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Design Thinking Strategies in Therapeutic Assessment of Adolescent Emotional Challenges

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Abstract:

The adolescent phase in every individual's life is faced with an array of developmental hurdles, among them being various emotional strains in one way or the other. This study sought to investigate these varied emotional challenges that this cohort battles in this phase of their lives. The study was conducted in a Senior High School in Kumasi, Ghana. This study's population consisted of:

- *Adolescents aged between 13 and 20 years,*
- *Adolescents aged between 16 years and 19 years*

The respondents were randomly sampled for this research. Through a non-structured interview and participant observations, data were gathered. Therapeutic solutions were sought through the adaptation of the Design Thinking Strategy processes. A 1:25-minute animated presentation was chosen and proposed through the ideation stages as an informative, educative piece of video that seeks to address the emotional challenges faced by adolescents to create awareness for both the said group and primary and secondary caregivers alike. The short video is also intended to educate caregivers safely and harmlessly. The results of this study revealed, majorly, among other concerns, the desire and need of most adolescents to be heard and understood by their parents and other primary caregivers.

Keywords: *Adolescence, adolescent emotional challenges, design thinking processes, therapeutic assessment*

1. Introduction

The stage of adolescence is a crucial period in the lives of every growing child, ushering them into adulthood. The World Health Organization (2013) states that adolescence is a transitional phase of growth and development between childhood and adulthood. An adolescent is any person who falls between the ages of 10 and 19 (WHO, 2013). In a country like Ghana, the statistics on adolescents show that adolescents between the ages of 10 and 19 years form approximately one-third of the entire population of Ghana. This has an additional 10% of young adults ranging between the years of 20-24 (UNICEF, 2020).

The transition from childhood to adulthood is characterized by various physical and psychological hurdles that need to be effectively dealt with for young adults to be ushered into a long productive adult life ahead of them. A study by Astha, Monika, Gitika, & Abhishek (2014) observed that adolescents suffer from several psycho-social problems at one time or the other during this particular developmental stage of their lives. A good number of these challenges are of a transient nature. However, Erikson (1953) posits that failure to successfully surmount the many psychological challenges posed and properly resolve issues concerning the adolescence phase of one's life could consequently usher these growing adults into very dysfunctional adulthood, rendering them emotionally impaired in many ways, often unnoticeable.

In this regard, it is essential to offer the needed attention to this critical stage of a child's life by both primary and secondary caregivers to nurture this group of people into healthy psychological wholeness and well-being. Doing so allows adolescents to be sound, confident, and productive adults who can contribute efficiently to their nation and the world at large. In light of the reasons above, this paper seeks to explore a tailor-made art therapeutic intervention through the Design Thinking Strategies to aid in managing adolescent emotional health challenges in a selected second-cycle institution.

1.1. Psychological Challenges during the Adolescent Stage

The general description of the stage from childhood to adulthood is viewed in many ways as marked by immense turmoil in adolescents' emotional and behavioral spheres. Research conducted by Pathak, Sharma, Parvan, Gupta, Ojha, & Goel (2011) affirms the frightening evidence that adolescents are highly vulnerable to psychiatric disorders. The inauguration into adult life brings about real struggles in developing self and identity while still trying to conform to the many societal norms and ideals of the families and societies they belong to. This process seems rapid and intense and may result in confusion, easily making adolescents more vulnerable to maladaptive patterns of thinking and behavior.

In recent times, the surge of urbanization and technological advancement has had most caretakers work long hours to fend for their families. Technology continues to stand as a barrier for families to experiencing physical interaction and reaching one another, thus rendering these caretakers and their families less time to bond and physically communicate efficiently. According to Astha et al. (2014), emotional problems facing adolescents have been relatively neglected, consciously or unconsciously, by caregivers, compared with behavioral problems because these may be difficult to detect by their parents or teachers.

Healthy adulthood, posited by Pathak et al. (2011), avers that it is mostly dependent upon the successful resolution of such emotional and behavioral problems. It goes on to indicate that the future of adolescents whose emotional developments are somewhat neglected are bound to face issues with psychological challenges such as depression, delinquencies, and, in extreme cases, suicidal inclinations. Current reports indicate a general insurgence of the prevalence of mental health issues and maladaptive behaviors among adolescents and young people. The World Health Organization estimates have indicated that up to 20% of adolescents suffer from one or more mental or behavioral challenges. Research conducted in various parts of the world has shown the occurrence of behavioral and emotional problems amongst adolescents ranging from 16.5% to 40.8%.

In Ghana, the prevalence of suicidal behaviors was 18.2%, 22.5%, and 22.2% for suicidal ideation, suicidal plan, and suicidal attempt, respectively, according to Asante, Kugbey, Osafo, Quarshie, & Sarfo (2017). Anxiety and loneliness formed part of the attributing factors of this challenge. The study goes on to affirm that parental understanding, acceptance of adolescents' challenges and worries, and respect for privacy upgraded adolescents' emotional health and, thus, stayed a significant protective factor for all the indicators of suicidal behavior. Monitoring the adolescents, especially those in the high school age range, and identifying and intervening early when adolescents show initial symptoms of emotional problems would go a long way to potentially decrease the prevalence of suicide and emotional ill-health among this population in Ghana (Asante et al., 2017).

