

Effectiveness of CBT in Treating IGD

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ABSTRACT

Introduction- This investigation explores the role of Cognitive Behavioral Therapy (CBT) in treating Internet Gaming Disorder (IGD) among adolescents. IGD is defined as excessive and compulsive engagement in video games, leading to adverse impacts on one's life. According to the ICD-11, this condition is characterized by a consistent pattern of gaming behavior that significantly disrupts areas such as personal life, education and work over a period of at least 12 months. Symptoms include a lack of control over gaming, preference for gaming over other interests and persistent gaming despite adverse consequences. While IGD affects a minority of gamers, it's vital for players to monitor their gaming habits and the potential impact on their health and social lives. The DSM-5-TR categorizes IGD as a research condition, noting it causes significant distress or impairment in personal functioning. Symptoms include gaming preoccupation, withdrawal symptoms, tolerance, unsuccessful control attempts over gaming, loss of interest in other activities, continued gaming despite issues, lying about gaming extent, using gaming to relieve negative moods and risking significant relationships or opportunities due to gaming. Approaches to managing IGD include CBT, Family therapy, Mindfulness-based interventions, Support groups and Lifestyle changes. CBT is a psychotherapy aimed at identifying and modifying negative thoughts and behaviors causing distress. It is effective for various conditions, including anxiety, depression and PTSD. CBT emphasizes the interconnection between thoughts, feelings and behaviors, advocating for change in one aspect to affect the others. Its components include Cognitive, Behavioral, Goal-oriented, Evidence-based and Time-limited aspects. **Literature Review-** Various studies have demonstrated CBT's efficacy in treating IGD. Research from 2015 to 2023 indicates CBT is beneficial in reducing IGD symptoms, improving psychological well-being and enhancing social interaction. Studies have shown significant improvements by the eighth session of CBT, with sustained benefits at a 6-month follow-up. Comparative studies have found CBT superior to supportive therapy in addressing IGD symptoms, with added benefits in anxiety, impulsivity and social engagement. Moreover, the PIPATIC program has shown promising results in treating IGD and associated disorders, indicating that a broader therapeutic focus may enhance treatment effectiveness. **Methodology-** This systematic review assessed the efficacy of CBT in treating adolescent IGD from 2015 to 2023, including studies that specifically mentioned CBT, IGD/gaming disorder and adolescents within the specified timeframe. **Results-** The review of 15 studies revealed that adolescents can generally manage their IGD symptoms effectively through CBT, often showing significant progress by the eighth session. CBT has been found to have a robust evidence base, surpassing other therapies in treating gaming

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disorder. Improvements were observed in gaming addiction severity, psychological symptoms and social functioning. The PIPATIC program and CBT-IA highlight the adaptability of CBT approaches to meet the unique challenges of IGD and internet addiction, respectively. **Discussion-** This study highlights CBT's effectiveness in addressing IGD among adolescents, emphasizing the necessity of recognizing and treating this disorder. CBT's comprehensive approach, which addresses cognitive, behavioral and emotional aspects, proves to be a potent intervention for IGD. Furthermore, the adaptability of CBT, as seen in the PIPATIC program and CBT-IA, underscores its potential in treating a range of symptoms and promoting lasting behavioral change. **Conclusion-** This investigation confirms CBT's efficacy as a therapeutic intervention for IGD, underscoring its significance as a preferred treatment modality. While individual and group sessions have proven beneficial, further research is needed to explore CBT's long-term impact and its application within different cultural contexts, including India.

Keywords: CBT, IGD

This research focuses on evaluating the impact of Cognitive Behavioral Therapy (CBT) in treating Internet Gaming Disorder (IGD) among adolescents.

