Research Article

Peers, Gratification and Threat: Social Media Usage Among Adolescents

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ABSTRACT

The advancement of information and communication technology, with the advent of social media, has attracted users across all age groups. However, adolescents were among the first to adapt to and experience the digital world for educational and recreational purposes. This research investigated adolescents' social media experiences, including peer influence in their usage and the perceived threat. In light of the uses and gratifications theory, the study employed survey methodology via a questionnaire to investigate. Adolescents between the ages of 15 and 19 participated through stratified random sampling based on electoral constituency. With a 99% confidence level and a 5% margin of error, a total of 665 respondents were examined, and the response rate was 84%. The research found that the adolescents were extensively networked due to the satisfaction they gained from social media. Similarly, the role of peers was moderate, as the gratification outweighed other factors, including security threats.

INTRODUCTION

Adolescence is a stage between childhood and adulthood that is defined by the World Health Organization as an age between 10 and 19. It is a critical period in human development as the child experiences drastic changes in their physical, psychological, and cognitive abilities (Larsen & Luna, 2018). Adolescents make up 1.6 billion individuals on the planet or one-sixth of all humans. Furthermore, adolescence is a period of social identity formation and increased risk-taking (Erikson, 1950). Also, adolescents are vulnerable to social pressures due to hormonal changes and their surrounding environment. They are more likely to experience mental health issues, including anxiety and sadness (Keles et al., 2020).

In this context, the advent of social networking sites was received extremely well among the adolescent community as it offered them a gateway to endless activities. These social media applications are web-based tools that facilitate user collaboration on information sharing and connections within their user network (Aichner et al., 2021). The reasons people use social media can be divided into four categories: communication, entertainment, expression of ideas, and leisure usage (Al-Menayes, 2015). Social media is extremely helpful to adolescents, as it helps them to socialize and reconnect with their family and acquaintances through the virtual platform. It also facilitates access to informational resources of all kinds for their academic commitments.

Due to these multiple benefits, social media usage among young people has increased (Spilkova et al., 2017). The affordability of inexpensive mobile phones and data packages to access the internet (Whiting & Williams, 2013) facilitated this transformation. This led to the infiltration of social networking sites deeply into the lives of adolescents (Boer et al., 2020). The user-friendly design, simple interface, and no-cost signup processes of these digital applications allowed them to use them with ease and comfort. With this, social media provides an instant

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communication channel to connect with their peers and enables an easy way to express their thoughts in an open forum. They can also perform all these tasks with utmost anonymity (Charles-Smith et al., 2015). Being anonymous not only makes the experience more user-friendly but also speeds up the sharing of ideas (Lampe et al., 2010).

Social media has completely changed the communication patterns among people (Drahová & Balco, 2017). It also allows them to generate content and customize it in an easy way (Collin et al., 2011). The distinction between creators and consumers has been muddled by user-generated content, which has also given users additional opportunities to connect with anyone and share their information at any time. Several social networking applications have surfaced in recent years, each serving a unique purpose for users (Asemah et al., 2013). Users select social media applications based on their needs (Quan-Haase & Young, 2010).

Social media is an engaging and necessary component of adolescents' everyday lives as a result of all of these incentives (Lau, 2017). As they adopted these new technological tools more quickly and enjoyed their potential earlier than any other demographic group, they were among the most frequent users of social media applications (Lenhart et al., 2015). They use social media for entertainment, education, and communication with friends, family, and even strangers (Reich et al., 2012). The importance of social media usage among adolescents is keenly studied due to their overdependence on this digital platform, which can lead to addiction, as termed in child psychiatry (Kim, 2017).

The gratifications associated with the user differ among various digital applications, and each tool provides its users with a certain set of benefits. As a result, users use numerous social media applications to attain satisfaction. Similar to how users preferred message-based instant applications over email for connecting and communicating (Huang & Yen, 2003). The satisfactions derived from social media differ according to its functionality. One of the popular social media platforms among adolescents is Facebook, which is primarily used for interacting with other users (Alhabash et al., 2014). This helps them to maintain friendships, or to befriend someone new to them (Raacke & Bonds-Raacke, 2008).

Even friends who had parted ways have been reunited thanks to social networking sites. The adolescents' search for education and socialization are all aided by it. However, peer influence refers to the influence of friends, family, and even acquaintances in the decision-making of adolescents. This influence significantly affects the adoption of digital tools and engagement on social media. (Jung et al., 2005). Like any other medium, social media offers advantages and disadvantages that might influence them to benefit or distract young people. The usage of digital resources by adolescents is seriously threatened by security weaknesses and online abuses (Siddiqui & Singh, 2016). In this context, the adolescents' perceived threat that is their perception of online threat deriving out of their online activities needs investigation.

