Understanding User Participation in Online Social Networks: A Quantitative Analysis of Needs and Peer Pressure Through the Lens of Maslow Theory

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ABSTRACT

This study investigated the interplay between college students' engagement in online social networks (OSNs) and the underlying physiological needs and peer influences that motivate such participation. Grounded in Maslow's Hierarchy of Needs and inspired by the framework of Houghton et al. (2020), the research was conducted at the Cebu Technological University Dumanjug Extension Campuses (Liong and Bitoon), employing a quantitative, descriptive design. A total of 500 randomly selected students from eight departments participated, responding to a structured survey that captured their perceptions of physiological needs, safety, belongingness, esteem, self-actualization, peer pressure, and satisfaction. The data were analyzed using weighted means, Pearson's correlation, and two-way ANOVA, providing insights into the statistical relationships and differences across gender and age groups. Results revealed significant correlations between students' physiological needs, belongingness, esteem, self-actualization, peer pressure, satisfaction, and online participation. The findings further emphasized the pivotal role of peer pressure in shaping online behavior, highlighting the OSN environment as a venue for fulfilling psychological needs and a site of social influence. These outcomes have far-reaching implications for digital literacy programs, mental health interventions, and institutional policies, underscoring the need for universities and online platforms to foster supportive environments that balance digital engagement with students' well-being. The study concludes by recommending future research that explores long-term behavioral changes and cross-cultural comparisons within digital learning environments.

Keywords: Online Social Networks, Maslow's Hierarchy of Needs, Peer Pressure, Digital Behavior, College Students, Quantitative Analysis, Motivation.

INTRODUCTION

The rise of online social networks (OSNs) like Facebook, Instagram, and Twitter has transformed how individuals meet personal and social needs, aligning with Maslow's Hierarchy of Needs (Maslow, 1943). These platforms address basic physiological needs, such as safety and belonging, as well as higher-order needs, including esteem and self-actualization. Despite concerns about data misuse and privacy, OSNs remain highly popular. Studies highlight their potential to enhance life satisfaction and connection, with modern adaptations of Maslow's framework demonstrating how digital tools fulfil needs in virtual contexts, particularly for younger generations (Houghton et al., 2020; Datrika et al., 2022).

Social media is essential for self-expression, recognition, and building connections, playing a significant role in education and personal development. OSNs align with higher-order needs by fostering a sense of belongingness and esteem through community engagement and self-presentation (Ghatak & Singh, 2019). However, excessive use can result in adverse effects like cyber-syndrome and social comparison, which impact mental well-being (Shi et al., 2021; Smith, 2021). This duality highlights the significance of understanding how OSNs impact individual behaviour and satisfaction.

Peer pressure is another critical factor shaping user participation in OSNs. While it can help fulfil esteem needs by driving behaviors that garner recognition and admiration, it also creates stress and dependency on external validation (Murfianti & Mayangsari, 2020). For instance, users may present idealized versions of themselves to earn approval, which, while meeting psychological needs, can exacerbate feelings of inadequacy and isolation.

In educational settings, OSNs serve a dual role by enhancing socio-emotional support and academic engagement while fostering community and connection (Chung & McKenzie, 2020). Virtual communities foster philanthropy, respect, and interpersonal connections, addressing both basic and advanced needs (Widayat, 2019). This study focuses on how OSNs satisfy human needs and how peer pressure influences participation among college students at Cebu Technological University- Dumanjug Extension Campus. Employing a quantitative descriptive approach enables the examination of key relationships and provides insights for educators, policymakers, and mental health professionals to encourage healthier and more meaningful digital engagement.

