

Why and how to include parents in the treatment of adolescents presenting Internet gaming disorder?

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(Received: November 29, 2018; revised manuscript received: April 10, 2019; accepted: April 21, 2019)

Background and aims: Clinicians and researchers are increasingly interested in investigating excessive use of video gaming recently named Internet gaming disorder (IGD). As is the case with extensively researched adolescent problem behaviors such as substance use disorder, several studies associate IGD with the young person's family environment and the parent–adolescent relationship in particular. Evidence-based treatments for a range of adolescent clinical problems including behavioral addictions demonstrate efficacy, the capacity for transdiagnostic adaptation, and lasting impact. However, less attention has been paid to developing and testing science-based interventions for IGD, and at present most tested interventions for IGD have been individual treatments (cognitive behavioral therapy). **Methods:** This article presents the rationale for a systemic conceptualization of IGD and a therapeutic approach that targets multiple units or subsystems. The IGD treatment program is based on the science-supported multidimensional family therapy approach (MDFT). Following treatment development work, the MDFT approach has been adapted for IGD. **Results:** The article discusses recurring individual and family-based clinical themes and therapeutic responses in the MDFT-IGD clinical model, which tailors interventions for individuals and subsystems within the young person's family. **Discussion and conclusions:** Basic science developmental research can inform conceptualization of IGD and a systemic logic model of intervention and change. This paper aims to expand treatment theorizing and intervention approaches for practitioners working with frequently life-altering behaviors of excessive Internet gaming. We operationalize this aim by addressing the question of *why* and *how* parents should be involved in youth IGD treatment.

Keywords: Internet gaming disorder, parents, adolescents, family relationships, multidimensional family therapy

INTRODUCTION

Internet gaming, a global phenomenon, has become one of the most popular leisure activities among children and adolescents. Although it remains recreational for most, clinicians and empirical studies report that some adolescents engage in extensive Internet gaming with associated difficulties in everyday functioning (Gentile, 2009; King, Delfabbro, Doh, et al., 2018; Kuss & Griffiths, 2012). In 2013, Internet Gaming Disorder (IGD) was included in Section III of the latest version of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2013) and Gaming Disorder has been added to the 11th World Health Organization's classification (WHO, 2018). Because of the several similarities between IGD and other addictive disorders (King, Delfabbro, Potenza, et al., 2018), such as substance use disorders (SUD; Ko et al., 2014), IGD treatment developers are using the theory and clinical methods from the youth addictions

specialty as a reasonable starting point for their work. However, IGD and SUD are not directly transposable and further discussions are necessary to find accurate diagnostic criteria of IGD (Griffiths et al., 2016; Kardefelt-Winther et al., 2017). These criteria must be empirically based and should be rooted in an understanding of IGD's underlying mechanisms (Tunney & James, 2017). Simultaneously, given the increasing demands for IGD treatment, the establishment of coherent treatment for this disorder is necessary (Rumpf et al., 2018). In this regard, existing basic science in developmental psychopathology and advances in how to develop and adapt interventions, the availability of effective youth treatments can be levered to specify new IGD interventions, as well as arguments on clinical and public health considerations (Rumpf et al., 2018).

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Cognitive behavioral therapies (CBTs) are firmly established in the addiction treatment field and thus far CBT clinical conceptualizations and treatments predominate in the IGD specialty as well (King et al., 2017). However, in relevant research, particularly in lines of treatment research with adolescent SUD and behavioral problems, family-based treatment and prevention theories and methods evidence a strong empirical base. For adolescent SUD, family-based interventions show a comparative superiority over individual therapies (Tanner-Smith, Wilson, & Lipsey, 2013). In behavioral addictions such as gaming and gambling for instance, an expanding empirical base has explored parent and family factors associated with the problem behavior (Kourgiantakis, Saint-Jacques, & Tremblay, 2013; Schneider, King, & Delfabbro, 2017) and interventions targeting these problems (Federman, Drebing, & Krebs, 2000; Zajac, Ginley, Chang, & Petry, 2017). In their review, Schneider et al. (2017, p. 331) conclude that “the influence of the family system is vitally important to address within interventions for adolescents” presenting IGD. Considering the movement to conceptualize problems transdiagnostically, and in terms of the cross-cutting mechanisms of different symptoms or diagnoses (Franklin, Jamieson, Glenn, & Nock, 2015), and the demonstrated effectiveness of several family therapies to treat problems of adolescents, family-based interventions should be considered as viable candidates for adaptation, application, and research concerning IGD.

