

Phenomenological Approaches to Adolescent Girls' Perceptions of Story-writing-based Design Thinking Focused on Aggression

Zahra Abolhassani^{1*}, PhD 

¹Department of Educational Sciences, Farhangiyani University, Tehran, Iran

*Corresponding author: Zahra Abolhassani, PhD; Department of Educational Sciences; Farhangiyani University, Postal code: 68875-61349, Tehran, Iran. Tel: +98 9127042015; Email: z.abolhasani66@cfu.ac.ir

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Abstract

Background: The design thinking approach is a method based on problem-solving that has recently become popular in the new ways of teaching different fields. Therefore, the present study aimed to investigate the lived experiences of secondary school students in implementing the extraordinary curriculum based on design thinking with the use of story-writing tools to reduce aggression.

Methods: This study applied a phenomenology method. The study included middle school girls in Baharestan city, Tehran Province, Iran. A total number of 78 students were selected using convenience sampling method. To collect data, structured interview was performed from May 13, 2023 to May 17, 2023. Data analysis was done using Colaizzi's 7-step method. Data validation was done through strategies such as reviewing interviewee transcripts, coding, and review by educational science experts.

Results: The findings of the interviews revealed three main axes: factors influencing aggression including emotions (such as hatred, jealousy, grudge, and low self-esteem) and social interactions (negative human behaviors towards others and negative behaviors in discussions and conversations); ways of controlling and managing aggression including practical techniques and sub-themes (thinking-based techniques, social interaction-based techniques, action-based techniques); and the curriculum learned from design thinking including cognitive aspects (creativity, decision-making, re-creation) and communication processes (consultation, interaction, empathy).

Conclusion: The results of the present study will provide psychologists and educators with a new perspective to prevent or reduce aggressive behaviors in educational environments. Also, our results indicated that aggression is experienced in a wide range of emotions, including disgust, self-deprecation, hatred, and jealousy, as well as behaviors and the use of words in communication. Accurate recognition of these experiential factors and elements can have significant implications for diagnosis and treatment. Therefore, the findings can somewhat emphasized the classification of these effective factors in creating aggression and the management and control strategies of aggression.

Keywords: Aggression, Psychology, Design thinking, Story-writing, Student

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1. Introduction

Aggressive behavior and interpersonal conflicts among children and adolescents continue to be common problems in educational systems worldwide (1). One of the most challenging issues in public health is preventing aggression and violent behaviors among adolescents in general (2). Aggression is widely defined as "a response that delivers harmful stimuli to another organism" (3). The findings indicated that the tendency to intentionally cause physical or psychological harm to others is a widespread problem. Unfortunately, the prevalence of aggression in the Iranian society, especially in recent years, is considered as one of the most serious social harms (4). A study conducted in the country also showed that 80 percent of students

believe that bullying exists in schools (5), which is a widespread problem. According to Savage and colleagues (6), when aggressive behavior occurs in high school settings, it has the consequence of creating a less positive atmosphere in schools, ultimately diminishing the quality of education and learning.

On the other hand, the process of design thinking has become a new trend in schools in different countries (7). As a result, numerous educators are keen on embracing design thinking as a viable approach to aid their students in acquiring knowledge by addressing practical challenges. Teachers engage students in collaborative problem-solving, creative challenges, and strengthening social-emotional balance and stability (8). In

general, design thinking is considered as the ability to combine empathy, creativity, and rationality in analyzing and adapting solutions for specific contexts (9). In design thinking projects, storytelling is also effectively used to present innovative ideas or solution opportunities (10). Design thinking reveals the challenges that students face. Also, research showed that storytelling is effective in reducing aggression in different ways (11). Carmel-Gilfilen and Portillo (12) shared strategies for enhancing empathy through storytelling, an important element in reducing aggression.

