). A study of Italian adults during the COVID-19 pandemic found an association between increased loneliness and isolation, increased levels of anxiety, and overuse of social media. The expected effect of loneliness on anxiety was amplified even after controlling for excessive social media use. Prolonged use of social media may be a common way for people to stay connected during a pandemic. However, for people with higher levels of loneliness, it might exacerbate anxiety and, therefore, be ineffective. This phenomenon reflects an individual's fear of the virus, not just the impact of social media (Schimment, Billieux & Starcevic, 2020). Individuals who frequently engage with social media often experience lower self-esteem and a heightened risk of

depression, potentially stemming from their effort to compensate for limited offline communication. However, this compensatory behavior does not necessarily improve overall well-being (Packer & Flack, 2023). In a related survey, participants recognized their reliance on social media and smartphones as integral to their peer interactions. They believed these platforms aided emotional regulation and enhanced emotional experiences. Nevertheless, social media use can trigger self-comparisons and judgments, contributing to self-esteem issues. The connection between excessive social media use and the pervasive digital environment is yet to be fully understood (Throuvala, Griffiths, Rennoldson & Kuss, 2019). A study focusing on Facebook revealed that individuals with higher levels of social anxiety were more prone to receiving 'likes' on the platform than those with lower social anxiety. This study underscores how social anxiety might reinforce the inclination to use social media platforms (Weidman, Fernandez, Levinson, Augustine, Larsen & Rodebaugh, 2012).

Individuals who fear negative evaluations are often prone to negative emotions (Heimberg, Brozovich & Rapee, 2010). Therefore, when these individuals are again confronted with negative emotions, rumination and digestion of these emotions may be exacerbated, increasing the likelihood of aggressive behavior. Negative affect is recognized as a critical component of mood and anxiety disorders (Watson, 2009), and the link between negative affect and problematic social media use supports previous research linking anxiety to problematic social media use (Elhai, Dvorak, Levine & Hall, 2017a). High anxiety attitudes about negative evaluations are associated with smartphone addiction (Wolniewicz, Tiamiyu, Weeks & Elhai, 2018), which can lead to negative emotions such as anxiety and depression. For adolescents, using social media is a convenient way to mitigate negative emotions and reduce their fear of negative comments in the real world. However, when adolescents express negative emotions online, they may be subjected to attacks from other users, such as insults and defamation, which can spill over into real life and escalate aggression (Chang, Yan & Shen, 2023). There is a significant association between fear of negative evaluations and problematic smartphone use, and fear of negative evaluations may be one of the motivating factors for problematic social media use as it is a compensatory coping mechanism (Wolniewicz *et al.*, 2018). However, a bivariate study confirmed that negative emotions were associated with problematic social media use, whereas fear of negative evaluations was not associated with social smartphone use (Wolniewicz *et al.*, 2018).

## Conclusion

The primary purpose of this study is to investigate the psychological impact of social media on undergraduate students with social anxiety. The psychological well-being of undergraduate students had a significant effect on the development of society. Therefore, social media, as a communication tool that can be used accessible from home, makes this study dedicated to contributing to the psychological well-being of undergraduate students while offering insights for college management. Based on previous studies, this study pays particular attention to the mediating role of social media use. Meanwhile, psychological factors, including loneliness, self-esteem, and fear of negative evaluations, as well as social support as moderators, play a vital role in the college

population. The literature review has validated the relationships between the variables addressed in this study, and self-determination theory provides strong support for analyzing these variables. However, previous studies have yet to fully delve into the intricate connections among these variables within a comprehensive framework. In addition, objective factors such as time and place in the current study might have biased the interpretation of these relationships in previous studies. Hence, the results of these studies are only informative for the recent study. Future studies should focus more on data collection design and population sampling conditions to obtain more accurate estimates.

## REFERENCES

- [1]. Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The impact of social media on learning behavior for sustainable education: Evidence of students from selected universities in Pakistan. *Sustainability*, 11(6), 1683. Retrieved from: <https://www.mdpi.com/2071-1050/11/6/1683/pdf>
- [2]. Pang, M., Zhang, Y., Guo, S., Yang, X., & Qi, X. (2023). Global Overview and Insights on Infodemiology and Infodemic Management. *China CDC Weekly*, 5(26), 579.
- [3]. Sapountzi, A., & Psannis, K. E. (2018). Social networking data analysis tools & challenges. *Future Generation Computer Systems*, 86, 893-913.
