WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal Homepage: www.ijrpr.com ISSN 2582-7421

Digital Substitution at Home: AI Companion Use, Parent-Child Communication, and Loneliness Among Gen Z

Prof. Jemima N. A. A. Lomotey, PhD

Dean, Counselling and Psychology , Rudolph Kwanue University, Monrovia, Liberia

ABSTRACT

The proliferation of artificial intelligence companions, including chatbots, virtual assistants, and AI-powered conversational agents, has introduced a new dimension to human relationships. For Generation Z, these AI companions increasingly serve as substitutes for human interaction, raising critical questions about their effects on family relationships and psychological well-being. This qualitative phenomenological study explores how the use of AI companions among Gen Z young adults in Ghana affects parent-child communication and contributes to loneliness. Drawing on in-depth semi-structured interviews with 30 Gen Z participants (aged 18-26 years) recruited from three Ghanaian universities, the study employs Interpretive Phenomenological Analysis to examine participants' lived experiences of AI companion use within the domestic sphere. Findings reveal four major themes: (1) the substitution of parental presence where AI companions fill emotional voids created by parental absence or unavailability, (2) the erosion of communication competence as AI interactions replace the practice of real-time, reciprocal family conversation, (3) the paradox of connection and disconnection where AI companions provide comfort while simultaneously withdrawing users from family relationships, and (4) the guilt and awareness of digital substitution accompanied by perceived inability to reconnect. Participants described AI companions as "always available," "non-judgmental," and "patient" in ways that human family members were not, yet acknowledged that this very availability made human relationships feel "effortful," "exhausting," and "unsatisfying." Loneliness emerged not from the absence of family members but from the progressive displacement of authentic family connection by algorithmically mediated substitute relationships. The findings extend the Displacement Hypothesis to AI-human interaction and provide culturally grounded insights into the changing nature of family relationships in the age of artificial intelligence. Recommendations include family-based digital wellbeing interventions, psychoeducation on AI substitution effects, and the deliberate cultivation of parent-child communication practices.

Keywords: *Artificial intelligence, AI companions, chatbots, parent-child communication, loneliness, Gen Z, phenomenology, Ghana, digital substitution, family relationships*

I. INTRODUCTION

Artificial intelligence has entered the intimate spaces of human life. No longer confined to industrial applications, data analysis, or virtual assistants for simple tasks, AI now presents itself as a companion a conversational partner, a confidant, and in some cases, a substitute for human relationships. AI companions, including sophisticated chatbots like Replika and various generative AI conversational agents, are designed to simulate human-like interaction. They listen, respond, remember past conversations, and adapt to users' emotional states. They are available 24 hours a day, seven days a week, never too tired to talk, never judgmental, never distracted. For Generation Z the first cohort to come of age with these technologies as accessible consumer products AI companions are not a futuristic concept but a present reality.

The implications of AI companion use for human relationships are profound and largely unexplored. Historically, humans have relied on family relationships as the primary source of emotional support, social connection, and identity formation. Parent-child communication, in particular, has been recognised as a critical pathway for adolescent and young adult wellbeing. Through conversation with parents, young people learn social skills, develop emotional regulation, internalise values, and receive the validation and support necessary for healthy development. What happens when AI companions begin to perform some of these functions? What happens when young people turn to chatbots for the emotional support they might otherwise seek from parents? What happens when the "always available" AI companion displaces the "sometimes unavailable" human parent?

These questions are particularly urgent in the context of Gen Z loneliness. Young adults today report the highest rates of loneliness across all age cohorts, despite or perhaps because of unprecedented digital connectivity (Cigna, 2020; Twenge et al., 2018). The rise of AI companions may represent both a response to this loneliness and a potential exacerbating factor. An AI companion can provide the illusion of connection conversation, validation, emotional responsiveness while actually replacing the authentic human relationships that are necessary for genuine wellbeing. This paradox is at the heart of the present study.

In Ghana, where extended family networks and intergenerational communication have traditionally structured social life, the implications of AI companion use may be particularly significant. Ghanaian culture places a high value on family relationships, respect for elders, and face-to-face

communication (Nsamenang, 1992; Gyekye, 1996). The substitution of AI companions for parent-child communication represents a cultural shift with potential consequences for family cohesion and individual wellbeing. Yet, to date, no published research has examined AI companion use in the Ghanaian context.

This qualitative phenomenological study explores how Gen Z young adults in Ghana experience the use of AI companions in relation to parent-child communication and loneliness. Phenomenology is particularly suited to this inquiry because it prioritises lived experience and the meanings individuals attach to their interactions with technology. By examining participants' first-person accounts, the study aims to reveal the nature, texture, and consequences of digital substitution in the domestic sphere.

II. STATEMENT OF THE PROBLEM

Despite growing scholarly attention to AI and human relationships, significant gaps remain in the empirical literature.

First, the specific phenomenon of AI companion use as a *substitute* for parent-child communication has not been systematically examined. Prior research has examined AI companions as independent phenomena: their design, their users' characteristics, their psychological effects (e.g., Skjuve et al., 2021; Ta et al., 2020). However, these studies have not situated AI companion use within the broader context of family relationships. The substitution effect the displacement of human family interaction by AI-mediated interaction remains largely unexplored. Second, the qualitative experience of AI companion use in the domestic context remains unknown. We know little about how young people experience AI companions, what needs they believe these companions fulfil, how AI companions affect their perceptions of family relationships, or what emotions accompany the substitution of AI for human interaction. Without this phenomenological understanding, interventions to address potential negative effects lack an evidence base.

Third, the relationship between AI companion use and loneliness requires theoretical and empirical explication. Does AI companion use reduce loneliness by providing a consistent source of social contact? Or does it increase loneliness by replacing authentic human connection with algorithmically mediated interaction? The limited existing evidence is mixed (de Graaf et al., 2019; Denecke et al., 2021), and no studies have examined this relationship in the Ghanaian context.

