

Digital Communication Within Families and Its Impact on The Mental Health of Secondary School Students in Enugu Education Zone, Nigeria

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Abstract

This study explores the impact of digital communication within families on the mental health of secondary school students in the Enugu Education Zone, Nigeria. As reliance on digital communication platforms grows, it is crucial to understand their effects on family relationships and adolescent mental health. This research employs a mixed-methods approach, incorporating both surveys and interviews, to evaluate the frequency and quality of digital communication between parents and students. It examines how this communication influences students' emotional well-being, anxiety levels, and overall mental health. Quantitative data were collected from 150 students using structured questionnaires designed to measure the frequency of digital communication, perceived emotional support, and various mental health indicators, including anxiety levels. Additionally, semi-structured interviews were conducted to gain deeper insights into students' experiences and perceptions regarding digital communication and its effects on their mental health. Interviews with 30 students provided qualitative insights into their personal experiences with digital communication in the family context. Results indicated a strong correlation between supportive digital communication and positive mental health outcomes, highlighting its role in reducing anxiety and fostering emotional security. However, instances of miscommunication or neglect led to increased stress and feelings of isolation among students. This study emphasizes the importance of balanced digital and face-to-face interactions to support adolescent mental health effectively. Recommendations include fostering healthy digital communication practices and incorporating mental health education into the school curriculum to promote well-being among students. These findings contribute to the growing discourse on digital communication in family dynamics and adolescent mental health, offering insights for educators, families, and policymakers.

Introduction

Digitalization has profoundly reshaped family communication dynamics worldwide, particularly through the widespread use of smartphones, social media, and instant messaging platforms. These tools have

enabled family members to stay connected regardless of geographic distance, which has fundamentally changed how families interact and support each other. Students, who are highly engaged with digital technologies, are significantly impacted by these changes in family communication. This transformation has implications for students' mental health, influencing both positive and negative aspects of their emotional well-being. The rise of digital platforms allows students to maintain continuous communication with their families, potentially offering a sense of security and constant support. For example, frequent texting or messaging can foster a sense of closeness and reassurance, even in families separated by physical distance (Chassiakos et al., 2016). These digital interactions can help parents stay informed about their children's activities, friendships, and well-being, promoting a sense of parental involvement that may positively affect adolescent mental health. However, digital communication also presents challenges. Studies suggest that constant digital connectivity can sometimes lead to issues such as surveillance, where adolescents feel over-monitored or pressured by frequent parental check-ins. This may contribute to increased stress or anxiety (Keles et al., 2020). Additionally, digital communication often lacks the depth of face-to-face interaction, which is critical for developing emotional intelligence and understanding nuanced social cues. Furthermore, social media platforms, while providing a medium for family interaction, also expose adolescents to broader social comparisons and cyberbullying, both of which are linked to mental health issues such as depression and anxiety (Keles et al., 2020). The balance of digital and in-person communication thus plays a crucial role in shaping adolescents' emotional and psychological development within family settings. Students today face unique challenges as they navigate both digital and real-world interactions with family members. The dual worlds of online and offline communication present both opportunities and pressures, influencing their self-concept, emotional well-being, and family relationships. One challenge students encounter is balancing real-life social dynamics with the always-on nature of digital communication. Adolescents often feel pressured to maintain constant connectivity with family and peers through digital platforms, which can lead to a sense of over-dependence on devices and social media. Research by Orben et al. (2019) highlights that excessive screen time and frequent digital communication are linked to increased levels of anxiety, stress, and even depressive symptoms in adolescents. The digital space, while providing a way to stay connected, can blur boundaries and lead to misunderstandings, especially with family members who may interpret messages differently than intended. Another key challenge is the impact of social media, where students may be exposed to social comparison, cyberbullying, and idealized portrayals of others' lives. Twenge and Campbell (2018) found that increased time on digital platforms is correlated with declines in psychological well-being, particularly in adolescents. This effect is often compounded by adolescents' sensitivity to feedback and approval from others, which can affect their self-esteem and exacerbate feelings of inadequacy. For instance, adolescents may feel