- [4]. Baltaci, Ö. (2019). The Predictive Relationships between Social Media Addiction and Social Anxiety, Loneliness, and Happiness. *International Journal of Progressive Education*, 15(4), 73-82. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ1224299.pdf>
- [5]. Zsido, A. N., Arato, N., Lang, A., Labadi, B., Stecina, D., & Bandi, S. A. (2021). The role of maladaptive cognitive emotion regulation strategies and social anxiety in problematic smartphone and social media use. *Personality and Individual Differences*, 173, 110647.
- [6]. Jiang, S., & Ngien, A. (2020). The effects of Instagram use, social comparison, and self-esteem on social anxiety: A survey study in Singapore. *Social Media+ Society*, 6(2), 2056305120912488.
- [7]. Xianglian Yu. (2017). Characteristic and neural mechanisms of attention bias and attention control in social anxiety individuals and the exploration on their relationship (Doctoral dissertation, Fujian Normal University). Retrieved from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CDFDLAST2018&filename=1018086663.nh>
- [8]. Luan, Y., Cao, J., Zhou, Y., Yang, J., & Yang, J. (2014). The prevalence rate and growth environmental factors of social anxiety disorder among Daqing college students. *Chinese Journal of Behavioral Medicine and Brain Science*, 793-796.
- [9]. Avcı, G., Dinç, E., & Üztemur, S. (2023). Sorry, I can't open my camera! social anxiety levels of prospective teachers in e-learning environments in the Covid-19 process.
- [10]. Eriksson, O.J., Lindner, P., & Mörtberg, E. (2020). Measuring associations between social anxiety and use of different types of social media using the Swedish Social Anxiety Scale for Social Media Users: A psychometric evaluation and cross-sectional study. *Scandinavian journal of psychology*.
- [11]. Zeng Hui (2022). The Relationship between Online Social Anxiety and Social Network Interaction—The



- Mediating Role of Self-Disclosure, *Advances in Psychology*, 12 (8), 2818-2825 <https://doi.org/10.12677/AP.2022.128336>
- [12]. Hampton, K. N., Rainie, L., Lu, W., Shin, I., & Purcell, K. (2015). Social media and the cost of caring. <https://www.pewinternet.org/2015/01/15/social-media-and-stress/>
- [13]. Wang Yiyun, Zhang, Mingxin, 2020(05). "Invisible" nervousness and uneasiness: social anxiety among WeChat friends. *Journalism Lover*. 49-54. DOI: 10.16017/j.cnki.xwzh.2020.05.012
- [14]. Carruthers, S. E., Warnock-Parkes, E. L. & Clark, D. M. (2019). Accessing social media: Help or hindrance for people with social anxiety? *Journal of Experimental Psychopathology*, 10, 1–11. <https://doi.org/10.1177/2043808719837811>
- [15]. Lai, F., Wang, L., Zhang, J., Shan, S., Chen, J., & Tian, L. (2023). Relationship between social media use and social anxiety in undergraduate students: mediation effect of communication capacity. *International journal of environmental research and public health*, 20(4), 3657.
- [16]. Packer, J., & Flack, M. (2023). The Role of Self-Esteem, Depressive Symptoms, Extraversion, Neuroticism and FOMO in Problematic Social Media Use: Exploring User Profiles. *International Journal of Mental Health and Addiction*, 1-15.
- [17]. Chang, H., Jixia, Y. A. N., & Shen, L. (2023). The relationship between fear of negative evaluation, family function, and adolescents' aggression: the mediating role of mobile phone addiction and rumination.
- [18]. McLaughlin, C. J., & Silience, E. (2023). Buffering against academic loneliness: The benefits of social media-based peer support during postgraduate study. *Active Learning in Higher Education*, 24(1), 63-76.
- [19]. Yang, X., Zhu, J., & Hu, P. (2023). Perceived social support and procrastination in undergraduate students: A sequential mediation model of self-compassion and negative emotions. *Current Psychology*, 42(7), 5521-5529.
- [20]. Luan, Y. S., Zhan-Ling, G., Mi, L., Ying, L., Lan, B., & Tong, L. (2022). The Experience Among Undergraduate students with Social Anxiety Disorder in Social Situations: A Qualitative Study. *Neuropsychiatric Disease and Treatment*, 1729-1737.
- [21]. Hajure, M., & Abdu, Z. (2020). Social phobia and its impact on quality of life among regular undergraduate students of Mettu College, Mettu, Ethiopia. *Adolescent health, medicine, and therapeutics*, 79-87.
- [22]. Fahri Akçakoyun. (2018). Analysis of self-esteem levels of students in physical education and sports high school. *Journal of Education and Training Studies*, 6(2), 73.