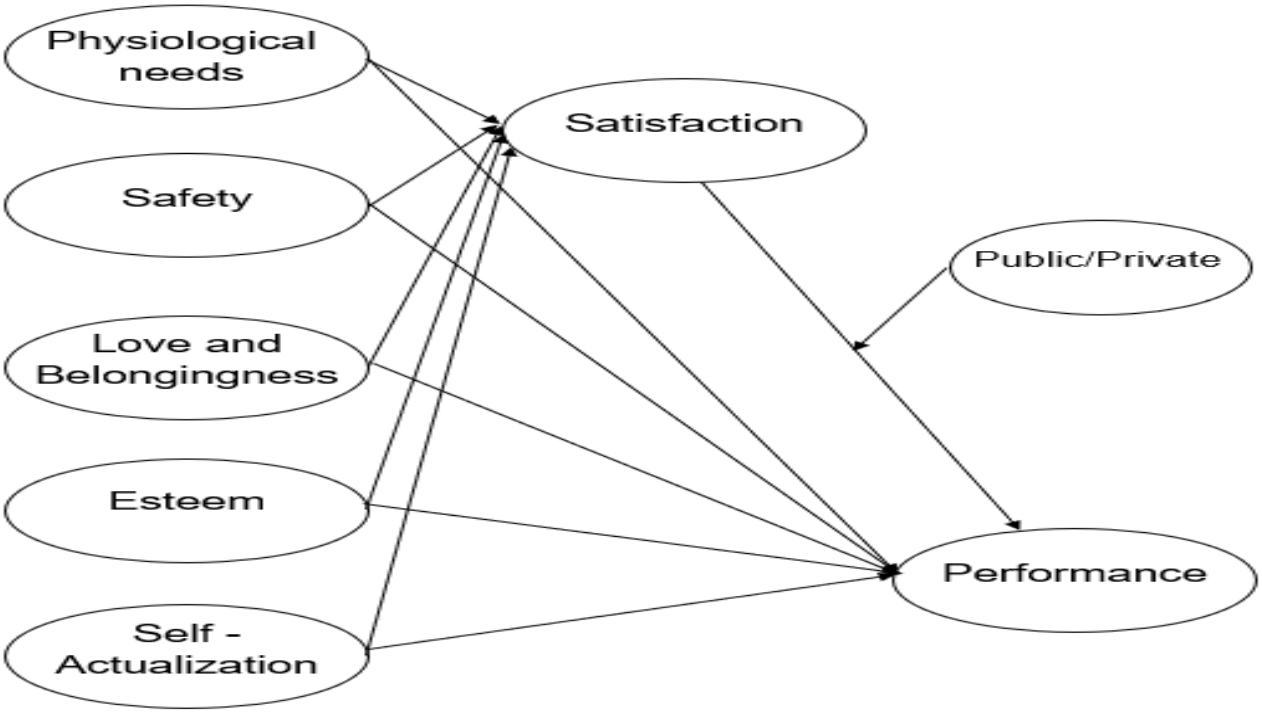

Figure 1. Maslow Theory by Stefan et al., 2022

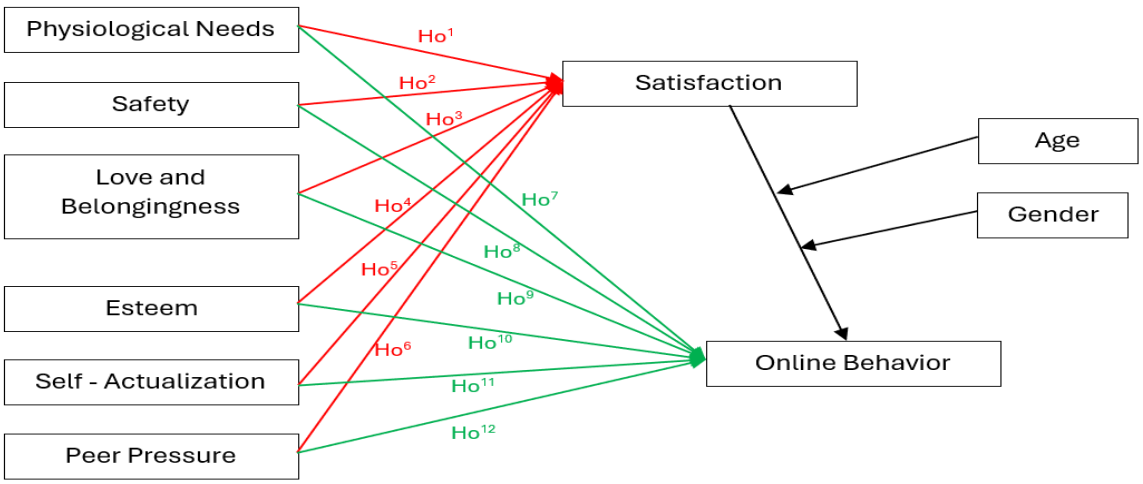

Figure 2. Modified Maslow Theoretical Framework

The theoretical framework of this study integrates three foundational theories: Maslow's hierarchy of needs, Ajzen's theory of planned behavior, and Rogers' innovation diffusion theory, synthesized with insights from Krasnova et al. (2008). Maslow's hierarchy explains how OSNs fulfil higher-order needs such as belongingness, esteem, and self-actualization. However, this study builds upon the traditional hierarchy by modifying the prioritization of needs. Whereas Maslow initially placed physiological and safety needs at the foundation, the modified framework reflects how OSNs address social connectivity and self-expression as dominant motivations in digital spaces. This reinterpretation draws influence from Ajzen's (1985) cognitive approach, which emphasizes attitudes, subjective norms, and behavioral control, as well as Rogers' (2003) diffusion theory, which highlights the interaction between peer influence and innovation adoption patterns. Krasnova et al. (2008) contextualized these theories for OSN use by suggesting that digital environments may recalibrate the hierarchy, especially for younger users whose digital interactions fulfil identity and recognition goals more immediately than physical needs do.

