

SUB THEME 06

Social Networking and Human Interactions Explored Through Technology

Social Networking Usage and Conspiracy beliefs among Undergraduates in Colombo, Sri Lanka

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Abstract

Conspiracy beliefs are increasingly prevalent, characterized by the attribution of significant world events to secret, often malicious plots by powerful groups. These beliefs challenge more plausible or scientifically grounded explanations and can negatively influence public health, political systems, and societal stability (Aaronovitch, 2009). Conspiracy theories typically flourish in environments of uncertainty and distrust, with recent research suggesting that social media platforms particularly Facebook, Twitter, and Instagram are central to their rapid spread (Marwick & Lewis, 2017). This phenomenon has led to concerns that Social Networking Sites (SNS) may be amplifying these beliefs by facilitating misinformation dissemination (Vosoughi et al., 2018).

Sri Lanka, a developing nation with increasing internet penetration and social media use, provides a unique context for examining these dynamics. The country has faced political instability and health crises, such as during the COVID-19 pandemic, where conspiracy theories regarding vaccine safety and government actions were rampant. However, few studies have examined the specific relationship between social networking usage and conspiracy beliefs among undergraduates in Sri Lanka. This study aims to address this gap by exploring the connection between social networking usage and conspiracy beliefs among university students in the Colombo district.

Literature Review

The link between social media and conspiracy beliefs is well-established in existing literature. Several studies indicate that social networking platforms

provide fertile ground for the spread of conspiracy theories (Jamieson & Albarracín, 2020). The open, user-driven nature of these platforms makes them ideal for sharing unverified or false information, particularly when users are not equipped with the critical thinking skills to assess the credibility of information. Moreover, algorithms on these platforms often reinforce confirmation bias, exposing users to content that aligns with their existing beliefs, further entrenching conspiracy theories (Boulianne & Lee, 2022).

On the other hand, some scholars argue that the relationship between social media use and conspiracy beliefs is not straightforward. Research by Enders et al. (2021) suggests that individuals.

Predispositions such as levels of political cynicism, distrust in authority, and openness to alternative explanations may drive conspiracy belief formation more than mere exposure to social media. This suggests that social networking platforms might not necessarily create conspiracy beliefs but instead amplify existing tendencies among users who are already predisposed to such thinking. Studies like those conducted by Napolitano and Reuter (2021) have pointed out that the evaluative use of the term 'conspiracy theory' itself can affect how people perceive the credibility of information, further complicating the dynamics of belief formation on social networks.

In the Sri Lankan context, the role of social networking in fostering conspiracy beliefs has yet to be systematically studied. However, given the socio-political challenges and increasing reliance on social media as a primary source of information, the country provides a valuable case for understanding how SNS use interacts with conspiracy thinking in a non-Western setting. In light of the literature reviewed, this study aims to fill a gap by investigating the association between social networking usage and conspiracy beliefs among undergraduate students in the Colombo district of Sri Lanka. The specific objectives of the study are as follows:

1. To assess the social networking usage among undergraduates in the Colombo district of Sri Lanka.

2. To assess conspiracy beliefs among undergraduates in the Colombo district of Sri Lanka
3. To assess the association between social networking usage and conspiracy beliefs among undergraduates in the Colombo district of Sri Lanka.
4. To assess the association between demographic factors and conspiracy beliefs among undergraduates in the Colombo district of Sri Lanka.

By addressing these objectives, the study will contribute to the understanding of how digital platforms shape conspiracy beliefs in the context of a rapidly developing society like Sri Lanka, and inform strategies for promoting digital literacy and critical thinking.

Methods and Methodology

This study employed a cross-sectional correlational design to explore the relationship between social networking usage and conspiracy beliefs among undergraduates in the Colombo district. A total of 452 participants, selected through convenience sampling, were recruited from several Universities. This sample size was deemed adequate based on guidelines for social science research, which suggest a minimum sample size of 300 for correlation studies. Participants were recruited through social media platforms and university forums, with a final sample comprising 237 males (52.4%) and 215 females (47.6%).

Data Collection Tools

Data were collected using two primary tools: The Social Networking Usage Questionnaire (SNUQ) and the Generic Conspiracist Belief Scale (GCBS). The SNUQ was designed to assess participants' frequency of social media usage across platforms such as Facebook, Instagram, and Twitter, as well as the nature of their engagement—whether passive (scrolling, viewing) or active (posting, sharing). In contrast, the GCBS measured participants' belief in various conspiracy theories, ranging from political conspiracies to those involving health and science. Both instruments were previously validated in studies on media usage and belief systems and were deemed appropriate for this population.