- Desalegn, G. T., Getinet, W., & Tadie, G. (2019). The prevalence and correlates of social phobia among undergraduate health science students in Gondar, Gondar Ethiopia. *BMC research notes*, 12(1), 438. <https://doi.org/10.1186/s13104-019-4482-y>
- [23]. Fan Suwei. (2019). Construction of Undergraduate students 'Mental Health Management System -Take the Yancheng Teachers University as an example. *Guangxi Normal University*. Luthans, F., & Stewart, T.I. (1977). A General Contingency Theory of Management. *Academy of Management Review*, 2, 181-195.
- [24]. Holmberg, C., Berg, C., Dahlgren, J., Lissner, L., & Chaplin, J. E. (2019). Health literacy in a complex digital media landscape: pediatric obesity patients' experiences with online weight, food, and health information. *Health Informatics Journal*, 25(4), 1343-1357. Retrieved from: <https://journals.sagepub.com/doi/pdf/10.1177/1460458218759699>
- [25]. Holmberg, C., Berg, C., Dahlgren, J., Lissner, L., & Chaplin, J. E. (2019). Health literacy in a complex digital media landscape: pediatric obesity patients' experiences with online weight, food, and health information. *Health Informatics Journal*, 25(4), 1343-1357. Retrieved from: <https://journals.sagepub.com/doi/pdf/10.1177/1460458218759699>
- [26]. Wang, Y. Y., Huang, X. C., Yuan, J., & Wu, Y. B. (2023, June). Exploring the Link between Family Health and Health Literacy among College Students: The Mediating Role of Psychological Resilience. In *Healthcare* (Vol. 11, No. 13, p. 1859). MDPI.
- [27]. Tung, S. E. H., Gan, W. Y., Chen, J. S., Ruckwongpatr, K., Pramukti, I., Nadhiroh, S. R., ... & Griffiths, M. D. (2022, August). Internet-related instruments (Bergen social media addiction scale, smartphone application-based addiction scale, internet gaming disorder scale-short form, and nomophobia questionnaire) and their associations with distress among Malaysian undergraduate students. In *Healthcare* (Vol. 10, No. 8, p. 1448). MDPI.
- [28]. Yu, W., Li, S., Xiao, W., Li, X., Wang, R., Liu, J., ... & Wan, Y. (2023). Childhood maltreatment and non-suicidal self-injury among Chinese undergraduate students: the moderating roles of social phobia and perceived family economic status. *Child Abuse & Neglect*, 139, 106113.
- [29]. Hunt, M. G., Marx, R., Lipson, C., & Young, J. (2018). No more FOMO: Limiting social media decreases loneliness and depression. *Journal of Social and Clinical Psychology*, 37(10), 751-768.
- [30]. Benjamin, K., & Potts, H.W. (2018). Digital transformation in government: Lessons for digital health? *Digital Health*, 4, 2055207618759168.
- [31]. Ugwu, L. E., Idemudia, E. S., Chukwu, O. O., & Onyedibe, M. C. C. (2023). Measuring the Impact of social media on Young People's Mental Health: Development and Validation of the social media-Induced Tendency Scale. *Depression research and treatment*, 2023.
- [32]. Rabie, M. A., Shorab, E., ElGabry, D., Aziz, K. A., Sabry, W. M., Aufa, O., ... & Nagy, N. (2019). Screening of social phobia symptoms in a sample of Egyptian undergraduate students. *Archives of Clinical Psychiatry (São Paulo)*, 46, 27-32.
- [33]. Li, J., Jia, S., Wang, L., Zhang, M., & Chen, S. (2023). Relationships among inferiority feelings, fear of negative evaluation, and social anxiety in Chinese junior high school students. *Frontiers in Psychology*, 13, 1015477.
- [34]. McLaughlin, C. J., & Silience, E. (2023). Buffering against academic loneliness: The benefits of social media-based peer support during postgraduate study. *Active Learning in Higher Education*, 24(1), 63-76.
- [35]. Moreton, J., Kelly, C. S., & Sandstrom, G. M. (2023). Social support from weak ties: Insight from the literature on minimal social interactions. *Social and Personality Psychology Compass*, 17(3), e12729.
- [36]. Huéscar, H. E., and Moreno-Murcia, J. A. (2017). Apoyo a la autonomía entre estudiantes, estrés percibido y miedo a la evaluación negativa: relaciones con la satisfacción con la vida [Autonomy support among students, perceived stress, and fear of negative evaluation: relationships with satisfaction with life]. *Behav. Psychol.* 25, 517–528
- [37]. Hou, Qian, Yueqiao Zhao, Xiaoge Su, Rong Rong, Sujian Situ, and Ying Cui. 2022. "Using Sina-Weibo Microblogs

- to Inform the Development and Dissemination of Health Awareness Material about Zika Virus Transmission, China, 2016–17.” PLoS One 17 (1): e0261602.