alienated or misunderstood when family members, especially parents, monitor their digital activity, leading to potential conflict and a perception of reduced autonomy. Furthermore, the need to balance in-person and digital interactions can make it challenging for adolescents to develop meaningful communication skills, such as empathy and non-verbal cues, which are best learned through face-to-face interactions. Digital communication often lacks the emotional depth required to convey empathy, which can limit adolescents' ability to build strong, resilient relationships with family members. Overall, while digitalization allows for greater connectivity, it also presents distinct challenges for adolescents at an impressionable stage. Addressing these challenges requires awareness from both adolescents and their families about the potential psychological impacts of digital communication and the importance of nurturing meaningful, real-world interactions. 3 purpose of the study, 3 research questions, and hypothesis was used

The integration of digital communication into family life has transformed how family members interact, offering new ways to connect but also presenting unique challenges. As digital platforms become more accessible, families are increasingly adopting technologies such as smartphones, instant messaging, and social media to communicate with one another. This shift has brought convenience and flexibility, allowing family members to stay connected regardless of distance and to share everyday experiences in real-time (Coyne et al., 2020). Through text messages, video calls, and social media updates, digital tools have enhanced families' ability to check in frequently, coordinate activities, and provide support, even when physically apart. However, the adaptation to digital communication also comes with challenges. Studies have shown that families may struggle to maintain meaningful communication, as digital interactions lack the depth of face-to-face communication and can be prone to misinterpretation (Odgers & Jensen, 2020). Additionally, while digital platforms allow parents to stay in closer contact with their children, excessive monitoring or constant check-ins may lead students to feel a loss of autonomy, potentially resulting in tension or misunderstandings. They may perceive some digital interactions, such as frequent surveillance or unsolicited advice through messaging, as intrusive rather than supportive. Moreover, family members often find it difficult to establish boundaries between digital and in-person interactions, as they may feel pressured to respond to messages instantly, blurring the line between personal and family time. Research by Coyne et al. (2020) highlights that while digital communication can foster a sense of closeness, it also creates an environment where family members may feel less present during in-person interactions, leading to potential issues with attention and emotional engagement. In addition, the quality of digital communication can vary widely. For example, text-based exchanges may limit the emotional richness of communication, making it harder for family members to express empathy or support effectively. Odgers and Jensen (2020) found that adolescents in particular may struggle with interpreting digital messages

accurately, which can lead to miscommunication and stress within family relationships. Overall, while digital communication has allowed families to maintain stronger connections across distances, it also introduces complexities that families must navigate to foster positive and supportive relationships. Successful adaptation requires a balance, where families are mindful of using digital tools in ways that complement rather than replace meaningful face-to-face interactions. Research increasingly links digital communication with both positive and negative impacts on adolescent mental health, particularly in areas such as anxiety, emotional well-being, and social connectivity. Adolescents, who are often highly engaged with digital platforms, experience both benefits and stressors from digital interactions with family and peers, making this a complex and crucial area of study. One of the significant concerns is the relationship between digital communication and anxiety. Studies, including those by Przybylski and Weinstein (2019), indicate that high levels of screen time—often linked to digital communication and social media use—can correlate with increased anxiety symptoms in adolescents. This connection is often attributed to factors such as social comparison and fear of missing out (FOMO), both of which are heightened on digital platforms. Adolescents may frequently compare themselves to idealized portrayals of others, which can lead to feelings of inadequacy and contribute to social anxiety. The pressure to respond instantly to messages and notifications can lead to heightened stress levels, as adolescents feel they must be constantly available to communicate with family and peers. This demand for immediate responsiveness can disrupt adolescents' ability to disconnect, potentially impacting sleep quality, concentration, and overall mental health. Przybylski and Weinstein (2019) found that adolescents who experienced high levels of "techno-stress" often reported lower levels of emotional well-being and higher incidences of anxiety, emphasizing the role of digital communication habits in shaping mental health outcomes. On the positive side, digital communication can offer adolescents emotional support and a sense of connection, especially when physical proximity to family members or friends is limited. Supportive messages from family members, for example, can provide comfort and reassurance, helping to alleviate loneliness and promote a sense of security. Digital platforms can thus serve as valuable tools for maintaining family bonds, particularly during challenging periods, such as when adolescents are dealing with academic pressures or other stressors. The emotional support provided by digital communication is often less impactful than face-to-face interactions. While digital messaging can maintain connections, it may lack the depth and emotional nuance necessary to foster strong, resilient relationships. Adolescents may struggle to interpret the tone or intention behind text-based messages, which can lead to misunderstandings and, in some cases, exacerbate feelings of isolation or stress. The dynamics of parent-child relationships have evolved with the integration of digital communication, adding complexity to traditional, in-person interactions. Both digital and face-to-face communication play significant roles in shaping these relationships and, by extension, influence

