

Title of the article (The Impact of Electronic Games on Aggressive Behavior in Children)

Boudoukha Abdessamad*
University of May 8, 1945 Guelma
(algeria)
brefabdou@gmail.com

Dr. Meknassi Mohamed
University of May 8, 1945 Guelma
(algeria)
mohamedtahir21@gmail.com

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Abstract:

The current study dealt with “The impact of electronic games on aggressive behavior in children,” as it aims to shed light on the subject of electronic games and to know the role of electronic games in their contribution to the emergence or development of aggressive behavior in children. The descriptive approach was relied upon using a case study, representing the study population from 09 cases of late childhood, male, from the same geographical area, and frequenting the same gym. It was approved .The results showed that the hypothesis that was adopted was verified through the analysis and interpretation of the results.

Keywords: electronic games, aggressive behavior, late childhood

1- The Issue:

Childhood is considered the foundation of human development, beginning from birth and continuing until adolescence. It is during this phase that an individual grows, develops, and establishes physiological, psychological, and social characteristics within a context of familial and societal interactions.

This stage in a child's life involves numerous changes that accompany their developmental trajectory, shaping the features of their future personality, including behaviors. These behaviors are influenced and reinforced by the desire to satisfy physical and psychological needs, parenting styles, social upbringing, and communication channels the child forms with their environment. However, disruptions in a child's development, particularly in their behaviors, can occur due to various factors, leading to behavioral problems that affect different aspects of personality. One of the most prevalent issues is aggressive behavior.

Aggressive behavior is considered harmful, as children learn to respond to various situations in multiple ways. Specialists have differing opinions on how children acquire aggression: some view it as a learned behavior through imitation, while others associate it with the internal conflict between love and hate toward another person, such as the mother. The child's life requires coordination among their behaviors, with interactive and communicative activities, such as play, playing a significant role in their growth.

Play is an essential educational medium in a child's life. Its importance extends beyond childhood, as it plays a critical role in a child's psychological development. Through play,

* The corresponding author: Boudoukha Abdessamad

children satisfy their needs, express their abilities, and explore social relationships and behavioral dimensions. Additionally, play serves as a gateway for cognitive and intellectual growth, helping children recognize, categorize, and understand concepts. The nature, forms, and types of play vary according to a child's age.

However, with scientific and technological advancements and the widespread adoption of technology, electronic games have emerged. Opinions about these games vary, with many specialists conducting studies to understand their importance and potential benefits alongside their negative effects on users' physical and psychological well-being, particularly children. Given the increasing prevalence of electronic games in our societies, the lack of parental supervision over their usage, and their potential impacts, this raises a question: Can electronic games contribute to the emergence or development of aggressive behavior in children?

2- Study Hypotheses:

General Hypothesis:

- Electronic games influence aggressive behavior in children.

Specific Hypotheses:

- Electronic games with aggressive themes contribute to the emergence of aggressive behavior in children.

Electronic games with aggressive themes contribute to the development of aggressive behavior in children.

3- Study Objectives:

- To shed light on the topic of electronic games.
- To explore the role of electronic games in contributing to the emergence or development of aggressive behavior in children.
- To raise parents' awareness of the effects of these games on their children's behaviors.
- To introduce electronic games as a modern type of play, distinct in some aspects from traditional forms of play.
- To review previous studies related to this topic

4- Previous Studies:

Study 1: Hind bint Suleiman Saleh Al-Rumayan

Title: The Relationship Between Aggressive Behavior and Playing "Grand Theft Auto" on PlayStation.