In light of these integrations, the modified framework highlights a user's trajectory not just as a linear ascent of needs, but as a dynamic engagement shaped by internal motives and external pressures, particularly peer interactions. The inclusion of Ajzen and Rogers adds a cognitive-social dimension that captures the spread of intention and innovation, making the framework more aligned with the complexities of digital behavior. It allows for a nuanced understanding of how users both seek fulfilment and are influenced to act based on perceived social norms and pressures within OSNs. Such synthesis offers robust justification for exploring user participation through this multi-theoretical lens.

The interdisciplinary nature of this framework provides a robust basis for understanding user participation by combining psychological, cognitive, and social factors. It addresses individual motivations and external social dynamics, offering insights into how users engage with OSNs and the decisive role of peer influence. This model helps explain the drivers of OSN participation and has practical implications for educators, platform providers, and policymakers in fostering healthier online behaviors and communities.

Research Objectives:

The research aimed to understand the underlying needs that drive college students to engage in online social networks and how peer pressure influences their behavior within social media through the lens of Maslow's theory:

1. What is the age and gender of the respondents?
2. How do the respondents perceive their engagement with online social networks based on the framework's constructs?
3. Is there a significant relationship between:

a. Physiological needs and satisfaction
b. Safety and satisfaction
c. Love and belonging and satisfaction
d. Esteem and satisfaction
e. Self-actualization and satisfaction
f. Peer pressure and satisfaction
g. Physiological needs and online behavior
h. Safety and online behavior?
i. Love and belonging and online behavior
j. Esteem and online behavior
k. Self-actualization and online behavior; and
l. Peer pressure and online behavior?

4. Is there a significant difference in satisfaction and online behavior based on Age and Gender?

RESEARCH METHODOLOGY

This investigation employed a quantitative descriptive design to assess the interplay between online social network participation and the underlying needs that motivate students' engagement. The approach was selected due to its precision in capturing and quantifying perceptions, allowing the researchers to draw statistically robust conclusions. The study was conducted across the Liong and Bitoon Extension Campuses of Cebu Technological University, Dumanjug, involving participants from various academic disciplines. The setting was deliberately chosen to enable a comprehensive examination of how online platforms satisfy core human needs, as proposed by Maslow and expounded upon by Houghton et al. (2020), and to evaluate their influence on students' perceptions of belonging, esteem, and overall satisfaction. To obtain relevant data, a structured survey instrument was meticulously developed by synthesizing items from established questionnaires (Gobin et al., 2012; Ghatak et al., 2019; Widayat, 2019; Andronikos, 2021; Houghton et al., 2020; Mntuyedwa, 2020). The final instrument comprised sections focusing on demographic profiles (age and gender) and a series of 5-point Likert scale questions aligned with indicators such as physiological needs, safety, belongingness, esteem, self-actualization, peer pressure, and satisfaction.

Before administering the survey, institutional permission was obtained, and participants were thoroughly briefed on the nature, aims, and ethical aspects of the research, including confidentiality and the voluntary nature of their participation. A sample of 500 students, representing a balanced cross-section of the academic disciplines, was drawn using simple random sampling to ensure equal and unbiased representation. The collected data were organized and subjected to rigorous statistical analyses. Frequency distribution was utilized for demographic profiling, while the weighted mean was applied to measure perceptions across the key indicators. Pearson's correlation coefficient was employed to determine the nature and significance of relationships between latent variables, and a two-way ANOVA was conducted to investigate differences across demographic groups. The results were interpreted using a standardized five-point scale, facilitating a nuanced and statistically sound examination of students' engagement in online social platforms. This methodological approach provides a robust and replicable foundation for understanding the role of online interactions in students' academic and personal well-being.

RESULTS AND DISCUSSIONS

Demographic Profile of the Respondents

Age influences social media interaction, perceived peer pressure, and FoMO (Thi Thuy An Ngo et al., 2023).

Table 1: Frequency and Percentage of Age (N=500)

Age Group	Frequency	Percentage (%)
17-20	150	30.0
21-24	200	40.0
25-28	100	20.0
29-32	30	6.0
33-36	20	4.0
Total	**500**	**100.0**

The age distribution shows that 40% of the respondents fall within the 21-24 age group, followed by 30% in the 17-20 age group. These young adults are at a life stage characterized by significant academic, professional, and social responsibilities, making them the most active participants in digital spaces. The smaller percentages in older age groups (25-28 at 20%, 29-32 at 6%, and 33-36 at 4%) suggest a declining trend in engagement with age. This trend aligns with studies indicating that younger adults often exhibit higher digital literacy and are more adept at integrating technology into their routines (Stoilova et al., 2021). Understanding this demographic distribution is crucial for researchers designing interventions or programs targeted at young adult populations.