In addition to these tools, demographic information, including age, gender, academic field, and place of residence (urban/rural), was collected to

explore potential demographic influences on both social networking usage and conspiracy beliefs.

Data Analysis

Data analysis was conducted using SPSS version 26. Descriptive statistics were employed to summarize demographic characteristics and the central tendencies of the key variables: social networking usage and conspiracy beliefs. To assess the relationship between these variables,

Spearman's rho was employed, given that both variables did not meet the assumption of normal distribution. Additionally, t-tests and ANOVAs were used to explore differences in conspiracy beliefs based on demographic factors such as gender, academic field, and residency.

Results and Discussion

The mean score for social networking usage in the sample was 1.39 (SD = 0.38), indicating moderate use of social media. Conspiracy belief scores, as measured by the GCBS, averaged 3.11 (SD = 0.27), suggesting a relatively high endorsement of conspiracy beliefs. However, a significant negative correlation was found between social networking usage and conspiracy beliefs ($r = -0.457$, $p < 0.01$). This finding indicates that contrary to expectations, higher social networking usage was associated with lower levels of conspiracy belief among the participants.

This result challenges the assumption that social media primarily amplifies conspiracy theories by creating echo chambers where misinformation thrives. Instead, the data suggests that greater exposure to diverse viewpoints on social networking platforms might encourage critical thinking and skepticism toward unverified claims. These findings are in line with recent studies suggesting that the relationship between social media and conspiracy beliefs may be more complex than previously thought (Boulianne & Lee, 2022).

Gender differences were also observed, with males reporting higher social networking usage ($t = 3.792$, $p < 0.001$) and greater endorsement of conspiracy theories compared to females. This aligns with previous research indicating that men are more likely to believe in conspiracy theories, possibly

due to greater exposure to political and social commentary on social networking platforms (Stempel et al., 2007). Moreover, students from social sciences were found to endorse conspiracy theories at higher levels compared to their counterparts in STEM fields ($F = 31.372, p < 0.001$). This difference may be attributed to the critical and theoretical nature of social science education, which often involves questioning dominant narratives and exploring alternative explanations for socio-political phenomena.

Conclusions and Remarks

The findings of this study offer a nuanced understanding of the relationship between social networking usage and conspiracy beliefs. While previous studies have often suggested that social media perpetuates conspiracy theories by creating environments conducive to misinformation, this study provides evidence that increased social networking usage may correlate with a lower tendency to believe in conspiracy theories. These findings underscore the importance of considering how social media can also serve as a platform for critical engagement and diverse perspectives.

Demographic factors such as gender and academic field also play a significant role in shaping conspiracy beliefs. Males and social science students, in particular, showed a greater tendency to endorse conspiracy theories, which suggests that interventions aimed at combating misinformation should be targeted according to these demographic nuances.

From a practical perspective, these findings hold implications for media literacy programs. Promoting critical thinking and skepticism in online environments may be an effective strategy for reducing the influence of conspiracy theories. Future research could adopt longitudinal approaches to explore how sustained engagement with social media affects belief systems over time. Additionally, it would be useful to explore the specific types of content that individuals engage with on social media platforms to understand better the mechanisms through which social networking usage influences conspiracy beliefs.

In conclusion, while social networking platforms are often blamed for the spread of misinformation, they also offer opportunities for education and critical dialogue. By fostering media literacy and encouraging thoughtful engagement with diverse viewpoints, social media could potentially serve as a tool to mitigate the spread of conspiracy theories and misinformation.

Keywords: *Conspiracy beliefs, Social networking usage, Generic Conspiracist Beliefs Scale(GCBS), Social Networking Usage Questionnaire(SNUQ), Social Networking Sites (SNS)*

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Social Networks and Human Interactions in the Process of Immigrant Settlement- Sri Lankan Sinhalese Migrants in Australia

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Introduction

Sri Lankan immigrants in Darwin, Australia demonstrate dramatic patterns in settlement and home making process. First, in the process of settlement, there is a demographic variation between the elderly migrants and recent arrivals to Darwin. Second, critical factors affecting immigrant settlement like kinship and social networks, availability of jobs, cost of living, environmental factors and climatic conditions, and availability of opportunities for an active social life play different roles among different immigrant categories. Third, in and out migration of Sri Lankan immigrants to Darwin from other states in Australia is peculiar compared to the migration between other states as demonstrated by 2016 statistics of low retention rate of immigrants compared to other states. These variations suggest that immigrant settlement must be understood as the confluence of numerous factors instead of a single contributing factor. Accordingly, this paper seeks to understand how ‘social relationships’ derived from two forms of relationships; kinship and friends leads to immigrants’ settlement. Thus, as this paper argue, social networks and human interactions must be understood in conjunction with other factors.