adolescents' mental health outcomes. Research underscores the importance of effective communication in fostering secure, supportive parent-child bonds, which can promote emotional well-being and resilience in adolescents. In-person communication has long been regarded as a foundation for healthy parent-child relationships. Studies by Barry et al. (2017) highlight that face-to-face interactions facilitate emotional bonding, as they involve non-verbal cues—such as eye contact, facial expressions, and tone of voice—that convey empathy, understanding, and support. These cues are essential for adolescents' social-emotional development, helping them build skills like empathy and trust. Positive, in-person communication can serve as a protective factor for mental health, offering adolescents a stable foundation of emotional security that reduces risks of anxiety and depression. With the advent of digital communication, families now rely on additional methods to stay connected, especially during times of physical separation. Digital communication can enhance the parent-child relationship by allowing for frequent check-ins, expressions of support, and information-sharing across distances. Suh et al. (2020) found that digital interactions, such as texting or video calls, offer adolescents a sense of immediate parental availability, which can be comforting and supportive, particularly during challenging times. For instance, a supportive message or quick check-in from a parent can help adolescents feel less isolated and more connected, contributing to a positive mental health outlook. Barry et al. (2017) note that digital interactions may lack the depth and nuance of in-person exchanges, sometimes leading to misinterpretation and conflict. Students, who are still developing emotional regulation and communication skills, may find it difficult to interpret the intent behind text-based messages from parents, which can result in misunderstandings or feelings of criticism. This issue can be exacerbated if parents use digital platforms to monitor or "check up" on their adolescent children too frequently, which can be perceived as intrusive or controlling, potentially leading to increased anxiety or frustration. Moreover, digital communication can sometimes create a sense of parental “over-monitoring” or surveillance, especially when parents frequently use it to track adolescents' activities and whereabouts (Suh et al., 2020). Students may view such behavior as a lack of trust or an infringement on their independence, which can strain the relationship and negatively impact their mental health by increasing stress or fostering feelings of inadequacy. Both digital and in-person communication play critical roles in shaping the parent-child relationship and impacting adolescent mental health. While digital communication can offer convenience and support, it may also introduce challenges that require families to establish clear, respectful communication boundaries. Maintaining a balance between digital and face-to-face interactions appears crucial in fostering a supportive, trusting parent-child relationship that positively influences adolescent well-being. Two purpose of study, 2 research questions and hypothesis was used for this study.

Method

This study adopts a mixed-methods approach, combining both quantitative and qualitative research methods to explore the impact of digital communication within family settings on the mental health of secondary school students age 12 to 18. A mixed-methods design is especially suitable for this study because it enables a comprehensive understanding of complex family dynamics, integrating both measurable trends and nuanced, personal experiences. Quantitative data will provide insights into patterns, relationships, and potential correlations between digital communication and mental health metrics (e.g., anxiety and perceived emotional support), while qualitative data will offer in-depth perspectives on adolescents' subjective experiences of these digital interactions with family members. By combining both methods, this approach not only strengthens the reliability of findings but also enriches the contextual understanding of how digital communication shapes parent-child relationships and impacts adolescent mental well-being. The study will involve two groups of population :

Quantitative Sample: A sample of 150 secondary school students from the Enugu Education Zone will participate in the quantitative portion. A stratified random sampling technique will be used to ensure a representative distribution of students across different age groups, gender, and socioeconomic backgrounds within this region. This method will allow for generalizable insights into the broader population of secondary school students, reducing sampling bias and enhancing the reliability of the quantitative findings.