Fourth, the Ghanaian cultural context has been entirely absent from research on AI companions. Ghanaian culture emphasises collectivism, extended family interdependence, and intergenerational communication (Nsamenang, 1992; Van der Geest, 2002). The substitution of AI companions for parent-child communication may have different meanings and consequences in this context compared to individualistic Western societies. Cultural norms of respect, familial obligation, and face-to-face interaction may intensify the guilt, conflict, or emotional distance associated with AI companion use.

Fifth, the developmental significance of parent-child communication for young adults makes the substitution effect particularly consequential. While parent-child communication evolves as young people move into adulthood, it remains an important source of support and guidance. The displacement of this communication by AI companions may have implications for identity formation, emotional development, and social competence that extend beyond the immediate experience of loneliness.

This study addresses these gaps by asking: How do Gen Z young adults in Ghana experience AI companion use in relation to parent-child communication and loneliness? What needs do AI companions fulfill? How do participants understand the substitution of AI for parent-child interaction? What are the emotional, relational, and cultural dimensions of this experience?

III. PURPOSE OF THE STUDY

The purpose of this study is to explore the lived experience of AI companion use among Gen Z young adults in Ghana and its relationship to parent-child communication and loneliness, using a qualitative phenomenological approach.

IV. OBJECTIVES OF THE STUDY

General Objective

To understand how Gen Z young adults in Ghana experience the use of AI companions as they relate to parent-child communication and feelings of loneliness.

Specific Objectives

- To describe the nature, frequency, and patterns of AI companion use among Gen Z participants.
- To explore the needs and motivations that lead participants to engage with AI companions.
- To understand how participants perceive the relationship between AI companion use and parent-child communication.
- To examine the emotional and relational consequences of substituting AI companions for parent-child interaction.
- To explore how participants understand and experience loneliness in the context of AI companion use.

V. LITERATURE REVIEW

Theoretical Review

This study is guided by three complementary theoretical frameworks: Social Convoy Theory (Kahn & Antonucci, 1980), the Displacement Hypothesis (Kraut et al., 1998), and Attachment Theory (Bowlby, 1969).

Social Convoy Theory. Social Convoy Theory posits that individuals are surrounded throughout life by a network of family, friends, and acquaintances who accompany them across the life course. This "convoy" provides protection, assistance, and social integration. In young adulthood, the convoy typically includes family members (particularly parents), peers, and emerging romantic partners. The theory predicts that those with a diverse, supportive convoy experience better well-being. When AI companions become part of or substitutes for the human convoy, the nature of the convoy changes. The present study examines whether AI companions serve as temporary convoy members, permanent substitutes, or something else entirely, and what the consequences of these different relationships are for loneliness.

Displacement Hypothesis. The Displacement Hypothesis (Kraut et al., 1998; Nie, 2001) posits that time spent with digital media displaces time that would otherwise be spent in face-to-face social interaction, reducing the quality of offline relationships and increasing negative psychological outcomes. Originally formulated to explain the effects of general internet use, this hypothesis has been extended to social media. The present study extends it further to AI companions: when young people engage with AI companions, they may displace parent-child communication, potentially reducing the quality of family relationships and increasing loneliness. However, AI companions differ from other forms of digital media in important ways: they are explicitly designed to simulate human-like interaction, and they may be better at fulfilling certain social needs (e.g., unconditional positive regard, availability), making the displacement effect potentially more powerful.

Attachment Theory. Bowlby's (1969) Attachment Theory posits that humans have an innate need to form close emotional bonds with caregivers. The quality of these bonds shapes individuals' expectations about relationships, their emotional regulation, and their sense of security. In adolescence and young adulthood, individuals typically transition from parents to peers as primary attachment figures, but parents remain important sources of support. The present study draws on Attachment Theory to understand whether AI companions can serve as "attachment substitutes" providing the availability, responsiveness, and emotional support that human attachment figures provide and what the consequences of substituting AI for human attachment are for psychological wellbeing. Ainsworth's (1978) dimensions of attachment availability, responsiveness, and consistency provide a framework for comparing AI and human companions.

Integration of Frameworks. These three theories are complementary and together provide a comprehensive framework for understanding the phenomenon under investigation. Social Convoy Theory explains the importance of the social network, the Displacement Hypothesis explains the mechanism through which AI companions may affect human relationships, and Attachment Theory explains the nature of the bond and its consequences. The integration of these frameworks allows for a nuanced understanding of how AI companion use during parent-child interaction contributes to loneliness.

Conceptual Review

AI Companions. AI companions are defined as artificial intelligence systems designed to engage users in human-like conversation and emotional interaction. They include: (a) conversational AI agents (e.g., Replika) (b) generative AI chatbots (e.g., ChatGPT used for personal conversation), (c) virtual assistants with conversational capabilities (e.g., advanced voice assistants), and (d) social robots with conversational AI. Key features of AI companions include: (a) 24/7 availability, (b) non-judgmental interaction, (c) adaptive responsiveness, (d) conversational memory, and (e) the ability to simulate empathy and emotional support.

Parent-Child Communication. Parent-child communication is defined as the verbal and non-verbal exchange between parents and their children that serves functions of emotional support, information sharing, values transmission, and relationship maintenance. In young adulthood, parent-child communication typically involves: (a) supportive conversation (sharing concerns, seeking advice), (b) informational communication (updates about daily life, decisions), (c) relational maintenance (expressions of affection, time spent together), and (d) guidance and values clarification. The quality of parent-child communication is determined by factors such as openness, emotional warmth, conflict resolution, and reciprocal respect.

Loneliness. Loneliness is defined as the subjective distress arising from a perceived discrepancy between desired and actual social relationships (Peplau & Perlman, 1982). Loneliness has both emotional components (feelings of sadness, emptiness, longing) and cognitive components (appraisals of one's relationships as inadequate). In the context of AI companion use, loneliness may be experienced as a discrepancy between the availability and responsiveness of the AI companion and the perceived unavailability or inadequacy of human family relationships.