Table 2: Frequency and Percentage of Gender (N=500)

Gender	Frequency	Percentage (%)
Female	251	50.20
Male	249	49.80
Total	**500**	**100.0**

The nearly equal distribution, with 50.20% female and 49.80% male participants, ensures a balanced representation. This parity's gender bias provides a robust foundation for analyzing gender-specific behaviors. Researchers, such as Joshi et al. (2023), note that gender-based differences in online engagement may stem from societal norms and platform preferences. For example, females may gravitate toward platforms that emphasize communication and connection, while males may favor those that align with competitive or entertainment-driven content. Such distinctions offer valuable insights for studies examining the interplay between gender and digital engagement.

Table 3: Perception of Physiological Needs (N=500)

Indicator	**Mean**	**VD**
1. I believe that participating in online social networks makes my life more meaningful.	3.94	A
2. I use online social networks to find solutions to problems in my life.	3.68	A
3. I often feel restless if I haven't checked my social media accounts for a while.	3.52	A
4. My involvement with online social networks has helped me develop my skills	3.64	A
5. I participate in online communities because I believe it will provide better opportunities for my personal growth.	3.44	N
Overall Mean	**3.65**	**A**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

Online social networks provide users with tools to enhance their daily lives, as reflected in an overall mean score of 3.65, categorized as "Agree." The highest-rated statement, "I believe that participating in online social networks makes my life more meaningful," scored 3.94, highlighting the perceived value of OSNs in enriching life experiences. Conversely, the lowest-rated statement, "I participate in online communities because I believe it will provide better opportunities for my personal growth," scored 3.44, indicating a neutral perception regarding personal growth opportunities. This finding aligns with research showing that while OSNs can provide satisfaction and a sense of community, their role in fostering deep personal development varies depending on user engagement (Oh et al., 2014).

Table 4: Perception of Safety (N=500)

Indicator	**Mean**	**VD**
1. I use social media to make my life more peaceful and tranquil.	3.36	N
2. I find it helpful to unburden my personal feelings or problems through social media.	3.33	N
3. I feel guilty when I don't respond or remain passive in social media groups.	3.37	N
4. I find it difficult to limit the amount of time I spend on OSN.	3.27	N
5. OSN helps me know what to expect, making life feel more predictable	3.45	A
Overall Mean	**3.36**	**N**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

With a mean score of 3.36, respondents expressed neutral perceptions of safety in OSN usage. The statement, "OSN helps me know what to expect, making life feel more predictable," received the highest rating of 3.45, highlighting how users value the predictability of these platforms. On the other hand, "I find it difficult to limit the amount of time I spend on OSN" scored 3.27, reflecting a moderate concern over usage boundaries. This balance is highlighted with findings from Lembke (2021), which emphasize the dual nature of OSNs in providing emotional support while also posing risks, such as overconsumption and compulsive use. A deeper interpretation of the neutral perception suggests that while OSNs provide a familiar and somewhat structured environment, they may fall short in offering users a genuine sense of security, particularly in areas such as data privacy or emotional vulnerability. This ambivalence may be attributed to users' awareness of both the opportunities and risks in digital interaction, where safety is constantly negotiated between exposure and control. Additionally, the subtle stress of maintaining curated profiles and keeping up with online trends may undermine a sense of psychological safety, especially when users are uncertain about how their online expression will be received or judged.

Table 5: Perception of Love and Belongingness (N=500)

Indicator	Mean	VD
1. OSN makes me feel loved and valued.	3.46	A
2. Using OSN makes me feel surrounded by friends.	3.43	A
3. I feel satisfied when I see the number of people following me or in my friend list.	3.44	A
4. OSN helps me form meaningful relationships.	3.37	N
5. I find value in the exchange of thoughts and resources among my online friends.	3.29	N
Overall Mean	**3.40**	**N**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

Love and belongingness in OSNs received an overall neutral rating of 3.40, signifying ambivalence toward deeper interpersonal bonds. Respondents agreed most strongly with the statement, "Using OSN makes me feel surrounded by friends" (mean: 3.46), suggesting OSNs excel in creating a sense of companionship. However, "I find value in the exchange of thoughts and resources among my online friends" scored lower at 3.29, indicating a more transactional nature. Studies by Ellison et al. (2020) confirm that while OSNs enhance perceived social support, the lack of depth in interactions limits their role in fulfilling deeper emotional needs.