In the literature of migration and immigration on settlement, social networks and human interactions are often discuss under the concepts of ‘bridging’ and ‘bonding’ which were initiated by Putnam (2000) and further discussed by Ryan et al. (2008). While the concept of bridging explains immigrant’s social relations extended to other ethnic categories other than their own (Barwick, 2015), the concept of ‘bonding’ explains the social relations confined to own ethnic communities. As Koelet & de Valk (2016) suggest, moving across ethnic communities support immigrant to get rid of the feeling of

isolation and social exclusion. Though these two concepts are useful to differentiate the social relationships between kinship and friendship in the context of migration and immigration, findings confirm that that it is not the case. For instance, when immigrant or their children or relatives may form affinal relationship beyond own ethnic community, which obsolete the terminological boundaries of the concept of bonding. Such instances suggest us the careful handle of terminologies.

Methodology

The study is based on two and half years of fieldwork carried out in Darwin, Australia with recent updates via digital interactive tools. The study is based on a qualitative approach, data gathered using three main data collecting tools, participant observation, in-depth interviews and analysis of artefacts such as souvenirs, photographs and materials related to the life events and household activities. During the two and half years of initial field activities, thirty-five case studies were carried out in addition to hundreds of informal discussions at domestic and public activities. Thirty-five case studies consisting of three categories of early and recent immigrants – temporary residents, permanent residents and citizenship holders. Respondents were approached using purposive and snowball sampling techniques. Access to the community was made through key informants who played vital role in community activities and social gatherings. They were the people who are connected to the immigrant communities across ethnic categories and government officials. This paper is based on data generated from the sections of questionnaire related to the settlement experience and future of migration. Data were analyzed using thematic approach.

Findings and Discussion

Out of 35 participants 14 decided to ‘stay’ and to make their permanent settlement in Darwin. Of these 14 participants, 11 were elderly migrants. 3 other migrants arrived in Darwin recently and are well established in their professions and economic advancement. Yet, their decision to ‘stay’ will be determined in due cause as they are still in the stage where interest in interstate migration might

arise at any moment. For example, children and their education may be a reason for interstate migration. Out of the 14 participants, 7 made their decision to stay due to the climatic conditions. 3 of them mentioned that their decision was made simply due to the 'convenient' life in Darwin. 4 of them have made the decision to stay due to friends and social networks. However, majority of the immigrants who settled in Darwin noted that their decision was influenced by factors such as 'close proximity to Sri Lanka' compared to other states, 'familiarity' of the landscape including flora and fauna, 'constant climatic and environmental conditions' despite a short period of cyclone. The idea of 'close proximity' refers to the comparatively less travel time to Sri Lanka via Singapore compared to other cities, which is possible only due to the transnational forces (Castle, 2002).

Out of 35 participants, 21 migrated to other states in Australia such as Melbourne, Sydney, Canberra, Adelaide and Perth. 10 of them mentioned that they left Darwin for betterment of life conditions. As sarcastically expressed, 'To be in real Australia', 6 of them migrated due to other opportunities available in other states compared to Darwin. This includes 'social and economic development', access to many facilities including spaces for many activities related to leisure and entertainment, 'low cost of living' including low cost of housing. Five of them migrated to other states to be with their 'relatives' and 'friends'. These, two forms of relationships play dual role in settlement process. While social interactions made through kinship relations and friendship relations which are vital for social mobility and advancement (Granovetter, 1973), the emotive dimension is also equally important to determine the integration process to the community (Pathirage, forthcoming 2024). On the other hand, such social networks are extended beyond the geographical boundaries to the virtual domain, which are possible due to the transnational forces (Castle, 2002; Baldasar, 2008).

