

## USE OF VIDEO GAMES IN A CHILD AND ADOLESCENT PSYCHIATRIC UNIT

Mouna Al Husni Al Keilani & Veronique Delvenne

Queen Fabiola University Children Hospital, Department of Child Psychiatry, Brussels, Belgium

### SUMMARY

**Background:** Video game has become the preferred form of play among youth. Substantial research has mainly examined problems related to potential negative effects of video games ranging from sedentary screen time, exposure to violence, and excessive or problematic gaming. However, over the past two decades, the use of video games in psychotherapy has become increasingly popular with a lot of applications.

**Subjects and methods:** After a review of the use and the effectiveness of commercial video games in the psychotherapy framework, we will share our experience in the use of video games in a child and adolescent psychiatric unit. We will illustrate it with the presentation of specific case reports.

**Result:** As video games are highly popular among children and adolescents, they are also interesting tools in the psychotherapeutic work with them. It's a new kind of play therapy, considering the setting, the psychological material that expresses during the game, the interpersonal relationships between gamers, the projective representation within the avatars, the cognitive strategies within the game.

**Conclusions:** Video games represent an essential tool in taking care of child psychiatric patients because of their popularity. They contribute greatly to build the patient/psychotherapist relationship. They help to approach cognitive, emotional and social patient's functioning, and also psychopathologic understanding and then psychiatric diagnosis.

**Key words:** commercial video games - psychotherapy - child psychiatry - group therapy - children - adolescents

\* \* \* \* \*

### INTRODUCTION

Video games have become the preferred form of play among youth: 97% of teenagers are playing video games, 99% of boys and 94% of girls aged 12–17 play computer, Web, phone, or console games (Steadman 2014).

Why are video games so popular to young people? The answer may lie in the reward process. One of them is the emotional reward through challenges that can be resolved with constructive strategy. The emotions (frustration, proud, joy...) felt in the game are a powerful motivation: access to a new level gives a feeling of success to the gamer. The pleasure experienced in the game reduces stress. In that way, video games can help as a mood regulator (Leroux 2019).

Substantial research has mainly examined problems related to the potential negative effects of video games ranging from sedentary screen time, exposure to violence, and excessive or problematic gaming until the notion of addictive gaming behavior (Aarseth 2016, Elson 2014). However, over the past two decades, the use of video games in psychotherapy has become increasingly popular and video games have found a lot of applications (Steadman 2014).

In that context, we decided to share our experience in the use of video games in our children and adolescents inpatient psychiatric unit in HUDERF. We will focus on the use of commercial video games, marketed and available for the general public, that are designed primarily for entertainment purposes, irrespective of their therapeutic value.

After a review of the use and the effectiveness of commercial video games in the psychotherapy framework, we will illustrate it with the presentation of specific case reports.

### SUBJECTS AND METHODS

#### Subjects

Our care unit welcomes 15 young people aged 8 to 15 in crisis for an average period of 6 weeks to 3 months. They are admitted for different purposes: suicidal attempt, depression, anorexia, behavior disorders, psychotic disorders... Our goal is the understanding of the patient's difficulties in terms of psychopathology and diagnosis with regard to their family, social and school environment. Our intervention is therapeutic, we stabilize the symptoms by working with individual therapy, family work, and group therapy with peers. We also use a medication prescription if necessary. During the hospitalization, we offer different multimedia workshops which include Kinect video games, commercial video games but also thematic workshops (bullying, good use of social network...).

Our goals is to apply video games in an acute psychiatric unit with the objective of helping us in the diagnosis, the psychologic and psychopathologic understanding and to have a psychotherapeutic effect for the stabilization of the symptoms.

We will share with you case reports to illustrate our purpose.

## Review

The PubMed, Medline, Ovid, Cairn info, Psychinfo databases were searched from 2010 to April 2020 for relevant paper using the key terms “commercial video games” AND “child” or “adolescent” AND “psychiatry” OR “therapy” OR “group therapy”. The authors also utilized the resources of their affiliated University libraries to identify other relevant books, periodicals, or other resources.