- [38]. Wumbie, B. A. M., Issah, D., & Issifu, I. (2023). Use of social media by students at Tamale Technical College. *Ghana Library Journal*, 28(1), 51-67.
- [39]. Arpaci, I., & Aslan, O. (2023). Development of a scale to measure cybercrime-awareness on social media. *Journal of Computer Information Systems*, 63(3), 695-705.
- [40]. Shahwan, S. J. (2023). The Impact of social media on Literature. *Arab World English Journal*.
- [41]. McFarland, L. A., & Ployhart, R. E. (2015). Social media: A contextual framework to guide research and practice. *Journal of applied psychology*, 100(6), 1653.
- [42]. Xiao Lin, Xu Sheng-sheng, Wang Qi. (2016) . Social media development and research review. *Research On Library Science*. 13-16. DOI: 10.15941 / j. carol carroll nki issn1001-0424.2016.14.002.
- [43]. Huang Jinjin. (2021). "Together" and "Be Alone": The influence of self-presentation on social loneliness in youth groups[D]. Anhui University. DOI:10.26917/d.cnki.ganhu.2021.001168
- [44]. Caplan, S. E. (2006). Relations among loneliness, social anxiety, and problematic Internet use. *CyberPsychology & behavior*, 10(2), 234-242.
- [45]. Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. *Current addiction reports*, 2(2), 175-184.
- [46]. Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends.” Social capital and college students’ use of online social network sites. *Journal of computer-mediated communication*, 12(4), 1143-1168.
- [47]. Titilope, A. O., & Muritala, F. A. (2023). Social Media Use and Perceived Social Capital Dimensions among Students of Covenant College, Ota, Ogun State, Nigeria. *College of Dar es Salaam Library Journal*, 18(1), 58-75.
- [48]. Jiang Yongzhi, Bai Xiaoli, seventy-three, Wu Yuntana. (2019). The Effect of Adolescents ' Social Networking on Social Anxiety: The Mediating Role of Online Positive Feedback and Self-Esteem[J]. *Chinese Journal of Special Education*, 76-81.
- [49]. Zhou, Y. S., & Song, Q. Q. (2009). Behavioral Versus Perceptual Dimensions of Social Networking Websites Use and their Relationship to Young Adults' Social Motives, Personality, and Social Well-being. *Chinese Journal of Communication*, (00), 27-46.
- [50]. Chen, W. Q. (2022). Study on Undergraduate students' Social Media Use Behavior and Social Media Anxiety: The Mediating Role of Online Social Capital and Upward Social Comparison (master’s thesis). Southwest College. Retrieved from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202301&filename=1022668291.nh>
- [51]. Lipsitz, J. D. , & Schneier, F. R. . (2000). Social phobia. epidemiology and cost of illness. *Pharmacoeconomics*, 18(1), 23-32.
- [52]. Lai, F., Wang, L., Zhang, J., Shan, S., Chen, J., & Tian, L. (2023). Relationship between social media use and social anxiety in undergraduate students: mediation effect of communication capacity. *International journal of environmental research and public health*, 20(4), 3657.
- [53]. Jiang, S., & Ngien, A. (2020). The effects of Instagram use, social comparison, and self-esteem on social anxiety: A survey study in Singapore. *Social Media+ Society*, 6(2), 2056305120912488.
- [54]. Heiser, N. A., Turner, S. M., Beidel, D. C., & Roberson-Nay, R. (2009). Differentiating social phobia from shyness. *Journal of anxiety disorders*, 23(4), 469-476.
- [55]. Epkins, C. C., & Heckler, D. R. (2011). Integrating etiological models of social anxiety and depression in youth: Evidence for a cumulative interpersonal risk model. *Clinical child and family psychology review*, 14, 329-376.
- [56]. Ostrander, M. J. (2021). Social anxiety, pornography use, and loneliness: A mediation analysis.
- [57]. Hutten, E., Jongen, E. M., Vos, A. E., van den Hout, A. J., & van Lankveld, J. J. (2021). Loneliness and mental health: The mediating effect of perceived social support. *International journal of environmental research and public health*, 18(22), 11963.
- [58]. Käll, A., Shafran, R., Lindegaard, T., Bennett, S., Cooper, Z., Coughtrey, A., & Andersson, G. (2020). A common elements approach to the development of a modular cognitive behavioral theory for chronic loneliness. *Journal of Consulting and Clinical Psychology*, 88(3), 269.