This article presents clinically relevant content from the empirical work from the developmental psychopathology research literature. We do so to broaden the conceptualization of IGD. We argue for a systemic orientation to IGD so that both individual level and proximal psychosocial environment factors can be used to guide treatment. The clinical orientation of the paper is multidimensional family therapy (MDFT), an evidence-supported treatment for youth substance abuse and related behavior problems (Liddle, 2016a). Several randomized clinical trials have established the efficacy of the MDFT with moderate-to-severe drug-abusing adolescents (Henderson, Dakof, Greenbaum, & Liddle, 2010; Liddle, Rowe, Dakof, Henderson, & Greenbaum, 2009; Weinberg, Rahdert, Coliver, & Glantz, 1998), and youth presenting with conduct disorder (Boustani, Henderson, & Liddle, 2016). MDFT recognizes the central role of the family in the development and treatment of adolescents’ drug use problems (Liddle et al., 2001; Muck et al., 2001), and its intervention orientation is based on empirical research covering normative adolescent development and developmental psychopathology (Liddle et al., 1998). The approach addresses the multiple subsystems in which people live both within and beyond the context of the family (Liddle & Rigter, 2013).

Empirically based and clinically based arguments can illustrate the relevance of family therapy for adolescents with IGD. From a basic science and developmental perspective, the family is the primary unit of socialization for children, and even though the nature of family relationships changes during adolescence, the developmental importance of the parent–child relationship remains vital. From a clinical perspective, including parents in treatment is based on a systemic conceptualization of clinical

problems (i.e., examining multiple sources of both good functioning and dysfunctions and examining behaviors/problems in context), and this conceptualization of the problem is supported by basic science – the development of problem behaviors in youth leading to psychopathology. Thus, the aim of this article is to present an empirical and clinical rationale for including parents in the treatment of adolescents presenting IGD. Our goal is not only to answer the question of *why* parents should be involved in youth IGD treatment but also *how* to include and work with them.

THE BASIC SCIENCE OR DEVELOPMENTAL CASE FOR INCLUDING PARENTS

Family relationships: A well-established protective factor from behavioral disorders

Emotional distance and extreme conflict between adolescents and their parents are not normative (Steinberg, 2014). In fact, no factor seems to influence adolescent adjustment more than the quality of family relationships (Garnefski, 2000; Kaminski et al., 2010; Repetti, Taylor, & Seeman, 2012), specifically “the teenager’s feeling of connectedness with parents and family” (Blum & Rinehart, 2000, p. 31). Parent–adolescent relationships influence the development and prevention of risky adolescent health behaviors (Riesch, Anderson, Pridham, Lutz, & Becker, 2010) and protect against a variety of externalizing and internalizing problem behaviors (Resnick et al., 1997). In the addiction literature, family relationship quality and the parenting process appeared as strong protective factors from the emergence of substance abuse, especially in adolescents (Blustein et al., 2015; Donovan, 2004; Keijsers, 2016; King, Molina, & Chassin, 2009; Waldron, Brody, Robbins, & Alexander, 2013).

IGD research is still in an early stage. Nevertheless, in several studies, IGD was associated with poor family relationships (Bonnaire & Phan, 2017; Chiu, Lee, & Huang, 2004), and positive parent–child relationships were found to be protective factors against IGD (Chiu et al., 2004; Da Charlie, HyeKyung, & Khoo, 2011; Kwon, Chung, & Lee, 2011; Liao et al., 2015; Yang & Tung, 2007). IGD gamers tend to come from less warm, cohesive families (Bonnaire & Phan, 2017; Choo, Sim, Liao, Gentile, & Khoo, 2015; Rikkers, Lawrence, Hafekost, & Zubrick, 2016; Wang et al., 2014; Zhu, Zhang, Yu, & Bao, 2015; Zorbaz, Ulas, & Kizildag, 2015), and low parental support (Baier & Rehbein, 2009) and low paternal adaptability (Tafa & Baiocco, 2009) have been associated with IGD. Thus, the quality of parent–adolescent relationships is an agreed upon behavioral target in youth intervention programs, given its centrality in the developmental health of the adolescent and the acquisition of essential life skills (e.g., emotion regulation as discussed below). Along these lines, it might be useful to recall that family therapy originally sought to articulate theory and practice in order to change dysfunctional transactional family patterns that connect to the development of problem behaviors (Liddle, 2010). Parallel and intersecting with this transactional change target are individual sessions with the parent(s) and with the young