This study explored the relationship between aggressive behavior and playing "Grand Theft Auto" on PlayStation, targeting students in grades 4, 5, and 6. It aimed to determine the game's prevalence and its influence on fostering aggression in individuals, families, and society. The researcher employed an experimental methodology, comparing aggression levels between children who played the game (experimental group) and those who did not (control group). (Al-Rumayan, 2007, p. 52)

Study 2: Dr. Khalid bin Saud Al-Bashar

Title: The Role of Mass Media in Acquiring Aggressive and Deviant Behavior. A Saudi study by Dr. Khalid Al-Bashar concluded that mass media is not the sole factor in acquiring deviant behavior. Instead, it interacts with existing aggressive tendencies, enhancing

latent aggression in individuals when exposed to violent content. His findings indicate that viewing such content affects behavior depending on individual predispositions and inclinations. This study involved two samples of youth, with descriptive and comparative methodologies employed to observe behavioral outcomes. (Sillamy, 1982, p. 55)

Al-Obaidi's study: "On the impact of using games and stories in modifying aggressive behavior in children" Riyadh

The study aimed to identify the impact of using games and stories in modifying aggressive behavior among kindergarten children. The researcher used the experimental method, and the research sample consisted of 13 children divided into two groups, one experimental and the other control. The researcher used a set of imaginative role-playing games, a set of cooperative games, as well as a set of stories narrated through puppet theater using the games. The program was implemented over a period of 8 weeks, with one hour daily, and using appropriate statistical methods, the results were as follows:

The presence of statistically significant differences in the average level of aggressive behavior between the experimental and control groups, in favor of the experimental group.

The presence of statistically significant differences in the average level of aggressive behavior between the pre-test and post-test among the experimental group children, in favor of the post-test. (Muhammad, w.y, p. 76).

Commentary on Previous Studies:

The previous studies examined the relationship between play, exposure to violent media, and aggressive behavior. While Hind Al-Rumayan and Khalid Al-Bashar's studies focused on negative influences in a shared cultural context, they differed in methodology: the former used an experimental approach with children, while the latter employed a descriptive-comparative method with youth.

Al-Obeidi's study emphasized the positive potential of play in modifying aggressive behavior. Despite differences in objectives, it shared methodological similarities with Al-Rumayan's research.

This study aligns with these previous works in its focus on the influence of play, particularly electronic games, on aggressive behavior. However, it differs by examining a specific type of game and its distinct characteristics, distinguishing it from other forms of media studied in previous research.

5- Theoretical Framework:

5-1- Childhood Stage:

Childhood is the first phase of a person's life and one of the most critical stages of growth. It lays the foundation for building, forming, and nurturing personality traits. Childhood is essential because it is during this stage that human behavior develops, personality traits take shape, and psychological and social components of the individual are formed. Before delving into the details of childhood, it is necessary to review some fundamental concepts mentioned earlier.

- **Operational Definition:**

Childhood is one of the essential growth stages a human goes through in life. It represents the initial phase of physical, physiological, mental, psychological, social,

and emotional development, preparing the child for complete maturity in subsequent stages.

5-2- Stages of Childhood:

Scholars and educators have differed in defining childhood in a person's lifespan. Generally, it starts from birth and ends at puberty, which marks the boundary between childhood and the next phase. To scientifically define childhood, it is essential to understand its stages and the characteristics of each. Previously, we discussed the classifications proposed by Freud, Piaget, and Erikson regarding growth stages, including childhood. The main foundations for classifying these stages are as follows:

- **Early Childhood:** From birth to three years of age.
- **Middle Childhood:** From three to seven years of age.
- **Late Childhood:** From seven years of age until puberty .(Terminology, no date, p. 95)

It is important to emphasize that these stages are not entirely separate but rather interconnected and overlapping. The age ranges defining the beginning and end of each stage are general averages influenced by individual differences and variations due to geographical and social environment. (Mansi, 1998, p. 06).

6- Aggressive Behavior:

- Definition by Sezer:

Aggressive behavior is a learned emotional response that, as the child grows (especially during their second year), evolves into functional aggression due to its conditional association with the fulfillment of needs.

- According to Laplanche and Pontalis' Dictionary:

Aggression refers to tendencies or sets of tendencies manifested in real or imagined behaviors aimed at harming, destroying, or humiliating others .(Pontalis, 1967, p. 322).