Narrative-based design thinking can play an important role in shaping an experience that reduces aggression. In this regard, the findings of Nicolaidou and colleagues (13) showed that due to the problems caused by aggression, children should develop emotional recognition and anger management skills from an early age. On the other hand, the results of the study by Paracha and co-workers (14) in the field of design thinking suggested that the application of design thinking can be used as a method for schools to prevent bullying and as a development strategy to create a non-bullying environment in schools. Additionally, the findings of Beaudoin and co-workers (15) indicated that narrative (story-writing) therapy is effective in enhancing social and emotional skills.

The results also showed that coaches use narrative or storytelling to facilitate learning, behavior change, and social change, and use a variety of techniques from modern media to participatory storytelling based on community. Ultimately, according to the result of Pribady (7), storytelling can be used in design thinking. Therefore, as described above, the harmful effects of aggression on adolescents and society were clarified, and the potential use of design thinking in the classroom and storytelling as a tool for design thinking was introduced. In this regard, the lack of examination of the experience of training courses for reducing aggression; in other words, students' experience in these training courses, especially with qualitative methods, increases the necessity of examining this issue.

However, for the sustainability of these methods and their effectiveness, teenagers' attitudes, problems, issues, and demands should be known from their lived experience in this period. Investigating this phenomenon with a qualitative method leads to accurate and in-depth knowledge

and specifies the dimensions of this experience in teenagers. Through lived experiences, you can gain insights into their perspective and tailor communication and behavior accordingly. Therefore, based on the issues raised, the present study aimed to investigate the students' lived experience of education in the way of design thinking based on story-writing, focusing on reducing aggression with a qualitative and in-depth method. Accordingly, the present study aimed to answer the following question: What is the experience of students about aggression and the points learned from teaching the design thinking method based on story-writing with the focus on reducing aggression?

2. Methods

This was a qualitative and phenomenological study conducted at a culturally diverse public school for girls in Baharestan city, located in the Southwest of Tehran Province, Iran. Data were collected from 80 female students at a high school over a period of three months, with one 90-minute session per week. Also, before starting to collect the data, an informed consent form was obtained from the participants. The final interviews were conducted from May 13; 2023 to May 17; 2023 in order to collect the students' lived experiences. Data collection was done through the analysis of the structure of their narratives. It is worth noting that the interviews were conducted in written form. Five questions were asked, and the students anonymously provided their answers. The questions were as follows: What did you learn from the class? Which part of the class did you like? Were you able to control your aggression and anger? What strategies did you learn? What feelings lead to aggression and how should they be controlled? How did you feel after the class?

All events and conversations during the instructional period were recorded by the researcher and used in the analysis. Also, during the collection of the interviews, anonymity of the participants was observed in order to comply with ethical considerations. The 7-step Collaizi content analysis method was used for coding and analyzing the data. After coding and integrating relevant codes, the formulated themes were categorized into specific thematic groups, and then placed under subgroups or sub-themes. Finally, the categorized themes were divided based on the objectives of the study.

To ensure the reliability and validity of the data, the opinions of education and training specialists were sought to identify the blind spots in the study. Also, to determine the validity of the data, strategies such as triangulation of data collection, review of interview transcripts, coding, and review by educational experts, as well as immersion in the data for an extended period, can provide appropriate credibility to the study.

3. Results

In the present study, a school that includes seventh, eighth and ninth grades was selected. A total of 78 female students, aged 13-15 years old (with a mean age of 14.50), participated in the study. In this study, classes and students were selected based on specific criteria, including their class culture and willingness to participate in the training course. It was also important that they had not received any previous training or research support within the past three months. Additionally, those who did not cooperate with the designated groups and activities were considered ineligible to continue participating. The study was conducted immediately after the first semester exams, at the end of January 2023.

After structured interviews with students and analysis of the interview data, three main axes, 5 themes, and 15 sub-themes were extracted and described in Table 1. The interviews aimed to explore students' perception of implementing a thinking-based open-ended story educational program to reduce aggression. Consequently, when the researcher asked questions of the students, a multitude of issues emerged, which were then

categorized into the three main axes. Subsequently, each of these factors was discussed, citing narratives from the students.