1.2. Attachment Theories and Their Relevance to Adolescent Emotional Health

Over time, there has been an appreciable proportion of studies focusing more on the role of attachment in the beginning stages of life and adulthood. However, amazingly, relatively few researchers consider the relevance of attachment during the adolescence phase of life. This is crucial, given that the stage of adolescence is characterized by varied developmental changes, such as physical, psychological, and social, and are inevitably influenced by models of attachment. Certainly, the quality of the relationship between children and their primary caregivers is considered to be crucial to their socio-emotional development because it embodies the fundamental experience of human intimacy (Sroufe, Carlson, & Levy, 1999). According to Bowlby (1969, 1973, 1980), attachment theories have to do with the emphasis on the process by which sturdy and enduring associations develop, are maintained, and can be modified over time. This is necessary as ensuring quality attachments during the primary years of one's life may not be enough to sustain and develop an individual's socio-emotional states in later years.

The relevance and sustenance of quality attachments are equally needed as persons advance in life. Many times, it is taken for granted the crucial period of adolescence. Bartholomew (1990) speculates that the general quality of early attachment is determined by the interactions between attachment figures and infants.

Lamb, Thompson, & Gardner (1985) also maintain that attachment is only stable when the caregiver situation proves consistently reliable and constant, advancing in the adolescent's life. This means that the need for love, care, and attention for adolescents is vital in helping them maintain a sound life, gradually progressing into adulthood, with minimum emotional trauma whatsoever. Parents, especially, are responsible for ensuring this sustenance and consistency as children grow into adulthood. The attachment to parents during the period of adolescence may differ from other ages because it highlights the emotional autonomy of the adolescent while maximizing levels of support (Schneider & Younger, 1996). Cooper et al. (1998) explain this as helpful when adolescents learn to retain a sense of steadiness when a lot of other changes are taking place and act as a safe base from which to explore newer social situations around them. Specifically, Daniels (1990) & McCurdy et al. (1996) confirm that significant during the years of adolescence is the process of separation-individuation from their parents and the development of relationships outside the family environs. Separation-individuation is the idea that a growing child can safely move outside into their new world, forming newer relations and exploring their own world and emotions while internally knowing or believing that their primary caregivers are always present for them whenever they need their support in various ways. Mahler (1975) affirms that the adolescent may not see the primary or secondary caregiver regularly. However, they must have built a strong emotional connection that makes them certain that these attachment figures can provide whichever constant support they may need in their lives as they advance in life, whether they always physically see them or not. This is necessary for emotional growth and stability in the growing adult's life. Fonagy (2003) states that the 'child's achievements require a parent who regards and responds to their infant as a sentient being who wants to communicate, understand and be understood'. Individuals in this phase of life desire most to be understood, cared for appropriately, advised lovingly, and respected accordingly. This is because Brown et al. (2001) believe that between the world of play and the world of work, adolescence stands at a unique

psycho-social point. This is why Bowlby (1973) argues for the continued importance of the parent-child attachment from pre-adolescence, well sustained and consistent in adolescence, and on to adulthood in the growth of a sense of self-reliance. This is the underpinning theory driving this study.

1.3. Design Thinking Strategies

Archer (1979) indicates, 'there exists a 'designerly' way of thinking and communicating that is both different from scientific and scholarly ways of thinking and communication, and, as powerful as scientific and scholarly methods of inquiry'. Scholars believe design thinking is a state of mind. Moottee (2013) sees this as 'a five-step, human-centric, holistic approach to problem-solving and business thinking that employs empathy, ideation, prototyping and experimentation to solve real-world issues.' According to Lambert & Flood (2017), design thinking was one major body of literature and theory that developed in the 1980s and 90s. The expansion of the concept of design thinking has it moving the theory away from the conventional making of visual artifacts to a mental model of design thinking, which has recently been a model applicable to a wide range of fields. Brown (2008) states that design thinking is strongly supported as being relevant even outside the design context. Design thinking strategy has, since, been a tool available not only to designers but is also relevant across all fields. According to Brown (2008), design thinking drives innovation by observing what people want, deciphering their latent needs, and meeting those needs. The concept or process has been a human-centered, 'open' problem-solving activity that decision makers use to solve real-world 'wicked' problems, as mentioned by Melles (2010, p.299).

1.4. Design Thinking Strategy in Healthcare

Design thinking has become one of the powerful frameworks for complex problem solving applied widely by various disciplines and recently emerging within the healthcare system. This process is viewed as intrinsically social and communicative, both of which tend to aid frame the ways in which healthcare professionals can also adopt the design process in solving problems with regard to their patients. McLaughlin, Wolcott, Hubbard, Umstead, & Rider (2019) believe that this procedure and design thinking mindset presents a unique framework used for problem-solving that could be of immense assistance to various health professionals faced with complex clinical challenges and decision-making. Therefore, design thinking has lately been applied in the healthcare system to address patient experiences and clinical outcomes and to help design tailor-made treatment approaches to various health conditions. Literature on medical education has laid stress on integrating design thinking into their curricula to help better understand and analyze patients' behavior and conditions in clinical settings (McLaughlin et al., 2019). A review on design thinking in healthcare proved the usefulness of a powerful concept as design thinking, not only to the designers but also in every facet of life, including the field of health.