- [59]. Perlman, D., Peplau, L. A., & Goldston, S. E. (1984). Loneliness research: A survey of empirical findings. Preventing the harmful consequences of severe and persistent loneliness, 13, 46.
- [60]. Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical psychology review*, 26(6), 695-718.
- [61]. Anand, P., & Mishra, S. K. (2021). Linking core self-evaluation and emotional exhaustion with workplace loneliness: does high LMX make the consequence worse? *The International Journal of Human Resource Management*, 32(10), 2124-2149.
- [62]. Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical psychology review*, 26(6), 695-718.
- [63]. Vasan, S., Eikelis, N., Lim, M. H., & Lambert, E. (2023). Evaluating the impact of loneliness and social isolation on health literacy and health-related factors in young adults. *Frontiers in Psychology*, 14, 996611.
- [64]. Abbott, J., Lim, M.H., Eres, R., Long, K., and Mattews, R. (2018). The impact of accuracy and bias in their perceptions of acceptance/rejection. *Educ. Psychol.* 26,
- [65]. Stoliker, B. E., & Lafreniere, K. D. (2015). The influence of perceived stress, loneliness, and learning burnout on university students' educational experience. *College student journal*, 49(1), 146-160.
- [66]. Padmanabhanunni, A., Pretorius, T. B., & Isaacs, S. A. (2023). We Are Not Islands: The Role of Social Support in the Relationship between Perceived Stress during the COVID-19 Pandemic and Psychological Distress. *International Journal of Environmental Research and Public Health*, 20(4), 3179.
- [67]. Tarawneh, H., Tarawneh, H. H., Sulaiman, B. A., Alnasraween, M. E. S., & Nawafleh, A. M. (2023). Quality of Life and its Relation to Self-Esteem for a Sample of Drugs Addicts.
- [68]. De Witte, J., & Van Regenmortel, M. (2019). Silver Empowerment. Loneliness and social isolation among elderly. An empowerment perspective.
- [69]. OLLIVAUD, J., GALHARRET, J. M., & ROUSSIAU, N. (2023). Spirituality, self-esteem, and the mechanisms of social and temporal comparison. *Spiritual Psychology and Counseling*, 8(1), 83-102.
- [70]. Cichocka, A., Marchlewska, M., & Cislak, A. (2023). Self-Worth and Politics: The Distinctive Roles of Self-Esteem and Narcissism. *Political Psychology*.



- [71]. Veissière, S. P., & Stendel, M. (2018). Supernatural monitoring: A social rehearsal account of smartphone addiction. *Frontiers in psychology*, 141.
- [72]. Smith, T. (2022). An exploratory analysis of the relationship of problematic Facebook use with loneliness and self-esteem: The mediating roles of extraversion and self-presentation. *Current Psychology*, 1-15.
- [73]. Sun, X., Zhu, C., & So, S. H. W. (2017). Dysfunctional metacognition across psychopathologies: a meta-analytic review. *European Psychiatry*, 45, 139-153.
- [74]. Liao, J., Xia, T., Xu, X., & Pan, L. (2023). The Effect of Appearance Anxiety on Social Anxiety among College Students: Sequential Mediating Effects of Self-Efficacy and Self-Esteem. *Behavioral Sciences*, 13(8), 692.
- [75]. Portillo, M., & Fernández Baena, J. (2020). Social self-perception in adolescents: Accuracy and bias in their perceptions of acceptance/rejection. *Psicología educativa: revista de los psicólogos de la educación*.
- [76]. Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia.
- [77]. Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour research and therapy*, 35(8), 741-756.
- [78]. Kocovski, N. L., & Endler, N. S. (2000). Social anxiety, self-regulation, and fear of negative evaluation. *European Journal of Personality*, 14(4), 347-358.
- [79]. Moreton, J., Kelly, C. S., & Sandstrom, G. M. (2023). Social support from weak ties: Insight from the literature on minimal social interactions. *Social and Personality Psychology Compass*, 17(3), e12729.
- [80]. Ledel, A. (2023). Problematic social media use and self-rated health among Swedish adolescents: Is the association moderated by perceived familial social support?
- [81]. Hupcey, J. E. (1998). Clarifying the social support theory-research linkage. *Journal of advanced nursing*, 27(6), 1231-1241.
- [82]. Entilli, L., Leo, D. D., Aiolfi, F., Polato, M., Gaggi, O., & Cipolletta, S. (2023). Social support and help-seeking among suicide bereaved: a study with Italian survivors. *OMEGA-Journal of death and dying*, 87(2), 534-553.
- [83]. Jolly, P. M., Kong, D. T., & Kim, K. Y. (2021). Social support at work: An integrative review. *Journal of Organizational Behavior*, 42(2), 229-251.