Peers and Social Media

Young users especially adolescents imitate the actions of their peers, those who share their interests. They are often influenced by the social norms and environment in which they live (Barker, 2009). The adolescents gain the social norms of their peers (Nesi et al., 2018). The amount of time adolescents spend with their peers and their approval tends to have an impact on them (Prinstein & Giletta, 2016). Also, peers and their motivation levels determine the level of influence they have over social media usage (Santor et al., 2000).

Adolescents are easily impacted by their peers, and as a result, the social norms they internalize from their peers are reflected in their behavior. Peers hold adolescents to understand social norms and socialization patterns (Henneberger et al., 2020). To gain approval and to maintain their peer circle the adolescents imitate the peer's attitude to stay relevant in their peer circle (Choukas-Bradley et al., 2015).

Even greater risks are taken by adolescents when they are around other people whom they consider important (Andrews et al., 2020). They display this characteristic even in their social media applications. Often, it establishes a strong correlation between adolescent's social media usage and risky behavior (Vannucci et al., 2020), with peers playing a critical role in it (Gerwin et al., 2018). The encouragement and motivation of the peers stimulate parts of the prefrontal cortex. Sherman et al. (2016) used magnetic resonance imaging of the cortex to determine the significance of peers among young Instagram users. The uniqueness of digital applications encourages the intensity of social media participation if they are endorsed by peers. The likes, shares, and comments from their peers make the adolescents enjoy, they enjoy their experience.

Theoretical Framework

The decision to select a medium among people relies on the level of satisfaction they receive from that particular medium (Palmgreen & Rayburn, 1979). In the context of social media, there is a wide range of applications that are currently available to people with abundant functionalities. People choose the application suitable for their tastes and needs (Ku et al., 2013).

Media Dependency theory postulates that if the chosen medium gratifies the person's needs and when completely dependent on the medium for social connection, information seeking will influence their behavior, thoughts, and feelings (Ball-Rokeach & DeFleur, 1976). Primarily, people's gratification is classified as hedonic, utilitarian, and social—the passing of leisure time and

enjoyment points to hedonic satisfaction. Information and knowledge-seeking fall under the utilitarian category, while social presence and interaction point to social satisfaction (Gan & Wang, 2015).

Early theories of communication assumed people to be submissive, easily receptive, and accept the powerful media (Windahl & McQuail, 1993). However, later theories like the Uses and gratifications theory took a different stance from the preceding postulates (Katz, 1959). This theory proposed viewers as active participants and they have the option to pick a medium that affects their sociological and psychological needs in some way (Flaherty et al., 1998).

In this context, social media too offers various gratification to its users. Its customizable features enable users to select the information they want from the application and share their content (Leung, 2013). Also, users actively select the application that can satisfy their needs and continue to use it as long as it gratifies them. As a result, the active users search for the applications in light of the anticipated gratifications (Baxter et al., 2008). Social scientists often use the postulates of the uses and gratifications theory even for new media applications like social networks (Han et al., 2015).

In addition, the Self-Determination theory postulates that people need conducive social environments to improve their motivation and well-being (Deci & Ryan, 2000). The social environment among adolescents is hugely occupied by their peer circle and most of their actions are somewhat imitated and related to their peer group. Also, the theory proposes that the most important motivational factor remains intrinsic and related to the inherent satisfaction in the behavior of the people. The study uses this postulate in the context of social media usage by adolescents.

Method

The study was conducted with the help of a survey method through a questionnaire. Adolescents studying in Chennai City between the ages of 15 and 19 were selected as the participants and filled out the questionnaire. Chennai city is regarded as India's cultural capital with 4.5 million population, and has one of India's highest rates of smartphone and internet usage. Through stratified random sampling, respondents were chosen based on the electoral constituencies of the city. The adolescents were approached through their schools and their parents. The response rate was 84%, and maximum effort was made to represent the respondents equitably in proportion to the population.

After receiving parental consent, respondents were permitted to take part in the survey. With a 99% confidence level and a 5% margin of error, 665 respondents were examined based on sample size calculation with a population size of eight lakhs based on the examination

records. After data collection, the data cleaning was performed to eliminate samples with insufficient datasets. Those responses were eliminated as the population was represented equitably.