2. Research Methodology

The method of enquiry took the form of a case study. The population for the study consisted of adolescents within the age range of 13 to 20. However, the sample for this study consisted of adolescents whose ages ranged between 16 and 19 years. This study used the simple random sampling technique. Thus, about 10 adolescents were randomly sampled and used for this research. The case study was deemed an appropriate research design since it affords an opportunity to seek concrete, contextual, in-depth knowledge on adolescent emotional challenges and, thus, was chosen as a method of inquiry for the study. This method, again, allowed the inquirer to explore and understand complex issues, examining the data within a specific context. It allows for a holistic, in-depth investigation in examining the various emotional issues adolescents face in that stage of their lives. A case study not only aided the researcher in going beyond only quantitative results but also helped to understand the behavioral conditions from the insider's perspective. According to Tellis (1997), this research method helps explain the process and outcome of a phenomenon through complete observation, reconstruction, and analysis of the cases under investigation.

This paper utilized the Design Thinking Strategies in a therapeutic alliance to access the data gathered. Alrubail's (2015) coinage of design thinking as a concept revolves around applying creativity and innovation to our actions, decision-making, and problem-solving as human beings. The data collection method and analysis went through the outlined design thinking strategies accordingly. The core principles of design thinking are to empathize, define, ideate, prototype, and test (Alrubail, 2015).

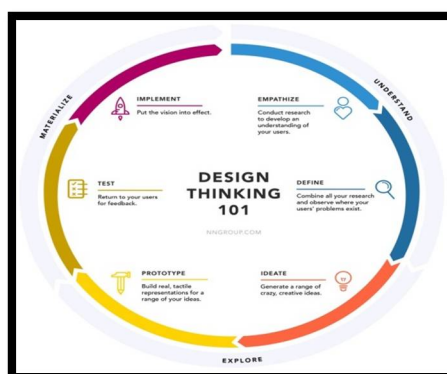


Figure 1: Design Thinking Process

2.1. Using Design Thinking Principles in a Therapeutic Alliance

2.1.1. Empathy

The initial stage of data gathering within the five-step design process was the Empathy stage. The major purpose of this first stage of the process was to discover people's explicit and implicit needs to meet them through the design solutions. Empathizing the design thinking process dealt with cultivating a nature that allowed the researcher to understand and share the same feelings that others feel. This was accomplished by skillful engagements or interactions with respondents. In this scenario, clients need solutions to emotional health.

Similarly, Finset et al. (2017) explain clinical empathy as 'the *action* of understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experiences of another'. This process begins with an interpersonal relationship, in which the listener (designer/clinician) attempts to understand the thoughts and feelings of the speaker (client/patient), be sensitive to their emotions and, as accurately as possible, identify the emotions being relayed.

2.1.2. Empathy Stage: Interactions with Respondents/Clients



Figure 2: Empathy Stage, Interactions with Adolescents
Source: Field Image

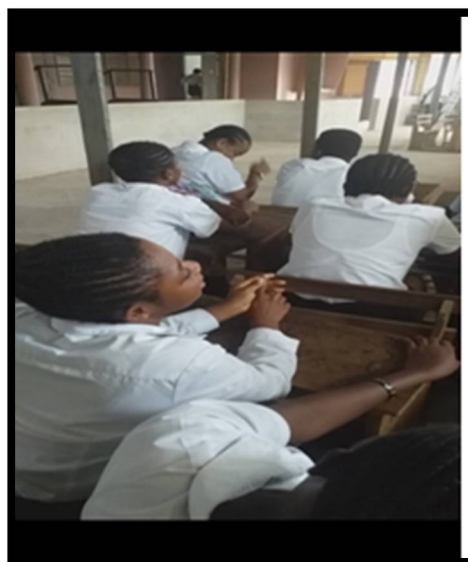


Figure 3: Empathy Stage, Interactions with Adolescents
Source: Field Image



*Figure 4: Empathy Stage,
Getting Responses from Adolescents
Source: Field Image*

The third component in empathy, after there has been an expression of emotions or requirements with regards to design and listening and understanding from the designer or clinician, is the empathetic response from the listener. In this way, empathy becomes a sequence that starts with, according to Finset et al. (2017), the patient's expression of emotion, followed by the perception, vicarious experience, and empathic response by the clinician.

This component ensures that the message that was received has been processed and well-understood by the listener (designer/clinician). It is confirmed by the asking of relevant questions by the listener. The requirements agreed upon and outlined by both the speaker and listener form the design brief. Some interview questions posed during the empathy stage were:

- What are some challenges faced during your adolescent stage?
- What is the feeling like having to deal with such challenges?
- How do you try to solve them?
- What are the effects these problems/challenges have on you?
- What do you think the causes of those negative emotions are?

These set the premise for more detailed discussions of clients' latent desires, needs, and wants as far as their emotional growth was concerned.