## RESULT

### Review

In the psychotherapeutic work with children and adolescents, video games can be a good tool such as other games that are used in play therapy. The setting and the objectives of video game psychotherapy is the same as in other child psychotherapy: it promotes expression and analysis of emotional conflicts with the therapist (Virole 2013). In the practice of psychodynamic psychotherapy, the use of video games includes the evaluation of cognitive processing style, the elaboration and identification of conflicts, and the building of a therapeutic relationship while playing a video game with or against each other. This kind of play therapy is also helpful to express unconscious or sub-conscious conflicts through the game in a real psychodynamic framework (Ceranoglu 2010, Skigen 2008). Video games can also be considered as a therapeutic tool, using metaphors, that helps to understand and build an intervention with the patient (Leroux 2019).

Furthermore, video games develop cognitive, social and emotional skills (Leroux 2019). For example, games such as Super Mario Bros or The Legend of Zelda develop specific skills: problem-solving strategies, detecting environmental cues, anticipating and responding to the consequences, developing motor skills, releasing aggression and anger, coping with loss, and enhancing cooperation (Gardner 1991). Analyzing how these skills unfold can contribute to understanding the psychopathology associated with behaviors.

Playing video games also involves learning social skills. The gamers can learn from each other: they observe the behavior of other gamers and they can imitate them to improve their own performance. Moreover, the gamer belongs to a community with rules and values. He must learn what is allowed or is not and then has to choose to respect it. The gamer also has different types of social contacts: discussions about video games on social networks or participation to conventions. Like Leroux says, paraphrasing Winnicott: “A video gamer alone doesn’t exist” (Kovess-Masfety 2016, Leroux 2019).

In conclusion, video games seems to represent an essential tool in taking care of child psychiatric patients because of their popularity. In the psychotherapeutic framework, they contribute to build the patient/

psychotherapist relationship. They help to approach cognitive, emotional and social patient’s functioning and also psychopathologic understanding and then psychiatric diagnosis.

### Setting of the multimedia workshop

The multimedia workshop is organized weekly and includes 4 young patients with a therapeutic indication. It is a half open group based on the short term of the hospitalizations. There are some global instructions to play: they are encouraged to help each other, if someone finds a tip, he has to explain it and share it within the group. They must respect each other, listen to peers, tolerate the behavior of others... If they are confronted with an obstacle, they are encouraged to discuss it together to find a solution. Thus, we create a space where they can learn to cooperate. They can also learn from peers which is highly effective in group therapy. The multimedia workshop is a space where the patients socialize and have fun playing video games together.

We organize the workshop in 3 parts for a total duration of 2 hours. The first part is the “Welcome time”: the rules and the setting of the videogame workshop are recalled by the patients with the help of the animator, in particular, if there is a new participant. They are also questioned on their gaming habits: Which type of game are they playing? On which support (computer, games console, tablet...)? This works as a good “ice breaker” for the group. It helps to know each other and to share their experiences. The second part is the “Game time”: by playing the videogame, the participants explore identity questions, subconscious and unconscious conflicts through the metaphor of the video game, in an intersubjective space with the other players and with the animators. The multimedia workshop is a space where the patients can experience affective processes (sadness, frustration, anger, anxiety, fear...), cognitive processes (learning, concentration, strategy, decision making, task programming) and are invited to find a way to manage them. Lastly, the third part is the “Debriefing time”, between the participants supervised by the animators, about their experience and their feelings during the workshop. The animators also tell the participants, what they have observed in their behavior and /or their reaction, to invite them to think and talk about it. Great attention is paid to the relationships within the group, how they play in the video game, and the way they interact with peers. As a next step, they can translate it in other situations they might encounter in everyday life. At the end of the workshop, the animators give every participant some goals to reach during the next workshop.

All these observations are reported to the team during our weekly meeting. It usually helps us to precise the individual and interpersonal psychopathology and gives us some clue to help the patient to manage his difficulties.

We often see a link between psychopathology and the way the patients play video games, their play is a good clinical indicator of their adaptation capacity, of their personal resources that can be used in the psychotherapeutic work and finally of their clinical evolution.

### First case report

Thierry was a thirteen-year-old boy. He was hospitalized for behavior disorder associated with ADHD. He and two other patients have participated in the video game workshop with *Crash Bandicoot*. *Crash Bandicoot* is a single-player platform game. In this case, the participants take turns playing with the same gamepad. When the one who has the gamepad loses, he must give the gamepad to the next one. The same occurs if he wins and finishes the level.

In the group, he was highly supportive of the others: he helped when they were having difficulties and he explained to them what they had to do to overcome the obstacles. When he was playing, he showed a lot of impulsiveness, under pressure he tended to rush and to lose. He had no problem with respecting the rules and the limits in the game. At a specific moment in the game, he was in a high trouble. He had to jump on some box, but he needed to develop a strategy: he must jump on the first box 5 times, then on the second box 5 times and so on. After 5 jumps, the box broke, disappeared and the character fell and died.