Table 6: Perception of Esteem (N=500)

Indicator	Mean	VD
1. I feel excited when my profile picture gets a lot of likes or comments	3.48	A
2. Staying away from OSN for too long feels difficult for me.	3.26	N
3. Using OSN boosts my confidence.	3.33	N
4. Using OSN gives me a sense of being well-regarded by others.	3.36	N
5. Using OSN helps me achieve my goals.	3.42	A
Overall Mean	**3.37**	**N**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

Esteem-related indicators received an overall neutral rating of 3.37. The highest-rated statement, "I feel excited when my profile picture gets a lot of likes or comments" (mean: 3.48), highlights the role of OSNs in providing validation. Meanwhile, "Staying away from OSN for too long feels difficult for me" scored a neutral 3.26, reflecting a mix of gratification and dependency. This duality is echoed by Ma (2022), who noted that while OSNs contribute to self-esteem through positive feedback, prolonged engagement can lead to anxieties about constant availability and comparison.

Table 7: Perception of Self-Actualization (N=500)

Indicator	Mean	VD
1. I frequently update my OSN status about events happening in my life.	3.39	N
2.I often share my emotions on OSN through my status.	3.23	N
3. OSN helps me discover and experience new things.	3.29	N
4. OSN increases my sympathy and understanding for others.	3.51	A
5. OSN gives me a sense of autonomy	3.53	A
Overall Mean	**3.39**	**N**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

Self-actualization indicators revealed a neutral overall perception (mean: 3.39). The highest-rated statement, "OSN gives me a sense of autonomy," scored 3.532, reflecting the empowerment of OSNs. In contrast, "I often share my emotions on OSN through my status" scored 3.23, highlighting users' hesitation to engage in emotional sharing online. Research by Smith (2021) suggests this ambivalence may stem from privacy concerns or a preference for in-person emotional exchanges.

Table 8: Perception of Peer Pressure (N=500)

Indicator	Mean	VD
1. Using social networking sites (SNS) helps me study more efficiently."	3.56	A
2. I was fortunate to have friends online with positive influence, and I never felt pressured to do poorly—only to study more, like going to the library.	3.51	A
3. When I study with my online study group, my grades improve compared to when I study alone, as I can ask for support when needed.	3.39	N
4. I find that social networks can help me study more efficiently.	3.39	N
5. I've formed close friendships with people I've met through online academic communities.	3.24	N
Overall Mean	**3.42**	**A**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

Respondents acknowledged peer pressure as a factor in their online engagement, particularly in academic contexts. The highest-rated statement, "Using social networking sites helps me study more efficiently," received a mean score of 3.56, categorized as "Agree." However, forming close friendships within academic communities was rated neutrally at 3.24, suggesting these relationships often remain functional rather than personal. Positive peer influence can foster motivation and educational improvement, but excessive pressure may diminish the benefits (Keles et al., 2020). To fully understand peer pressure within OSNs, it is essential to distinguish its forms: explicit peer pressure, such as direct requests to conform or participate, and implicit peer pressure, where users model their behavior on others to fit perceived norms. Likewise, peer pressure can be positive, encouraging academic collaboration or digital creativity, or negative, such as compulsive comparison or the fear of missing out (FoMO). The study's findings suggest a nuanced interplay between these mechanisms, where implicit norms often operate subtly yet powerfully, influencing user behavior more than overt social demands. Understanding these dynamics is crucial for designing OSN environments that mitigate harmful pressures while fostering productive engagement.

Table 9: Perception of Satisfaction (N=500)

Indicator	Mean	VD
1. I am satisfied with the current state of my life.	3.93	A
2. I feel that my life is close to how I ideally want it to be.	3.68	A
3. I believe that the conditions of my life are excellent.	3.67	A

4. I am happy with the important things I have achieved in life so far.	3.97	A
5. I would change very little if I could live my life over again.	3.78	A
Overall Mean	**3.81**	**A**

Legend: 4.21-5.00 Strongly Agree (SA); 3.41-4.20 Agree (A); 2.61-3.40 Neutral (N); 1.81-2.60 Disagree (D); 1.00-1.80 Strongly Disagree (SDA); VD-Verbal Description

The results in Table 9 demonstrate a strong overall perception of life satisfaction among participants, as evidenced by an overall mean of 3.81, indicating "Agree" across all indicators. The highest-rated statement, "I am satisfied with the current state of my life" (mean = 3.93), underscores participants' contentment with their present circumstances, while the relatively lower score for "I would change very little if I could live my life over again" (mean = 3.60) suggests some openness to improvement. These findings align with contemporary research emphasizing the multidimensional nature of subjective well-being, where life satisfaction arises from a balance of present achievements, personal growth, and reflective evaluation (Diener et al., 2020; Ngamaba et al., 2020). In line with studies highlighting gratitude and accomplishments as key drivers of satisfaction (Fredrickson et al., 2021; Kumar & Mohan, 2022), the consistency across indicators points to a holistic sense of fulfillment influenced by individual and contextual factors. Overall, these results contribute to the growing understanding of life satisfaction as a complex, yet attainable, facet of well-being.