The variables were measured with the help of five-point Likert scale-based items on the questionnaire. Hedonic, utilitarian, and social gratification were measured through items framed by previous research works (Li et al., 2015). Similarly, the perceived threat (Mahmood et al., 2021) and social media (Anderson & Jiang, 2018) usage were also measured. Finally, data from 634 respondents were selected for statistical analysis. Among them, 49.69% (N = 315) were female, while the remaining were male (N = 319). Similarly, 26.34% of the respondents were fifteen years old (N = 167), 20.67% were sixteen years old (N = 131), 27.44% (N = 174) were seventeen years old, 23.03% (N = 146) were eighteen years old, and the remaining were nineteen years old (N = 16).

Design and Research Questions

Social media usage among adolescents was further influenced by the intrinsic need for gratification (Perloff, 2014). According to Jung and Drummond (2016), these intrinsic needs were further shaped by peer validation among adolescents. Especially in social media, where they can choose the applications and gratify according to their expectations which may not be possible in traditional mediums (Asemah et al., 2013). In this context, the following research queries were raised for examination.

- RQ1: Do gratifications affect the adolescent's social media usage?
- RQ2: Does gratifications affect the adolescent's perception of online threats?
- RQ3: Does the perception of threat affect adolescent's social media usage?
- RQ4: What is the effect of peer influence on gratifications and social media usage?

The current research study developed a model comprising components that drive social media usage through hedonic, utilitarian, and social gratifications based on the Uses and Gratifications Theory and examined this about the perceived threat and peer influence, as examined in the literature analysis.

Results

Convergent and discriminant validity tests were used to analyze the sample's validity to determine the model's fitness. The average variance extracted (AVE), factor loadings, and composite reliability are used to evaluate the model's convergent validity (Gefen et al., 2000). The composite reliability was higher than 0.9, and the average variance extracted for the constructs was found to be higher than 0.600. Additionally, as reported in Table 1, the measured factor loadings were higher than 0.7. For every construct used in a study, the factor loading is expected

Table 1: Factor Loadings, Reliability values, and Validity measurement

Items		Composite reliability	rhoA	AVE	Cronbach's alpha
Hedonic Gratifications		0.920	0.914	0.698	0.891
Utilitarian Gratifications		0.947	0.942	0.66	0.937
Social Gratifications		0.975	1.018	0.797	0.973
Peer Influence		0.932	1.12	0.733	0.921
Perceived Threat		0.936	1.026	0.785	0.914
Social Media Usage		0.937	0.925	0.65	0.922
Factor Loadings					
HG1	0.804	UG1	0.783	SG1	0.893
HG2	0.899	UG2	0.926	SG2	0.945
HG3	0.744	UG3	0.824	SG3	0.849
HG4	0.913	UG4	0.753	SG4	0.857
HG5	0.805	UG5	0.753	SG5	0.868
		UG6	0.89	SG6	0.883
SM1	0.702	UG7	0.836	SG7	0.897
SM2	0.744	UG8	0.799	SG8	0.868
SM3	0.762	UG9	0.764	SG9	0.927
SM4	0.877	PR1	0.774	SG10	0.938
SM5	0.832	PR2	0.858	TH1	0.949
SM6	0.839	PR3	0.941	TH2	0.945
SM7	0.815	PR4	0.770	TH3	0.845
SM8	0.863	PR5	0.924	TH4	0.796

Note: HG represents hedonic gratifications, SM represents social media usage, UG represents utilitarian gratifications, PR represents peer influence, SG represents social gratifications, and TH represents perceived threat.
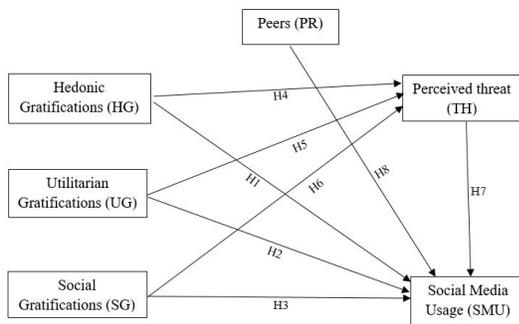

Figure 1: Proposed Model

to be greater than 0.7. (Vinzi et al., 2010). To increase the reliability and AVE ratings, seven constructs with low factor loadings (below 0.7) were eliminated (Grefen & Straub, 2005).