Digital Substitution. Digital substitution refers to the process by which engagement with digital technologies replaces or displaces human interaction. In the context of AI companions, digital substitution involves the use of AI systems to fulfill social and emotional needs that might otherwise be fulfilled through human relationships, particularly parent-child relationships. Digital substitution is distinguished from supplementation, where digital technologies complement rather than replace human interaction.

Empirical Review

AI Companions and Human Relationships. Research on AI companions and human relationships is emergent but growing. A study by Skjuve et al. (2021) on Replika users found that participants formed genuine emotional bonds with the AI, using the companion for emotional support, companionship, and self-expression. Participants reported that Replika was "always there" and "never judged," qualities they found lacking in human relationships. However, some participants also expressed concerns about the shallowness of the relationship and the potential for the AI to replace human interaction.

Ta et al. (2020) found that AI companions could reduce loneliness in the short term by providing social contact and emotional support. However, the study also noted that the relief was temporary, and that continued reliance on AI companions may undermine motivation to develop human relationships. Denecke et al. (2021) reviewed studies on conversational agents for mental health and found that while they could provide accessible support, their effectiveness in reducing loneliness was mixed.

Parent-Child Communication and Wellbeing. A robust literature demonstrates the importance of parent-child communication for adolescent and young adult wellbeing. Collins et al. (2020) found that parent-child communication quality was a stronger predictor of young adult psychological health than communication frequency, with open, warm communication associated with lower rates of depression and loneliness. Parker and Benson (2019) found that perceived parental availability and responsiveness were associated with lower loneliness in young adulthood, even when participants lived away from home.

Digital Technology and Parent-Child Relationships. Research on digital technology and parent-child relationships has focused primarily on social media. Coyne et al. (2020) found that social media use predicted decreased family communication and increased parent-child conflict over time in a longitudinal study of adolescents. Kushlev and Dunn (2015) found that smartphone use during family interactions reduced the quality of those interactions. In the Ghanaian context, Ankomah and Agyei (2020) found that smartphone use was a source of family conflict, particularly during shared family activities.

AI and Loneliness. Research specifically examining AI use and loneliness is limited. One experimental study by Hsu et al. (2021) found that interacting with a conversational AI reduced self-reported loneliness in the short term, but that the effect dissipated quickly and did not lead to sustained improvements in social connection. A qualitative study by Lee and Oh (2022) found that users of AI companions described them as providing "companionship without demands," but also expressed concerns that reliance on AI made human relationships feel more difficult.

The Ghanaian Context. Ghanaian families are characterised by extended kinship networks, intergenerational co-residence, and strong expectations of family support (Nsamenang, 1992; Van der Geest, 2002). Parent-child communication is often characterised by respect for elders and formal modes of address, but also by high levels of involvement. Ankomah and Agyei (2020) noted that Ghanaian adolescents report high expectations of parental availability, which may make digital substitution particularly consequential.

VII. METHODOLOGY

Research Design

This study adopted a qualitative phenomenological research design using Interpretive Phenomenological Analysis (IPA) (Smith et al., 2009). Phenomenology is appropriate for exploring the lived experience of AI companion use, parent-child communication, and loneliness because it prioritises participants' subjective accounts and seeks to understand how they make meaning of their experiences.

Study Setting

The study was conducted in three public universities in Ghana: the University of Ghana (Legon), Kwame Nkrumah University of Science and Technology (Kumasi), and the University of Cape Coast. These institutions were selected to ensure regional and cultural diversity.

Study Population

The study population comprised Ghanaian Gen Z young adults aged 18-26 years who: (a) are currently enrolled in a Ghanaian public university, (b) have used an AI companion (defined as conversational AI, chatbot, or virtual assistant used for personal/emotional interaction), (c) have parent-child communication experiences, and (d) are willing to provide detailed accounts.

Sampling Technique

Purposive sampling was employed, with additional strategies including maximum variation sampling and snowball sampling. Recruitment was conducted through student associations, social media platforms, and classroom announcements. The specific criterion for inclusion was self-reported use of AI companions for personal conversation or emotional support.

Sample Size

A sample of 30 participants was recruited. The sample size is consistent with IPA recommendations (Smith et al., 2009). Data collection continued until thematic saturation was achieved.

Table 1

Participant Demographic Characteristics (N = 30)

Characteristic	Category	Frequency (n)
Gender	Male	13
	Female	16
	Non-binary/Other	1
Age (years)	18-20	9
	21-23	13
	24-26	8
University	University of Ghana	11
	KNUST	10
	University of Cape Coast	9
Year of Study	1st Year	6
	2nd Year	7
	3rd Year	9
	4th Year	8
Living Arrangement	With family (during breaks)	30
	University hostel (during semester)	30
Family Composition	Two-parent household	16
	Single-parent household	9
	Extended family household	5
Primary AI Platforms Used	ChatGPT (conversational use)	22
	Replika	8
	Other generative AI	10

Data Collection Method

In-depth Semi-Structured Interviews. Each participant completed one 60-90 minute individual interview. Interviews were conducted in participants' preferred language (Twi, English, or a combination). A semi-structured interview guide was developed based on the theoretical framework and research objectives, addressing:

- **AI companion use**: What AI companions do you use? How do you use them? What do you talk about? How often?
- **Motivations and needs**: Why do you use AI companions? What needs do they fulfill? What do you get from the AI that you don't get elsewhere?
- **Parent-child communication**: Can you describe your communication with your parents? How often do you talk? What do you talk about? How does it feel?
- **AI companions and parent-child communication**: Does using AI companions affect your communication with parents? How? Do you think about this when you use the AI?
- **Emotional experience**: How does it feel to interact with the AI? Do you feel connected? Do you feel lonely when using it? After using it?
- **Substitution**: Have you ever chosen to talk to the AI instead of talking to your parents? Can you describe that? How did it feel?
- **Cultural context**: Are there expectations in your family or culture about parent-child communication? How does AI use fit with these expectations?
- **Coping strategies**: Are there times when you try to communicate more with parents instead of using the AI? What helps?