person, which also address the parent–youth relationship, as well as more “individual” aspects of each family member’s life (e.g., the parent’s functioning as an individual, outside of their role as a parent; the young person’s functioning in multiple developmental realms such as identity, peer relations, and emotion regulation). Youth engaged in MDFT reported improvements in relationships with their parents (Henderson, Rowe, Dakof, Hawcs, & Liddle, 2009; Liddle et al., 2009). Moreover, behavioral observational methods show improvement in family functioning (e.g., reductions in family conflict and increment in family cohesion) to a greater extent with MDFT than other therapies, with these benefits remaining present at follow-up 1 year later (Liddle et al., 2001).

Parenting style: A way of helping adolescents grow up in healthy ways

Many studies have demonstrated a relationship between parenting and the adolescent’s healthy development (see Davids, Roman, & Leach, 2017; Newman, Harrison, Dashiff, & Davies, 2008 for systematic reviews). Parenting styles can be specified (authoritarian, authoritative, permissive, and neglectful; Baumrind, 1967; Maccoby & Martin, 1983), and associations exist between parenting styles and youth outcomes. Adolescents raised in authoritative households consistently presented with more protective behaviors and fewer risk behaviors than adolescents from non-authoritative families. Parenting styles and behaviors related to warmth, communication, and disciplinary practices predict important outcomes including academic achievement and psychosocial adjustment (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994).

In the addiction field, numerous studies have shown a relationship between parental monitoring and substance use in adolescents (Kaltiala-Heino, Koivisto, Marttunen, & Fröjd, 2011; Wang, Dishion, Stormshak, & Willett, 2011), and have suggested a decreased risk of substance use among adolescents whose parents had an authoritative parenting style and an increased risk for adolescents whose parents had permissiveness/indulgence, neglectful/unengaged, or authoritarian parenting (Cablovà, Pazderková, & Miovsy, 2014; Davids et al., 2017). In the media research domain, the concept of parental mediation (e.g., parents’ efforts to protect their children from exposure to dangers online; Livingstone, 2007) appeared as a protective factor (Mesch, 2009; Rosen, Cheever, & Carrier, 2008). Optimal parenting (defined as parents that care for and protect their child yet respect their autonomy; Floros & Siomos, 2013) and restrictive mediation (which refers to parental rules and regulations on children’s media use; Chng, Li, Liao, & Khoo, 2015) are negatively associated with pathological Internet use. Only a few studies have examined the association between parenting style and video game use and they yield mixed findings (Chiu et al., 2004; Shin & Huh, 2011). Studies on gaming rules seem to differ according to the gender of the child. Restriction may be more important for females to curb excessive gaming. Males seem to benefit from clear rules about gaming use like time to begin and time to end gaming accompanied by non-authoritative parental vigilance (Bonnaire & Phan, 2017). Although still

an open question, the effect of the parent–child relationship on IGD may be stronger for boys than for girls (Choo et al., 2015; Wallenius & Punamäki, 2008).

Parenting practices are fundamental and for some experts, the evidence supporting authoritative parenting is so strong that the question of which type of parenting benefits adolescents the most need minimal additional study (Steinberg, 2001). Perhaps, parenting practices hold the potential to reduce the effect of moderators that are less changeable (such as media exposure, poverty, and neighborhood risks) on subsequent youth behavior (Newman et al., 2008). Thus, the major influence that parenting styles and behaviors exert on youth risks and protection indicates a clear need for more family-based interventions to improve adolescent health outcomes. Based on empirical data, which have shown that parenting practices improve in MDFT (Schmidt, Liddle, & Dakof, 1996), MDFT seems a promising family-based therapy for IGD. In the basic MDFT approach, therapists actively guides, coaches, and shapes more positive and constructive family interchange during family sessions (Liddle, 2016b). IGD therapists work to establish a more concrete thinking through about and better communication of rules about video game use to the youth. Within a harm-reduction philosophy, video game abstinence is not necessarily a realistic goal. Sessions attempt to foster a mutual agreement about reducing the amount of video game time (Ramirez et al., 2011). Furthermore, in sessions with parents, therapists focus on establishing adequate age-related rules and behavioral follow through with their rules with appropriate consequences.