3.1. Main Axis: Effective Factors of Aggression

This axis emphasizes the influential and causative factors of aggression in individuals. In this axis, two themes of emotions with sub-themes (hatred, envy, resentment, low self-esteem) and social interactions with sub-themes (negative human behaviors in dealing with others, negative behaviors in debate and conversation) were obtained.

3.2. Theme 1: Emotions

3.2.1. Sub-theme 1: Grudge

This sub-theme emerged from the experiences of participants who expressed the role of feelings of hatred in the emergence of aggression in their statements. One participant expressed their opinion as follows: "When we hold a grudge against someone, it always leads us to seek revenge or argue with that person."

3.2.2. Sub-theme 2: Jealousy

This feeling arises when a person feels that what they have is less than what they should have. One participant says: "Because I always study well, my notebook is always neat for the teachers. One of the kids saw my notebook and said, 'Why do you always show off to the teachers?' Then, he grabbed my notebook and tore it apart, which led to a big fight."

Table 1: Theme and sub-themes deduced from students' experience

Effective factors of aggression	Emotions	Grudge
		Jealousy
		Hatred
		Low self-esteem
		Social interactions
Ways to control and manage aggression	Operational techniques	Negative human behaviors in the face of others
		Negative behaviors in discussions
		Thinking-based techniques
		Technique based on social interactions
		Action-based technique
Learned Curriculum from design thinking	Cognitive	Creative
		Decision making
		Re-creation
	Communication processes	Consultation
		Interaction
		Empathy

3.2.3. Sub-theme 3: Hatred

When a person dislikes someone and has a very negative feeling towards them. The feeling of hatred has formed in them. This feeling may be related to previous relationships with people and other issues regarding the person or group in question. One participant expressed their experience: "I hate that person so much that I want to punch them in the face." For example, another student said: "Nargis is so arrogant that whenever I look at her, I feel bad and I always want to hurt her."

3.2.4. Sub-theme 4: Low Self-esteem

This topic came from the experiences of participants who mentioned the effects of low self-esteem on aggression and conflict in their statements. In this regard, one of the participants mentioned: "One of our classmates last year, whenever she said something wrong and one of the kids corrected her, they quickly got into arguments and swearing."

3.3. Theme 2: Social Interactions

3.3.1. Sub-theme 1: Negative Human Behaviors in Dealing with Others

This subject consists of the following concepts: belittling, stubbornness, disrespect, bullying, mental preconceptions, revenge, retaliation, quick judgment, and slander. Most participants in their statements referred to behaviors in dealing and interacting with others that created a basis for conflict and aggression.

One of the participants about the mental assumptions raised: "They think I did it on purpose." Perhaps it can be said based on observations that mental assumptions can lead to premature judgment. For example, another participant told about seeking revenge: "I want to empty my complex and make them experience the same feeling I had. They should suffer." In response to coercion and disrespect, belittling can also be a reason for creating enmity in a person and lead to insolence. In this case, the person wants to retaliate with insolent behavior for the distress caused to them and express their distress in this way. A participant expressed: 'some of the kids had lost some items and blamed me. I was very upset, they even searched my bag but didn't find anything, and they humiliated me in front of everyone. They realized it wasn't

my doing, but I was very heartbroken, and we had arguments and quarrels for a long time.' Making baseless accusations and denigrating others were also mentioned as contributing factors to creating aggression. For example, one participant stated: "Just a few weeks ago, one of the kids in our class accused me, and I got really upset and resentful, and I said I would retaliate."

3.3.2. Sub-theme 2: Negative Behaviors in Discussion and Conversation

This subtopic includes the concept of insulting, arguing, mocking, bad language, throwing accusations, and lying.

Most participants referred to negative behaviors that cause discomfort and create aggression when speaking. One participant's experience was such that when they are being cursed at, they cannot remain silent - it starts with cursing and ends with physical violence. "Throwing accusations is a colloquial term for taunting; a word used to belittle a person in a group or gathering. One participant mentioned: "Mrs. X always taunts us out of jealousy, and it upsets me, and I hate them, and in the right situation, I show them my anger to make them feel bad."