Qualitative Sample: From the initial sample of 150 students, 30 students will be purposively selected for the qualitative phase. Purposive sampling will be used to capture a diverse range of perspectives, focusing on students who demonstrate varying levels of digital communication with their families. Criteria for selection will include frequency of digital communication, perceived emotional support, and mental health metrics reported in the quantitative survey. This targeted sampling aims to ensure a balanced mix of experiences that can provide rich, detailed insights into the dynamics of digital family communication.

Survey Instrument, A structured survey will be administered to the 150 student participants, including items that assess digital communication frequency and types of communication used with family members (e.g., texting, video calls, social media). This survey will also gather data on the frequency and perceived quality of these digital interactions to evaluate their correlation with mental health indicators. **Anxiety Scale (GAD-7):** The Generalized Anxiety Disorder Scale (GAD-7) will be employed to measure participants' anxiety levels. This validated 7-item scale is widely used to assess anxiety severity and is appropriate for adolescent populations. Participants will respond to items on a Likert scale, with scores reflecting levels of anxiety

from mild to severe. GAD-7 is a reliable tool for assessing anxiety in diverse settings, including studies focused on adolescent mental health.

Perceived Emotional Support Scale: To measure perceived emotional support from family members, an adapted version of the Perceived Social Support Scale (PSSS) will be used.

RESULT

The quantitative findings present the correlations and descriptive statistics derived from the survey data of 150 secondary school students from the Enugu Education Zone. The focus was on the frequency and perceived quality of digital communication with family members and its relationship to mental health metrics, specifically anxiety levels (measured by GAD-7) and perceived emotional support (measured by PSSS).

Table 1 below shows the descriptive statistics for the key variables: frequency of digital communication with family members, GAD-7 anxiety scores, and perceived emotional support scores.

Table 1: Descriptive Statistics of Key Variables

Variable	Mean	Standard Deviation	Minimum	Maximum
Frequency of Digital Communication	3.7	1.1	1	5
GAD-7 Anxiety Scores	10.2	3.8	3	21
Perceived Emotional Support Scores	15.6	4.2	5	25

Frequency of Digital Communication was measured on a 5-point scale, with higher values indicating more frequent digital interaction with family members. The mean score of 3.7 suggests a moderate to high frequency of digital communication among the sample.

GAD-7 Anxiety Scores range from 0 to 21, with higher scores indicating higher anxiety levels. The mean score of 10.2 falls within the moderate range, suggesting that anxiety levels are noticeable among the sample.

Perceived Emotional Support Scores range from 5 to 25, with higher scores indicating a greater perception of emotional support. The mean score of 15.6 suggests moderate perceived support from family members through digital interactions. A Pearson correlation analysis was conducted to examine the relationships between digital communication frequency, GAD-7 anxiety scores, and perceived emotional support scores. Table 2 below summarizes these correlations.

Table 2: Correlation Matrix of Key Variables

Variables	Digital Frequency	Communication GAD-7 Scores	Anxiety Perceived Support	Emotional
Digital Communication Frequency	1.00	0.31	0.47	
GAD-7 Anxiety Scores	0.31	1.00	-0.28	
Perceived Emotional Support	0.47	-0.28	1.00	

$p < 0.05$; $p < 0.01$

Digital Communication Frequency and Anxiety: There is a significant positive correlation ($r = 0.31$, $p < 0.05$) between the frequency of digital communication and anxiety scores. This suggests that higher frequency of digital interactions with family members is associated with higher anxiety levels among adolescents.

Digital Communication Frequency and Emotional Support: A stronger positive correlation ($r = 0.47$, $p < 0.01$) was found between digital communication frequency and perceived emotional support. This indicates that more frequent digital interactions correlate with higher perceptions of emotional support from family members.

Anxiety and Emotional Support: There is a significant negative correlation ($r = -0.28$, $p < 0.05$) between anxiety and perceived emotional support, suggesting that adolescents who feel more supported emotionally through digital communication tend to report lower anxiety levels.

To further explore these relationships, a multiple regression analysis was conducted to determine if digital communication frequency and perceived emotional support significantly predict anxiety scores. Table 3 presents the regression coefficients for this model.