Internet Gaming Disorder (IGD)

It is characterised by excessive and compulsive engagement in video games, negatively affecting individuals' lives. According to the ICD-11, this disorder is marked by persistent gaming that significantly hinders functioning in personal, familial, social, educational, professional or other crucial areas for at least 12 months. Signs include a lack of control over gaming habits, a preference for gaming over other interests and persistent gaming despite its adverse effects. While only a minor segment of gamers experience IGD, gamers need to monitor their gaming time and the potential impact on their health and social lives.

The DSM-5-TR recognises IGD as a topic warranting more investigation, specifying that it must cause considerable distress or impairment in various life areas. Symptoms proposed include a fixation on gaming, withdrawal symptoms when gaming is not possible, a need for increased gaming time to achieve satisfaction, repeated unsuccessful efforts to curb gaming, a disinterest in other activities, persistence of gaming despite its negative consequences, lying about gaming extent, using gaming as an escape from negative feelings and risking or losing significant relationships or career opportunities due to gaming.

Potential Interventions for IGD:

- **Cognitive-behavioural therapy (CBT):** This method helps people recognise and modify detrimental thoughts and behaviours linked to gaming, enhancing coping mechanisms and problem-solving abilities.
- **Family therapy:** Engaging family members in the therapeutic process can address and modify family interactions, supporting the individual in positive lifestyle changes.
- **Mindfulness-based interventions:** Mindfulness meditation can heighten awareness of one's thoughts and feelings, manage stress and curtail impulsive gaming.
- **Establishing limits:** Creating definitive gaming schedules and balancing them with varied activities is crucial in managing IGD.
- **Support groups:** Participation in support groups or online forums for individuals facing similar issues offers essential encouragement and accountability.
- **Promoting healthy lifestyle changes:** Regular physical activity, social activities, hobbies and proper sleep and nutrition can diminish the urge for excessive gaming.

Cognitive Behavioral Therapy (CBT)

It is a therapeutic approach designed to assist individuals in recognising and altering detrimental thought and behaviour patterns that fuel their psychological distress. It is effectively employed across a spectrum of mental health issues, including anxiety, depression, PTSD and more. CBT operates on the principle that thoughts, emotions and actions are inter-linked, implying that modifying any of these aspects can influence the others.

Vital elements of CBT:

- **Cognitive aspect:** CBT guides participants in pinpointing harmful or inaccurate thought processes, termed cognitive distortions, exacerbating emotional turmoil. Such thought patterns often encompass irrational beliefs or exaggerating problems. CBT teaches people to question and reframe these thoughts into more balanced and constructive outlooks.
- **Behavioural aspect:** CBT aims to modify behaviours that perpetuate distress. This may include controlled exposure to anxiety-inducing scenarios (exposure therapy) or imparting specific skills to alleviate symptoms (for instance, relaxation exercises or problem-solving techniques).
- **Collaborative and Targeted approach:** CBT is a joint endeavour between the therapist and the client. They establish concrete, attainable objectives and advance toward them via organised sessions and practical assignments.
- **Evidence-supported:** CBT is one of the most thoroughly vetted and empirically validated psychotherapeutic methods. A wealth of research has validated its efficacy in managing numerous mental health challenges, either as a stand-alone treatment or in conjunction with medication and other therapies.
- **Time-bound:** Though the duration of therapy may vary based on individual circumstances and needs, CBT generally emphasises swift progress, aiming for noticeable improvement within a defined timeframe.

LITERATURE REVIEW

Research by Małgorzata Przepiorka and colleagues in 2015 explored the application of CBT in treating IA among adolescents, with a study group of 114 participants receiving CBT at a specialised centre. By the eighth session, a significant majority reported control over their initial complaints, a trend that persisted during a 6-month follow-up. Moreover, government initiatives have been introduced to combat this issue in countries like China and South Korea.

A 2016 study by Subrata Naskar and the team compared the impact of CBT and supportive therapy on IGD among adolescents. Participants were engaged in a fourteen-session CBT program. Results indicated superior outcomes for the CBT group across various metrics, including reductions in IGD symptoms and improvements in anxiety, impulsivity and social functionality. Thus, the study underscored CBT's relative efficacy over supportive therapy.