2.2. Define

The definition of the respondents' problems was dependent on the insights previously gained in the preceding stage. A precise definition of clients' problems allowed for more vivid approaches to solving a particular problem. Suwal (2017) affirms this by stating that framing the right problem is the only way to create the right solutions. This second stage of data collection required some creativity in figuring out what the underpinning problems could be. The previously gathered insights and observations were analyzed and synthesized by the researcher to understand the roots of the supposed problems under investigation. With a client-centered approach in mind, this process sought to draw an actual meaningful, and actionable problem statement for which a solution is required.

In defining respondents' problems, the researcher had to better understand respondents' specific needs and gain more insights from clients' presentations of what the issues were. This was done by going deeper into questioning to gain a broader perspective of specific emotional challenges these adolescents may be battling, the possible causes, and the potential solutions to curbing those emotional issues. In many ways, the Define stage lent clarity to the design thinking process, which is pivotal in understanding the issues before ideas can be generated and prototypes can be built and tested. This is similar to therapy in a way that an ill-diagnosed problem is ill-treated. A revisit to clients' requirements indicates:

- What is the client seeking? (Design Brief)
- Ability to communicate effectively with parents
- Respect and understanding from parents during this phase in their lives
- Recognition of their emotional challenges and advice accordingly
- Defining the problem
- Bridging the communication gap between adolescents and parents
- Parental attention
- Quality time with parents
- Parental understanding of teenage challenges

2.3. Ideation

This third process rests solidly on the wholesome background of knowledge and understanding that was obtained by the first two processes. The major goal of the Ideation stage in this method of inquiry was to make use of creativity and innovation to develop practical solutions to a problem faced by a client. This stage affords design thinkers the chance to

spark off their ideas by innovative processes in brainstorming, embracing both good and 'terrible' ideas for better answers to various challenges.

Therapeutic treatment plans, in the same way, allow clinicians to explore various treatment techniques that are best suited for recovering persons' psychological challenges. This is an exciting process that encourages 'thinking outside the box' and 'going wide' with regard to concepts and outcomes by both designers and clinicians. Dam & Siang (2019) assert that the ideation process offers both the fuel and source material for building prototypes and getting innovative solutions into the hands of the people who need them most.

By broadening the solution space, both designers and clinicians learn to look beyond the same everyday methods of unraveling problems or challenges to find more precise and sustaining solutions to various issues under investigation. This paper sought to generate creative ideas by adopting the mind mapping process.

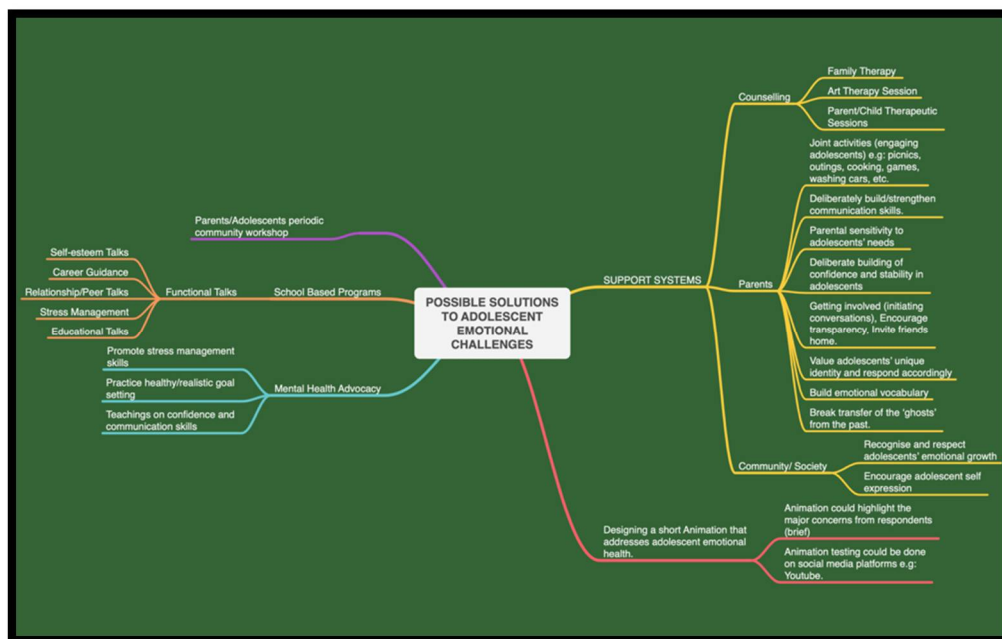


Figure 5: General Ideas Caught on Mind Map in Ideation Stage
Source: Researcher's Construct (2021)

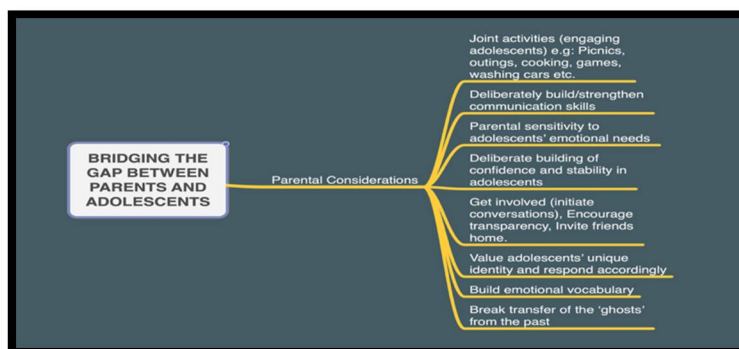


Figure 6: Highlights of Respondents' Requirements from Parents
Source: Researcher's Construct (2021)