- According to the DSM-IV (Diagnostic and Statistical Manual):

Aggression includes behaviors such as intimidation or threats (e.g., scowling), initiating fights, and using forms of conduct that result in serious physical harm (Al-Shishae, 2005, p. 55).

7- Types of Aggressive Behavior

Humans, unlike other creatures, possess intellect and language, enabling them to express themselves using all body parts, in addition to verbal communication. Aggression can manifest through hands, words, neglect, defiance, opposition, vandalism, and more. (Maamariya, 2007, p. 196)

Researchers have classified aggressive behavior into various forms. However, it is worth noting that there is no universally agreed-upon classification due to differing theoretical perspectives and objectives. Among the most comprehensive classifications of aggressive behavior are:

- **Verbal Aggression:** Includes insults, swearing, and humiliation, usually stopping at this point.
- **Gesture-Based Aggression:** Involves using non-verbal signals such as hand movements or body gestures with aggressive or inappropriate connotations.

- **Physical Aggression:** This involves the body being used to harm others, such as kicking, hitting, slapping, using tools for striking, scratching with nails, or biting.
 - Individual vs. Group Aggression:
 - **Individual Aggression:** Where an individual seeks to harm others, groups, or objects.
 - **Group Aggression:** Where a group collectively aims to harm other groups or individuals. (Ziyad, 1992, p. 55)
 - Self-Directed Aggression vs. Aggression Toward Others:
 - **Self-Directed Aggression (Masochism):** This involves self-harm, such as tearing or breaking personal belongings.
 - **Aggression Toward Others (Sadism):** The aggressor derives pleasure from witnessing the victim's suffering, potentially causing physical pain through actions like hair-pulling, ear-twisting, or scratching.
 - **Bullying Aggression:** This type of aggression often leads to quarrels, involving ridicule or belittling others.
 - **Direct vs. Indirect Aggression:**
 - **Direct Aggression:** Directed at a specific individual or source of frustration, using physical force, verbal expressions, or both.
 - **Indirect Aggression:** Occurs when the individual cannot direct their aggression toward the intended person or source of stress. Instead, they redirect it toward another individual or engage in alternative aggressive actions .(Al-Eisawi, 1999, p. 81)

8- Measuring and Diagnosing Aggressive Behavior

Measuring aggressive behavior presents significant challenges due to its complexity. Various methods of measurement depend on the theoretical framework adopted by the researcher. These methods include :(Khoury, 2000, p. 161)

- Direct observation.
- Measuring behavior through its consequences.
- Behavioral interviews.
- Peer assessments.
- Personality tests.
- Teacher evaluations.
- Scales developed by researchers

9- Electronic Games and Children

History of Aggressive Video Games

The emergence of aggressive video games dates back to 1976 with the release of the game *Death Race*. This game simulated derby races where players deliberately crashed cars. The goal was to run over pedestrians, whose screams would turn into gravestones upon impact. *Death Race* was also the first game to be widely banned in stores across the United States.

- With advancements in computer capabilities, these games became increasingly sophisticated. However, the industry initially hesitated to apply

multimedia realism to such games. In 1992, Sega spent \$4.5 million to develop *Night Trap*, a thriller game in which vampires invade a sorority. The following year saw the release of *Mortal Kombat*, allowing players to inflict extreme violence on opponents, such as tearing out spinal cords. As technology advanced, video games began to mimic real-life scenarios with remarkable realism .(Barakat, 2009, p. 69)

Classification of Electronic Games

Electronic games can be classified into three main types based on their purpose:

1. Entertainment and Excitement Games:

These games aim primarily to entertain and occupy free time. They rely on user interaction and often start with simple levels before becoming increasingly complex. Examples include racing games, combat games, and space invasion simulations.

2. Intelligence Games:

These games focus on logical reasoning and decision-making, requiring players to use critical thinking. One of the most notable games in this category is digital chess.

3. Educational Games:

These aim to balance entertainment with learning, delivering information in an engaging way. Educational games span a wide range of academic levels, from primary school to university.