Cronbach's alpha and composite reliability were used to examine the item's reliability. The alpha values exceeded the 0.700 threshold, and the composite values were also above 0.700. (Wasko & Faraj, 2005). Additionally, as indicated in Table 1, all values of Average Variance

Extracted were higher than 0.500, indicating that the convergent validity was significantly acceptable.

The Fornell-Larcker criterion was used as a standard practice to evaluate discriminant validity. Table 2 shows the square root of the average variance extracted for the items and it was higher than the correlation between the constructs. The heterotrait-monotrait ratio of correlations, with a maximum limit of 0.90, was also used to examine the discriminant validity (Henseler et al., 2015). Consequently, discriminant validity is accepted in this model (Table 3).

The proposed model's hypothesized paths are echoed by the structural model, which is assessed by the values of R^2 and path significance. The R^2 for the model's dependent variable determines the robustness of each structural path, and its value must be equal to or greater than 0.100 to be considered satisfactory (Briones Penalver et al., 2018). As the values are at the expected level, the model's predictive power is acknowledged.

Likewise, the Q^2 determines the endogenous components' predictive power. The established model has predictive validity, as evidenced by the Q^2 value being greater than 0. The findings shown in Table 4 reflect

Table 2: Fornell-Larcker measurement

	HG	PR	SG	SMU	TH	UG
Hedonic Gratifications	*0.836*					
Peer Influence	0.506	*0.856*				
Social Gratifications	0.312	0.383	*0.893*			
Social Media Usage	0.579	0.328	-0.082	*0.806*		
Perceived threat	-0.207	-0.166	0.521	-0.417	*0.886*	
Utilitarian Gratifications	0.548	0.395	-0.022	0.569	-0.426	*0.816*

Note: Values in italics indicate the square root of Average Variance Extracted

Table 3: Heterotrait-Monotrait Ratio

	Hedonic Gratification	Peer Influence	Social Gratification	Social Media Usage	Perceived Threat
HG					
PR	0.472				
SG	0.450	0.506			
SMU	0.841	0.302	0.308		
TH	0.235	0.176	0.459	0.429	
UG	0.819	0.391	0.36	0.837	0.406

Note: HG represents hedonic gratifications, SM represents social media usage, UG represents utilitarian gratifications, PR represents peer influence, SG represents social gratifications, and TH represents perceived threat.
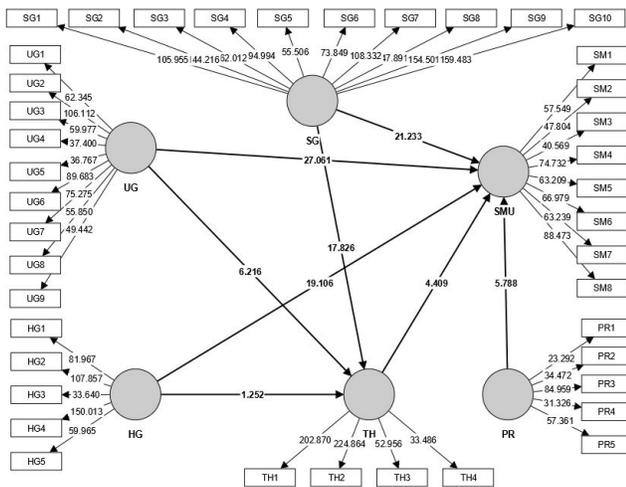

Figure 2: Structural model

the significant importance of the items' predictions. Furthermore, the Standardized Root Mean Square Residual (SRMR) was used to check the model's fit. The reported SRMR value was 0.083, which is below the necessary value of 0.10 and demonstrates adequate model fitness (Hair et al., 2016). SMU and TH had R^2 values of 0.981 and 0.444, respectively.

The Hypotheses of the study were further assessed for quality of fit. H1 determines if HG significantly affects SMU. The findings show that HG has a significant effect on SMU (t = 19.106, β = 0.438, p < 0.001). H1 was therefore strengthened. H2 determines if UG significantly affects SMU. The test results show that UG has a significant effect on SMU (t = 27.061, β = 0.638, p < 0.001). H2 was therefore supported. H3 determines whether SG significantly affects SMU. The results show that SG has a significant effect on SMU (t = 21.233, β = -0.214, p < 0.001). H3 was therefore strengthened. H4 determines whether HG significantly affects TH.