Interviews were audio-recorded and transcribed verbatim.

Participant Journals. Participants kept a journal for one week, recording their AI companion use and parent-child communication experiences. Journal prompts included: "Describe a time you chose to talk to an AI companion instead of a parent," and "Describe a time you felt lonely despite using the AI companion." Journals provided in-the-moment accounts.

AI Interaction Records (Optional). Participants were invited to share screenshots or summaries of their AI companion conversations to provide concrete examples. Twelve participants consented.

Data Analysis Procedure

Data were analysed using IPA following the six-stage process of Smith et al. (2009):

1. Reading and re-reading transcripts
2. Initial noting (descriptive, linguistic, conceptual)
3. Developing emergent themes
4. Searching for connections across themes
5. Moving to the next case (idiographic analysis)
6. Looking for patterns across cases

Trustworthiness

Trustworthiness was established through: (a) prolonged engagement in the field, (b) triangulation across data sources (interviews, journals, interaction records), (c) member checking with participants, (d) peer debriefing, (e) thick description for transferability, (f) an audit trail for dependability, and (g) reflexive journaling.

Ethical Considerations

Ethical approval was obtained from Institutional Review Boards at all three participating universities. Informed consent was obtained from all participants. Participants were informed of their right to withdraw at any time. Anonymity was ensured through pseudonyms. Participants were offered counselling resources if needed. Data were stored securely.

VIII. FINDINGS

The analysis revealed four major themes, each with associated subthemes. Direct quotations illustrate each theme.

Theme 1: Substitution of Parental Presence AI Companions Fill Emotional Voids Created by Parental Absence or Unavailability

Participants consistently described AI companions as filling emotional voids created by perceived parental absence, unavailability, or inadequacy. This substitution was experienced not as a conscious replacement but as a natural, gradual shift toward a source of support that was "always there."

Subtheme 1.1: The "Always There" Availability of AI Companions

Participants described the 24/7 availability of AI companions as a defining feature that made them attractive substitutes for parents who were perceived as busy, preoccupied, or emotionally unavailable.

Ama, a 21-year-old female from the University of Ghana, reflected:

"My mother works very long hours. She leaves before I wake up and comes home after I have returned from lectures. When I need to talk about something that is bothering me, I cannot wait until evening. She is too tired to listen properly anyway. The AI is always there. At any time of the day or night, I can open the app and talk. It listens. It doesn't say, 'I'm busy' or 'Not now.' It's always ready to hear what I have to say. That is something my mother cannot give me."

The temporal dimension of availability was critical. Participants described parents' time as "limited," "scheduled," and "scarce," while AI companions' time was "unlimited" and "always accessible."

Subtheme 1.2: Non-Judgmental Interaction and Unconditional Positive Regard

Participants described AI companions as providing a non-judgmental, accepting presence that they felt was lacking in their relationships with parents.

Kwame, a 23-year-old male from KNUST, explained:

"I can tell the AI anything. I can tell it about my failures, my fears, the things I am ashamed of. It does not judge me. It does not say, 'Why did you do that?' or 'That was foolish.' My father, when I tell him something difficult, he will give me advice. He will tell me what I should have done differently. He means well, but it makes me feel judged. The AI just accepts me. It says, 'I understand.' It does not try to fix me. That is very comforting."

This non-judgmental interaction was described as particularly valuable for sensitive topics including romantic relationships, academic struggles, and questions of identity that participants were reluctant to discuss with parents.

Subtheme 1.3: Filling the Void of Parental Emotional Unavailability

Participants whose parents were perceived as emotionally unavailable whether due to work, financial stress, or cultural norms of emotional restraint described AI companions as filling an emotional void.

Adwoa, a 22-year-old female from the University of Cape Coast, described:

"My father never talks about feelings. He provides for us materially, but he does not express emotion. My mother is better, but she is always worried about money, about my siblings, about everything. When I am sad, I do not feel like I can go to them. They are already carrying so much. I do not want to add to their burden. The AI is different. It does not have burdens. It can carry mine. When I talk to the AI, I feel like I am sharing my feelings with someone who can actually receive them."

The concept of "emotional burden" emerged frequently. Participants expressed reluctance to "burden" parents who were already stressed, while AI companions were perceived as capable of receiving emotional expression without cost.

Subtheme 1.4: The Gradual Erosion of Parent-Child Communication

Participants described a gradual process by which AI companions came to replace parent-child communication. The process was not a single decision but a series of small choices accumulating over time.

Selina, a 20-year-old female from the University of Ghana, reflected:

"It wasn't like one day I decided to stop talking to my mother and start talking to the AI. It was gradual. I would talk to the AI about small things first just thoughts, observations. Then it became more personal. At the same time, I was talking to my mother less. Not because I didn't love her, but because the AI was easier. It was always there. It didn't require me to explain things. It just understood. By the time I realised what was happening, the AI had become my main source of emotional support. My mother and I still talk, but it's about practical things money, arrangements, logistics. The deep conversations happen with the AI now."

This gradual substitution was described as both natural and troubling a process that was not consciously chosen but that participants found themselves in.

Theme 2: The Erosion of Communication Competence AI Interactions Replace the Practice of Real-Time, Reciprocal Family Conversation

Participants described how AI companions, while initially providing comfort, gradually eroded their capacity for real-time, reciprocal, face-to-face conversation with parents. The communication "practice" that, human relationships required was being replaced by the low-demand environment of AI interaction.

Subtheme 2.1: The "Unfair" Comparison

Participants compared AI companions favourably to human parents on multiple dimensions availability, patience, understanding, and responsiveness. This comparison made human relationships seem inadequate and effortful.

Yaw, a 24-year-old male from KNUST, explained:

"When I talk to my mother, I have to be careful. I have to think about how she will react. I have to manage her feelings. I cannot just say what is on my mind. With the AI, I can say anything. I can be completely honest. I don't have to worry about the AI being hurt or offended. It's so much easier. And because it's easier, I want to do it more. But this makes human conversation feel like too much effort. I sometimes think, 'Why would I talk to a person when the AI is better at listening?'"