- [84]. Nisbet, J., Jamshidi, L., Andrews, K. L., Stewart, S. H., Shields, R. E., Teckchandani, T. A., ... & Carleton, R. N. (2023). Mental health and social support among Royal Canadian Mounted Police cadets. *Frontiers in Psychology*, 14, 1092334.
- [85]. Qin, J. J. (2015). Social media and Social Support used as Predictors of Social Anxiety and the Study of Affective Priming (master's thesis, Minnan Normal College). <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD201601&filename=1015416944.nh>
- [86]. Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, 52(1), 30-41.
- [87]. Yenen, E. T., & Carkit, E. (2023). Fear of COVID-19 and general self-efficacy among Turkish teachers: Mediating role of perceived social support. *Current Psychology*, 42(3), 2529-2537.
- [88]. Wang, X., Cai, L., Qian, J., & Peng, J. (2014). Social support moderates stress effects on depression. *International journal of mental health systems*, 8(1), 1-5.
- [89]. Deci, E. L., & Ryan, R. M. (1980). Self-determination theory: When mind mediates behavior. *The Journal of mind and Behavior*, 33-43.
- [90]. Montgomery, D. P., Montgomery, M., & Montgomery, M. (2023). Theories of Motivation to Support the Needs of All Learners. *LEARNing Landscapes*, 16(1), 213-227.
- [91]. Khalid, S., Gao, C., Lianyu, C., Lu, J., Xiuyu, L., & Tadesse, E. (2023). Exploring Chinese and Ethiopian higher VET adolescent learning motivation through the lens of self-determination theory. *Plos one*, 18(5), e0285439.
- [92]. Zhao Yanmei, Zhang Zhengtang, Liuning, Dingmingzhi. (2016). A Literature Review on New Development of Self-Determination Theory ZHAO Yanmei' ZHANG Zhengtang' LIU Ning' DING Mingzhi. *Chinese Journal of Management*. 2016,13(07):1095-1104.
- [93]. Tao, D., Chen, Z., Qin, M., & Cheng, M. (2023, May). Modeling Consumer Acceptance and Usage Behaviors of m-Health: An Integrated Model of Self-Determination Theory, Task-Technology Fit, and the Technology Acceptance Model. In *Healthcare* (Vol. 11, No. 11, p. 1550). MDPI.
- [94]. Hajek, A., & König, H. H. (2021). Social isolation and loneliness of older adults in times of the COVID-19 pandemic: Can use of online social media sites and video chats assist in mitigating social isolation and loneliness? *Gerontology*, 67(1), 121-124.
- [95]. Tian, X., Bi, X., & Chen, H. (2023). How short-form video features influence addiction behavior? Empirical research from the opponent process theory perspective. *Information Technology & People*, 36(1), 387-408.
- [96]. Boursier, V., Gioia, F., Musetti, A., & Schimmenti, A. (2020). Facing loneliness and anxiety during the COVID-19 isolation: the role of excessive social media use in a sample of Italian adults. *Frontiers in psychiatry*, 11, 586222.
- [97]. Bodhi, R., Singh, T., & Joshi, Y. (2022). Modelling the role of social media usage in improving users' well-being: a social enhancement model perspective. *Benchmarking: An International Journal*, 29(8), 2450-2470.
- [98]. Ceyhan, A.A. and Ceyhan, E. (2008), "Loneliness, depression, and computer self-efficacy as predictors of problematic internet use", *Cyber Psychology and Behavior*, Vol. 11 No. 6, pp. 699-701.
- [99]. Morahan-Martin, J. (2005), "Internet abuse: addiction? disorder? symptom? alternative explanations?", *Social Science Computer Review*, Vol. 23 No. 1, pp. 39-48.
- [100]. Xu, C., Ryan, S., Prybutok, V. and Wen, C. (2012), "It is not for fun: an examination of social network site usage", *Information and Management*, Vol. 49 No. 5, pp. 210-217.
- [101]. Bodhi, R., Singh, T., & Joshi, Y. (2022). Modelling the role of social media usage in improving users' well-being: a social enhancement model perspective. *Benchmarking: An International Journal*, 29(8), 2450-2470.
- [102]. Veissière, S. P., & Stendel, M. (2018). Supernatural monitoring: A social rehearsal account of smartphone addiction. *Frontiers in psychology*, 141.
- [103]. Ruan, C., Lu, Z., Li, H., Lin, W., Li, D., & Yuan, J. (2023). More friends on SNS, more materialism? The moderating roles of self-esteem and social comparison orientation. *Plos one*, 18(5), e0283723.
