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BUILDING BRIDGES THROUGH PLAY: A GAME DESIGN APPROACH TO ENHANCING PARENT- YOUNG ADULT COMMUNICATION

Teesha Madan¹, Sandipan Bhattacharjee², Bhaskar Saha³

1, 2, 3 Department of Visual Communication Design, UID, Karnavati University





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ABSTRACT

In the intricate landscape of family dynamics, cultivating transparent communication between parents and young adults poses a nuanced challenge. This research delves into the development and impact of a distinctive game designed to transmute awkward conversations into potent instruments for fortifying connections between these two groups. The central objective of this game is to forge a secure and captivating space that nurtures open dialogue, enabling both parents and young adults to exchange personal narratives and experiences. The ultimate goal is to cultivate an environment where young adults feel at ease initiating discussions with their parents. Employing a dual survey method — a questionnaire and a prototype — substantiated the necessity for an intervention and validated the game design concept. Grounded in the belief that awkward conversations can catalyse more meaningful communication, the game offers a structured platform for instances when a young adult grapples with expressing themselves or when parents sense a detachment from their child's life. The iterative nature of the game, featuring multiple rounds, ensures reciprocity in sharing stories, fostering a balanced and open dialogue. This innovative approach seeks to dismantle communication barriers and foster empathy, contributing to the realm of game design by highlighting the potential of interactive experiences in facilitating significant conversations within families.

Keywords: Game Design, Behavioural Design, Interactive Experiences, Communication, Innovative Strategies

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1. INTRODUCTION

In the complex tapestry of family dynamics, the challenge of fostering clear and open communication between parents and young adults is both nuanced and multifaceted. Against this backdrop, the present research embarks on an exploratory journey to design and assess the impact of an innovative game aimed at transforming awkward conversations into powerful opportunities for strengthening familial bonds. At the heart of this endeavour is the ambition to create a secure and engaging environment conducive to the free exchange of personal narratives and experiences between parents and young adults. The game's primary objective is to establish a communicative bridge that encourages young adults to feel more comfortable initiating conversations with their parents, thereby enhancing mutual understanding and empathy.

This study leverages a dual survey methodology, combining questionnaires with a game prototype, to both underscore the pressing need for such communicative interventions and to validate the foundational principles of the game's design. This approach is rooted in the premise that awkward conversations, often seen as barriers to effective communication, can instead serve as catalysts for deeper and more meaningful exchanges. By offering a structured yet flexible platform,

the game facilitates moments of genuine connection, especially when young adults find it challenging to articulate their thoughts or when parents feel alienated from their children's lives.

1.1 BACKGROUND STUDY

Middleton (2017) and Pitts (2015) delve into the intricate challenges that emerge in the communication landscape between parents and young adults, with a keen focus on the realms of substance use and other sensitive topics. Their research collectively underscores a pivotal concern: the navigation of these complex conversations is fraught with potential pitfalls, necessitating the development and implementation of effective strategies and training for parents. The crux of their argument lies in the acknowledgment that these delicate dialogues, if mishandled, can significantly strain familial relationships, emphasizing the urgency for skilful communication approaches that can mitigate misunderstandings and foster a supportive environment for addressing such challenging issues.

Expanding on this foundation, Mann (2005) and Scharp (2020) contribute to the discourse by highlighting the broader implications of communication strategies in contexts that are inherently prone to creating feelings of alienation. Mann's insights into the dynamics of online learning environments reveal the critical role of communication in mitigating the sense of isolation that can emerge in these settings. Scharp, on the other hand, brings to light the nuances of coping with parental alienation, stressing the importance of building resilience through effective communication practices. Both scholars assert that the ability to maintain open, honest, and empathetic dialogue serves as a linchpin in overcoming the barriers to connection, ultimately playing a pivotal role in healing and strengthening the parent-young adult bond.

Together, these studies weave a compelling narrative that champions the value of cultivating open, honest, and empathetic channels of communication. They posit that such communicative virtues are not merely beneficial but essential in bridging the gap between parents and young adults. This body of research lays bare the reality that resistance to communication, if unaddressed, can culminate in feelings of alienation, underscoring the necessity for strategies that not only encourage dialogue but also ensure it is conducted in a manner that respects the emotional landscapes of all involved. By advocating for an approach to communication that prioritizes understanding and empathy, these scholars contribute invaluable insights into how families can navigate the precarious paths of sensitive discussions, thereby reinforcing the familial fabric against the challenges of misunderstanding and estrangement.