Action Games:

This category includes games characterized by excitement, combat, and fantasy, such as wrestling and police chase games .(Swalehah, 2004, p. 52)

Advantages and Disadvantages of Electronic Games

Advantages:

- Computers, as the primary medium for electronic games, captivate children and often command their full attention. Educational computer games, in particular, help children build self-confidence and self-esteem by allowing them to control their experiences and choose their preferred levels of challenge.
- Even young children can observe scenes on a computer screen, but engaging with these programs requires fine motor skills, hand-eye coordination, and literacy skills like reading and writing. A child's enthusiasm determines how quickly these skills develop, with many advancing rapidly if introduced to computers early, such as in preschool.

Purposeful electronic games promote parallel thinking, as they require children to handle multiple scenarios simultaneously. (Jeratli, (Monday, October 5, 2008)., p. 12)

Disadvantages:

1. Physical Harm:

Experts unanimously agree that excessive and prolonged computer use can lead to health risks for children. The most common issues include eye strain, migraines, and symptoms of repetitive stress, such as wrist, neck, and back pain. Extended screen time also contributes to skeletal and posture-related problems.

2. Psychological Harm:

Children need interpersonal communication and interaction as part of their essential development. Overuse of computer games can negatively impact these aspects.

- Children who spend excessive time in front of computers may miss out on other crucial activities necessary for their physical, social, intellectual, and emotional growth.

- Playing computer games alone for hours can lead to social isolation and, in some cases, addiction to gaming. This prolonged screen time may result in social challenges such as shyness or introversion.

Additionally, the content of these games can leave negative imprints on a child's personality and behavior .(Virtual Worlds on the Internet: A New Gateway for Terrorists, (Thursday, February 7, 2008))

Applied Aspect

Research Methodology

This study adopts a **descriptive methodology**, which is widely recognized for its simplicity in understanding and analyzing various factors influencing a given situation. The descriptive approach is particularly useful for analyzing and reporting on the characteristics of specific phenomena and exploring the relationships between variables.

The study utilizes the **case study method**, as it provides a deep investigation into the complex factors influencing a specific unit, whether an individual, a family, or a group. By employing this method, comprehensive data is gathered about the current state, past experiences, and environmental relationships of the unit being studied. This approach allows for the creation of a well-rounded, integrated view of the unit and its functioning within society.

In this research, the focus is on the **late childhood stage**, specifically examining **aggressive behavior and its correlation with playing electronic games**.

The rationale behind selecting this methodology lies in the limitations of time and resources, which prevent the application of more rigorous methodologies. Furthermore, the nature of the study aligns with the characteristics of the chosen approach.

Spatial and Temporal Framework

- **Spatial Framework:**

The study was conducted in a specialized electronic gaming hall located in the city of El Eulma, in the Sétif province. The hall is frequented by children and adolescents of various ages and is equipped with 10 gaming devices. Among these, 3 televisions are connected to PlayStation consoles, along with games such as *Bayar*, *Babyfoot*, racing games, and combat/war games. This study specifically focuses on the latter two categories as they directly pertain to the research topic on violence and aggression.

Description of the Games Used:

- **Metalug Plus:**

This game involves a small military character riding a camel, armed with a pistol and grenades to fight against soldiers. The game progresses through two main stages: the first involves fighting soldiers in a tunnel, while the second requires battling strange creatures in another tunnel. The game features multiple levels characterized by frequent violent scenes, such as striking and bloodshed.

- **Nightmare:**

This game revolves around a child resembling the character "Super Mario," who fights monsters using fire. The game advances through multiple levels, with each level introducing progressively stronger monsters. The character gains strength by eating the meat of defeated monsters.

- **Temporal Framework:**

The study was conducted over a four-month period, from **November 5, 2024**, to **December 3, 2024**.

Study Sample

The study sample consisted of **9 children** in the **late childhood stage**, which is a crucial phase for personality development. During this stage, children expand their understanding of the world and acquire cognitive and motor skills.