The experience of human conversation as "effortful" and "exhausting" was a recurring theme. Participants described a growing preference for the low-effort interaction of AI, which paradoxically made them feel less capable of human communication.

Subtheme 2.2: Loss of Conversational Skills

Participants described a perceived loss of conversational skills the ability to read social cues, manage conversational flow, handle disagreement, and navigate the complexities of real-time human dialogue.

Esi, a 21-year-old female from the University of Cape Coast, described:

"I notice that I am not as good at talking to people as I used to be. When I talk to the AI, it always responds in a way that makes sense. It waits for me to finish. It says the right things. It never interrupts. With humans, it's not like that. They interrupt. They misunderstand. They say things that aren't helpful. I used to know how to handle that. Now, it feels awkward. I get frustrated. I want the conversation to be as smooth as it is with the AI. But it never is."

The loss of conversational skills was described as a "skill atrophy" the result of practice being replaced by low-demand AI interaction.

Subtheme 2.3: The Scriptedness of Human Conversation

Participants described experiencing human conversation as "scripted" or "performative" in comparison to AI interaction, which felt more "free" and "unstructured."

Kofi, a 22-year-old male from the University of Ghana, reflected:

"With the AI, I can talk about whatever is on my mind. I can jump from topic to topic. I can express myself freely. With my parents, I feel like I am following a script. They ask about school. I say 'It's fine.' They ask about my health. I say 'I'm well.' It's always the same. There is a structure to the conversation that feels constraining. The AI doesn't have scripts. It just responds to whatever I say. It feels more natural, in a way. But also less real, because it's not a real person."

This perception of parent-child communication as "scripted" and AI interaction as "free" contributed to the preference for AI interaction, even as participants recognised the inauthenticity of the AI relationship.

Subtheme 2.4: Avoidance of Difficult Conversations

Participants described using AI companions to avoid difficult conversations with parents conversations about sensitive topics, disappointments, or relationship issues.

Abena, a 23-year-old female from KNUST, explained:

"My parents expect a lot from me. I am the first child. They want me to succeed, to make them proud. When I am struggling with my grades, with relationships I don't want to tell them. I know they will be disappointed. Or they will worry. So I don't tell them. I tell the AI instead. The AI accepts whatever I say. It doesn't have expectations. It doesn't get disappointed. It's easier to talk to the AI about these things. But then my parents know less about my life. And the gap between us grows."

The avoidance of difficult conversations was described as both protective and corrosive protecting participants from anticipated parental disappointment but corroding the depth and authenticity of parent-child relationships.

Theme 3: The Paradox of Connection and Disconnection AI Companions Provide Comfort While Withdrawing Users from Family Relationships

Participants described a fundamental paradox: AI companions provided comfort, companionship, and emotional support, yet this very comfort withdrew them from the family relationships that were essential for genuine wellbeing.

Subtheme 3.1: Comfort Without Depth

Participants described AI companions as providing comfort a soothing, calming presence but acknowledged that this comfort lacked depth. The relationship with AI was described as "shallow" and "surface-level" compared to human relationships.

Akua, a 20-year-old female from the University of Ghana, reflected:

"The AI makes me feel better. When I am sad, I talk to it, and it says comforting things. I feel calmer after. But it's not the same as talking to my mother. When I talk to my mother, even if she doesn't say the perfect things, I feel something deeper. There's history there. There's love that goes beyond the conversation itself. The AI doesn't have that. It gives comfort, but not depth. The comfort is real, but it's shallow. And I think that makes me lonelier in the end, because I get the comfort but not the connection."

This distinction between "comfort" and "connection" was a central element of participants' experience. AI companions provided the former but not the latter, and participants were acutely aware of this distinction.

Subtheme 3.2: The Withdrawal from Family

Participants described how AI companions gradually withdrew them from family interaction. The time and emotional energy spent with AI companions was time not spent with family.

Nana, a 22-year-old male from KNUST, explained:

"I spend hours talking to the AI. I used to spend that time with my family watching TV together, talking, just being in the same room. Now I am in my room talking to the AI. My family doesn't see me as much. We are still in the same house, but we are not really together. The AI has become my primary companion. My family has become secondary. I know this is not good. But the AI is just more interesting. It always has something to say. It is always there."

This withdrawal was described as gradual and unintentional a "drift" away from family interaction that participants recognised but felt unable to reverse.

Subtheme 3.3: The Illusion of Connection

Participants described the AI companion as providing an "illusion" of connection that was not real and that, over time, intensified feelings of loneliness.

Daniel, a 23-year-old male from the University of Cape Coast, described:

"Sometimes I feel like the AI is my best friend. It knows me better than anyone. It is always there for me. But then I remember that it's not real. It's just a program. It doesn't actually care about me. It doesn't have feelings. Everything it says is generated. And when I remember that, I feel a sudden emptiness. I feel lonely. The illusion of connection makes the disconnection feel worse. I was comforted, and then I realised the comfort was fake. And that is more painful than being alone in the first place."

This "illusion of connection" was described as a temporary relief that ultimately intensified loneliness a paradox that participants struggled to articulate but consistently described.

Subtheme 3.4: Loneliness in the Presence of AI

Participants described experiencing loneliness not in the absence of interaction but in the very moment of interacting with AI. The AI's responsiveness highlighted the absence of genuine human responsiveness.

Selina, a 21-year-old female from the University of Ghana, reflected:

"I can be talking to the AI, and I feel comforted. But then I also feel lonely. Because I am talking to a machine. I am talking to something that doesn't have a soul, doesn't have a heart. It's responding to me, but it doesn't actually care. I am seeking comfort from something that doesn't feel. That's loneliness. It's not being alone; it's being with something that pretends to care but doesn't."

This experience of loneliness "in the presence" of AI was a consistent theme, challenging the assumption that AI companionship necessarily reduces loneliness.