In 2017, Chou et al. embarked on assessing a CBT-centric intervention for gaming addiction in Taiwan with 100 diagnosed adolescents. Those in the CBT cohort underwent 12 individual therapy sessions, focusing on modifying gaming habits and enhancing coping mechanisms. Compared to the control group, they experienced notable declines in addiction severity and enhancements in mental health parameters, affirming CBT's effectiveness in addiction management.

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Daniel L King's 2017 systematic review scrutinised treatment literature for gaming disorder among adolescents, assessing 30 studies against the CONSORT 2010 standards. CBT emerged with a robust evidence base, surpassing other therapeutic approaches in documented efficacy.

Further, Kristyn Zajac's 2017 study demonstrated CBT's superiority in ameliorating IGD symptoms among adolescents through a fourteen-session regimen. The therapy notably addressed anxiety, impulsivity and familial harmony better than supportive alternatives.

The 2018 PIPATIC program study by Alexandra Torres-Rodríguez et al. evaluated specialised psychotherapy against standard CBT for adolescents with IGD. The study indicated the PIPATIC program's effectiveness in addressing IGD and comorbid issues, thereby suggesting a broader, integrative therapeutic focus might be more beneficial than CBT alone, although CBT also showed efficacy.

Gioia and Valentina Boursier (2019) reinforced CBT's potential for managing gaming disorder, emphasising its role in reducing related psychological issues, though calling for more research on long-term effects.

Matthew WR Stevens and colleagues in 2019 assessed CBT's impact on IGD, anxiety, depression and gaming duration among adolescents, with findings suggesting CBT's moderate success in mitigating anxiety and depressive symptoms for short-term.

Daniel L King's 2020 study further validated CBT's utility in treating gaming disorders among adolescents, focusing on a comprehensive fourteen-session protocol.

Georgekutty K Kuriala and Marc Eric S Reyes (2020) compared CBT to supportive therapy, finding CBT superior in improving IGD outcomes by addressing anxiety, impulsivity and social challenges.

Jiwon Han's 2020 research highlighted CBT's effectiveness in reducing IGD symptoms, internet addiction, anxiety, depression and social avoidance among adolescents, emphasising enhanced attention and family cohesion.

Kimberly S Young reviewed CBT for IA (CBT-IA) among adolescents in 2021, showcasing its success in symptom management and recovery maintenance and highlighting its adaptation to the internet's pervasive role.

In 2022, Paraskevi Lampropoulou's study further confirmed CBT's effectiveness over supportive therapy in treating adolescent IGD, noting significant improvements in critical psychological and social metrics.

Ramesh D. Navalagund's 2023 study underscored CBT's efficacy in addressing gaming disorder symptoms in Indian adolescents compared to supportive therapy, emphasising its role in managing anxiety, impulsivity and social avoidance.

In 2023, Yinan Ji and Daniel Fu Keung Wong discussed IGD's negative impacts on minors, including sleep and academic performance. They stressed the importance of early intervention, given the potential for exacerbating brain function abnormalities, the need for preventive care and the significance of family dynamics in treatment.

METHODOLOGY

This systematic review evaluated the existing literature on the efficacy of CBT in treating IGD among adolescents from 2015 to 2023. Studies selected for review included specific keywords—CBT, IGD/gaming disorder and adolescents—and to have been published from 2015 onward. Any studies lacking these keywords or published before 2015 were excluded from consideration.