- [104]. Sun, X., Zhu, C., & So, S. H. W. (2017). Dysfunctional metacognition across psychopathologies: a meta-analytic review. *European Psychiatry*, 45, 139-153.

- [105]. Peris, M., de la Barrera, U., Schoeps, K., & Montoya-Castilla, I. (2020). Psychological risk factors that predict social networking and internet addiction in adolescents. *International journal of environmental research and public health*, 17(12), 4598.
- [106]. Smith, T. (2022). An exploratory analysis of the relationship of problematic Facebook use with loneliness and self-esteem: The mediating roles of extraversion and self-presentation. *Current Psychology*, 1-15.
- [107]. Hollett, R. C., Panaia, P. M., & Smart, A. H. (2023). Gaze behaviour, body image in women and online apparel shopping. *International Journal of Consumer Studies*.
- [108]. Xiao, L., Chu, D., Wang, F., & Yang, Y. (2021). Editing the self in pictures: Selfie editing promotes self-objectification among Chinese. *Current Psychology*, 1-13.
- [109]. Vagka, E., Gnardellis, C., Lagiou, A., & Notara, V. (2023). Nomophobia and Self-Esteem: A Cross Sectional Study in Greek University Students. *International Journal of Environmental Research and Public Health*, 20(4), 2929.
- [110]. Collates, K. D. (2023). Social Media Addiction and its relationship With Self-esteem in University Students. *Current Trends in Mass Communication*, 2(1), 25-31.
- [111]. Casale, S., Akbari, M., Bocci Benucci, S., Seydavi, M., & Fioravanti, G. (2022). Interpersonally based fears and problematic social networking site use: the moderating role of online social support. *International Journal of Mental Health and Addiction*, 1-13.
- [112]. Kelly, L., Keaten, J. A., & Millette, D. (2020). Seeking safer spaces: The mitigating impact of young adults' Facebook and Instagram audience expectations and posting type on fear of negative evaluation. *Computers in Human Behavior*, 109, 106333.
- [113]. Hayes, R. A., Carr, C. T., & Wohn, D. Y. (2016a). One click, many meanings: Interpreting paralinguistic digital affordances in social media. *Journal of Broadcasting & Electronic Media*, 60(1), 171-187. <https://doi.org/10.1080/08838151.2015.1127248>.
- [114]. Alhabash, S., & Ma, M. (2017). A tale of four platforms: Motivations and uses of Facebook, Twitter, Instagram, and Snapchat among undergraduate students? *Social media+ society*, 3(1), 2056305117691544.
- [115]. Lee, Y. K., Chang, C. T., Lin, Y., & Cheng, Z. H. (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior, and technostress. *Computers in human behavior*, 31, 373-383.
- [116]. Ali, F., Ali, A., Iqbal, A., & Zafar, A. U. (2021). How socially anxious people become compulsive social media users: The role of fear of negative evaluation and rejection. *Telematics and Informatics*, 63, 101658.
- [117]. Raza, S. H., Yousaf, M., Zaman, U., Khan, S. W., Core, R., & Malik, A. (2023). Unlocking infodemics and mysteries in COVID-19 vaccine hesitancy: Nexus of conspiracy beliefs, digital informational support, psychological Well-being, and religious fatalism. *Vaccine*, 41(10), 1703-1715.
- [118]. Thorisdottir, I. E., Sigurvinsdottir, R., Asgeirsdottir, B. B., Allegrante, J. P., & Sigfusdottir, I. D. (2019). Active and passive social media use and symptoms of anxiety and depressed mood among Icelandic adolescents. *Cyberpsychology, Behavior, and Social Networking*, 22(8), 535-542. Retrieved from: <https://opvisindi.is/bitstream/handle/20.500.11815/2080/Post%20print%20%20%C3%9E%C3%B3risd%C3%B3ttir%20-%20final.pdf?sequence=4&isAllowed=y>
- [119]. Gilles, E. (2020). The Relationship Between Nature, Media Use and Psychosocial Well Being in a College Population.
- [120]. Dhir, A., Yossatorn, Y., Kaur, P., & Chen, S. (2018). Online social media fatigue and psychological wellbeing—A study of compulsive use, fear of missing out, fatigue, anxiety, and depression. *International Journal of Information Management*, 40, 141-152.
- [121]. Shi Yu-sheng & An Gui-hua. (2022). Comparison and Guidance Strategies of Social Media Use among Different Types of College Students. Editorial Department of Hexi University (06),102-109. doi:10.13874/j.cnki.62-1171/g4.2022.06.017.
