



Screening, Brief Intervention, and Referral to Treatment Model Based on ICD-11 Criteria of Gaming Disorder and Hazardous Gaming During the COVID-19 Pandemic

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Abstract

Purpose of Review This commentary aimed to propose the screening, brief intervention, and referral to treatment (SBIRT) model for gaming disorder (GD) and hazardous gaming (HG) on the basis of the International Classification of Disease, 11th version (ICD-11) classification.

Recent Findings COVID-19 and its preventive measures increase the risk of GD and the treatment needs could exceed the capacities of mental health systems. Brief intervention could be provided for adolescents with HG after screening. Psychiatrists make diagnoses of GD or HG and then refer them to school counselors, specialized psychologists, or integrated teams based on the severity, comorbidity, and complication of GD.

Summary The classification of GD and HG was suitable to develop a SBIRT model intervention. The SBIRT should work through the shortage of resources and provide a brief intervention guild to make it practical.

Keywords COVID-19 · Gaming disorder · Hazardous gaming · SBIRT · Adolescents · Collaborative network

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Introduction

Coronavirus disease 2019 (COVID-19) has changed the daily routine of individuals worldwide since December 31, 2019. The social interaction and outdoor activities of children and adolescents had to be limited following the closing of schools and implementation of lockdown as prevention measures [1]. The popularity of gaming and eSports increased throughout the first half of 2020 because they satisfied people's need to interact with others for fun [2]. However, excessive gaming can result in physical and mental health problems, such as gaming disorder (GD) [3•]. Stress, the economic crisis, the busyness of parents, and social restrictions under the pandemic may have increased the risk of GD. However, mental health resources may be limited during this difficult time. Therefore, a divided schedule to provide practical evaluation and early intervention for GD during the COVID pandemic was necessary.

The International Classification of Disease, 11th version (ICD 11) defined GD as one of the addictive disorders in 2019 [4] on the basis of clinical evidence and public health needs [5]. It had several advancements. First, negative consequences (criterion 3) and functional impairment were employed as required criteria. Thereafter, dysregulated

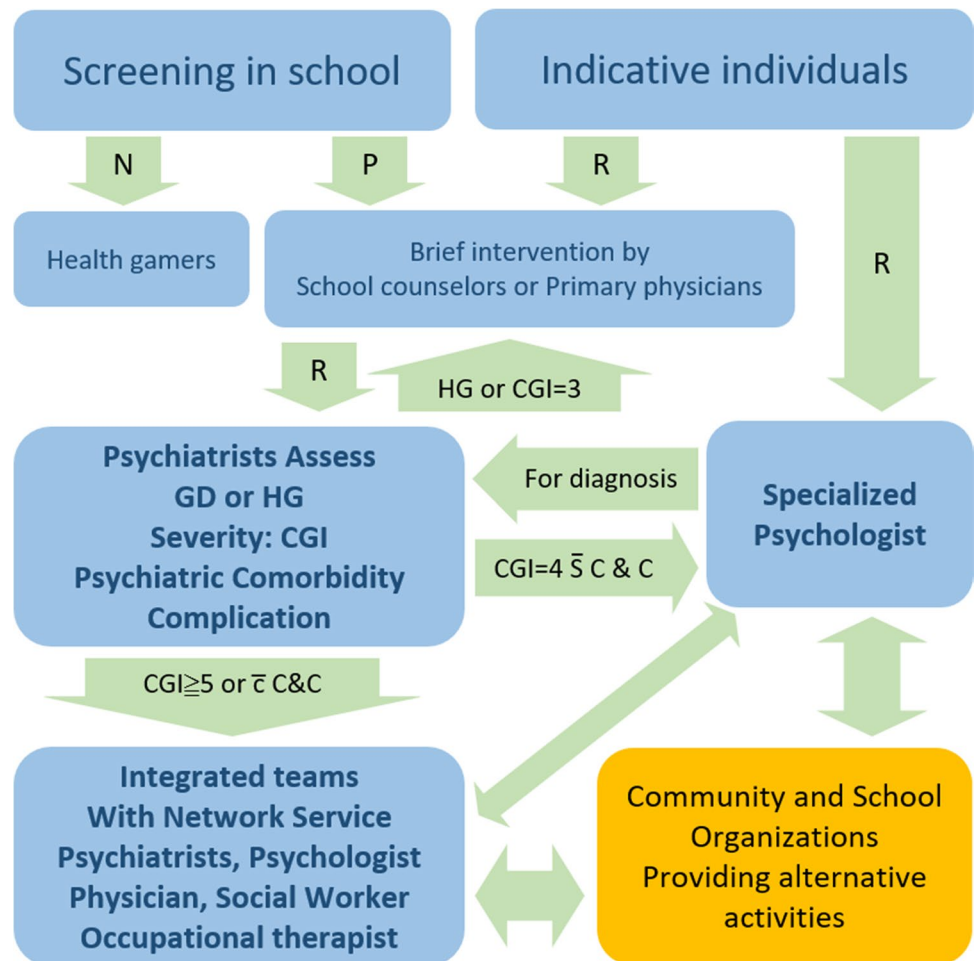
gaming, a core presentation of addictive disorder, and increased priority of gaming, a key factor impairing daily function, were established as required criteria (1 and 2). Because all criteria had to be met, a higher diagnostic threshold was achieved [3•], minimizing the risk of over-diagnosis. Furthermore, time was saved because only three criteria and functional impairments had to be checked. Furthermore, additional clinical features, such as comorbidity and differential diagnosis, were also provided to improve the clinical utility of ICD-11 GD criteria [4].