The sample was selected based on specific criteria to ensure homogeneity and minimize the impact of extraneous variables:

- **Gender:** The sample was limited to male participants to eliminate gender-related differences.
- **Geographical Location:** All participants were from the same geographical area and frequented the same gaming hall.
- **General Background:** The participants shared similar personal, familial, educational, and socio-health characteristics to avoid potential external influences.

Research Tools

- **Observation:**

The study relied on **structured observation** as the primary tool for data collection. This method is particularly effective for observing actual behaviors in real-life situations. Structured observation provides precise and scientifically valid data, especially in scenarios where participants might resist direct interaction with the researcher. The observations were carefully planned and focused on pre-determined topics relevant to the research.

Observation Tool

We developed a structured observation card for the gaming hall owner to record his observations. The card was divided into two key sections:

1. **Observations Before Playing the Games**

This section focused on behaviors prior to engaging with the electronic games, with particular emphasis on the two games mentioned earlier (*Metalug Plus* and *Nightmare*). The main points of observation in this section included:

- **Frequency of visits to the gaming hall**
- **Behavior within the gaming hall**
- Whether the participant attended alone or with peers

2. **Observations During and After Playing the Games**

This section concentrated on behaviors exhibited during and following gameplay.

The main points of observation included:

- **Types of games the participant engages in**
- **Participant's interaction during gameplay**

- **Imitation of characters or scenarios**
- **Manifestation of aggressive behaviors and their nature**

Interview Tool

An **interview** is defined as a structured conversation aimed at achieving a specific purpose beyond mere casual dialogue. Interviews are generally flexible, allowing the researcher to clarify ambiguities and address inconsistencies in the participant's responses. This method is particularly useful for uncovering contradictions in answers and requesting clarifications regarding such discrepancies.

To collect data, we designed a structured **interview form** with pre-written questions and blank spaces for recording participants' responses. The form was divided into two main sections:

Section One: Independent Variable - Violent and Aggressive Games

This section was further divided into two subcategories:

1. Before Playing the Games

Questions in this subcategory focused on:

- Frequency of visits to the gaming hall
- Whether the participant attended alone or with peers

2. During and After Playing the Games

Questions in this subcategory addressed:

- **Games played for excitement and the participant's favorite game**

Section Two: Dependent Variable - Aggressive Behaviors

This section was also divided into two subcategories:

1. Before Playing the Games

Questions in this subcategory explored:

- **The participant's behaviors prior to visiting the gaming hall and learning the games**

2. During and After Playing the Games

Questions in this subcategory focused on:

- **The participant's feelings during victory, particularly during loss**
- **Imitation of characters or scenarios presented in the games**
- **Application of imitated behaviors when encountering others with aggressive actions**
- **Nature of the aggressive behavior exhibited**

Aggression Test for Children :

The aggression test designed by researchers *Philip Carter* and *Ken Russell* consists of **14 questions** aimed at measuring the degree of aggression in children. The test offers three response options for each question:

- **Yes:** Indicates a high level of aggression and is assigned **2 points**.
- **I don't know:** Suggests a lower level of aggression and is assigned **1 point**.
- **No:** Reflects a non-aggressive tendency and is assigned **0 points**.

The total score is calculated by summing up the points from the responses, and the degree of aggression is assessed based on the following scale:

Score	Level of Aggression
More than 28 points	Very highly aggressive
22 to 25 points	Quick-tempered
18 to 21 points	Slightly aggressive
13 to 17 points	Balanced
9 to 12 points	Not very aggressive
5 to 7 points	Somewhat calm
0 to 4 points	Calm

Study Results

The following table summarizes the application of the aggression test to the study sample and the results obtained:

Case	Game Practice	Visiting the Hall	Game Played	Aggressive Behavior	Imitation/Interest in Characters	Frustration Feelings/Situations	Test Result	Opinion on Games' Impact on Behavior
1	Before	With friends	Car racing	Calm	-	-	-	-
	After	Alone	Metallus plus	Aggressive towards others	Imitation	Present	Slightly aggressive	Does not see it
2	Before	With friends	Intelligence games	Slight verbal aggression	-	-	-	-
	After	With friends	Metallus plus	Increased aggression	No imitation	Present	Quick-tempered	Sees it
3	Before	With friends	Car racing	Good	-	-	-	-
	After	Alone	Metallus plus	Aggressive towards others (hitting)	Imitation	Present	Slightly aggressive	Does not see it

Case	Game Practice	Visiting the Hall	Game Played	Aggressive Behavior	Imitation/Interest in Characters	Frustration Feelings/Situations	Test Result	Opinion on Games' Impact on Behavior
4	Before	With friends	Entertainment games	Slight verbal aggression	-	-	-	-
	After	Alone	Metallurgy	Increased physical aggression	Imitation	Present	Slightly aggressive	Does not see it
5	Before	-	Baby foot	Slight physical aggression	-	-	-	-
	After	Alone	Nightmare	Increased aggression	Imitation	Present	Highly aggressive	Does not see it
6	Before	-	Cars	Slight physical aggression	-	-	-	-
	After	Alone	Nightmare	Increased aggression	Imitation	Present	Highly aggressive	Does not see it
7	Before	With friends	Baby foot	Verbal and physical aggression	-	-	-	-
	After	Alone	Nightmare	Increased aggression	Imitation	-	Highly aggressive	Sees it
8	Before	-	Cars	Does not seem aggressive	-	-	-	-
	After	-	Nightmare	Aggressive towards others	No imitation	-	Slightly aggressive	Sees it

Case	Game Practice	Visiting the Hall	Game Played	Aggressive Behavior	Imitation/Interest in Characters	Frustration Feelings/Situations	Test Result	Opinion on Games' Impact on Behavior
				(hitting)				
9	Before	With friends	Babi foot	Seems good	-	-	-	-
	After	With friends	Metalug plus	Aggressive towards others (hitting)	No imitation	-	Slightly aggressive	Does not see it

Interpretation and General Results Extraction:

Results Interpretation: The analysis aims to identify the points of similarity and difference among cases and explore the connection between the two main axes: the first axis concerning electronic games and the second related to aggressive behaviors, all in light of theoretical frameworks and explanatory theories.

Before Playing Games:

Initially, the children's attendance at the gaming hall could be explained by the excess energy they wish to expend, or as Tesler suggested in his theory on play, this could be seen as a purposeful activity aimed at relaxation after a tiring school day. This aligns with the **Recreation Theory**, which interprets play as a way to relieve the body and calm tired nerves. Supporting this interpretation is the fact that most children attend the gaming hall in the evening after school hours.

Alternatively, this behavior can be considered as a means to fulfill certain unmet imaginative or fantasy needs that cannot be achieved in reality, as suggested by **Vygotsky**. It could also reflect the children's perception of play as a cognitive tool for learning and achieving harmony between acquired knowledge and needs. Considering the broader goals of play, it can be said that their attendance might represent an attempt to escape the constraints of reality.

- **Cases (1, 3, 8, 9):**

These cases exhibited relatively calm behavior, with no apparent signs of aggression. In general, they were observed to have good temperaments, both with friends and in the hall. This conclusion is based on observations recorded by the hall owner and interviews conducted with the children. The calm behavior might be attributed to personality traits or other factors, such as family and social upbringing.

- **Cases (2, 4, 5, 6, 7):**

These cases exhibited some aggressive behaviors, including verbal and physical aggression, often directed towards others. These observations were also corroborated by the hall owner's notes and the interview results. These behaviors

might be linked to personality traits or family and social upbringing. Differences in these behaviors among cases could be attributed to individual differences.

- **After Playing Games:**

All cases exhibited some form of aggressive behavior post-gameplay. This conclusion is supported by the aggression test conducted on the cases, as well as observations by the hall owner and interviews. Although the degree of aggression varied, it was present across all cases.