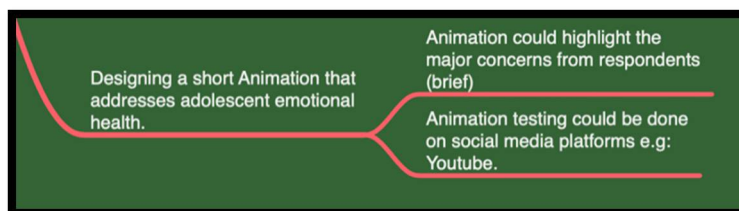


Figure 7: Selected Idea to Be Developed into Prototype
Source: Researcher's Construct (2021)

2.4. Prototype

The prototype stage is the next process following the ideation phase towards finding a solution to adolescent emotional issues. This stage is necessary because it gives a clearer view of how clients will behave with the final solution(s)/product. Prototypes allow designers to critically observe, record and measure the performance and functionality of the proposed solution/product. The client's behavior, interactions, and general relationship with the prototype give feedback on how best to improve the final solution going forward. Another importance of developing prototypes, aside from being time and cost-effective, is that it provides a tangible idea to work with, instead of abstract ideas, which may be difficult to measure its functionality. One idea out of the many ideas generated from the ideation stage was chosen and developed into a proposed solution with regard to the issues concerning adolescents' emotional health.

The researcher settled on developing a short animation that sought to address the highlighted points raised during the Define stage. This idea was conceived to act as a subtle engagement for family therapy, devoid of contretemps between parents or care-givers and their wards. The various developmental stages the prototype underwent are shown below.



Figure 8: Preliminary Drawings



Figure 9: Preliminary Drawings



Figure 10: Preliminary Drawings



Figure 11: Preliminary Drawings

2.4.1. Prototype Processes: Digital Images

The prototype was designed and created by POWTOON Ltd., the visual communication platform developed in 2011. POWTOON is a British animation software for creating animated presentations and animated videos.

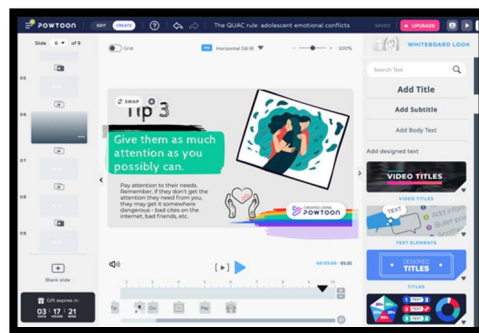


Figure 12: Design Process

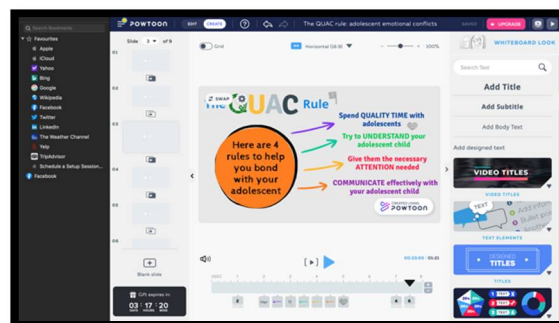


Figure 13: Design Process

2.5. Test

Testing is the final stage of the design thinking strategy, where proposed solutions for a particular problem are tested with clients. The intention of this process is to find out if the design or idea is capable of successfully solving the problem that needs a solution based on the previously gathered data from the initial stages. This becomes an on-going process, which may require numerous phases of revisions to make the final product better at meeting clients' needs. Gregory (2020) mentions that each stage of the design thinking process becomes all about re-framing the problem in human-centric ways, thinking out of the box, and adopting a hands-on approach. Again, on this final level, it informs designers whether the initial problem was rightly framed and solved.

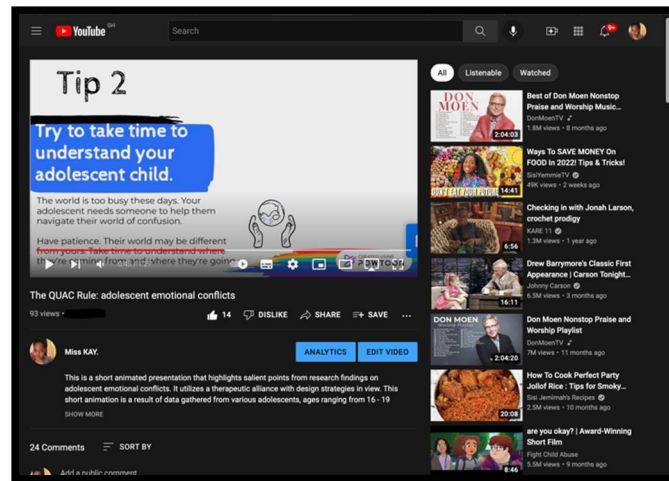


Figure 14: Testing Prototype Video on YouTube

The researcher sought to take advantage of technology, added some innovation, and bridged the limitations that the recent COVID-19 posed. Since testing in the designated location (Great Dafco High School) was impossible because of a pandemic lockdown, technology through social media, such as YouTube, granted the researcher the needed feedback or response for the issue under investigation.