Immigrants' decision to stay or leave is determined by arrays of factors mentioned above. Categorically, such factors are grouped into two- economic and, social and cultural. While factors such as salary level, cost of living are over determined in the category one, kinship and friendship ties are over emphasized in category two. However, as evident, role of social networks cannot be

understood alone overlooking the confluence of other factors. Most of those factors are connected to the ideas such as 'social status' space for social and economic expansion, the quality of life and climatic conditions. For some immigrants, while some of these factors cause to determine the settlement in Darwin the same causes push others out of Darwin. The best examples are factors such as climatic conditions and isolation. Darwin is considered a tropical region with intense humidity along with a period of heavy rain and cyclone known as the wet season. On most occasions including in employment, the dress code is casual. Moreover, life is less competitive compared to other cities. But the same reason may push some immigrants out of Darwin due to the unbearable humidity and cyclones as well as less competitiveness markets, as some people noted that Darwin do not offer chances to thrive economically. These factors cut across generations as well. For instance, elderly may prefer tropical weather to cold climatic conditions, whereas youth may enjoy the cold weather with winter. Also, the nature of kinship relations and its connectivity at home country equally play an important role in determining to stay or leave. For example, if the kinship relations in the home country is not warm and positive, and subject to humiliation during the visits (Gallo, 2015), migrant may evaluate the nature of the relationship of the kinsmen in the host community and decides the settlement.

Settlement is not a mere mechanical process of staying, but has emotional and affective dimension connected to the time and memory. The length of the stay had made them draw new forms of social networks and human interactions which made their lives meaningful compared to the settlement experiences of recent immigrants. The pattern of social networks and interactions among early immigrants works across the other ethnic communities, which can be identified as bonding and Bridging (Putnam, 2000). Such expansive relationships are possible due to length of stay including possible affinal relationship across communities. Again, as Portes (2008) mentioned social networks depend on person's accrued of the reasonable degree of cultural capital, which cannot be seen among many recent immigrants. In such instances, either they may confine themselves into their own ethnic communities or may take long

time to create expansive relationships across the communities. Thus, I Argue that the role of social networks and interactions in immigrant communities must be evaluated with other social and cultural factors.

Keywords: *Sri Lankan Immigrants, Australia, Darwin, Interstate migration, Social Networks*

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Factors Associated with the User's Willingness to Leave Digital Footprint on Social Media

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Abstract

In the digital age, social media platforms have become integral to daily life, allowing users to interact, share information, and express themselves. Despite the growing reliance on these platforms, little is known about the factors influencing users' willingness to leave digital footprints data trails that reveal online behavior and personal information. This study examines the factors associated with user willingness to leave digital footprints on social media, highlighting the implications for privacy, security, and user behavior. The research explores how personal, social influence, technological, privacy, and security factors shape users' intentions, providing a framework applicable across different cultural and geographical contexts.

Literature Review

Understanding user behavior on social media platforms requires a multifaceted approach. Existing studies have applied several theoretical frameworks, such as the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT), to explore the factors that influence social media usage. These models emphasize elements like perceived ease of use, perceived usefulness, and technological compatibility as primary drivers of adoption and engagement (Venkatesh et al., 2012; Lu et al., 2010). However, these frameworks often overlook the broader psychological, social, and contextual factors that affect users' willingness to leave digital footprints (Muhammad et al., 2017).

Research shows that intrinsic motivations, including self-enhancement, self-esteem, and the desire for social recognition, play a crucial role in shaping user behavior online (Park & Kim, 2014; Whiting & Williams, 2013). Users often engage with social media to fulfill psychological needs for entertainment, relaxation, and self-expression (Al-Jabri et al., 2015; Grace et al., 2015). Additionally, social influence factors, such as peer pressure and social norms, significantly impact users' willingness to share personal information and maintain a digital presence (Cheung et al., 2015; Bharati et al., 2014).