The researcher's observations indicated that continuing the discussion at different times by the students themselves was a major factor in creating aggression. In confirmation of these observations, one participant stated: "One day at school, I got into a fight with someone, he kept bringing up previous arguments, trying to prove himself and empty his grudges, but I was not someone to sit quietly at that moment, so it led to a fight. I also threw a piece at him and insulted him." At the same time, the speaker's tone is also very effective in aggression; for example, a participant said: He also ordered me with a very ugly and humiliating tone (as if I am a servant): Go, bring the door and clean here! In short, I am perfect. I answered him, if he said respectfully, I would have done it, but he said ugly, and I answered him ugly." Lies were also identified as one of the factors in creating aggression. In this regard, a participant mentioned: "If someone lies to you and then you realize what happened, you get angry and start arguing."

3.4. Main Axis 2: Ways to Control and Manage Aggression

Managing and controlling aggression is a skill that

an individual acquires and strengthens to maintain calmness and composure when faced with anger and frustration, and to exhibit appropriate behavior and reaction. Anger management is a reactive response that an individual has in a state of anger control. Therefore, the main focus of ways to control and manage aggression consists of three sub-themes: thinking-based techniques, social interaction-based techniques, and action-based techniques.

3.4.1. Sub-theme 1: Thinking-based Techniques

This sub-theme consists of four concepts: comprehensive thinking, non-judgment, delayed response, and rational decision-making.

Participants highlighted practical experiences for controlling aggression in the classroom, which showed that techniques stemming from thinking can be a significant factor in aggression management. One of the participants also stated for delayed response and rational decision-making: "Let's give the person a chance to explain their actions. Also, another participant expressed it this way: Let's not act hastily and make decisions after calming down, let's not judge others. Comprehensive thinking is among the things that every individual needs to do to control aggression. In this regard, a participant stated: "Let's research first and then speak, or let's think about the outcome before doing anything."

3.4.2. Sub-theme 2: Social Interaction-based Techniques

This subject matter consists of four concepts: empathy, silence, active listening, and ignoring others. According to the statements of the participants, empathy, silence, and good listening are among the factors that lead to better and healthier relationships and reduce feelings of aggression. In this regard, a participant mentioned: "We should understand others, if someone did this to us, how would we feel?" Another participant expressed: "Sometimes we should remain silent in response to others. Arguments will diminish." In the discussion of communication, participants emphasized that if we do not value the work of others and do not consider ourselves at their level, the discussion will not continue and the argument will end.

3.4.3. Sub-theme 3: Action-based techniques

There are activities that, by creating a gap

between the time of aggression and action, reduce aggression. In this regard, participants mentioned some practical activities for managing aggression and anger, including drinking water, counting from zero to ten, taking deep breaths, leaving the argument scene, being alone, and listening to music.

3.5. Main axis 3: The learned curriculum from design thinking

3.5.1. Theme 1: Cognitive

3.5.1.1. Sub-theme 1: Creativity

Creativity is a kind of ability to produce new ideas through combining, changing, and reusing ideas, and presenting a new design. In this regard, a participant stated: "I was looking for new words for conversation. To write the story in different ways, we needed to think and give ideas about what the story should be, whether it should be fantasy, realistic, or supernatural."

3.5.1.2. Sub-Theme 2: Decision-making

Decision-making is considered as one of the life skills. One of the participants mentioned that we were able to convince the children to choose our story. Another participant mentioned that because my friend was the leader, she forced us to act according to her opinion. Another participant also stated: "We learned to listen to each other's opinions and then choose the best opinion, or maybe we would write a combined story."

3.5.1.3. Sub-Theme 4: Recreation

In the field of recreation, the writer can manipulate all aspects of the original text and make any changes suitable to their thoughts. Contributors also expressed: "The storytelling part was interesting to me, and we were able to write various and diverse stories."

3.5.2. Theme 2: Communication Processes

3.5.2.1. Sub-theme 1: Empathy

Empathetic individuals are sensitive to the events observed in their environment and can put themselves in the position of the affected individuals. In this regard, a participant mentioned

at the end of the class: "I can understand others and put myself in others' shoes."