2.6. Some General Feedback from YouTube (Testing Prototype)

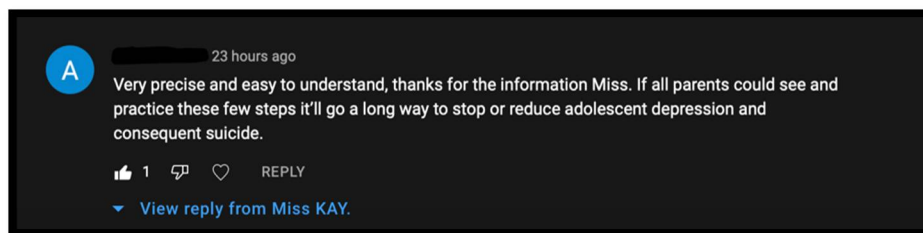


Figure 15: YouTube Feedback

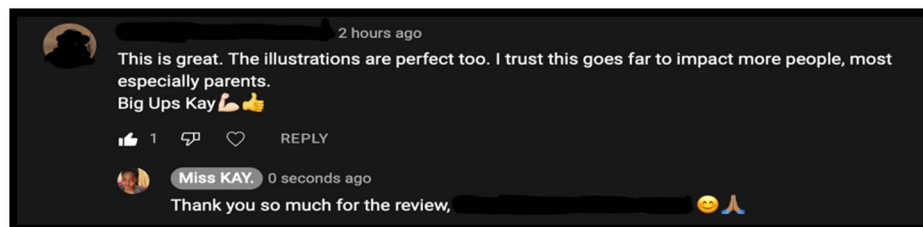


Figure 16: YouTube Feedback

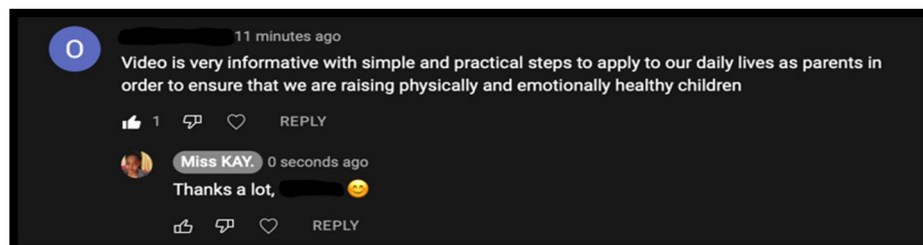


Figure 17: YouTube feedback

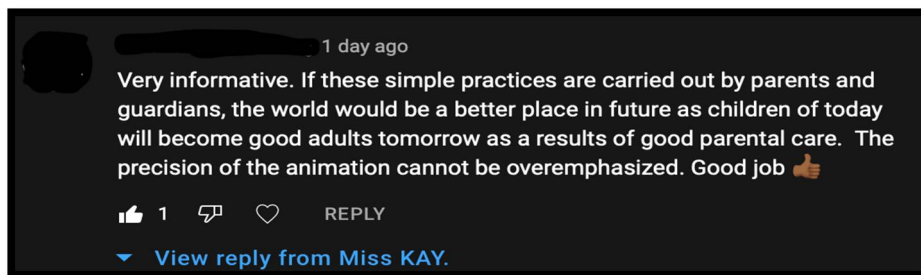


Figure 18: YouTube Feedback

3. Results and Discussion

The main points agreed on between the researcher and respondents were highlighted in a short-animated video that sought to address such issues. The animated video is designed to be safely viewed by both teenagers and their parents or caregivers without any hint of discomfort. The main goal of the video is to create awareness by subtly drawing attention to the emotional challenges adolescents may be facing that have slowly been taken for granted in many ways.

In a 1:25-minute animation, the scenes are stringed into a short meaningful, and educative presentation that, in the end, teaches, informs and suggests other better ways to relate to the adolescent. Each scene brings to light one of the requirements in the design brief or the defined problems (quality time, understanding from caregivers, parental attention, and effective communication). This has been developed into The QUAC Rule. The QUAC Rule, established as both intervention-based therapy and preventive approach, draws viewers' attention to significant highlights gathered from previous conversations with the population at hand. The summary of the contents of the animation has its foundations from theoretical underpinnings driving this study and data from interviews conducted with adolescents under investigation.

The animation highlights essential matters that attest to Lamb, Thompson, & Gardner (1985), who affirm that attachment is only stable when the caregiver situation proves consistently reliable and constant, advancing in the adolescent's life. Through The QUAC Rule, emphasis is placed on a consistent, reliable preventive or intervention-based approach to a tailor-made therapeutic solution for every adolescent. The QUAC Rule, again, sums up literature according to Bowlby (1969, 1973, 1980), who mentions that prominence must be placed on the process by which sturdy and enduring associations are developed, maintained, and can be modified over time with the adolescent child, according to their individual needs.