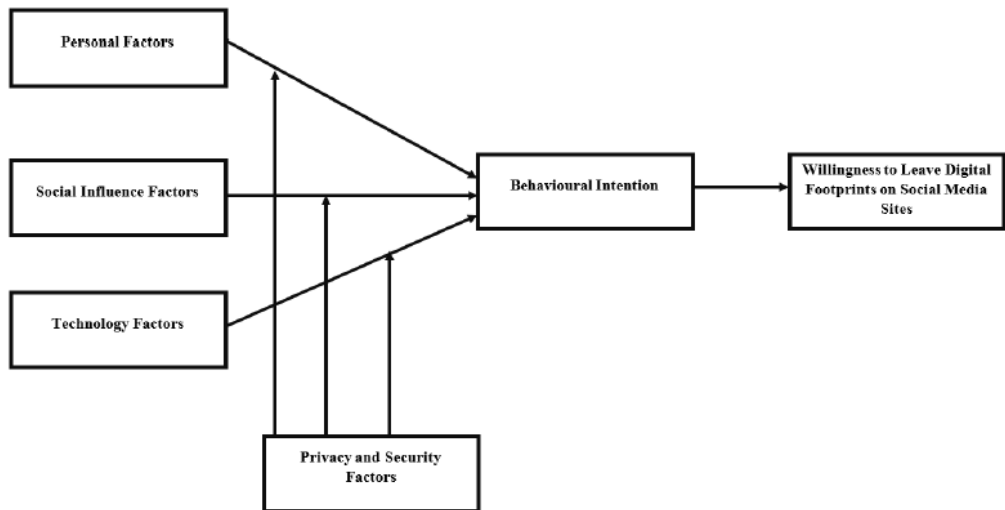
Technological factors, including perceived utility, innovation, and ease of use, have been found to influence users' behavioral intentions on social media. The perceived usefulness of these platforms, coupled with their ease of use, enhances user engagement by reducing barriers to participation (Al-Gahtani et al., 2007; Idemudia et al., 2016). However, concerns about privacy and security remain critical. Users' perceptions of risk and their trust in the platform's ability to protect their data are vital determinants of their willingness to leave digital footprints (Cao et al., 2015; Büchi et al., 2017).

Despite these insights, there remains a gap in understanding the interplay between these factors, particularly how privacy and security considerations influence users' decisions to create and maintain digital footprints (Muhammad et al., 2017). This study seeks to bridge this gap by integrating these diverse factors into a comprehensive model applicable across various cultural and geographic contexts.

With the findings of the literature review the conceptual framework of this study can be constructed integrating multiple factors influencing user willingness to leave digital footprints on social media platforms. It includes three independent variables namely personal, social influence factors, and technological factors. These factors are hypothesized to impact the mediating variable, behavioral intention, which in turn influences the dependent variable, willingness to leave digital footprints. The framework also includes privacy and security factors as a moderating variable, affecting the strength of the relationship between behavioral intention and willingness to leave digital footprints. This

framework provides a comprehensive model that captures the direct, mediating, and moderating effects of various factors on user behavior, offering a holistic view of digital footprint dynamics on social media (see figure 01).

Fig. 01: Holistic view of digital footprint dynamics on social media



Methods and Methodology

This study employed a quantitative research design to analyze the factors influencing user willingness to leave digital footprints on social media. The research population comprised social media users, with a sample size of 392 respondents drawn from all nine provinces of Sri Lanka using a snowball sampling technique. Data were collected via a self-administered questionnaire, with the validity and reliability of the instrument confirmed through preliminary tests. The analysis utilized descriptive and inferential statistics, including regression, correlation, and mediation analyses, to assess the relationships among personal, social, technological, privacy, and security factors and their impact on behavioral intention.

Results and Discussion

This study used correlation, regression, mediation, and moderation analyses to explore the factors influencing user willingness to leave digital

footprints on social media platforms. The correlation analysis revealed significant positive relationships between personal factors ($r = 0.58$, $p < 0.01$), social influence factors ($r = 0.62$, $p < 0.01$), technological factors ($r = 0.54$, $p < 0.01$), and users' behavioral intentions to leave digital footprints. These findings suggest that higher self-esteem, social engagement, and perceived technological benefits enhance users' behavioral intentions.

Regression analysis further demonstrated that personal factors ($\beta = 0.34$, $p < 0.01$), social influence factors ($\beta = 0.41$, $p < 0.01$), and technological factors ($\beta = 0.28$, $p < 0.01$) significantly predict behavioral intention, explaining 62% of the variance (Adjusted $R^2 = 0.62$). Additionally, behavioral intention was a strong predictor of users' willingness to leave digital footprints ($\beta = 0.48$, $p < 0.01$).

Mediation analysis indicated that behavioral intention fully mediates the relationships between personal (indirect effect = 0.22, 95% Confidence Interval (CI): 0.14 to 0.30), social influence (indirect effect = 0.26, 95% CI: 0.18 to 0.34), and technological factors (indirect effect = 0.20, 95% CI: 0.12 to 0.28) and willingness to leave digital footprints. This highlights that users' intentions play a crucial role in translating these factors into actual online behavior.