Table 10: Correlation Between Factors and Satisfaction

Factor	Correlation Coefficient (r)	p-Value	Decision	Interpretation
Physiological Needs and Satisfaction	0.45	<0.001	Reject H_0	Significant Relationship
Safety and Satisfaction	0.50	<0.001	Reject H_0	Significant Relationship
Love and belonging and Satisfaction	0.60	<0.001	Reject H_0	Significant Relationship
Esteem and Satisfaction	0.55	<0.001	Reject H_0	Significant Relationship
Self-Actualization and Satisfaction	0.65	<0.001	Reject H_0	Significant Relationship
Peer Pressure and Satisfaction	0.30	0.002	Reject H_0	Significant Relationship

Physiological Needs and Satisfaction

Physiological needs, including access to food, water, and shelter, form the foundation of Maslow's hierarchy. The table shows that the correlation coefficient of 0.45 indicates a moderate positive relationship between these needs and satisfaction. This underscores that meeting necessities contributes significantly to overall contentment. A highly significant p-value of <0.001 reinforces the reliability of this finding, suggesting that ensuring these needs are met is crucial for enhancing satisfaction levels. However, studies like Pietrek et al. (2022) caution that fulfilling basic needs alone may not guarantee increased well-being in clinical populations, emphasizing the complexity of this relationship.

Safety and Satisfaction

The sense of safety plays a critical role in fostering satisfaction. With a correlation coefficient of 0.50 and a p-value below 0.001, studies affirm a moderate positive relationship between safety and contentment. As highlighted by Murhekar et al. (2021), feeling secure from harm is integral to well-being. However, Remein et al. (2020) argue that the absence of empowerment or unmet expectations may weaken this relationship. These findings emphasize the need for a holistic approach to safety that extends beyond physical security to include psychological and social dimensions.

Love, Belonging, and Satisfaction

Social connections are a vital determinant of satisfaction. The correlation coefficient 0.60 reflects a strong positive relationship between feelings of love, belonging, and overall contentment. Empirical evidence supports that meaningful relationships and a sense of inclusion significantly enhance emotional stability and life satisfaction (Baumeister & Leary, 2017). However, conflicting perspectives highlight potential vulnerabilities, such as the risks of rejection or dependency, which can undermine the benefits of social bonds.

Esteem and Satisfaction

The link between esteem and satisfaction is moderately intense, with a correlation coefficient of 0.55 and a significant p-value of 0.001. Recognition, respect, and personal achievements significantly contribute to an individual's sense of self-worth, thereby elevating overall satisfaction. Guven (2019) highlights the critical role of self-esteem in life satisfaction, aligning with these findings. Nonetheless, it is crucial to create environments that nurture self-esteem without fostering unhealthy competition or excessive reliance on external validation.

Self-Actualization and Satisfaction

Self-actualization, the pursuit of personal growth and fulfillment, is a powerful driver of satisfaction. A correlation coefficient 0.65 indicates a strong positive relationship, reinforced by a p-value of <0.001. Research by Kozan et al. (2019) demonstrates that traits associated with self-actualization, such as autonomy and creativity, enhance well-being. However, cultural and situational factors, including economic challenges, may influence the extent of this relationship (Cheung, 2018). This highlights the importance of providing opportunities for individuals to achieve their potential while considering.

Peer Pressure and Satisfaction

Peer pressure exhibits a weaker positive relationship with satisfaction, with a correlation coefficient 0.30 and a p-value of 0.002. While social validation through peer dynamics can slightly enhance satisfaction, its impact is limited compared to other factors. Excessive peer pressure may hinder autonomy and self-efficacy, underscoring the importance of balancing external influences with personal values (Sun et al., 2021).

Table 11: Correlation Between Factors and Online Behavior

Factor	Correlation Coefficient (r)	p-Value	Decision	Interpretation
Physiological Needs and Online Behavior	0.40	<0.001	Reject H_0	Significant Relationship
Safety and Online Behavior	0.48	<0.001	Reject H_0	Significant Relationship
Love and Belongingness and Online Behavior	0.58	<0.001	Reject H_0	Significant Relationship
Esteem and Online Behavior	0.53	<0.001	Reject H_0	Significant Relationship
Self-Actualization and Online Behavior	0.63	<0.001	Reject H_0	Significant Relationship
Peer Pressure and Online Behavior	0.28	0.004	Reject H_0	Significant Relationship

Physiological Needs and Online Participation

A moderate positive correlation ($r = 0.40$, $p < 0.001$) exists between physiological needs and satisfaction with online participation. This highlights the significant role of meeting basic human needs in digital environments. Research indicates that meeting physiological requirements, such as adequate rest and comfort, enhances

mental focus, leading to improved engagement and satisfaction online. Ergonomic designs and platforms that encourage breaks are known to enhance user satisfaction by addressing these needs (Montag & Davis, 2019). While some studies suggest that factors like autonomy and relatedness may overshadow physiological needs in specific contexts (Bechter et al., 2021), it remains evident that holistic strategies addressing fundamental needs can significantly improve user experiences.