3.1. Animation Pans out in These Scenes



Figure 19: First Introductory Scene

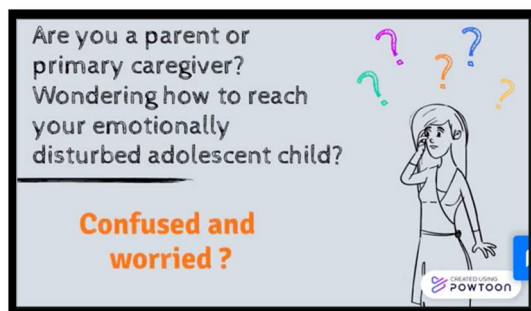


Figure 20: Second Introductory Scene



Figure 21: Introducing the QUAC Rule

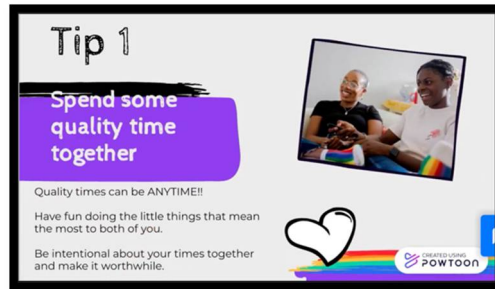


Figure 22: Giving Tips on Quality Time with Adolescents

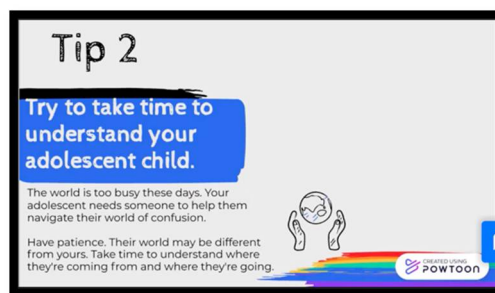


Figure 23: Giving Tips on Understanding the Adolescent

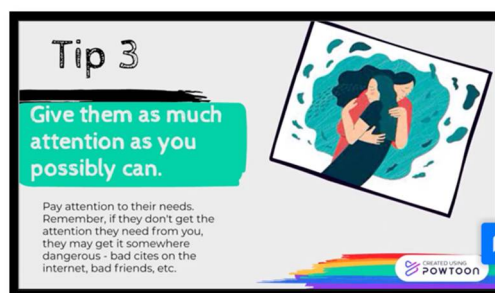


Figure 24: Tips on Giving Quality Attention to the Adolescent

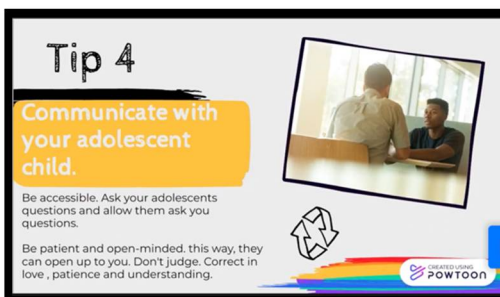


Figure 25: Tips on Effective Communication with Adolescents



Figure 26: First Concluding Remarks



Figure 27: Second Concluding Remarks

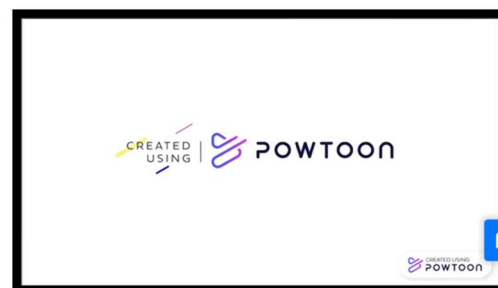


Figure 28: Credits

3.2. Online Reviews on Animated Video

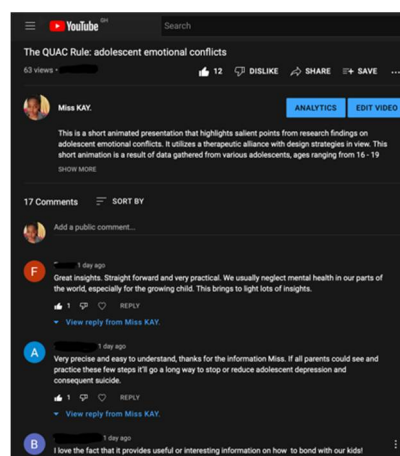


Figure 29: Online Reviews

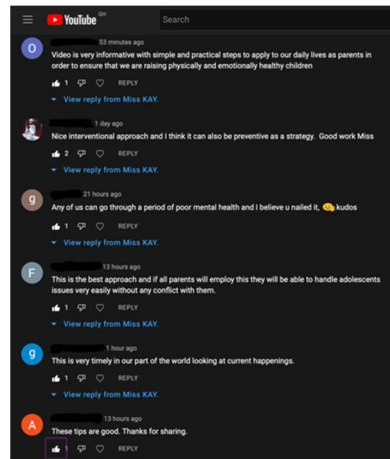


Figure 30: Online Reviews

3.3. Some Reviews from the Public

The animated video, which was posted on YouTube, a social media site, had these opinions, suggestions, and a general critique from the public. General reviews acknowledged The QUAC Rule as a needed component that can help immensely raise well-rounded, emotionally sustained and equipped young adults ready to contribute to the development of this world. The reviews emphasized that if The QUAC Rule is followed, in their opinions, by parents and caregivers, an adolescent emotional crisis such as adolescent depression and confusion leading to various suicidal inclinations and attachment insecurities in later adulthood may reduce.