- The appearance of these behaviors could be linked to **frustrating situations** experienced by the children during or after gameplay. For instance, **cases (1, 2, 3, 4, 5, 6, 7)** encountered frustration due to their inability to progress in games or repeated defeats. This aligns with **Miller and Robert's Frustration-Aggression Theory**, which suggests that frustration can trigger an aggressive response. However, this explanation does not apply to the remaining cases, which did not exhibit frustration.

- Aggressive behaviors, particularly in **cases (1, 3, 8, 9)**, could also result from repeated visits to the gaming hall and extended exposure to these games. This aligns with **Watson's Behavioral Theory**, which asserts that behaviors, including aggression, are learned through environmental influences, such as the gaming hall environment and repeated exposure to stimuli. Reinforcement of these behaviors might occur due to the atmosphere of the hall and the violent content of the games. From a behavioral perspective, play itself can be considered a learned behavior resulting from repeated associations between stimuli and responses in the environment. Thus, gaming has become a stimulus that triggers a new behavioral response, namely aggression, reinforced by prior experiences.

- Additionally, most cases mentioned their interest in game characters, particularly main characters. This supports **Bandura's Social Learning Theory**, which emphasizes the importance of imitation and modeling in learning aggressive behaviors. The varying degrees of aggression among cases might be explained by cognitive processes, especially perception. This is particularly evident in cases **(1, 3, 4, 5, 6, 7)**, where aggression seems to result from imitating violent scenes in the games.

However, **cases (8, 9)** demonstrated interest in the characters without imitating them. This might be due to their hesitation or the fact that their exposure to the games did not reach a level that would trigger imitation. Interestingly, **case (2)** exhibited aggression but showed no interest in or imitation of game characters.

Analysis and General Results Interpretation

1. Explanation Based on Freudian Theory:

The differences in aggression among the cases lead us to consider **Freud's psychoanalytic theory**, particularly the mechanism of **defense mechanisms** that children may unconsciously use during or after playing these games. For example:

- The emergence or increase in aggressive behavior was accompanied by defense mechanisms, most notably **identification**. The children absorbed the traits of the characters in the games, whether positive or negative (e.g., aggressive

behavior), by imitating them unconsciously. Identification serves as a defense mechanism to compensate for a perceived deficiency, allowing the child to internalize these traits as a means of self-completion.

- Case (2) demonstrated sadistic tendencies, suggesting a potential underlying **sadistic disorder**, which may stem from unresolved psychological experiences during early childhood.

2. Positive Cognitive Aspects:

Despite the negative implications of aggression, there are indications of positive cognitive stimulation in some cases:

- For instance, **case (2)** exhibited a strong desire to overcome challenges in games. These games often progress from simple, manageable levels to complex, fast-paced ones that surpass the child's capabilities despite their training. The success achieved in these games contributes to cognitive development, particularly in problem-solving and persistence.
- Similarly, other cases expressed a desire to **win and overcome challenges**, reflecting the games' potential to foster determination and critical thinking.

3. Awareness of the Games' Impact on Aggression:

When asked whether the children were aware that playing these games might lead to aggression, the responses varied:

- **Cases (1, 3, 4, 5, 6):** Denied this possibility, likely due to their younger age (around 9 years old).
- **Cases (2, 7, 8, 9):** Acknowledged the potential for such an impact, reflecting a higher level of cognitive awareness, possibly due to their older age (around 12 years old).

This difference supports the **cognitive explanation** that awareness and perception vary by age, with older children having a more advanced ability to understand the link between their behavior and external influences.

4. Social and Emotional Implications:

- The children's engagement with these games often conflicted with the **general goals of play**, such as fostering group cohesion and teamwork. The lack of awareness of the importance of collaboration led to prolonged self-centered behavior, which contributed to **social and emotional imbalance**, manifesting as selfishness and aggressive reactions.
- Cases (1, 3, 4, 7), for example, became less social after engaging in these games.