The burgeoning field of family communication and interactive interventions has increasingly recognized the quintessential role of fostering environments conducive to open and secure dialogues within families. A crucial strand within this body of research posits that the key to enhancing familial bonds lies in the innovative deployment of interactive tools to stimulate rich, meaningful conversations. The seminal works of Golsteijn (2011) and Toft (2012) have been instrumental in foregrounding the potential of such tools — including photo cubes and interactive games — as catalysts for nurturing communication between parents and young adults. These interactive mechanisms not only facilitate the sharing of personal narratives and experiences but also encourage a playful exploration of diverse communication styles, thus enriching the familial dialogue landscape.

Complementing this perspective, Sanders (1993) articulates the critical importance of engaging families in discussions about assessment findings, advocating for a "guided participation" approach. This model underscores the necessity of a scaffolded interaction framework that significantly bolsters therapy outcomes by actively involving family members in the therapeutic process. Moreover, Glenn (1987) introduces a metacommunicative lens to the discourse, elucidating how the strategic framing of play within adult conversations can serve as a potent conduit for engendering empathy and mutual understanding. Such a metacommunicative approach not only deepens the emotional connections between family members but also facilitates a more nuanced appreciation of each other's perspectives and experiences.

Collectively, these scholarly contributions illuminate the transformative potential of integrating interactive tools and games into family communications. They advocate for the development of a novel game-based intervention that transmutes potentially awkward or challenging conversations into powerful opportunities for strengthening familial ties. By championing a balanced and open dialogue framework, this burgeoning research area promises to redefine the contours of family therapy and communication strategies, paving the way for more resilient and interconnected family units.

1.2 DEFINING AREA FOR DESIGN INTERVENTION

A critical examination of the existing literature and societal trends points to a pronounced problem area: the escalating challenge of mental health issues among young adults, particularly in the context of communication breakdowns within families. This issue has been magnified by the digital era's influence, where virtual interactions often replace face-to-face conversations, potentially leading to a lack of deep, meaningful communication. Additionally, the stigma surrounding mental health, coupled with generational differences in understanding and discussing such issues, exacerbates the communication gap between parents and young adults. This gap not only impedes the effective sharing of feelings and experiences but also hinders the provision and reception of support for mental health challenges. The need for effective communication strategies that can bridge this gap and facilitate a supportive dialogue about mental health concerns is both urgent and critical.

Given this backdrop, the aim of this research is twofold. First, it seeks to investigate the impact of communication breakdowns on the mental health of young adults within the family context. This involves exploring how lack of open dialogue, misunderstandings about mental health, and the stigma associated with mental health issues affect the well-being of young adults and the overall dynamics of family relationships. Second, the research aims to develop and evaluate a targeted intervention designed to improve communication between parents and young adults regarding mental health issues. The intervention will focus on fostering open, honest, and empathetic dialogue, with the goal of reducing stigma, improving mutual understanding, and enhancing the mental health outcomes for young adults. Through this, the research endeavours to provide evidence-based strategies that families can adopt to strengthen their communication practices and support structures, ultimately contributing to better mental health and well-being for young adults.

The use of game design in enhancing family communication is an innovative research area with promising outcomes. Studies like those by Toft (2012), D'Cruz (2015), Liang (2012), and Matuk (2020) showcase the diversity and potential of games in facilitating better dialogue and understanding within families. From Toft's Junomi, which

promotes togetherness through playful interaction, to D'Cruz's exploration of games for sexual health discussions between parents and youth, and Liang's focus on mobile games for cultural values like filial piety, the scope is vast. Matuk's work on educational transmedia games further highlights the potential for learning and communication. These studies collectively underline how games can break down barriers, foster empathy, and strengthen familial bonds, showcasing the transformative power of interactive experiences in family communication.

Through the game's iterative design, featuring multiple rounds of story-sharing, the game meticulously fosters a balanced and open dialogue, ensuring that both parents and young adults have equal opportunities to share and listen. This not only promotes a reciprocal flow of communication but also deepens the participants' understanding of each other's perspectives and experiences. By strategically leveraging the mechanics of game design to bridge communication gaps, this research contributes a novel perspective to the fields of family therapy and game design. It underscores the transformative potential of interactive experiences in dismantling barriers to communication and nurturing empathy, thereby facilitating significant conversations within the family unit.