Emotion regulation: The role of the family context

Developmental research and theory suggest that a core component of children’s successful development is learning how to regulate emotional responses and related behaviors in socially appropriate and adaptive ways (Denham et al., 2003; Eisenberg, Spinrad, & Morris, 2002; Halberstadt, Denham, & Dunsmore, 2001). The role of emotion regulation in atypical development (Cicchetti, Ackerman, & Izard, 1995; Frick & Morris, 2004; Steinberg & Morral, 2003) is well established (for addictive disorders, see Sloan et al., 2017 for a review). Emotional experiences are one of the bases of the self (Lupton, 1998) and enable subjects to enter into relationships with the surrounding world (Lyon & Bardalet, 1994). Reaching emotional self-sufficiency and autonomy is a core milestone of adolescence (Hill & Holmbeck, 1986). Young people need to regulate emotion independently of their attachment figures (Allen & Miga, 2010).

Our developing intervention theory for IGD suggests that for some adolescents, playing video games is a maladaptive strategy used to cope with individual and familial difficulties. Excessive video gaming can be considered as an escape strategy, or as proposed by Hayes et al. (1996), an experiential avoidance of painful aspects of real life. This clinical perspective is in line with the four-factor model of IGD cognition proposed by King and Delfabbro (2016). Most IGD adolescents stay in front of their screen instead of exploring the environment, going out for new experiences, new relationships, and therefore developing their autonomy. Reality exploration, as is expected in attachment theory with

adolescents (Dubois-Comtois, Cyr, Pascuzzo, Lessard, & Poulin, 2013), seems to be replaced by virtual game reality exploration. IGD adolescents appear to blur the boundaries between realities: game reality takes priority over the everyday reality of family and social lives. The body invested is one of the avatars. The young person's body in reality is left out, as if they were disconnected from their own bodily sensations and emotions. From their point of view, game partners are part of their social network and they are sharing emotions with them. It is not uncommon for these youth to not recognize that relationships outside of the virtual world intimidate them and represent significant emotional challenges. It seems that through gaming they avoid or suppress negative emotions and experience positive ones. Several studies confirm this clinical observation. Adolescents were found to play video games in order to escape from daily life and forget about worries (Wallenius, Rimpelä, Punamäki, & Lintonen, 2009). Poor peer attachment (Estévez et al., 2017) and low social competence (Wichstrøm, Frode Stenseng, Belsky, von Soest, & Hygen, 2018) predicted IGD since teenagers use video games as a refuge (Vollmer, Randler, Horzum, & Ayas, 2014), and or as an effective, albeit non-face-to-face form of its relationship satisfaction (Estévez et al., 2017). Low levels of emotion regulation or poor emotion regulation skills are associated risks of IGD (Estévez et al., 2017; Wichstrøm et al., 2018).

Considering these findings, therapists need to create a climate of trust to allow the adolescent to connect with emotions, express them, and develop improved regulation behaviors. This and other developmental challenges are not all intrapersonal or individually based (i.e., thought of as individual adolescent competencies). A critical developmental research finding, with important clinical implications, is that parents play a fundamental role in emotion regulation skills (Morris, Silk, Steinberg, Myers, & Robinson, 2007) and the adolescent needs to acquire emotional competencies to leave the screen, go out, and develop relationships with peers. As highlighted by Estévez et al. (2017), disrupted relationships between parents and adolescents can prevent the acquisition of emotion regulation and maintain a dysfunctional distance (or proximity) between parents and adolescent. Thus, there is a need to repair the relationship or attachment bond to foster emotional skill acquisition and from that base, invest in exploring of the surrounding world. To do so, it is important for the parents to talk differently about video games and gaming. Talking about gaming is a way for parents to help their adolescent identify and express what they feel when they play video games and begin to think about different ways of regulating emotions. For example, when the adolescent is failing in his game and becomes aggressive and violent, parents could help the adolescent discover different ways in which to express their frustration, anger, and disappointment. In talking by this way, parents contain the emotions that their adolescent is experiencing while playing and help him find different ways of expressing, controlling, and regulating his emotions. Each arousal, each sensation, each emotion that the adolescent is feeling in the game needs to find a meaning and the adolescent needs to have the words to describe what he is experiencing. In agreement with Coulombe (2010),

thanks to language (thus thanks to the meaning), the adolescent will be able to develop a critical distance regarding video games, as a reflexive counterweight to its power of fascination.