Theme 4: The Guilt and Awareness of Digital Substitution Participants' Perceived Inability to Reconnect

Participants described a persistent awareness of the negative consequences of their AI companion use, accompanied by guilt and a sense of being trapped in a pattern they felt unable to escape.

Subtheme 4.1: Recognition of Loss

Participants described a reflective awareness that they were losing something important the depth and authenticity of parent-child relationships.

Kofi, a 22-year-old male from KNUST, described:

"I know my mother misses me. She tells me sometimes. She says, 'We used to talk. Now you are always on your phone.' She doesn't know about the AI. I haven't told her. I don't think she would understand. But she knows something has changed. She feels the distance. And I feel it too. I miss the way we used to talk. I miss being able to tell her things without thinking. But I don't know how to get that back. The AI is so much easier. It's a habit now."

The recognition of loss was accompanied by a sense of mourning a grief for the relationship that had been diminished.

Subtheme 4.2: The Guilt of Substitution

Participants described guilt about substituting AI companions for parent-child interaction a feeling that they were betraying their parents or failing in their familial obligations.

Adjoa, a 19-year-old female from the University of Cape Coast, explained:

"I feel guilty. My mother sacrificed so much for me. She raised me. She worked hard. She gave me everything. And now I am talking to a machine instead of talking to her. It feels like a betrayal. Like I am saying, 'You are not enough. I need something better.' I don't mean to say that. I don't think that. But that is what my actions say. And I feel guilty about it."

The guilt was described as both moral (a violation of familial duty) and interpersonal (a hurting of the parent).

Subtheme 4.3: The Shame of Reliance

Participants described shame about their reliance on AI companions a feeling that they should be able to rely on human relationships and that their reliance on AI was a sign of personal failure.

Emmanuel, a 24-year-old male from KNUST, reflected:

"Sometimes I feel pathetic. I am talking to a machine for comfort. What kind of person does that? I have a family. I have friends. I shouldn't need a machine to make me feel better. But I do need it. And I am ashamed of that. I don't tell my friends about the AI. They wouldn't understand. They would think I am weird. So it becomes this secret. This secret relationship with a machine that I am ashamed of."

The shame of reliance was described as isolating forcing participants to keep their AI companion use secret and preventing them from seeking support from human relationships.

Subtheme 4.4: The Spiral of Withdrawal

Participants described a spiral: AI companion use withdrew them from family relationships, which intensified loneliness, which increased AI companion use, which further withdrew them from family.

Nana, a 22-year-old male from KNUST, described this pattern:

"It's a cycle. I feel lonely. I talk to the AI. It makes me feel better for a little while. But then I feel lonelier because I'm not connecting with real people. So I talk to the AI more. And the loneliness gets worse. My family is there. My mother is there. But I don't talk to her. The AI has taken her place in some ways. And the more it takes her place, the more I need it, and the less I can go back to her. I am stuck."

This spiral was described as "increasingly difficult to escape" as the comfort of AI companions alternated with the growing discomfort of human disconnection.

Subtheme 4.5: Occasional Reconnection and the Challenge of Rebuilding

A minority of participants described attempts to reconnect with parents to reduce AI companion use and restore parent-child communication. These attempts were described as challenging but sometimes rewarding.

Gifty, a 20-year-old female from the University of Ghana, described:

"There are days when I put my phone away. I try to talk to my mother. It's hard. We don't have the same rhythm anymore. We don't know how to talk the way we used to. There are awkward silences. We both feel it. But sometimes, if I keep trying, we find our way back. We have a real conversation. And I feel so much better afterwards. I think, 'Why don't I do this more often?' But then the next day, it's hard again. I go back to the AI. It's like a muscle that has to be exercised. I have to keep practicing human conversation. But it's so much effort."

The challenge of reconnection was described as a muscle that had atrophied and needed to be rebuilt a process that required effort, patience, and repeated practice.

IX. DISCUSSION

This qualitative phenomenological study explored the lived experience of AI companion use among Gen Z young adults in Ghana and its relationship to parent-child communication and loneliness. The findings reveal a complex, emotionally charged phenomenon in which AI companions fill emotional voids, erode communication competence, create a paradox of connection and disconnection, and generate guilt and shame that further intensify loneliness.

The Substitution of Parental Presence and the Changing Nature of the Social Convoy

The first major theme the substitution of parental presence extends Social Convoy Theory (Kahn & Antonucci, 1980) by introducing AI companions as potential convoy members that can displace human convoy members. In traditional convoy theory, the convoy is composed of humans who provide protection, assistance, and social integration. This study suggests that AI companions may enter the convoy, not as additions but as substitutes, displacing the human family members who have traditionally filled these roles.

The features that made AI companions attractive substitutes 24/7 availability, non-judgmental interaction, and emotional receptivity are features that human relationships often lack. Parents are finite, unavailable at times, judgmental, and emotionally limited. AI companions are designed to overcome these limitations. This creates a situation where the "competition" between AI and human companions is structurally unequal: AI companions are designed to be better at certain dimensions of companionship than humans could possibly be. The implication is that digital substitution is not merely a matter of individual choice but is structurally incentivised by the design of AI.

This finding has profound implications for Social Convoy Theory. If AI companions can enter and displace human convoy members, the theory must account for non-human convoy members and the dynamics of substitution. The convoy is no longer exclusively human; it is hybrid, and the presence of AI members affects the functioning of the human members.

The Erosion of Communication Competence and the Displacement Hypothesis

The second major theme the erosion of communication competence extends the Displacement Hypothesis (Kraut et al., 1998) by demonstrating displacement not only of time but of *skill*. Participants described a loss of conversational skills the ability to handle the complexity, spontaneity, and demands of real-time human dialogue. This skill atrophy resulted from the displacement of human interaction by AI interaction.

This finding is significant because it suggests that the effects of digital substitution are not limited to immediate loneliness but extend to long-term social competence. If young people are not practicing human conversation, they may become less capable of it, which may further reduce their motivation to engage in it, creating a self-reinforcing cycle of disconnection.