The first time, Thierry jumped chaotically on the boxes, lost the count and his character died. At the next turn, when he took back the gamepad, the other patients helped him to adopt a structured strategy: for every box, they counted the 5 necessary jumps together for every box and when to move to the next. Thanks to the support of the other gamers, he succeeded.

The multimedia workshop with such a video game is interesting to explore the cognitive skills. The compartment and the defect in Thierry's strategy of play are corresponding with his ADHD diagnosis. It helps to discriminate oppositional or aggressive behavior rather than impulsive characteristics. Indeed, Thierry has difficulties respecting rules and limits at home and school probably because of his impulsiveness. Video game tool also helps to see how the task planning has an impact on the learning process and what he needs in order to overcome this. With the help of peers, Thierry can adopt new planning strategies in the game than can be extended in a lifetime.

### Second case report

Lara, Zahir, and Nathalia were the participants to the *Big Little Planet* video game workshop. *Big Little Planet* is also a platform game, but it can be played with multiple players. Furthermore, this game requires cooperation between gamers: they need to accomplish

a certain task together to succeed. If they are not able to organize themselves to play together, they cannot go further, and they fail. Besides, the gamers had to create an avatar to impersonate them. This can explore the representation of the self.

Zahir chose an avatar with female characteristics that looked like the avatar of Lara. Nathalia chose a "neutral avatar". In this group, Lara wanted to take the leadership and expected to be followed. She never really consulted with the others about the strategy in the game and imposed her ideas. Zahir did not say anything about that but, with his character, he decided to follow the way he had chosen, ignoring Lara. Nathalia often followed Lara in her strategy. Rapidly, Zahir felt excluded, not listened to, and he "killed" his avatar because "there is no other option". Lara was extremely irritated by Zahir's behavior but never adapted her strategy. Nathalia took a buffer role but didn't succeed.

At a moment, it became so highly conflictual that the animators had to intervene and stop the workshop for a debriefing. It focused on the emerging conflict and invited the participants to find a new way to manage it, highlighting the forces and the failures of each other. They also proposed some advice to enhance cooperation.

At the next workshop, the youths tried another way to cooperate. When they disagreed, they spontaneously took a break and consulted with each other before choosing a common strategy. Zahir tried to express himself to the group when he wanted to choose another way, Lara made an effort to seek the opinion and the proposals of the other gamers, Nathalia could take a more important place in the game strategy as she did not manage the conflict between Lara and Zahir.

If we consider their strategies in the video workshop, it highlights their personal problematic. In front of a conflict problem, Zahir chose to "kill" his avatar as there is no other solution for him. He was hospitalized after a suicidal attempt in a context of difficult relationships with peers and within his family. He felt different and not understood by others. Specifically, he was wondering about his sexual orientation with the fear of not been accepted. Similarly, he had chosen a female avatar with characteristics related to his sexual identity questioning. We can observe that he used the same strategies to face conflictual situations in his life and the game. The video game was like a virtual scene. Through the analysis of his play, we were able to approach with him, the way he reacted to the conflict and to invite him to think about it and to find how to handle it differently.

Concerning Lara, she showed a rigid and controlling attitude in the game as she did in her everyday life. She was hospitalized for anorexia nervosa. She is described as having a rigid and controlling personality; she needed to control what happened for her and in her

environment the same way she controlled what she ate. She showed poor capacities for adaptation and mentalization. It was really hard for her to let herself go. She had important difficulties to manage conflicts within her family, refusing to eat in order to express her opposition. In this workshop, she had to confront conflicts with other gamers, and she experienced managing it with discussion, compromise, and adapting to others.

## DISCUSSION

As video games are highly popular among children and adolescents, they are also interesting tools in the psychotherapeutic work with them. It's a new kind of play therapy, considering the setting, the psychological material that expresses during the game, the interpersonal relationships between gamers, the projective representation within the avatars, the cognitive strategies within the game...

In our first clinical illustration, we have seen that video games can also be used to develop cognitive, emotional, and social skills. It helps to understand and sometimes discriminate behavioral particularities. In this case, video games prove to be an excellent rehabilitation tool even more if it's used in a group of supportive peers.