2. METHODOLOGY

Research Design-This study adopts a mixed-methods approach, integrating qualitative interviews with user testing to evaluate the effectiveness of a specially designed game in enhancing communication within families. The research is structured around a pre- test/post-test design, allowing for the assessment of changes in family communication dynamics before and after the intervention.

Participants - The study will involve a purposive sample of 10 families, each comprising at least one parent and one young adult (aged 18-25).

2.1 DESIGN INTERVENTION: THE GAME

The intervention is a game specifically designed to facilitate open dialogue, empathy, and understanding within families. It will incorporate elements identified from the literature as beneficial for promoting communication, such as story-sharing, problem-solving challenges, tailored to address both general and sensitive topics. Fig. 1 describes the key points from the identified literature, along with benefits of a game design intervention. It also throws some light on the research methodology.



Fig. 1 Understanding area of intervention, analyzing the apt solution, user testing

2.2 PROCEDURE

Pre-Test Intervention: Participating families will complete a baseline interview measuring key aspects of their current communication dynamics, including frequency, openness, perceived barriers, and satisfaction levels. This is done to gather in-depth insights into the specific communication challenges faced by each family.

Game Intervention: Families will be asked to participate in a series of game sessions. These sessions will be observed to note interaction patterns, engagement levels, and any observable changes in communication behaviour. Post-Test Assessment: Following the intervention, post-intervention interviews will also be conducted to capture qualitative feedback on the game's impact on family communication dynamics.

2.3 QUANTITATIVE DATA ANALYSIS

Qualitative data from interviews will be analysed using thematic analysis to identify common themes and insights related to the effectiveness and impact of the game intervention.

2.4 ETHICAL CONSIDERATIONS

The study will adhere to ethical guidelines, ensuring voluntary participation, informed consent, anonymity, and the right to withdraw at any time. Special care will be taken to maintain confidentiality and sensitivity towards participants' privacy, especially when discussing sensitive topics during interviews.

2.5 EXPECTED OUTCOMES

This methodology is designed to rigorously evaluate the potential of game design as a tool for enhancing family communication. By integrating qualitative insights, the study aims to provide a comprehensive understanding of how structured play can foster more open, empathetic, and effective communication within families.

3. USER RESEARCH

Based on the user study findings, it's evident that there's a diverse range of attitudes and experiences among young adults and their parents regarding interpersonal communications.

3.1 DESIRE FOR OPEN COMMUNICATION (40%)

A significant portion of young adults and parents expressed a strong desire for open communication, indicating a perceived need for deeper connection and understanding within their familial relationships. Despite this desire, many participants reported feeling unsure or hesitant about initiating conversations with their parents. They believed that their parents might understand them but struggled with where to begin or how to broach sensitive topics. Notably, participants suggested that they would feel more comfortable engaging in open dialogue if their parents took the initiative by sharing their own personal stories first. Whereas parents addressed the growing distance they observed in

the teenage years, and felt that their child does not feel connected to them anymore and they are not even aware of the instances occurring in their child's life. This indicates a desire for a supportive and empathetic approach from both ends, with the hope that it would create a conducive environment for meaningful conversations to unfold.

3.2 PRACTICE OF EFFECTIVE COMMUNICATION (20%)

A smaller yet significant subset of participants reported actively practicing effective conversations. These individuals described engaging in unfiltered sharing of personal stories as a means of fostering trust, confidence, and mutual support within their familial relationships. They highlighted the positive impact of these conversations on their ability to navigate challenging situations with the knowledge that they were backed by their parents' understanding and support. Additionally, participants emphasized the comfort and security they felt in confiding in their parents, suggesting that these open communication practices played a crucial role in strengthening their bonds and promoting emotional wellbeing. On the other hand, a lot of effort went in place to build such a relation emphasising non judgements and becoming friends first.

3.3 PERCEPTION OF PARENTAL MISUNDERSTANDING (25%)

A considerable proportion of participants expressed concerns about their parents' ability to understand them, despite recognizing the importance of their relationships. These individuals described feeling a sense of distance or disconnect in their interactions with their parents, attributing it to perceived barriers in communication. While they acknowledged the significance of parental involvement in their lives, they expressed scepticism about their parents' capacity to empathize with their experiences and perspectives. This perception of parental misunderstanding underscored a significant challenge in family communication dynamics, indicating a need for interventions aimed at bridging the gap and fostering greater understanding between parents and young adults.