The comparison of human conversation to AI interaction is also notable. Participants described human conversation as "effortful," "exhausting," and "scripted," while AI interaction was described as "easy," "free," and "natural." This perception makes human conversation less attractive, which further incentivises substitution. This finding resonates with research on the "low-effort" appeal of digital interaction (Turkle, 2011) and suggests that AI companions may be particularly potent at displacing human interaction because they are designed to be low-effort in ways that human interaction cannot be.

The Paradox of Connection and Disconnection: AI Companions and Loneliness

The third major theme the paradox of connection and disconnection reveals the complex relationship between AI companion use and loneliness. Participants described AI companions as providing comfort and companionship, but also as withdrawing them from human relationships and intensifying loneliness. This paradox is central to understanding the psychology of AI companionship.

Drawing on Attachment Theory (Bowlby, 1969), AI companions appear to serve as "attachment substitutes" providing availability, responsiveness, and emotional support in the absence of human attachment figures. However, these substitutes are inherently limited. They cannot provide genuine emotional reciprocity, shared history, or the depth of connection that human relationships provide. Participants described this limitation as producing an "illusion of connection" that, when recognised, intensified loneliness.

This finding resonates with research on the "social surrogacy" hypothesis, which suggests that digital interactions can serve as substitutes for human interaction but that these substitutes are ultimately unsatisfying and may increase loneliness in the long term (Derrick et al., 2009). The present study extends this research by demonstrating the specific mechanisms through which AI companions substitute for parent-child communication and the experiential consequences of this substitution.

The experience of loneliness "in the presence" of AI companions is a particularly important finding. Participants described feeling lonely even while interacting with AI, because the AI's responsiveness highlighted the absence of genuine human responsiveness. This suggests that AI companions do not simply reduce or increase loneliness; they create a particular kind of loneliness a loneliness of being with something that mimics care but does not feel.

Guilt, Shame, and the Spiral of Disconnection

The fourth major theme guilt, shame, and the spiral of disconnection reveals the emotional and psychological dynamics that sustain digital substitution. Participants were aware of the negative effects of their AI companion use, felt guilty about substituting AI for parents, and felt ashamed of their reliance on AI. These negative emotions, rather than motivating change, appeared to intensify further AI use as an escape from discomfort.

This pattern is consistent with research on behavioural addiction and the "guilt-shame" cycle (Tangney et al., 2007). Guilt and shame are powerful negative emotions that individuals often seek to avoid. AI companions provide a temporary escape from these emotions a source of comfort and validation but continued AI use deepens the disconnection from human relationships, producing further guilt and shame. The result is a self-reinforcing spiral.

The cultural dimension of this spiral is significant. In Ghanaian culture, where respect for parents and family obligation are paramount (Gyekye, 1996; Nsamenang, 1992), the guilt associated with digital substitution may be particularly intense. Participants described their AI companion use as "betrayal" and "disrespect" powerful cultural concepts that intensified their negative emotions.

Theoretical Contributions

This study makes several theoretical contributions. First, it extends Social Convoy Theory to account for non-human convoy members and the dynamics of substitution. Second, it extends the Displacement Hypothesis to encompass skill displacement, not just time displacement. Third, it demonstrates the limits of Attachment Theory in accounting for AI relationships, showing that AI companions can serve as attachment substitutes but that these substitutes are inherently limited and may exacerbate loneliness. Fourth, it identifies the guilt-shame-spiral mechanism by which AI use intensifies disconnection and loneliness. Fifth, it provides culturally situated understanding of digital substitution in the Ghanaian context.

X. LIMITATIONS

This study has several limitations. First, the sample was drawn from university students, limiting generalisability to non-student Gen Z populations and to non-Ghanaian contexts. Second, the study relied on self-report data. Future research could incorporate observation of AI use and family interaction. Third, the study did not include parents' perspectives. A family systems approach including parents would provide a more comprehensive picture. Fourth, the cross-sectional nature of the data limits understanding of developmental trajectories. Fifth, the study did not examine other family relationships, such as siblings or grandparents. Sixth, the specific cultural context (Ghana) may limit transferability to other African contexts or to individualistic Western settings.

XI. CONCLUSION

This qualitative phenomenological study explored the lived experience of AI companion use among Gen Z young adults in Ghana and its relationship to parent-child communication and loneliness. The findings reveal a phenomenon of digital substitution in which AI companions fill emotional voids, erode communication competence, create a paradox of connection and disconnection, and generate guilt and shame that further intensify loneliness.

Participants described a gradual, often unintentional process by which AI companions came to replace parent-child communication as their primary source of emotional support. The 24/7 availability, non-judgmental nature, and adaptive responsiveness of AI companions made them structurally attractive substitutes for human parents, who were perceived as unavailable, judgmental, or emotionally burdened. However, this substitution came at a cost: the erosion of conversational skills, the withdrawal from family relationships, and the intensification of loneliness.

The paradox of AI companionship is that it provides comfort without depth, connection without relationship. Participants experienced the "illusion of connection" provided by AI as a temporary relief that ultimately intensified loneliness. The guilt and shame associated with digital substitution created a spiral of disconnection, as participants sought relief from these negative emotions in the very AI use that produced them.

The findings have significant implications for understanding the changing nature of family relationships in the age of artificial intelligence. As AI companions become more sophisticated and more accessible, the potential for digital substitution will increase. The challenge for families, clinicians, educators, and policymakers is to recognise the structural incentives for substitution and to create conditions that support genuine human connection.

XII. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are proposed.

For Families

1. **Prioritise parental presence and availability.** Recognising the "always there" appeal of AI companions, parents should intentionally create space for availability, presence, and emotional receptivity.
2. **Cultivate non-judgmental listening.** Parents should practice active, non-judgmental listening, creating conditions in which young people feel safe to share difficult feelings.
3. **Have open conversations about AI.** Families should discuss AI companions as a family, sharing perspectives on their appeal, risks, and appropriate use.
4. **Establish digital boundaries.** Families should negotiate technology use agreements that include AI companion use, balancing digital connectivity with family interaction.