In the second clinical case, the video games workshop illustrates group and interpersonal strategies as well as personal cognitive and psychological skills. Within the scene of the video game, the patient could become aware of his difficulties. It's interesting and particularly useful with patients who have failed mentalization, who are not comfortable with words. It's also an interesting tool for young adolescents, who have difficulties with introspection, who prefer action. This kind of game offers a sensorial and emotional world where they are in action.

The avatar the youth choose can be a helpful tool in the psychotherapeutic framework because the gamers develop their player characteristics and fulfill various roles (Steadman 2014). In this way, the avatar is a figure of identification rapidly invested by the young patient (Stora 2019). Video games also promote expression of the self by the creation and the manipulation of the avatar that allows the patient to express different aspects of his personality (Leroux 2019). Finally, video games are a good media in the psychotherapeutic relationship with the youth, to reflect him the way he reacts in conflicting or cooperative situations and to help him to find other strategies.

## CONCLUSION

Video games are frequently criticized for their potential negative aspects on child and adolescent development. However, there is also a great interest to

use it as a usual tool in child and adolescent psychotherapy. We have to consider the setting of video game psychotherapy in the same level as the well-known play therapy. The therapist may find in video games a useful tool to approach young patients with mentalization issues. It's also interesting to build a therapeutic relationship with young patients who cannot express their suffering in words. It helps to understand the individual difficulties of the patient in link with his psychopathology and his psychologic functioning within the scene and the construction of the game. Video games can also have a therapeutic effect if it is used as a tool that brings the patient to reflect on himself and to find a way to manage his emotional, social, and cognitive issues.

### Acknowledgements:

Cedric De Waele and Nicolas Matthys who are my colleagues and my partners in the animation of the video games workshop.

**Conflict of interest:** None to declare.

### Contribution of individual authors:

Mouna Al Husni Al Keilani carried out the literature research, the interpretation of the data, and the manuscript writing.

Véronique Delvenne carried out the interpretation of the data and the manuscript writing.

## References

1. Aarseth E, Bean AM, Boonen H, Colder Carras M, Coulson M, Das D, et al.: *Scholars' open debate paper on the World Health Organization ICD-11 Gaming Disorder proposal*. *J Behav Addict* 2016; 6:267-70
2. Ceranoglu TA: *Star Wars in Psychotherapy: Video Games in the Office*. *Acad Psychiatry* 2010; 34:233-236
3. Elson M, Ferguson CJ: *Twenty-five years of research on violence in digital games and aggression: Empirical evidence, perspectives, and a debate gone astray*. *Eur Psychol* 2014; 19:33-46
4. Gardner, JE: *Can the Mario Bros. help? Nintendo games as an adjunct in psychotherapy with children*. *Psychol Psychother-T* 1991; 28:667-670
5. Kovess-Masfety V, Keyers K, Hamilton A, Hanson G, Bitfoi A, Golitz D et al: *Is time spent playing video games associated with mental health, cognitive and social skills in young children?* *Soc Psychiatry Psychiatr Epidemiol* 2016; 51:349-357
6. Leroux Y: *Les jeux video dans les psychotherapies psychanalytiques in Médiations numériques : jeux vidéo et jeux de transfert*, 31-57. Eres, Collections Cybercultures et santé mentale, 2019
7. Stora M: *Médiation et jeu vidéo : une narration sensorielle*. « Ico, c'est moi ». In *Médiations numériques : jeux vidéo et jeux de transfert*, 325-340. Eres, Collections Cybercultures et santé mentale, 2019

8. Skigen, D: *Taking the sand tray high tech: Using The Sims as a therapeutic tool in the treatment of adolescents*. In L. Rubin (Ed.), *Popular culture in counseling, psychotherapy, and play-based interventions*, 165–179. New York, NY: Springer, 2008
9. Steadman J, Boska C, Lee C, Lim XS, Nichols N: *Using popular commercial Video Games in Therapy with Children and Adolescents*. *J Tech Hum Serv* 2014; 32:201-2019
10. Virole B: *La technique des jeux vidéo en psychothérapie*. In Tisseron S & Virole B: *Subjectivation et empathie dans les mondes numériques*, 31-50. Dunod, Collections *Inconscient et culture*, 2013

*Correspondence:*

Mouna Al Husni Al Keilani, MD, HUDERF  
Queen Fabiola University Children Hospital, Department of Child Psychiatry  
15 Avenue Jean Joseph Crocq, Bruxelles 1020, Belgium  
E-mail: mouna.alhusni@huderf.be