THE CLINICAL CASE FOR INCLUDING PARENTS

Inclusion of parents in the treatment process promotes adolescents' initial engagement and ongoing participation in treatment

One of the most robust findings in adolescent SUD treatment literature is that retention in therapy is essential for obtaining a successful treatment outcome (Stark, 1992; Stevens & Morral, 2003). Nevertheless, adolescents are generally reluctant to enter into therapy (Rubenstein, 2005) and the lack of engagement of one of the family members in the therapeutic process can have a detrimental effect on all the family's experience (Higham, Friedlander, Escudero, & Diamond, 2012). From our clinical experience, most adolescents presenting IGD do not enter into treatment on their own initiative and are reluctant or downright opposed to treatment.

Several empirical studies showed that family-based therapy is more effective than other well-established adolescent drug abuse treatments in terms of the engagement and retention of adolescent in the therapy (see Becker, Boustani, Gellatly, & Chorpita, 2018; Tanner-Smith et al., 2013 for reviews). Family members, especially parents, are instrumental in facilitating the adolescent's change process (Huey, Henggeler, Brondino, & Pickrel, 2000) and enhance treatment success, especially for reluctant adolescents (Higham et al., 2012). In the case of MDFT, controlled trials support the engagement, retention, and outcome superiority of MDFT compared to standardized treatment, including CBT (Liddle, 2016a; Liddle et al., 2009). Thus, given the capacity of MDFT to meet the most difficult treatment challenges of clinically referred youth (Diamond, Diamond, & Liddle, 2000) in controlled trials and implementation studies, MDFT appears as a promising approach for IGD.

Why is MDFT efficient at engagement? Parents with an addictive teenager are discouraged, exhausted, overwhelmed, and feel like they have tried everything and that nothing will work anymore. They come to the addiction treatment center as a last resort. Yet, MDFT therapeutic attitude is optimistic about change, is focused on strengths, and is energetic, which is demonstrated in the way that the therapist establishes multiple therapeutic alliances with different family members (Liddle, Dakof, & Diamond, 1991; Liddle, Dakof, Henderson, & Rowe, 2011). Therapeutic alliance is one of the biggest predictors of therapeutic outcomes (Friedlander, Escudera, Heatherington, & Diamond, 2011; Martin, Garske, & Davis, 2000) and studies have shown a negative relationship between the quality of the therapeutic alliance and therapy dropout (Robbins, Liddle, Turner, Dakof, & Alexander, 2006). Furthermore, the results suggest that, while the strength of the parent-therapist alliance appears to influence treatment completion,

the strength of the alliance with the adolescent appears to impact on treatment outcome (Shelef, Diamond, Diamond, & Liddle, 2005). Including parents in the treatment has one significant immediate effect: it changes the negative perception of the adolescent coming to the treatment center. It allows the teenager to get out of the position of identified patient (Runkel, Christenson, Glunz, & Cobb, 2017), avoiding the notion of sole responsibility for the situation. Including parents in therapy allows the adolescent to feel that he is not the only “caretaker” of the situation, which relieves him. It co-empowers all family members. Especially, because he is generally in denial of his problematic behavior, his only “complaint” concerns his parents. Thus, occasionally, engaging parents might be the only way to maintain adolescents in treatment durably. Therefore, one of the main challenges for family therapists is to simultaneously engage in multiple therapeutic alliances and engage several family members who may be in conflict with each other and have different levels of motivation for treatment (Friedlander, Escudera, & Heatherington, 2006). One specificity of MDFT is that the therapist works with the family system but also with the subsystems of the parents on one hand and the teenager on the other hand. This work favors the building of therapeutic alliances and is “easier” when the families are in crisis, which is the case for almost all IGD families. With the whole family, the risk is to make an alliance with one or the other and to reproduce in therapy what they live on a daily basis. Several studies on MDFT provide some guidance about the types of therapist interventions that may hinder the establishment of alliances: therapist who are in too much of a hurry to engage in problem solving with the adolescent (Diamond, Liddle, Hogue, & Dakof, 1999) or parents (Schmidt et al., 1996) and do not follow the protocolized stages of the approach to engagement with the parent and adolescent (Diamond et al., 1999). Thus, therapeutic alliance plays an important role in treatment retention in family therapy but it is important to disentangle the factors associated with variability in alliance, therapist intervention, and retention (Robbins et al., 2006). Indeed, there is a need to identify specific therapist interventions that facilitate the formation of alliances with adolescents and parents. Although for both this will include an exchange about video games, the clinical work is different with the parents and with the teenager (see the following points).