Moderation analysis showed that privacy and security concerns significantly moderate the relationship between behavioral intention and willingness to leave digital footprints (interaction effect = -0.18, $p < 0.05$). High privacy and security concerns reduce the likelihood of leaving digital footprints, even when behavioral intention is strong.

The hypotheses tested supported all proposed relationships: personal, social, and technological factors positively impact behavioral intention (H1-H3), behavioral intention mediates the relationship between these factors and willingness (H4), and privacy and security concerns moderate the relationship between behavioral intention and willingness (H5). Finally, behavioral intention was confirmed to positively influence willingness to leave digital footprints (H6). These findings align with existing literature on digital behavior, emphasizing the importance of personal, social, and technological factors in shaping user

intentions (Al-Jabri et al., 2015; Park & Kim, 2014). The significant mediation effect of behavioral intention highlights its role in the decision-making process, while the moderation effect of privacy concerns underscores the need for robust privacy protections to foster user engagement. The study suggests that enhancing user trust through clear data policies and strong privacy controls could encourage more active participation and willingness to leave digital footprints.

Conclusions and Remarks

This study provides a comprehensive understanding of the factors influencing user willingness to leave digital footprints on social media platforms. The findings confirm that personal factors, such as self-esteem and self-enhancement, social influence factors like peer engagement, and technological factors, including perceived utility and ease of use, significantly impact users' behavioral intentions. Behavioral intention acts as a crucial mediator in translating these factors into actual willingness to leave digital footprints. The study also highlights that privacy and security concerns significantly moderate the relationship between behavioral intention and willingness, suggesting that even with strong behavioral intentions, users may hesitate to leave digital footprints if privacy risks are perceived.

These findings have significant implications for social media platforms, policymakers, and digital marketers. To enhance user engagement, platforms should focus on strengthening user trust through robust privacy controls and transparent data policies. Furthermore, the study's model can be adapted to various cultural and geographic contexts, offering a versatile tool for understanding digital behavior globally. Future research should explore the model's applicability in different settings and consider additional variables that may influence user behavior. Overall, this research contributes to the ongoing discourse on digital privacy, user behavior, and the balance between engagement and security in online environments.

Keywords: *Behavioral intention, digital footprint, privacy, security, social media, user behavior*

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The Evolution of Human Relationships in the Digital Age: A Study of Online Friendships and Offline Impacts

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Abstract

This study seeks to elucidate the evolving nature of human relationships in the digital age, concentrating on the formation, dynamics, and effects of online friendships on both virtual and real-world interactions. The research utilizes a mixed-methods design, integrating quantitative and qualitative data collection methods. An organized online survey was disseminated to a representative sample of 300 individuals aged 18 to 45 living in Maharagama, Sri Lanka. Comprehensive semi-structured interviews were performed with a sample of participants (n=20) chosen for their varied experiences with online relationships. Regression analysis indicated that the number of online friends, perceived friendship quality, and average daily online engagement were significant predictors of emotional fulfillment in online relationships, especially among younger generations who are more digitally integrated. Virtual friendships significantly influence individuals' social lives, providing avenues for connection, support, and emotional satisfaction. The results of this study may assist individuals and mental health professionals in comprehending the influence of technology on human interactions.

Keywords: *Online Friendships, In-Person Relationships, Social Media, Digital Age, Emotional Satisfaction, Human Interactions*

Introduction

The advent of the digital age has significantly changed the dynamics of human interactions, especially in relation to relationships. Social networking platforms such as Facebook, Instagram, Twitter, and Snapchat have transformed

interpersonal relationships and communications and enabled unparalleled social connections across wide-distance. The study examines the changing nature of human relationships in the digital age and focuses on the establishment, dynamics, and impact of online friendships on virtual and real interactions. Previous studies have investigated the potential advantages and disadvantages of virtual relationships (Lampe, C., et al., 2008; Subrahmanyam, et al., 2008). Online friendships can provide social support, connections, and broader social networks, but they can also pose problems in terms of emotional intimacy, trust, and authenticity (Hampton, K. N., et al (2018); Tufekci 2014). Exploring the complex relationships between online and offline interactions is essential to understand the changing dynamics of human interaction in the digital age. This study is designed to improve the current research by analysing the formation, maintenance and experience of online friendships concerning conventional offline relationships. The research will specifically explore the following questions:

1. In what ways do online friendships contrast with offline friendships regarding their formation, dynamics, and emotional satisfaction?
2. What is the effect of online friendships on the quality and longevity of real-world relationships, including those with family, friends, and romantic partners?
3. Do emotional and psychological repercussions arise from sustaining friendships predominantly via digital platforms?
4. What are the beneficial and detrimental effects of online friendships on individuals' social well-being?