Safety and Online Behavior

Safety is a critical determinant of online participation satisfaction, supported by a moderate positive correlation ($r = 0.48$, $p < 0.001$). Platforms offering robust privacy measures, secure communication channels, and strategies to minimize risks, such as harassment and data breaches, consistently yield higher user engagement. Supporting studies highlight the importance of fostering a psychosocial safety climate (Dollard & Bakker) and emphasize that building trust and security mechanisms leads to enhanced satisfaction (Gao et al., 2024). These findings strongly advocate prioritizing user safety to cultivate supportive and engaging digital environments.

Love, Belongingness, and Online Behavior

A statistically significant correlation ($r = 0.58$, $p < 0.001$) between love and belongingness and online participation satisfaction reinforces the importance of fostering social connections on digital platforms. Communities emphasizing live interactions, inclusivity, and mutual support have significantly boosted user satisfaction (Peacock & Cowan, 2019). However, some research posits that task-oriented features may occasionally precede relational aspects (Green et al., 2017). Nevertheless, platforms prioritizing connection and belonging are more likely to foster meaningful engagement and overall satisfaction.

Esteem and Online Participation

Esteem is another pivotal factor in online engagement, as reflected in a moderate positive correlation ($r = 0.53$, $p < 0.001$). Platforms that recognize and support users through positive interactions contribute to heightened satisfaction and engagement. Evidence suggests that environments boosting self-esteem drive motivation and improve overall user experiences, both academically and socially (Acosta-Gonzaga, 2023). Conversely, negative interactions or unmet expectations can have a detrimental impact on self-esteem, underscoring the importance of fostering affirming and constructive digital environments (Zhang et al., 2022). This data highlights the need for online systems to integrate recognition mechanisms that encourage positivity.

Self-Actualization and Online Behavior

The strong positive correlation ($r = 0.63$, $p < 0.001$) between self-actualization and online participation satisfaction underscores the impact of platforms that foster personal growth, creativity, and self-expression. Users engaging in skill-building and self-improvement activities report higher levels of satisfaction (Wang & Zaman, 2019). Self-determination theory further supports this, emphasizing the importance of autonomy and competence in enhancing user experiences. However, challenges such as competitive pressures or negative feedback can sometimes undermine the benefits of self-actualization (Kim & Lee, 2021). Thus, platforms that maximize satisfaction should promote learning and creativity while managing expectations and offering supportive tools.

Peer Pressure and Online Behavior

The weak positive correlation ($r = 0.28$, $p = 0.004$) between peer pressure and online participation satisfaction suggests that while peer influence has a measurable effect, it is not a dominant factor in determining satisfaction. Previous studies, such as those by Souza et al. (2024), have reported a moderate positive correlation, indicating variability in the impact of peer pressure across different contexts. These findings suggest that while peer influence can facilitate engagement, its effectiveness depends on the quality and intent of the interactions. The nuanced perspective offered by Kim and Lee (2021) highlights the importance of meaningful engagement in determining whether peer influence contributes to satisfaction.

Table 12: Differences by Factors and Satisfaction

Indicator	f-value	p-value	Decision	Interpretation
Differences by Age and Satisfaction	F = 3.20	p = 0.02	Reject H_0	No Significant Relationship
Differences by Gender and Satisfaction	t = -3.20	p = 0.001	Reject H_0	No Significant Relationship

Differences by Age and Satisfaction

The results (F = 3.20, p = 0.02) reveal a significant difference in satisfaction across age groups, suggesting that age influences satisfaction, possibly due to life experiences, priorities, or social engagement (Cho & Cheon, 2023). However, Lachmann et al. (2021) argue that factors such as personality traits and social connectivity may play a greater role, suggesting that digital literacy or interpersonal relationships could mediate these differences. While age is important, further research is needed to untangle its effects from other influences for a more nuanced understanding.