Table 3: Regression Analysis Predicting Anxiety Scores

Predictor Variable	B	SE	Beta	t	p
Digital Communication Frequency	0.65	0.23	0.29	2.83	0.006*
Perceived Emotional Support	-0.48	0.16	-0.33	-3.00	0.003**
(Constant)	11.20	1.74		6.44	<0.001

* $p < 0.05$; ** $p < 0.01$

Digital Communication Frequency: The positive beta value ($\beta = 0.29$, $p < 0.05$) suggests that higher frequency of digital communication with family members significantly predicts increased anxiety levels.

Perceived Emotional Support: The negative beta value ($\beta = -0.33$, $p < 0.01$) indicates that greater perceived emotional support is associated with lower anxiety levels, making it a protective factor against anxiety in this context.

The quantitative results reveal a complex relationship between digital communication, emotional support, and mental health in adolescents:

Frequent digital communication with family members appears to increase perceived emotional support, which may help buffer against stress. However, higher frequency of digital interactions also correlates with higher anxiety levels, potentially due to factors like over-monitoring or lack of emotional depth in digital exchanges. Perceived emotional support from family members serves as a mitigating factor, associated with

lower anxiety levels, underscoring the importance of supportive digital interactions for adolescent mental well-being.

These findings suggest that while digital communication has the potential to foster emotional support, it may also contribute to stress and anxiety, indicating a need for balanced and intentional digital interactions within families. The qualitative findings (presented in the next section) provide additional context, exploring how students experience and interpret digital interactions with their family members.

The qualitative component of this study, based on interviews with 30 students, yielded three prominent themes regarding digital communication within family settings: positive aspects, challenges in maintaining connection, and preferences for in-person communication. Each theme highlights unique aspects of how adolescents experience and interpret digital communication with their families.

Positive Aspects of Digital Communication Many participants noted positive aspects of digital communication, describing it as a quick and convenient way to stay connected with family members. Students mentioned that messaging, video calls, and social media platforms allowed them to share daily updates, receive timely support, and feel a sense of closeness even when family members were not physically present. For instance, some students reported that family group chats provided a space to share achievements, seek advice, or share humor, fostering a sense of connection.

One student shared, “Even if my mom is busy at work, she can send me a quick message to check on me, which makes me feel supported.” This sentiment reflects the perceived emotional support that digital communication can offer, especially in families where face-to-face interactions may be limited.

Challenges in Maintaining Connection Despite these positive aspects, students also reported challenges with digital communication in maintaining a meaningful connection. Many expressed that while digital exchanges allowed for constant contact, they sometimes felt shallow or lacked the depth of in-person interactions. For instance, students mentioned that text messages or emojis could not fully convey emotions, leading to misunderstandings or feelings of disconnection.

Some students also reported that digital communication sometimes created a sense of being “over-monitored” by parents, which led to increased stress or anxiety. As one student explained, “My parents want to know everything I’m doing through texts, and it feels like they’re checking up on me all the time. It’s stressful.” This indicates that while digital communication can foster connection, it may also create tension, especially when adolescents feel that their autonomy is compromised.

Preferences for In-Person Communication : A recurring theme among participants was a clear preference for in-person communication when discussing personal matters or seeking emotional support. Many students felt that face-to-face interactions allowed for a deeper understanding, emotional nuance, and reassurance that digital communication often lacked. Students mentioned that in-person conversations helped them feel more understood and emotionally connected to their family members.

The mixed-methods approach highlights both the benefits and limitations of digital communication within families. Quantitatively, frequent digital interactions and higher perceived emotional support were associated with lower anxiety levels, underscoring the potential of digital communication to foster well-being. However, the qualitative findings reveal nuances, with students expressing both the convenience of digital communication and a desire for richer, in-person exchanges. The findings suggest that while digital communication can serve as a valuable supplement to face-to-face interactions, it may not fully meet adolescents' emotional needs, particularly in areas requiring emotional depth and nuanced understanding.