The results indicate that HG has little influence on TH (t = 1.252, β = -0.076, p = 0.211). H4 was not reinforced as a result. H5 determines whether UG significantly affects TH. The results show that UG has a significant effect on TH (t = 6.216, β = -0.344, p < 0.001). H5 was therefore strengthened. H6 determines whether SG significantly affects TH. The results show that SG has a significant effect on TH (t = 17.826, β = 0.534, p < 0.001). H6 was therefore strengthened. H7 determines if TH significantly affects SMU. The results show that TH has a significant effect on SMU (t = 4.409, β = 0.042, p < 0.001). Hence, H7 was reinforced. H8 determines if PR significantly affects SMU. The results show that HG has a significant effect on SMU (t = 5.788, β = -0.068, p < 0.001). H8 was therefore reinforced.

DISCUSSION AND CONCLUSION

Hedonic, utilitarian, and social gratifications all play a significant part in social media usage among adolescents similar to Gan (2018). Among these gratifications, utilitarianism (t = 27.061) has a significant effect on social media use compared to other categories of gratifications. As digital usage served as a doorway for adolescents' academic and other needs, this digital usage facilitated

Table 4: Structural model fitness assessment

	P	β	T values	97.50%	2.50%	Standard deviation
Hedonic Gratifications -> SMU	0.000	0.438	19.106	0.484	0.394	0.023
Utilitarian Gratifications -> SMU	0.000	0.638	27.061	0.682	0.590	0.024
Social Gratifications -> SMU	0.000	-0.214	21.233	-0.194	-0.233	0.010
Hedonic Gratifications -> TH	0.211	-0.076	1.252	0.034	-0.204	0.061
Utilitarian Gratifications -> TH	0.000	-0.344	6.216	-0.231	-0.448	0.055
Social Gratifications -> TH	0.000	0.534	17.826	0.589	0.470	0.030
Perceived threat -> SMU	0.000	0.042	4.409	0.061	0.024	0.009
Peer Influence -> SMU	0.000	-0.068	5.788	-0.043	-0.089	0.012

Note: SMU represents social media usage, and TH represents perceived threat.

access to social networking sites (Goel & Gupta, 2020). The web-based applications were used by information seekers, particularly young people (Hamilton et al., 2020), as their academic work was linked to online usage for assignments, which allowed adolescents to use it more frequently.

The perceived threat was influenced by the social and utilitarian needs of the adolescents. As sensitive information sharing online mainly points to social networking sites, users who are more satisfied with their social interactions are more likely to perceive a threat. On the other hand, the users' perceived threat was least affected by hedonic gratification. The peer influence on social media usage was minimal in comparison to the respondents' reported levels of satisfaction. The peers have a limited influence on social media use, and they are primarily driven by gratification rather than friendship.

Threat perception had little effect on social media usage. The benefits that the adolescent receives from social media outweigh their perceived threat. That is the advantages they gained outweighed the risks from online, and they no longer consider it as a major factor as social media provides them with opportunities for knowledge transfer and endless entertainment.

The R^2, which reflects the degree of variance by independent variables in the proposed model, indicates that social media usage has a high score of 98.1%. It also reflects the size of changes induced by the impact of an exogenous variable on an internal variable. In this study, every component of the model may be held responsible for 98.1 percent of social media usage. Among the main drivers of media use among the respondents were information and knowledge-seeking behavior. Adolescents prioritize their search for knowledge as the primary reason for accessing social media. This can also be attributed to the age of the respondents, as many of the participants in the survey, were between the ages of 16 and 18, and were preparing for competitive tests for their higher education and pursuing careers in engineering or medicine.

The next significant element that holds social media usage is social gratification which can be pointed to the adolescent's virtual presence on social networking sites. Social networking and usage via the internet also influenced the perception of threat. The level of threat perception changes as they engage more. However, hedonic gratification has little bearing on how adolescents perceive threats and remains insignificant. It shows that awareness of threats was disregarded when enjoyment became the focus.

Peers and threat perception were important influences on media use. However, while these variables could induce adolescents to social media usage, their continued use is more linked to the degree of satisfaction as postulated in the Uses and gratification theory. It overpowered the threat perception and peers. As peers are more likely to initiate social media usage within their group, the continued usage among young users depends on personal gratification which is intrinsic to their behavior. Also, the social gratification of 'like' and 'comment' which are extrinsic motivators for their continued social media usage tend to have strong significance. The research study is important to understand the critical level of social media usage among adolescents who have unrestricted access to social media. This usage has exposed them to online abuse, bullying, and explicit content. At times, these factors psychologically affect their well-being even in later stages of life.

STATEMENTS AND DECLARATIONS

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