One of the main parents’ complaint is “I cannot stop my adolescent from playing video games”

When they seek therapy, parents mainly complain about the obstacles they face when trying to regulate the use of video games. This means that they have difficulty posing an act of authority, setting clear rules about video game use and enforcing them. The difficulty in solving this problem can lead parents to feel guilty, to lose confidence in their parental competences, and to withdraw from therapy. Thus, the therapist must attend to this level of alliance with the parents very early to reduce the risk of dropout (Robbins et al., 2006). In MDFT, one major task of the first stage of subsystem work with parents is to make them feel that they are helpful and influential in their teenagers’ life, to engage

them in therapy (Liddle, 2000). The goal is to interrupt the cycle of defeat, desperation, and emotional distancing that parents experience and to revive their hopes, dreams, connection with, and aspirations for their teenagers. The MDFT therapist needs to create processes inside and between family members that are ingredients and promoters of change. One of these processes is to allow the parents to truly experience what they have been going through. Slowly, gradually, with empathy, hope, and new perspectives of the situation, the MDFT therapist connects parents with their pain and suffering in past and current situations, which in turn contributes to connect and reconnect parents to their loving and caring about their child. Engagement, which is key to change, could be defined as an engagement with the self, and for the parent, a potential engagement or reengagement with their teenager. Furthermore, parents need to recognize and reconnect with their parental skills. Therapist look for and build on examples of parenting practices that have been successful. As recommended in MDFT Stage 1 (i.e., “Build the foundation”), and these everyday parenting actions become a platform to work on new rules about video game use (i.e., Stage 2: “Prompt action and change”). Here, the therapist can increase parents’ knowledge about and then practice effective parenting practices (Liddle, 2000).

There are two specific features of parents of adolescents presenting with IGD. The first one is that most of them have a difficulty integrating or understanding that children/adolescents need to be educated on screens/video game use. For the parents, because their child is born with video games around, it is assumed that they should know how to make good use of them and how to stop at the right time. They also fail to understand that technical mastery does not imply cognitive and emotional mastery. The second feature is that for many reasons, parents did not always monitor video game use in the past, and they introduced the games early into the home. However, because of all the current negatives consequences, more or less suddenly and quite brutally for the teenager, the parents begin to forbid an activity that they have never really controlled so far and begin to be extremely critical about video games. They become authoritarian in a unilateral approach. Video games are presented as responsible for all failures and all the negative aspects of the teenager’s life. Yet, negative parental attitudes toward gaming are associated with more symptoms of IGD (Jeong & Kim, 2011) and parental supervision of gaming is negatively associated with IGD (Bonnaire & Phan, 2017; Rehbein & Baier, 2013). This means that the therapist must work with parents on setting rules and limits and move from the “absence” of rules to a controlled use of video games. This means that parents will move from a logic of all or nothing to a logic of negotiation and co-construction. Similar to children, adolescents need rules and limits because structure makes them feel secure (Steinberg, 2004). Children gradually develop the ability to manage themselves: they acquire this skill and parents are essential in this learning process until late adolescence. Here, the therapist can help parents understand why the adolescent cannot limit himself by explaining the recent work of neuroscience (i.e., the part of the brain in which executive functions develop, essential for cognitive control,

remains immature until early adulthood; Casey, Getz, & Galvan, 2008; Steinberg, 2008).

Nevertheless, before working on video game use rules, the therapist must work on parents' ambivalence and on their perception of video games. Indeed, even if parents want their child to have a controlled use of video games, deep down they would like him to no longer play at all. But setting rules does not mean forbidding. On the one hand, it is inconceivable to ban an activity that almost all teenagers practice. In addition, this activity contributes to the enjoyment and acquisition of many skills (see Bediou et al. 2018; Granic, Lobel, & Engels, 2014 for reviews). Indeed, it is important for parents to know the benefits of playing video games. On the other hand, the teenager cannot accept that his parents suddenly forbid the use of video games when they had always let him play beforehand. Thus, the therapist must help parents to set clear limits, which are adapted to the teenager's current game playing. The teenager will not be able to go from 10 hr per day to 1 hr. Furthermore, this cannot be done without the contribution of their teenager. Indeed, collaborative problem-solving is the most effective strategy to solve conflict (Steinberg & Levine, 1997). To reach a positive parent-adolescent relationship, parents need to gradually transform their use of authority from a unilateral approach to one of cooperative co-construction (Youniss & Smollar, 1985). Clinical experiences show that the transition from authoritarian control to a collaborative parental-adolescent stance takes time to establish and settle. Time and building of a trusting relationship are major issues when parents are asking for quick changes and may not be willing to wait as much as needed. Establishing family changes is a step-by-step endeavor with intermediate phases that may appear dysfunctional. Parents must establish a contract with their teenager for the use of video games. Indeed, the teenager will willingly submit to a contract if he feels valued and if he agrees upon the rules of the contract. In order for parents to agree to work on the rules of use of video games and for the teenager to agree to talk about this with his parents, parents must stop talking about video games in purely negative terms.