This study aims to elucidate the changing dynamics of human relationships in the digital era and to present insights into the potential advantages and obstacles linked to online friendships.

Objectives of the Research

1. Analyze the characteristics and dynamics of online friendship compared to offline relationships.

2. Assess the impact of virtual friendship on the quality and longevity of real relationships.
3. To explore the emotional and psychological impact of maintaining friendships through digital platforms.
4. Determine the beneficial and harmful effects of online friendships on the social well-being of individuals.

Literature Review

The emergence of digital technology has fundamentally altered the nature of human relationships, giving rise to a new paradigm in how individuals connect and interact. A significant body of research has explored the dynamics of online friendships, highlighting both their advantages and drawbacks. Lampe et al. (2008) examined the evolution of social media usage and its impact on interpersonal connections, suggesting that online platforms can enhance social networks by fostering connections across geographical boundaries. However, while these platforms facilitate the establishment of new friendships, they may also create challenges related to emotional intimacy and authenticity (Hampton & Wellman, 2018; Tufekci, 2014).

The role of online friendships in providing emotional support and social connectivity has been emphasized by several studies, which indicate that virtual relationships can fulfill social needs, particularly among younger generations (Subrahmanyam et al., 2008; Mesch & Talmud, 2006). Yet, the complexity of online interactions raises important questions regarding their influence on offline relationships. Research by Lomanowska and Guitton (2016) suggests that while online friendships may offer a sense of belonging, they often lack the depth and richness of traditional in-person relationships. Additionally, concerns about privacy, safety, and the potential for superficial connections in online spaces pose significant challenges for individuals navigating these digital environments (Parsakia & Rostami, 2023). Understanding the interplay between online and offline relationships is essential for assessing the broader implications of digital interactions on social well-being and emotional fulfillment. This study aims to

contribute to this growing body of literature by examining the characteristics, dynamics, and psychological impacts of online friendships on individuals' offline social lives.

Methods and Methodology

This study uses mixed-method research design, integrated methods of collecting quantitative and qualitative data, to fully understand the dynamics of human interaction change in the digital age. This mixed method methodology facilitates both quantitative and qualitative data analysis and provides a more comprehensive and accurate understanding of research questions.

An organized online survey was conducted with a representative sample of 300 individuals aged 18 to 45 residing in Maharagama, Sri Lanka. The survey included both closed-ended and open-ended questions to gather data on various aspects. Demographic details such as age, gender, educational attainment, profession, and geographic region were collected. Online friendship dynamics were explored by examining the regularity of digital interactions, platforms used, types of online friendships (e.g., acquaintances, intimate friends), and the perceived benefits and challenges of virtual relationships. Additionally, the survey assessed offline relationships, focusing on the frequency of in-person interactions, types of offline relationships (e.g., familial, platonic, romantic), and the impact of online friendships on offline connections. Emotional fulfillment was evaluated in terms of satisfaction, social support, and emotional well-being derived from both online and offline relationships. The survey also measured the average daily time spent on social media and other digital platforms.

Comprehensive semi-structured interviews were conducted with a diverse sample of 20 participants selected for their varied experiences in online and offline relationships. These interviews explored participants' personal experiences, perceptions, and reflections on the formation and development of virtual friendships, the impact of these friendships on real-world relationships, the emotional and psychological aspects of online connections, and the perceived benefits and challenges of maintaining friendships primarily through digital platforms.

Statistical analysis, including descriptive statistics, correlation analysis and regression analysis, is used to analyse quantitative data from surveys. This allows to identify patterns, trends and correlations between variables. Thematic analysis is used to examine qualitative data obtained from interviews. This meant identifying and coding the repeated themes and patterns of the interview transcript. Thematic analysis enables participants to better understand their subjective experiences and opinions.

Throughout the research process, ethical considerations were strictly observed. Participants gave informed consent before participating in the study. The privacy and anonymity of their data are protected, and all data is confidentially managed. In addition, measures have been taken to ensure the ethical use of social media data, including the acquisition of necessary permits and the compliance with platform regulations.