3.4 NEUTRAL STANCE (15%)

A minority of participants adopted a neutral stance on the topic of communication with their parents, neither strongly desiring nor rejecting open dialogue. These individuals exhibited varying levels of engagement and comfort in their familial relationships, with no strong positive or negative sentiments towards communication with their parents. While they may not actively seek out opportunities for open dialogue, they also do not express significant barriers or concerns in their communication dynamics. This group's responses highlight the complexity and diversity of experiences within the young adult population, suggesting that interventions aimed at promoting communication may need to be tailored to individual preferences and needs.

4. GAME FORMULATION

4.1 OBJECTIVE OF THE GAME

Players aim to navigate through levels of conversation, from Ice Breakers to Deep Dives, sharing personal stories and insights to stimulate understanding and empathy. The ultimate goal is to foster closer bonds and encourage open dialogue on typically awkward subjects.

4.2 COMPONENTS IN THE GAME

Game Board: A checkered track with spaces marked for different categories, including school, college, public spaces etc. Cards: 54 cards divided evenly among the three levels (18 per level), plus 6 wild cards. Dice or Spinner: Determines the number of spaces players move.

Game Pieces: One for each player.

Timer: To limit response times, ensuring the game progresses smoothly.

4.3 SET UP OF THE GAME

Place the game board in the centre of all players. Shuffle each level of cards separately and place them on their designated spots on the board. Each player chooses a game piece and places it at the starting point. Decide the playing order (e.g., youngest goes first). This set up is graphically explained in Fig. 2.

4.4 GAME PLAY

- **4.4.1** Turns: Players take turns rolling the dice or spinning the spinner and moving their piece the indicated number of spaces.
- **4.4.2** Card Drawing: Depending on the space landed on, the player draws a card from the corresponding level deck.
- **4.4.3** Ice Breaker: Light, fun prompts to get everyone comfortable.
- **4.4.4** Let's Get the Ball Rolling: Prompts for sharing personal stories and experiences.
- **4.4.5** Let's Dive Deep: Intimate, thought-provoking questions designed to foster deep emotional connections.
- **4.4.6** Response Time: Players have 30 sec to 2 minutes (use the timer) to respond to the prompt. Other players listen attentively.
- **4.4.7** Discussion: After sharing, allow for a brief, respectful discussion or expressions of empathy. Wild Cards: If drawn, these allow for special actions, such as asking another player a question, sharing out of turn

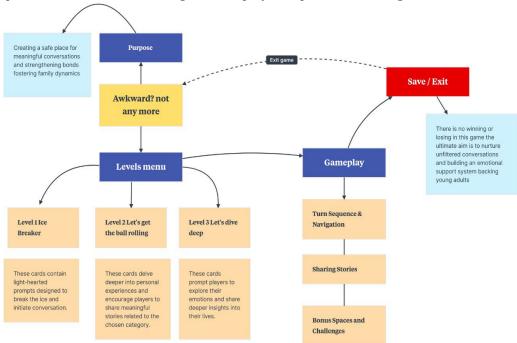


Fig. 2 Understanding the game methodology and the functionality

4.5 WINNING THE GAME

This game does not have to be competitive. The aim is to encourage open, heartfelt dialogue, and in this version, all participants win through gained understanding and empathy.

4.6 RULES FOR ENCOURAGEMENT

- **4.6.1** No judgment or negative comments; this is a safe space.
- **4.6.2** Listen actively and respectfully.
- **4.6.3** Share honestly, but only what you're comfortable sharing.
- **4.6.4** It's okay to pass. Emotional safety is paramount.

4.7 CONCLUSION AND REFLECTION

At the game's conclusion, encourage a round of reflection where players can express how they felt about the experience, any new insights gained about others, and whether the game helped them feel closer or more understood.

5. PROTOTYPING AND CONSTRUCTION

The game prototype is meticulously designed to serve as a tool for facilitating engaging and meaningful communication within families. The construction of the game components, including the board and cards, is carefully crafted to enhance both functionality and symbolic significance, thereby enriching the overall gameplay experience.