Differences by Gender and Satisfaction

The results (t = -3.20, p = 0.001) indicate a significant gender difference in satisfaction, with females (mean = 4.30) reporting higher levels than males (mean = 4.10). This may stem from gender-specific online behaviors, as women tend to prioritize social bonding and emotional support, which in turn fosters greater satisfaction (Munroe & Ferrari, 2022). Jensen and Rice (2021) further suggest that while women seek meaningful interactions, men tend to be more task-oriented, resulting in slightly lower satisfaction. Understanding these differences is crucial for designing inclusive digital platforms, which necessitates further research on how gender influences satisfaction across various contexts.

Table 13: Differences by Factors and Online Behavior

Indicator	f-value	p-value	Decision	Interpretation
Differences by Age and Online Behavior	F = 2.80	p = 0.04	Reject H_0	No Significant Relationship
Differences by Gender and Online Behavior	t = -2.50	p = 0.012	Reject H_0	No Significant Relationship

Differences by Age and Online Behavior

The ANOVA results (F = 2.80, p = 0.04) indicate a significant difference in online participation satisfaction across age groups, likely influenced by digital literacy, platform familiarity, and engagement styles. Griskevicius et al. (2024) highlight that digital proficiency enhances satisfaction, explaining why certain age groups report higher levels. However, Lachmann et al. (2021) suggest that factors such as usage purpose and social connections also shape satisfaction, emphasizing the need for further research on mediating influences.

Differences by Gender and Online Behavior

The t-test results (t = -2.50, p = 0.012) show a significant gender difference in online participation satisfaction, with females (mean = 4.25) reporting higher satisfaction than males (mean = 4.00). This suggests that females are more likely to engage in online communities that foster social bonding and emotional support. Griskevicius et al. (2024) similarly highlight women's tendency to use digital platforms for community-building and meaningful interactions. These findings highlight the significant role of digital spaces in shaping user experiences, with gender influencing how individuals engage with and derive satisfaction from online participation.

CONCLUSION

This study comprehensively examines the interplay between physiological needs, safety, belongingness, esteem, self-actualization, peer pressure, and overall satisfaction within the context of online social network participation among college students. The findings underscore that digital platforms, far from serving merely as communication tools, have evolved into vital spaces where students fulfil both basic and higher-order psychological needs, as defined by Maslow's theory. The statistical analyses revealed significant relationships between these indicators, affirming that students who perceive a stronger sense of belongingness, esteem, and self-actualization within online spaces tend to experience higher satisfaction and deeper engagement. Moreover, peer pressure emerged as a pivotal external determinant, intensifying online behavior and reshaping perceptions of belonging and social status.

Notably, the results highlight that both internal motivations and external influences operate in tandem, shaping how students utilize digital platforms. The interplay of age and gender further provides nuanced insights, suggesting that different demographic groups navigate online environments with varying priorities and levels of satisfaction. In light of these findings, online social networks can be intentionally leveraged within academic and social contexts to foster a sense of belonging, support emotional well-being, and encourage responsible digital citizenship. These outcomes carry significant implications for educators, platform developers, and policymakers, suggesting that aligning digital spaces with students' psychological needs can lead to more meaningful, productive, and balanced engagement. In this way, online platforms can evolve beyond their traditional role as social connectors, becoming vital arenas for personal growth, emotional resilience, and communal belonging.

RECOMMENDATION

Policymakers and educators must prioritize the integration of comprehensive digital literacy programs that address responsible social media use, the psychological impacts of online engagement, and the management of peer influence. These programs should be tailored to promote critical thinking and reflection on the motivations driving online behavior, enabling students to make informed and intentional decisions about their OSN participation. Furthermore, academic institutions can promote healthy digital habits by encouraging collaborative, skill-building activities online while providing mental health support for students navigating the pressures of virtual environments. For platform developers, a user-centric approach is vital. Features that prioritize mental well-being, foster meaningful connections, and encourage self-expression without overemphasizing external validation can help create a healthier digital experience. Collaborating with researchers and psychologists to design tools encouraging balanced usage, such as time-tracking alerts or community-building activities, can significantly enhance user satisfaction. These combined efforts across education, policy, and platform design will ensure that OSNs remain empowering spaces for personal growth and positive social interaction.

For future research, it is recommended that scholars adopt longitudinal methodologies to track behavioural changes over time, particularly in response to evolving peer dynamics and digital trends. Such approaches can reveal the long-term psychological effects of OSN participation and whether current patterns sustain user satisfaction or lead to digital fatigue. Comparative studies across cultural contexts would also yield valuable insights into how socio-cultural norms mediate the influence of peer pressure and the fulfilment of needs. Additionally, mixed-method designs could enrich findings by capturing qualitative nuances that surveys alone may overlook. Exploring interventions—such as peer mentoring models or platform-based behavioral nudges—can also help researchers assess strategies for promoting healthier engagement. By diversifying methodological lenses, future studies can expand the understanding of digital participation as a multifaceted, culturally situated, and temporally evolving phenomenon.

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