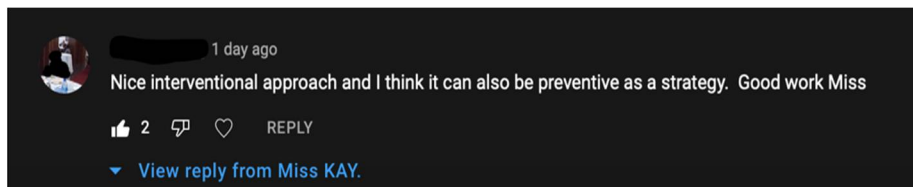


Figure 31: Online Reviews

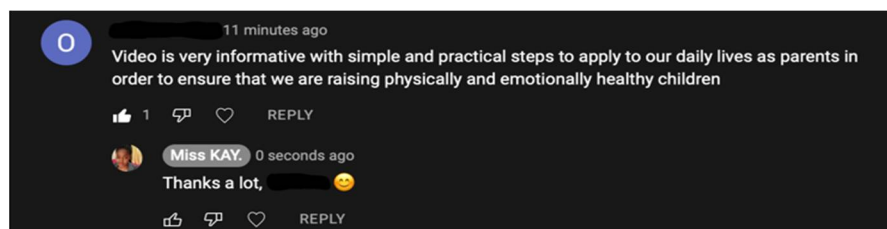


Figure 32: Online Reviews

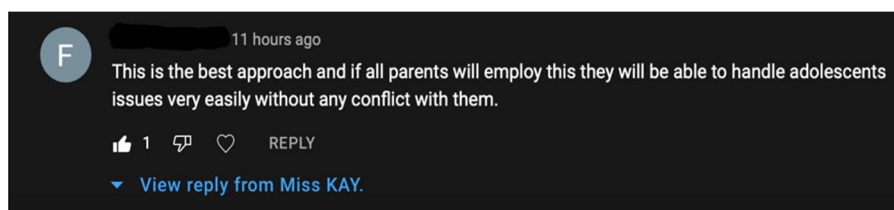


Figure 33: Online Reviews

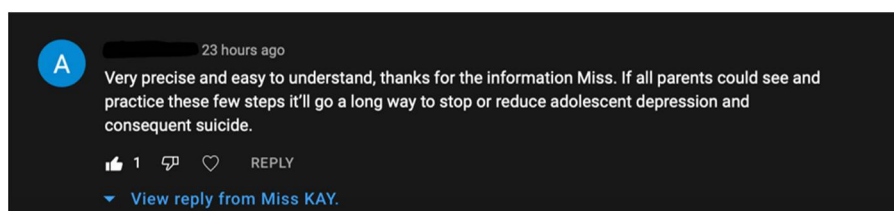


Figure 34: Online Reviews

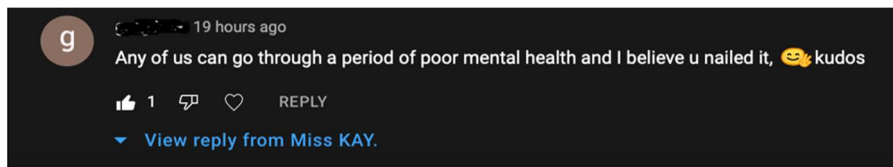


Figure 35: Online Reviews

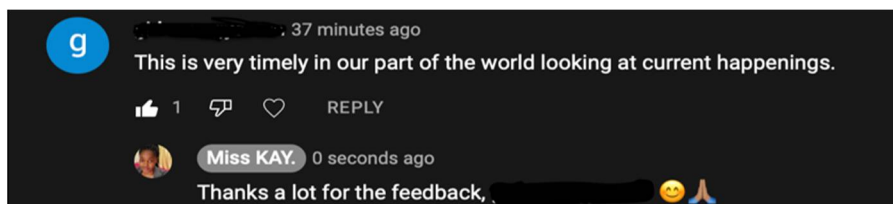


Figure 36: Online Reviews

4. Limitations to the Study

The limitation to this study was posed by the emergence of the COVID-19 pandemic. The prototype and testing stages faced some difficulties, as the researcher wished for respondents to have engaged and given feedback accordingly.

5. Conclusion

It has been established that the phase of adolescence tends to pose a myriad of emotional conflicts for the growing adult. Interviews conducted revealed the adolescent's need for love and attention, especially from their primary caregivers. The burning need to be heard and understood was expressed in precise terms. Data gathered discovered the roots of a wide range of vices due to neglect and mismanagement of adolescent emotional needs. These findings confirm literature from Fonagy (2003), stating that the growing adolescent requires a parent or caregiver who regards and responds to them as sentient beings who want to communicate, understand, and be understood.

6. Recommendations

It is recommended that further studies be conducted in the field of adolescence and another emergence of psychopathologies since this field has had fewer investigations in the Ghanaian cultural setting. Meanwhile, there is every indication that this is a crucial area in the growth and development of children and the nation at large.

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