- **5.1** Board Design The game board is constructed with precision, measuring 12 inches by 12 inches, offering ample space for player interaction while maintaining a manageable size for easy handling. The board features a grid layout of checkered boxes, each measuring 2 inches, providing a structured framework for movement and strategic positioning during gameplay. This layout ensures clarity and organization, essential for guiding players through the various stages of the game.
- **5.2** Card Design Central to the gameplay experience are the 54 cards, meticulously crafted with attention to detail and quality. Each card is printed on durable 170gsm paper, ensuring longevity and resilience to frequent handling. The cards are sized at 3.5 inches by 2.5 inches, striking a balance between readability and portability. Moreover, the dual finish of matte and glossy surfaces not only adds visual appeal but also enhances durability, making the cards suitable for extended use.
- **5.3** Color Symbolism A defining feature of the game is its incorporation of primary colors—red, yellow, blue, and green—each chosen for its symbolic significance in color psychology. These colors serve as visual cues throughout the game, evoking specific associations and prompting players to engage with deeper layers of meaning. Red symbolizes vitality and energy, yellow represents warmth and expression, blue embodies intellect and clarity, while green signifies balance and harmony. By leveraging color symbolism, the game creates a multi-dimensional experience that resonates on both emotional and cognitive levels.
- **5.4** Symbolic Shapes In addition to color symbolism, the game utilizes basic shapes—squares, circles, and lines—to convey symbolic meaning and enhance gameplay dynamics. Squares represent stability and structure, providing a framework for clear boundaries and grounded communication. Circles symbolize fluidity and openness, encouraging adaptability and free-flowing dialogue. Meanwhile, lines signify progress and direction, guiding players on their journey toward deeper understanding and connection.

6. GAME INTERVENTION REVIEW

The feedback received on the game intervention revealed a spectrum of perspectives and insights, providing valuable input for further refinement and development. As per the assessment observed in Fig. 3 – 6 the findings are listed below

6.1 POSITIVE CONNECTION AND UNDERSTANDING (30%)

A notable portion of participants (30%) expressed a positive connection with the concept of the game intervention, understanding the need for such an intervention to foster communication within families. These individuals recognized the potential of the game to facilitate meaningful dialogue and bridge communication gaps between parents and young adults. Their positive response indicates a readiness to engage with the intervention and suggests a strong foundation for its implementation.

6.2 SCOPE FOR IMPROVEMENT IN DESIGN AND TOPICS COVERED (30%)

Another 30% of participants acknowledged the value of the intervention but identified areas for improvement in the game's design and the range of topics covered. While supportive of the concept, they suggested enhancements to make the game more engaging, accessible, and inclusive. Additionally, they recommended expanding the scope of the game to encompass a broader range of relationships beyond parent-child dynamics, such as interactions among siblings or colleagues. This feedback highlights the importance of flexibility and adaptability in the intervention's design to cater to diverse user needs and preferences.

6.3 CONCERNS ABOUT COMPLEXITY AND CONSERVATION STIMULATION (25%)

A quarter of participants expressed concerns about the complexity of the game and its potential impact on conversation stimulation. While acknowledging the importance of the intervention, they raised apprehensions about the game's ability to effectively stimulate meaningful dialogue. Moreover, they emphasized the need to ensure that the game does not

overwhelm participants, particularly in facilitating conversations within the parent-child relationship. However, despite these concerns, this group remained supportive of the concept and provided valuable suggestions for improvement.

6.4 potential for uncalled - for circumstances (15%)

Fifteen percent of participants expressed reservations about the potential consequences of the game intervention, fearing that it might trigger uncalled-for circumstances or uncomfortable discussions. They emphasized the importance of implementing a controlled structure within the game to guide conversations and mitigate any adverse outcomes. This feedback underscores the need for careful consideration of the intervention's design and implementation to ensure its effectiveness and safety.

6.5 NEUTRAL RESPONSE (10%)

A minority of participants (10%) provided a neutral response to the game intervention, neither strongly endorsing nor rejecting its implementation. While not expressing strong opinions, their feedback still contributes valuable insights into areas where the intervention may need further clarification or refinement.