5. The Role of Virtual Worlds:

The aggressive behaviors observed in these cases may also be attributed to a **disconnection between the real and virtual worlds**. The following factors play a role:

- The virtual world provides a greater sense of freedom and control, making it more appealing than the real world. This shift impacts the child's perception, thinking, and behavior.
- The games blend imagination with virtual elements, creating an immersive experience where the child envisions themselves in roles such as:

- **Case (1):** Imagining themselves as a shooter defeating enemies.
- **Case (3):** Viewing themselves as a monster scaring others.

This blend of imagination and virtual reality makes the games feel like an extension of the child's identity, enhancing their tendency to imitate aggressive actions witnessed in the games.

General Results of the Study:

From the analysis and interpretation, the following general conclusions can be drawn:

1. Imitation of Game Characters:

The main characters in aggressive electronic games often serve as models for children, who imitate their behaviors, even if those behaviors are negative or aggressive.

2. Frustration and Aggression:

Frustrating situations during gameplay (e.g., failure to progress or repeated losses) can lead to aggressive reactions in children.

3. Aggressive Behavior and Game Content:

The nature of aggressive behaviors observed in children often resembles the scenes depicted in the games.

4. Interest Without Imitation:

While some children show interest in game characters, this does not necessarily mean they will imitate their behavior.

5. Repetition and Learning Aggression:

Frequent exposure to aggressive electronic games, especially in environments conducive to such behavior, can lead to the learning and adoption of aggressive behavior.

6. Indirect Effects on Social and Emotional Balance:

Prolonged engagement with these games can indirectly lead to **social isolation** and **emotional imbalance**, preventing children from overcoming self-centeredness and contributing to aggressive reactions.

7. Blurring Reality and Virtuality:

The overlap between the child's real world and the virtual world of these games reduces the distinction between the two, leading to imitation of virtual behaviors in real-life interactions.

General Evaluation of Study Results

In Light of the Study Hypotheses:

It can be concluded that playing electronic games with a stimulating and aggressive nature significantly contributes to the emergence or growth of aggressive behavior in children. This influence is reflected in the impact of playing such games on children's behaviors, thus confirming the hypotheses proposed in this study.

In Light of Previous Studies:

After presenting the study results, we can state that the findings of our research align with those of previous studies cited in our work regarding the influence of games on aggressive behavior.

For instance:

Hind bint Sulaiman Saleh Al-Rumayan's study highlighted the relationship between playing games and aggressive behavior. Although the type of aggressive-stimulating games and the environment of the study differed, the findings are largely consistent with our results.

Dr. Khalid bin Saud Al-Bisher's study suggested that electronic games are somewhat similar to scenes shown on television and other media. These games act as a medium between an individual's predispositions and the various elements that shape their external behavior. Our findings align with his conclusion that aggressive stimuli and responses are related, as games can reinforce aggressive behavior. However, our study diverges by observing that aggressive behavior may emerge from scratch, especially given the repetitive nature of the scenes in such games.

Al-Obaidi's study also agreed with our research regarding the impact of games on children's aggressive behavior. However, while our study emphasized the negative, aggression-inducing effects of such games, Al-Obaidi's research found that certain games could have positive behavioral effects. This highlights that electronic games can be a double-edged sword—some can help mitigate aggression, while others contribute to its emergence or increase.

Conclusion:

From all of this, we see the importance of childhood as a critical phase of development, where growth in its various forms significantly influences personality and behavior. Play, especially electronic games, plays a substantial role in shaping these behaviors. These games, being a double-edged sword, can either accelerate growth positively or have an adverse impact, manifesting in physical and psychological aspects. One of the most significant effects observed is the potential of such games to influence the emergence or intensification of aggressive behavior in children. This can occur through their captivating visuals, the frustration they induce, reduced social interaction, or the instincts they stimulate.

A lingering question arises: if the studied cases are taken from a developmental stage theoretically capable of higher awareness and cognitive maturity yet still show these negative effects, what could be the potential impact on children at earlier developmental stages?

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