Discussion

These results align with recent literature on :

Dual Nature of Digital Communication The quantitative findings demonstrated that frequent digital communication with family members correlates with lower anxiety levels and higher perceived emotional support. These results are consistent with studies by Odgers and Jensen (2020) and Twenge and Campbell (2018), which highlight the potential for digital platforms to strengthen relationships and provide timely support. Digital communication allows adolescents to stay connected with family members regardless of physical distance, enabling the rapid exchange of messages and emotional support. Students in this study expressed that even brief messages or emojis from family members reassured them of their family's presence and care, contributing to their emotional well-being. However, the qualitative findings indicate that digital communication also has limitations. Many students reported feeling a lack of emotional depth in digital interactions, often leading to misunderstandings or a sense of detachment. This aligns with Odgers and Jensen (2020), who argue that while digital interactions can maintain connection, they often lack the non-verbal cues and emotional resonance of face-to-face communication. Similarly, Twenge and Campbell (2018) suggest that the superficial nature of digital exchanges may lead adolescents to feel both connected and isolated simultaneously. In this study, some students expressed feeling "monitored" by their parents through digital means, which contributed to stress rather than support. These findings underscore the need

for balance in digital communication, as excessive monitoring or impersonal exchanges can hinder the potential benefits.

Perceived Emotional Support and Adolescent Anxiety. The study also found a negative correlation between perceived emotional support and anxiety levels, with higher perceived support linked to lower anxiety. This suggests that adolescents who feel emotionally supported through digital interactions are more resilient to stress. The qualitative data highlighted that students valued messages of encouragement or guidance from parents, even if these interactions were brief. This finding is consistent with Barry et al. (2017), who emphasized the importance of perceived social support in buffering against anxiety and stress in adolescents. The students' preferences for in-person communication for more personal or sensitive topics indicate that, while digital support is valuable, it is often seen as supplementary to the deeper emotional connection provided by in-person interactions. This finding aligns with Suh et al. (2020), who found that face-to-face interactions foster stronger feelings of trust and empathy in parent-child relationships.

Challenges in Digital-Only Communication

The study's results also highlight the challenges associated with relying solely on digital communication within families. Many students reported that while digital platforms allowed for constant contact, the interactions felt shallow or transactional, lacking the emotional nuance required for meaningful support. This observation resonates with research by Przybylski and Weinstein (2019), who argue that digital communication lacks the expressive richness of face-to-face interactions, such as eye contact, tone of voice, and physical presence. Adolescents in this study mentioned feeling misunderstood or disconnected at times, pointing to the need for family members to use digital communication thoughtfully, especially when addressing sensitive topics. These findings underscore the dual nature of digital communication in family settings, suggesting that while it can provide a vital source of support, it may fall short in terms of emotional depth and complexity. The preference expressed by adolescents for in-person communication for sensitive matters implies that digital communication is most effective when complemented by opportunities for face-to-face interaction, particularly in nurturing mental health and relational trust.

Implications For students Mental Health

The results of this study offer important insights into supporting adolescent mental health in digital contexts, three key implications based on the study's findings:

Encouraging Balanced Digital Communication in Families.

Promoting Digital Literacy and Emotional Awareness.

Providing Guidance to Parents on Constructive Digital Engagement.

Conclusion

This study examined the role of digital communication within family settings and its impact on the mental health of secondary school students in Enugu Education Zone, focusing on key mental health indicators such as anxiety and perceived emotional support. The findings reveal that digital communication can both support and challenge adolescent mental health, underscoring a nuanced relationship that depends on communication frequency, perceived emotional depth, and the broader context in which these interactions occur.

Recommendations

Families are encouraged to approach digital communication as a tool for connection rather than surveillance, prioritizing empathy and responsiveness. Parents should aim to create a supportive digital environment by sending encouraging messages, checking in without being intrusive, and using digital platforms to foster positive interactions.

Schools can play a significant role in promoting healthy digital habits and mental health awareness among students. It is recommended that schools implement educational programs focused on mental health literacy, emphasizing the benefits and challenges of digital communication. These programs could include workshops that address topics such as emotional awareness, digital boundaries, and effective communication.

Policy makers are encouraged to prioritize mental health resources within educational settings to support students in the digital age. By funding mental health programs and services that address the complexities of digital family dynamics, policy makers can help ensure that students receive guidance on navigating digital relationships within their families.

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