6.6 OVERALL ASSESSMENT

The feedback received on the game intervention reflects a diverse range of perspectives, highlighting both strengths and areas for improvement. While there is a positive reception and understanding of the intervention's purpose, there is also a recognition of the need for refinement in its design, scope, and implementation. Addressing these considerations will be crucial in optimizing the intervention's effectiveness and ensuring its ability to facilitate meaningful communication within families



Fig. 3 User Testing 1



Fig. 5 User Testing 3



Fig. 4 User Testing 2



Fig. 6 User Testing 4

7 FUTURE SCOPES

7.1 GAME DEVELOPMENT

7.1.1 DESIGN SCOPE

In future iterations of the game, incorporating two styles of customized dice in place of the traditional board can enhance interactivity and gameplay dynamics. These dice can feature symbols, colors, or patterns corresponding to the game's thematic elements, adding an additional layer of strategy and excitement for players.

Furthermore, integrating visual elements such as graphics and iconography can make the game more appealing to a wide range of audiences. By enhancing the aesthetic appeal of the game components, it can attract and engage players of all ages and backgrounds, fostering a more inclusive and immersive gameplay experience.

7.1.2 GAME SPECTRUM

Expanding the game's spectrum to include a broader range of topics, such as first investments, first pay checks, and the sentimental value of objects, can enrich the gameplay experience and deepen the level of engagement among players. By addressing a diverse array of themes and narratives, the game can resonate with a wider audience and provide opportunities for meaningful reflection and discussion.

7.1.3 RULE DEVELOPMENT

Future iterations of the game can focus on refining and developing rules to include elements of control and stake, ensuring that uncalled-for circumstances are effectively mitigated. By introducing mechanisms for players to regulate the direction and intensity of conversations, the game can maintain a balance between spontaneity and structure, promoting a safe and supportive environment for communication.

7.2 RESEARCH PAPER DEVELOPMENT

7.2.1 INCREASING SAMPLE SIZE AND PROTOTYPE DEVELOPMENT

To further validate the effectiveness of the game intervention, future research endeavours can focus on increasing the sample size and conducting multiple iterations of prototype development. By expanding the pool of participants and refining the game mechanics based on iterative feedback, researchers can enhance the reliability and generalizability of study findings, providing valuable insights into the impact of the intervention on family communication dynamics.

7.2.2 UNDERSTANDING POST INTERVENTION FEEDBACK

Future research efforts can delve deeper into understanding post-intervention feedback, analysing participant responses to identify patterns, trends, and areas for improvement. By exploring the nuances of participant experiences and perceptions, researchers can gain valuable insights into the efficacy of the game intervention and inform future iterations of game development and research design.

7.2.3 ANALYSING BEHAVIOURAL PSYCHOLOGY DEVELOPMENT

Lastly, future research endeavours can focus on analysing behavioural psychology development before and after intervention. By examining changes in communication patterns, interpersonal dynamics, and emotional expression among participants, researchers can assess the long-term impact of the game intervention on family relationships and well-being. This holistic approach to evaluation can provide valuable evidence of the intervention's effectiveness in promoting positive communication outcomes and inform future research directions in the field of family communication and game design.

8. CONCLUSION

In conclusion, this research paper delved into the intricate landscape of family communication dynamics, exploring the development and impact of a game intervention designed to foster open dialogue between parents and young adults. Through a mixed-methods approach, the study uncovered a diverse range of attitudes, experiences, and challenges related to family communication, shedding light on both the potential of the game intervention and areas for further refinement and exploration.

The findings revealed a significant desire among young adults for open communication with their parents, emphasizing the importance of creating a supportive and empathetic space for dialogue initiation. Positive experiences with effective conversations underscored the potential of structured play in nurturing trust, confidence, and mutual understanding within familial relationships.

However, challenges such as perceived parental misunderstanding and concerns about complexity highlighted the need for careful consideration in intervention design and implementation. Suggestions for improvement, including broader topic coverage and enhanced rule development, offer valuable insights for future iterations of the game.

Looking ahead, future research endeavours hold promise in expanding sample size, refining prototype development, and analysing post-intervention feedback to deepen our understanding of the game intervention's efficacy. By incorporating insights from behavioural psychology and continuing to explore the intersection of game design and family communication, researchers can advance knowledge in this field and develop innovative interventions to support stronger, more connected families.

In essence, this research paper serves as a stepping stone towards enhancing family communication dynamics through interactive experiences, paving the way for continued exploration and innovation in fostering meaningful connections within the familial sphere.

CONFLICT OF INTERESTS

None.

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