3.5.2.2. *Sub-theme 2: Interaction*

Interpersonal interactions within any group are of great importance. In this period, students have learned well how to interact with each other in the classroom environment and not turn a simple conflict into long and childish disputes. In this regard, one participant mentioned, "We learned to collaborate." Another participant also stated, "We learned how to have discussions." Another participant also expressed, "Let's not get upset quickly."

3.5.2.3. *Sub-theme 3: Consultation*

Collaboration and consultation allow us to use the thoughts and opinions of others and make the best decisions. In this regard, one participant mentioned, "Class consultation was good because it taught us to live better and improve our ethics." Another participant also expressed, "I think about the class's words and suggestions."

4. Discussion

The present study aimed to investigate the lived experiences of high school students from the implementation of an extraordinary curriculum based on design thinking using the tool of half-finished stories to reduce aggression. Using the interviews conducted with the participants, the findings of this research on the subject of interview questions were found in three main axes: factors influencing aggression with two sub-themes of emotions and sub-themes (hatred, jealousy, grudge, and low self-esteem) and social interactions with the sub-theme (negative human behaviors in dealing with others and negative behaviors in discussion and conversation); the second main axis was ways to control and manage aggression with the sub-theme of operational techniques and sub-themes (thinking-based techniques, social interaction-based techniques, action-based techniques) and the third axis was the learned curriculum from design thinking with two cognitive sub-themes (creativity, decision-making, re-creation) and communication processes with sub-themes (consultation, interaction, empathy).

In the field of factors influencing aggression in the emotions theme, it can be stated that some emotions such as hatred, envy, resentment, and self-deprecation have a significant negative burden and lead to the creation of aggression and anger. According to the results of Krapauskas (16), fear, hatred, suffering, and anger are four models that lead to aggression. Furthermore, hatred universally ignites national enmity. These findings were consistent with the results of research (17, 18) which showed that envy is directly related to aggression. In explaining the present results, it can be stated that emotions can cause us to act impulsively and replace deliberate thinking. Establishing communication between individuals is one of the most important skills that has been highly practical in social environments and can lead to success or failure, depression, and other mental and psychological problems. In this regard, Malette (19) showed that a humiliating event can create powerful emotions for the formation of aggression and anger, as humiliation and insult by hitting self-esteem intensify aggression. Self-esteem problems or, in a way, self-deprecation also led to aggression (20).

Retaliation is another behavior mentioned by the participants in dealing with others. Retaliation is a tendency toward reactive aggression and acts like receiving a reward (21). This is because after receiving humiliation or any kind of aggression from another person, the thought of revenge and retaliation to compensate for the received behavior has the power to create initial but falsely desirable emotions. In explaining these findings, it can be stated that retaliation is a form of emotional discharge, and the study participants stated that retaliation helps them feel better. Also, the findings of the present study on factors affecting the creation of aggression were consistent with previous study (22), which showed that making accusations has the potential to create hostility. Koller and Darida (23) also mentioned insult, accusation, and lying as verbal aggression and examined and introduced solutions. The findings of the present study were also in line with the results of other studies (24) regarding verbal insults (taunting), cursing, and defamation (25) as effective factors in creating aggression. By the present findings, cognitive biases towards the other party a misunderstanding of the intentions of others, or an inability to resolve adaptive conflicts can lead to anger and aggression (26).

In explaining these findings, it can be stated that behavior and speech in dealing with others are two important factors in creating aggression, as individuals use their behavior and speech to harm others to compensate for their deficiencies in communication skills or to affirm the opinions of their peers and demonstrate power over others.

Among the ways to manage and reduce aggression mentioned by the participants were processes that led to thinking. Therefore, the findings of the present study were consistent with the results of the study by Saliha and co-workers (27), which showed that work should not be done without thinking twice, and it is at this time that aggression can be reduced. Also, the results of numerous studies showed that problem-solving; self-monitoring of emotional cognition; cognitive restructuring and brainstorming can be useful skills in managing and reducing aggression (28, 29). Possible reasons for explaining these findings can be attributed to participants' awareness of the effectiveness of using rational and ethical reasoning in controlling aggression and anger. The teachings and discussions carried out in the classroom have led students to have more control over their emotions and thoughts, which in turn leads individuals to have appropriate direction in different situations and reduce their anger in most cases. In fact, with the help of an individual's thinking ability, they can recognize the consequences of their behavior and consequently respond appropriately to situations and others in various situations.