RESULTS

Fifteen studies were identified as relevant, after applying the inclusion and exclusion criteria. Analysis of these studies yielded several key findings:

- Adolescents dealing with IA typically begin to see an improvement in their primary issues by the eighth CBT session, with these improvements being maintained at a 6-month follow-up.
- A 12-session CBT program, with each session lasting an hour, significantly reduces severity scores for gaming addiction. Additionally, participants showed notable improvements in depression, anxiety, coping skills, self-awareness and self-esteem.
- CBT is supported by a broader evidence base for the treatment of gaming disorder compared to other therapeutic approaches.
- The PIPATIC program has been shown to effectively treat IGD and related comorbid disorders/symptoms, enhancing intra and interpersonal skills as well as family relations. Altering the treatment focus and adopting an integrative approach offers more benefits in facilitating changes in adolescent behaviour than a CBT approach focused solely on IGD. Nonetheless, conventional CBT remains a valid treatment option for IGD.
- CBT serves as an effective short-term intervention for diminishing symptoms of IGD and depression.
- Programs comprising fourteen 90-minute CBT sessions, facilitated by a therapist for groups of four to five adolescents once or twice a week, yielded superior results in mitigating IGD symptoms compared to supportive therapy. These programs led to significant reductions in internet addiction, anxiety, depression, impulsivity and social avoidance while also improving attention and familial cohesion.
- CBT-IA, which integrates CBT with Harm Reduction Therapy (HRT) to specifically address the unique challenges of IA, has proven successful in treating severe cases of IA. Adolescents were able to manage their symptoms by the end of a 12-week therapy program and maintain recovery six months post-treatment.

DISCUSSION

This study aimed to explore the efficiency of Cognitive Behavioral Therapy (CBT) as a therapeutic intervention for Internet Gaming Disorder (IGD) in the adolescents. IGD is characterised by excessive and compulsive engagement in gaming activities to the extent that it disrupts daily functioning. It is marked by a lack of control over gaming habits, prioritisation of gaming above all other activities and persistent gaming in the face of adverse consequences. Gamers are encouraged to remain vigilant about their gaming duration and the potential impact on their physical, psychological and social well-being.

CBT, a psychotherapeutic approach, is aimed at assisting individuals in identifying and modifying detrimental thought patterns and behaviours that contribute to psychological distress. It is a well-regarded treatment for a variety of mental health issues, premised on the

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interconnectedness of thoughts, emotions and actions, and posits that alterations in any one domain can lead to changes in others.

Through a systematic review of 15 studies from 2015 to 2023, this analysis has established CBT as a potent short-term remedy for alleviating IGD and associated depressive manifestations, showcasing a broader evidence base compared to other therapeutic modalities.

The review highlights that most adolescents can address their primary complaints within 8-14 sessions of CBT (lasting between 60 to 90 minutes each) and maintain these gains at a six-month follow-up. These interventions, which can be administered individually or in small groups, have showed significant diminish in gaming addiction severity and foster enhancements in anxiety levels, coping mechanisms, self-awareness and self-esteem. Notably, they also contribute to improved attention spans and familial cohesion.

The PIPATIC initiative is recognised for its efficacy in treating IGD and its concurrent disorders/symptoms, with a particular emphasis on enhancing personal and interpersonal skills and family dynamics. An integrative treatment approach, shifting focus from solely IGD to a broader behavioural change perspective, has proven more efficacious than traditional CBT methodologies targeting only the disorder. Additionally, CBT-IA, integrating CBT with Harm Reduction Therapy (HRT), addresses the distinctive aspects of IA, proving particularly effective in managing severe cases.

CONCLUSION

This study's objective was to scrutinise the effectiveness of CBT as a treatment for gaming disorder, reviewing 15 relevant studies spanning from 2015 to 2023. The findings affirm CBT's utility as a therapeutic strategy for IGD, noting variability in session numbers and lengths based on the disorder's severity. Both individual and group therapy formats have evidenced significant reductions in anxiety, impulsivity and social avoidance behaviours. However, further investigations are warranted to ascertain the long-term efficacy of CBT on IGD, particularly within the Indian context. Enhancement is required over our understanding of and treatment approaches for this emerging challenge.

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Conflict of Interest

The author(s) declared no conflict of interest.

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