Conflicts and lack of communication between parents and adolescent

As with SUD (Liddle, 2000), excessive blame, defensiveness, and recrimination are characteristics of early-stage conversations with families of adolescents presenting IGD. On one hand, parents tend to be critical and judgmental about their adolescent and these recriminations include video games; on the other hand, the adolescent tends to be either silent or aggressive. IGD takes place inside the family and therefore has a strong impact on family functioning. The more the adolescent plays video games, the more the parents harbor judgments about video games and the more the adolescent locks himself into video games and becomes mute. This shows how much therapists need to target family relationships and day-to-day communication. Indeed, high negative attitudes toward the patient and his disorder may be a fairly treatment-resistant family attribute (Doane, Hill, & Diamond, 1991). When these negative exchanges persist, family members feel hopeless about change and dissatisfied with therapy

(Diamond & Liddle, 1999) and the likelihood of non-compliance and early dropout increases (McMahon, Forehand, Griest, & Wells, 1981). Clinically, chronic negative emotional expression during sessions has been associated with poor treatment outcome (Mann, Borduin, Henggeler, & Blaske, 1990; Robbins, Alexander, Newell, & Turner, 1996).

In MDFT, the therapist facilitates change directly in the parent-adolescent relationship through enactment (Diamond & Liddle, 1996, 1999; Liddle, 2000). In MDFT, enactment gives an ecological picture of existing family relationships and a technique to shape new kinds of family interactions (Liddle, 1995). Thus, in the first stage of MDFT, the therapist works on family members' reconnection and particularly emotional reconnection. Parenting relationship interventions are designed to close the emotional distance between the parents and the adolescent – and more specifically to repair the attachment relationship – and reduce excessive conflict and negative affect (Liddle, Rowe, Dakof, & Lyke, 1998). Decreasing the negative emotional charge will reconnect family members. To do so, the therapist needs to take time to build therapeutic alliance with the adolescent alone and with the parents alone. The MDFT therapist works processes of different types (intrapersonal and interpersonal) with different family members (Liddle & Rigter, 2013). One important goal here is that video games are no longer a source of conflict and difficulties. Indeed, although parents perceive video games as a poison, the therapist sees it here as the cure. First, video games will contribute to create the therapeutic alliance with the teenager; second, they will contribute to reconnect parents and adolescent, which will then allow therapy to address other difficulties and problems in the family. Thus, video games are perceived as the means of restoring communication between parents and adolescent.

Most IGD adolescents are not aware of their excessive use and even less aware of the function of video games (e.g., emotion regulation). IGD teenagers are usually shy, introverted, and inhibited (Bonnaire, 2015; Caplan, 2007). Thus, it is not easy for them to speak freely. It is therefore essential to be active and directive in the session, not to let silence settle down, and to show genuine interest in their video game. When it comes to talking about themselves, words are generally lacking, which is not the case when it comes to video games. It is essential that the therapist has some knowledge about video games. It is a way to be legitimate in the face of the teenager, and not to be compared to a parental figure who knows nothing about it and does not care about it. In addition, having knowledge in games allows therapist to pose important questions that make sense to the adolescent's practice. For the teenager, meeting an adult who has knowledge in the field of video games, who is authentically interested in them, and who does not judge them is a clinical fundamental element that contributes to build the therapeutic alliance.

The therapist needs to meet alone with the parents in order to hear and to empathically validate their suffering and worries. Indeed, as mentioned before, in MDFT, Stage 1 implies validation of parents' past efforts, and acknowledgement of difficult past and present circumstances. It is

important for the therapist to be careful not to respond immediately to their request for a magic solution. Being in a hurry for change and engaging too quickly in problem-solving undermines therapeutic alliance building and increases the probability of stopping therapy (Doane et al., 1991). The therapist will not be able to set up problem-solving in the relational system if there is no change in the family emotional climate. Parents will not be able to try new educational behaviors or practice if their emotional involvement is low (Dix, 1991; Liddle et al., 1998; Patterson & Chamberlain, 1994). However, the therapist can assist the parent's mentalization of the child's mind (Fonagy & Bateman, 2005) and describe to parents the opportunity to look at things from a different perspective (Sorensen, 2005). Nevertheless, the therapist also needs to modify parents' perception of video game and help them get out of a critical and negative perception. Indeed, criticism about gaming has two main consequences: it reinforces adolescent video game use and maintains the lack of communication. Communication cannot be reestablished if there is significant emotional distance between parent-adolescent and an emotional climate full of hostility and disappointment (Burke & Weir, 1978; Mann et al., 1990).