The results of the previous research (30, 31) showed that social skills such as cooperation, empathy, expression of existence, self-control, and responsibility are effective in treating aggression. Research showed that teaching self-regulation and communication skills to students has been effective in preventing bullying and aggression (32). Furthermore, in line with the present findings, the findings of Vaziri and Lotfi Azimi (33) indicated that teaching empathy skills in schools, especially in adolescence, can lead to a reduction in aggressive behaviors by providing the ability to understand others. This is because empathy allows individuals to align themselves with what others feel or think about them, establish effective contact with their social environment, and prevent harm to others. Teaching social skills such as empathy can reduce subjectivity and increase the chance of compromise and acceptance, thus leading

to a correct interpretation of situations and the intentions of others.

The findings in the third axis of the curriculum indicated that two cognitive and communicative process themes have been acquired. In general, Kimbell (34) introduced design thinking as a cognitive style that seeks innovation and problem-solving. Also, in different models of design thinking, collaboration, and teamwork are considered important indicators of design thinking (35). In line with the present findings, design thinking (DT) increases students' creative, problem-solving, participatory, and communicative thinking skills and supports students in developing empathy and metacognitive skills (36, 37). Based on the present findings, it can be stated that using design thinking challenges students to think and choose new and innovative solutions in their communications, thereby stimulating and encouraging collaboration and consultation, and ultimately encouraging individuals to choose the best way to communicate and address the challenges in life. However, the study conducted by Ejsing-Duun and Skovbjerg (38) indicated that design thinking can be used to develop problem-solving skills.

Ultimately, given that the present study has been conducted using a qualitative design, it is suggested that in the future studies mixed methods should be used. Also, it is suggested that psychologists, counselors, and educational coaches implement these aggression control interventions and workshops with new approaches such as design thinking continuously and on a wide scale in all age groups. Additionally, providing training and empowerment for educators on how to use design thinking is deemed crucial. It is hoped that the results of the present study will provide psychologists and educators with a new perspective to prevent or reduce aggressive behaviors in educational environments

4.1. Limitations

This study had several limitations that may have affected the accuracy and completeness of the results. One limitation was the use of a structured questionnaire. While this method may have provided some valuable insights, it may not have allowed for a thorough understanding of the participants' perspectives. Conducting in-depth interviews could have provided a more

comprehensive view and potentially yielded new findings. Additionally, there is a possibility that some students may have sought help from their friends while completing the questionnaire. This could have influenced the accuracy and validity of the results. To mitigate this limitation, measures could have been taken to ensure that participants completed the questionnaire independently. Another limitation of this study was its focus on the female community. This may have limited the generalizability of the findings to the male population. To address this, future research could include a more diverse sample to provide a more comprehensive understanding of the topic.

5. Conclusions

Our results indicated that aggression is experienced in a wide range of emotions, including disgust, self-deprecation, hatred, and jealousy, as well as behaviors and the use of words in communication. Accurate recognition of these experiential factors and elements can have significant implications for diagnosis and treatment. Meanwhile, the explicit expression of anger emotions formed in experiential phenomenology also clarified the emotional aspects of aggression. Therefore, the findings can somewhat emphasize the classification of these effective factors in creating aggression and the management and control strategies of aggression.

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Authors' Contribution

Zahra Abolhasani: Data collection and data analysis, drafting the work and reviewing it critically for important intellectual content.

The author has read and approved the final manuscript and agree to be accountable for all aspects of the work, such as the questions related to the accuracy or integrity of any part of the work.

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Ethical Approval

The Ethics Review Board of University of Tehran, Iran approved the present research with the code of IR.UT.PSYEDU.REC.1403.049. Also, written informed consent was obtained from the participants.

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