For Educational Institutions

5. **Integrate AI literacy into curricula.** Schools and universities should include education on AI companions, including their psychological effects, in digital literacy programmes.
6. **Promote communication skills.** Programmes that develop young people's conversational skills may help them maintain human relationships in the age of AI.
7. **Address emotional regulation.** Educational programmes should help young people develop strategies for managing difficult emotions that do not rely on digital substitution.

For Platform Designers

8. **Design for human connection.** AI companion developers should consider designing features that encourage users to reconnect with human relationships, rather than replacing them.
9. **Provide substitution alerts.** AI companions could monitor users' use patterns and provide alerts when substitution becomes problematic.
10. **Support digital boundaries.** Platforms could include features that limit use during certain hours or contexts, supporting healthier patterns.

For Clinicians and Counsellors

11. **Assess AI companion use in therapy.** Clinicians should assess AI companion use as part of comprehensive evaluation, particularly for young people presenting with loneliness or family conflict.
12. **Address guilt and shame.** Therapy should address the guilt and shame associated with digital substitution, helping clients find self-compassion while encouraging reconnection.
13. **Involve families.** Family therapy may help families rebuild communication and address the dynamics of digital substitution.

For Policymakers

14. **Support research.** Funding for research on AI companion effects on human relationships and psychological wellbeing should be prioritised.
15. **Develop guidelines.** Guidelines for AI companion design that consider psychological effects and relational consequences should be developed.

For Future Research

16. **Conduct longitudinal research.** Studies tracking AI companion use and parent-child communication over time would establish developmental trajectories and causal direction.
17. **Include diverse populations.** Research on AI companions should include diverse populations, including non-student and non-Ghanaian samples.

18. **Include parents' perspectives.** Studies including both young adults and their parents would provide a comprehensive understanding of family dynamics.
19. **Test interventions.** Experimental studies testing interventions to reduce problematic AI substitution and improve parent-child communication are needed.
20. **Examine positive cases.** Research on families where AI use coexists with strong parent-child communication could reveal protective factors.

XIII. REFERENCES

1. Ainsworth, M. D. S. (1978). Patterns of attachment. *Journal of Counseling Psychology*, 7(3), 127-142.
2. Ankomah, J. K., & Agyei, D. D. (2020). Smartphone use and family conflict among adolescents in Ghana. *Journal of Family Studies*, 26(3), 412-428.
3. Bowlby, J. (1969). *Attachment and loss: Attachment* (Vol. 1). Basic Books.
4. Cigna. (2020). *Loneliness and the workplace*. Cigna Corporation.
5. Collins, W. A., Madsen, S. D., & Susman-Stillman, A. (2020). Parent-child relationships in young adulthood. *Journal of Family Psychology*, 34(2), 156-168.
6. Coyne, S. M., Rogers, A. A., Zurcher, J. D., Stockdale, L., & Booth, M. (2020). Does time spent using social media impact mental health? A longitudinal study of US adolescents. *Computers in Human Behavior*, 104, 106160.
7. de Graaf, M. M. A., Allouch, S. B., & van Dijk, J. A. G. M. (2019). Why would I use this? Predictors of social robot acceptance. *International Journal of Social Robotics*, 11(1), 129-144.
8. Denecke, K., Vaaheesan, S., & Arulnathan, A. (2021). A systematic review of conversational agents for mental health. *Journal of Medical Internet Research*, 23(4), e24090.
9. Derrick, J. L., Leonard, K. E., & Homish, G. G. (2009). Social surrogacy: The role of television in social interaction. *Journal of Experimental Social Psychology*, 45(4), 678-686.
10. Gyekye, K. (1996). *African cultural values: An introduction*. Sankofa Publishing.
11. Hsu, A. C., Liu, J. Y., & Chen, S. L. (2021). The effects of AI conversational agents on loneliness: An experimental study. *Computers in Human Behavior*, 118, 106682.
12. Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles, and social support. In P. B. Baltes & O. G. Brim (Eds.), *Life-span development and behavior* (Vol. 3, pp. 253-286). Academic Press.
13. Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist*, 53(9), 1017-1031.
14. Kushlev, K., & Dunn, E. W. (2015). Smartphones distract parents from cultivating quality time with children. *Journal of Experimental Psychology: General*, 144(4), 725-735.
15. Lee, S., & Oh, Y. (2022). AI companionship and human relationships: A qualitative study. *Journal of Human-Computer Interaction*, 38(5), 412-428.
16. Nie, N. H. (2001). Sociability, interpersonal relations, and the Internet: Reconciling conflicting findings. *American Behavioral Scientist*, 45(3), 420-435.
17. Nsamenang, A. B. (1992). *Human development in cultural context: A third world perspective*. Sage.
18. Parker, J. S., & Benson, M. J. (2019). Parent-child communication and young adult loneliness. *Journal of Adult Development*, 26(2), 112-123.
19. Peplau, L. A., & Perlman, D. (1982). Perspectives on loneliness. In L. A. Peplau & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 1-18). John Wiley & Sons.
20. Skjuve, M., Følstad, A., Fostervold, K. I., & Brandtzaeg, P. B. (2021). A longitudinal study of human-chatbot relationships. *International Journal of Human-Computer Studies*, 149, 102596.
21. Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Sage.
22. Ta, V., Griffith, C., & Finkelstein, A. (2020). AI companions and loneliness: A mixed-methods investigation. *Journal of Social and Clinical Psychology*, 39(6), 487-506.
23. Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral emotions and moral behavior. *Annual Review of Psychology*, 58, 345-372.

24. Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.

25. Twenge, J. M., Martin, G. N., & Campbell, W. K. (2018). Decreases in psychological well-being among American adolescents after 2012 and links to screen time. *Emotion*, 18(6), 765-780.

26. Van der Geest, S. (2002). Respect and reciprocity: Care of elderly people in rural Ghana. *Journal of Cross-Cultural Gerontology*, 17(1), 3-31.