For the parents, reaching out and renewing communication is being able to meet the adolescent where he stands: in front of his screen, playing video games. This is not a peculiar challenge. Parents may feel that they are suppressing themselves and not feel at ease. Furthermore, video games distanced their adolescent from them. Prior to asking for change, parents need to discover what is really in their child's mind. Parents must talk with their adolescent about his video game and be interested in what he likes while he is playing. Parents usually mix up "showing an interest" and "liking it." The aim of talking about video games and being interested in them is not to love and become an expert in them but rather to get in touch and reconnect with their teenager. However, parents are extremely critical about video games and when they do this, the teenager withdraws because he feels poorly understood and rejected. Furthermore, adolescents generally do the opposite of what their parents advocate (this is a developmental logic; see Steinberg, 2004), so the more parents will criticize or even ban video games the more the teenager will play. Thus, parents must be skilled and recognize the positive aspects of video games. Indeed, this will allow parents to: (a) reestablish the communication with their teenager, (b) find a way to get to know him better, (c) see him in another light and change the (negative) perception of their adolescent, and (4) find a way to add value to their adolescent (who performs well in the game; Bonnaire, 2015). This work (along with other psychotherapeutic interventions) will contribute to move from an emotional climate full of negative emotions (e.g., anger, disappointment, fear of the future, and worries about schooling) to an emotional climate full of positive emotions (love, hope, pride, and kindness). This clinical challenge is an essential precondition before the prospect of change. Indeed, MDFT change mechanism studies (Diamond & Liddle, 1996; Henderson et al., 2010; Schmidt et al., 1996) have shown that improvements in developmentally consequential aspects of the family system (parenting

practices and more specifically negative parenting behaviors) are related to change at the critical level of interest – reduction of adolescent symptoms, including drug abuse.

CONCLUSIONS

Although acknowledging the early developmental stage of the specialty, systematic reviews on IGD treatments have specified several research needs. King et al. (2017) emphasized the paucity of well-designed treatment outcome studies and limited evidence for the effectiveness of any treatment modality. To date, no treatment for IGD meets the criteria for an evidence-based treatment. In line with this conclusion, Zajac et al. (2017) outline that no research has modeled IGD treatments on evidence-based treatments for adolescent SUD, for which the most effective are family-based. Our aim was to demonstrate the appropriateness of MDFT for IGD. One study on an intervention for Internet addiction showed that a multilevel treatment program that involved the adoption of a family perspective presented encouraging results in youth (Shek, Tang, & Lo, 2009). Consequently, one might think that family therapy and more specifically therapy with a multidimensional conception could be very promising. Initially designed for adolescents presenting SUD and recognized as an evidence-based treatment, MDFT appears as a relevant treatment model for adolescents presenting IGD. Given the well-established transdiagnostic empirical evidence of MDFT (Liddle, 2016a), and its track record and systematic methodology of adaptation to fit different treatment settings and treat a range of various clinical disorders, MDFT can be considered a viable option for IGD treatment. MDFT reflects a practical, flexible, adaptive, and widely transportable approach (Liddle, 2016a). Two ongoing studies in France and Switzerland are adapting the MDFT approach to IGD cases. We hope these projects can contribute to the urgent need for clinical knowledge in this specialty.

Finally, it seems important that clinicians be more involved in the process of building an effective therapy for IGD. As outlined by Hershenberg and Goldfried (2015), it remains crucial to continue to design research that incorporates the perspective and expertise of the clinician. From a holistic perspective, social, cognitive, emotional, and behavioral variables investigated at multiple levels of analysis should be used to refine existing interventions (Hershenberg & Goldfried, 2015).

Funding sources: None.

Authors' contribution: CB drafted the first version of the manuscript. All authors have corrected and provided suggestions to this first draft. It was sent back and forth with corrections several times between CB and the other authors. All authors agreed on the final version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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