Results

The analysis reveals a young demographic with a mean age of 27 years, consisting of 55% females and 45% males, indicating a balanced gender distribution. The educational background of participants is diverse, with 28% holding a bachelor's degree, 6% a master's degree, 41% having completed Advanced Level (A-Levels), 18% at Ordinary Level (O-Levels), and 7% with less than Ordinary Level qualifications. This educational variation reflects the differing levels of engagement and perspectives among participants.

In terms of online behavior, participants report spending an average of 5 hours daily on the internet, highlighting their reliance on digital platforms. Social connections reveal a stark contrast between online and offline interactions, with an average of 150 online friends compared to just 10 offline friends. This discrepancy emphasizes the expanding nature of social networks in the digital realm, suggesting that individuals may cultivate broader connections online while maintaining fewer relationships in their immediate physical environment.

A robust positive correlation was identified between the time spent online and the number of online friends. A weak negative correlation was identified between online time and the number of offline friends. No significant

correlation was found between age and perceived emotional fulfillment from online friendships.

Regression analysis indicated that the number of online friends, the perceived quality of online friendships, and the average daily duration spent online were significant predictors of emotional fulfillment derived from online relationships. Although the number of offline friends did not directly predict emotional satisfaction derived from online friendships, it exerted a moderating effect on the correlation between the number of online friendships and emotional fulfillment. Individuals possessing robust offline relationships typically experience greater emotional satisfaction from their online friendships.

Regression Model:

$$\text{Emotional fulfillment} = 20 + 0.5 * (\text{Number of online friends}) + 1.2 * (\text{Perceived quality of online friendships}) + 0.3 * (\text{Average daily time spent online})$$

The results reveal that online friendships have a significant impact on individuals' social lives, particularly among younger generations who are more digitally integrated. Increased online engagement tends to expand the number of virtual acquaintances, though it may also contribute to a decline in face-to-face social interactions. However, it is the quality of online friendships, rather than their quantity, that plays a pivotal role in emotional fulfillment. Additionally, strong offline relationships can enhance the positive effects of online friendships on emotional well-being.

The qualitative analysis highlights the importance of online friendships, their influence on in-person relationships, and their emotional satisfaction and social assistance. Participants formed online friendships with people with similar interests, hobbies, or backgrounds, highlighting the importance of common interests in building virtual connections. Online friendships can enhance offline relationships by sharing experiences and conversation topics, but excessive involvement can undermine offline relationships. However, some participants expressed a longing for greater physical intimacy and connection, recognizing that virtual interactions cannot fully satisfy their need for in-person closeness.

Challenges and issues faced by participants included concerns about online privacy and safety, perceived superficiality of online relationships, and fear of rejection and humiliation.

Virtual friendships offer emotional support and connection, fostering new opportunities and shared experiences. However, they can also undermine offline relationships if not managed carefully. The absence of physical intimacy and risk of superficiality limit the benefits. Addressing privacy, safety, and fear of rejection is crucial for building healthy online connections.

Discussion

The study explores the dynamic changes in human relationships in the digital age, highlighting the importance of digital friendships for social existence and emotional satisfaction. However, it also highlights the challenges and disadvantages of these friendships. Online friendships often form through common interests, experiences, and accidental interactions, but can be superficial and lacking in depth compared to offline relationships. The study emphasizes the need for a balance between digital and physical interaction to maintain healthy relationships and promote shared experiences.

The study provides a comprehensive overview of the changes in human relationships in the digital age, but has limitations such as being limited to a specific age group (18-45) and relying on self-reported data. It also focused on a limited selection of social networking platforms. Despite these limitations, the study offers a theoretical and practical perspective on digital sociology and relationship sociology, offering recommendations for cultivating healthy relationships in the digital age and for social networking platform developers to enhance functionality for meaningful connections and emotional well-being.

Recommendations

The study suggests that while online friendships provide emotional support, maintaining strong offline relationships is crucial for emotional well-being. The quality of online friendships should be prioritized over the number of connections. Excessive online engagement can strain offline relationships and lead to feelings of isolation. To mitigate privacy risks, individuals should

exercise caution when sharing personal information online, set healthy boundaries, limit screen time, and prioritize face-to-face interactions.

Conclusion

This study provided important insights into the dynamic change in human relations in the digital age. Virtual friendships have a significant impact on individuals' social life and provide a way of connecting, supporting and experiencing emotional satisfaction. Nevertheless, they also pose specific challenges and potential disadvantages. Understanding the advantages and limitations of virtual friendships allows individuals to efficiently cross the digital world and establish healthy relationships in online and offline environments.

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