- [122]. Huang Shiqing. (2022). Research on the Influence Mechanism of Undergraduate students' Social Media Addiction on Cyberbullying (A Dissertation Submitted in Partial Fulfilment of The Requirements for The Degree of Master of Library and Information Studies, Huazhong College of Science and Technology). <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFDTEMP&filename=1023472907.nh>
- [123]. KIRCABURUN, K., TOSUNTAŞ, Ş. B., EMİRTEKİN, E., Gülşah, K. O. Ç., BAHTİYAR, M., & GRİFFİTHS, M. (2023). Social anxiety and social media addiction among emerging adults: The mediating role of 'sofalsing'. *Uluslararası Düzce Eğitim Bilimleri Dergisi*, 1(1), 13-19.
- [124]. Hu, X., Zhang, J., He, S., Zhu, R., Shen, S., & Liu, B. (2022). E-learning intention of students with anxiety: Evidence from the first wave of COVID-19 pandemic in China. *Journal of affective disorders*, 309, 115-122.
- [125]. Liu, X. Q., Guo, Y. X., & Xu, Y. (2023). Risk factors and digital interventions for anxiety disorders in undergraduate students: Stakeholder perspectives. *World Journal of Clinical Cases*, 11(7), 1442.
- [126]. Chen, S., Fang, S., & He, S. (2021). Analysis of college students' mental health and suggestions on crisis prevention. *Psychology*, 12(12), 1982-1989.
- [127]. Yang Qian. (2021). Social Anxiety in Social Media Use among Young People. Master's degree thesis. Nanchang University. <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=1021795825.nh>
- [128]. Shrivastava, A., & Desousa, A. (2016). Resilience: A psychological construct for psychiatric disorders. *Indian journal of psychiatry*, 58(1), 38.
- [129]. Pittman, M. (2015). Creating, consuming, and connecting: Examining the relationship between social media engagement and loneliness. *The Journal of social media in Society*, 4(1).
- [130]. Carmel, S., O'Rourke, N., Tovel, H., Raveis, V. H., Antler, N., & Cohn-Schwartz, E. (2023, July). Social Support and Commitment to Life and Living: Bidirectional Associations in Late Life over Time. In *Healthcare* (Vol. 11, No. 13, p. 1965). MDPI.
- [131]. Kraner, D. (2023). The Internet, the Problem of Socialising Young People, and the Role of Religious Education. *Religions*, 14(4), 523.
- [132]. Boursier, V., Gioia, F., Musetti, A., & Schimmenti, A. (2020). Facing loneliness and anxiety during the COVID-19 isolation: the role of excessive social media use in a sample of Italian adults. *Frontiers in psychiatry*, 11, 586222.

- [133]. Packer, J., & Flack, M. (2023). The Role of Self-Esteem, Depressive Symptoms, Extraversion, Neuroticism and FOMO in Problematic Social Media Use: Exploring User Profiles. *International Journal of Mental Health and Addiction*, 1-15.
- [134]. Throuvala, M. A., Griffiths, M. D., Rennoldson, M., & Kuss, D. J. (2019). Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study. *Computers in Human Behavior*, 93, 164-175.
- [135]. Weidman, A. C., Fernandez, K. C., Levinson, C. A., Augustine, A. A., Larsen, R. J., & Rodebaugh, T. L. (2012). Compensatory internet use among individuals higher in social anxiety and its implications for well-being. *Personality and individual differences*, 53(3), 191-195.
- [136]. Heimberg, R. G., Brozovich, F. A., & Rapee, R. M. (2010). Chapter 15 - A Cognitive Behavioral Model of Social Anxiety Disorder: Update and Extension. *Social Anxiety*, 395-422. <https://doi.org/10.1016/B978-0-12-375096-9.00015-8>
- [137]. Watson, D. (2009). Differentiating the mood and anxiety disorders: A quadripartite model. *Annual Review of Clinical Psychology*, 5, 221-247.
- [138]. Elhai, J. D., Dvorak, R. D., Levine, J. C., & Hall, B. J. (2017). Problematic smartphone use: A conceptual overview and systematic review of relations with anxiety and depression psychopathology. *Journal of affective disorders*, 207, 251-259.
- [139]. Wolniewicz, C. A., Tiamiyu, M. F., Weeks, J. W., & Elhai, J. D. (2018). Problematic smartphone uses and relations with negative affect, fear of missing out, and fear of negative and positive evaluation. *Psychiatry research*, 262, 618-623. <https://doi.org/10.1016/j.psychres.2017.09.058>
- [140]. Chang, H., Jixia, Y. A. N., & Shen, L. (2023). The relationship between fear of negative evaluation, family function, and adolescents' aggression: the mediating role of mobile phone addiction and rumination.

\*\*\*\*\*