Aside of GD, ICD-11 defined hazardous gaming (HG) as excessive gamers with a risk of mental or physical health issues, under “Problems associated with health behaviors” [6]. Thus, it is a definition of problems in health behavior, but not a disease. HG criteria could identify individuals at risk of developing GD and compensate for the false negatives obtained using the GD criteria. The classifications in GD, HG, and healthy gaming could be favorably implemented in preventive and intervention programs [7•].

The screening, brief intervention, and referral to treatment (SBIRT) model employed for alcohol use disorder has been reported to decrease alcohol use and negative consequences

[8]. We proposed the SBIRT model of GD based on the ICD-11 diagnostic system and implement it in the policy of intervention in Kaohsiung city (Fig. 1). When adolescents are screened positive for any gaming-related harmful physical or mental health consequences, such as depression, delayed sleep, immobilization, or social difficulty [3•], they should be briefly intervened by the primary teacher, school guidance counselor, or primary physicians for their HG. According to WHO training guidelines on alcohol-related brief interventions (BIs), adolescents should be dealt with by adopting an empathetic, person-centered, and strength-based approach to trigger the motivation to change. The assessment of common negative physical consequences, such as insomnia and obesity [3•], offers a means of ensuring continual talk for promoting adolescents’ motivation. Further suggestions focused on sleep hygiene and exercise under healthy gaming can be more smoothly and effectively implemented than promoting gaming abstinence. Moreover, parents of at-risk adolescents should be briefly educated on regulating and monitoring their children’s gaming, including turning off the Wi-Fi to prevent midnight gaming. Social interaction or peer activities, such as summer camp activities

Fig. 1 Screening, brief intervention, and referral to treatment model based on ICD-11 criteria of gaming disorder and hazardous gaming. Foot notes; N, negative in screening; P, positive in screening; R, referring; HG, hazardous gaming; GD, gaming disorder; CGI, clinical global impression; C & C, comorbidity and complication



[9], should be promoted to substitute for excessive gaming behavior. Furthermore, adolescents at risk of GD should be referred to psychiatrists for further diagnosis according to the resource list provided by the health department of Kaohsiung City Government. These resource lists include the department of child and adolescent psychiatry or addiction psychiatry of medical centers, psychiatric hospitals, and municipal hospitals. The psychiatrist should determine the diagnosis of GD or HG and its severity based on clinical global impression (CGI) [10].

Those diagnosed with HG or mild GD (CGI = 3; with mild, limited, or short-term functional impairment) can be referred back to school counselors for a motivational intervention, BI, or environmental intervention to prevent its progression. Those with moderate GD without complications (CGI = 4; functional impairment is moderate in one field of academic, social, work, or health) can be referred to a specialized psychologist in a clinic or hospital for the administration of cognitive therapy focused on behavior modification, cognitive restructuring, and harm reduction, as suggested by Young and Brand [11]. Those with severe GD symptoms (CGI \geq 5; moderate functional impairment in multiple dimensions), psychiatric comorbidities such as attention deficit hyperactivity disorder or depressive disorder, or physical complications such as insomnia, delayed sleep phase disorder, or obesity [3•] should be managed by psychiatrists who can organize and integrate mental health and medical resources to adopt a bio-psycho-social approach to fit the individual's treatment needs.

We experience several challenges that should be overcome before the SBIRT model for GD can be employed in the COVID-19 pandemic. First is the shortage in treatment resources. The COVID-19 pandemic mediated the association between depression, anxiety, and GD in a prospective study [12]. Its stress is associated with GD through the effect of social support [13]. Since social restriction is critical in preventing spreading of COVID-19, social gaming and social media were used to mitigate the stress associated with these restrictions [14]. However, social isolation and loneliness also predispose GD during pandemic through depression or anxiety [15, 16]. Thus, King et al. reported that gaming increased during COVID-19 pandemic and the need for treatment of GD increased and exceeded the capacity of mental health provided [17••].

On the other hand, mental health professionals need to participate in the preventive work of COVID-19 and its mental health work. Although the problems with excessive gaming might be covered by social restrictions, such as gaming in the online class, the problems are present when the restriction had been relieved in many countries now. More mental health resources should be provided for these treatment needs. However, Dullur et al. reported that only 16.3% of psychiatrists felt confident in managing GD [18].

As GD is firstly recruited as an official diagnosis in ICD-11 in 2019 and COVID-19 outbreak on December 1, 2019, the training programs had been limited after that time. Thus, workshops or treatment guidelines focused on GD should be provided as soon as possible when the restriction had been relieved. Taiwan Association for Prevention and Treatment of Internet Addiction has just proposed the first edition of treatment guild of internet addiction under the program of Ministry of Health and Welfare. As the limitation in resources now [17••], the schools, clinics, and hospitals should be integrated into a team to divide the work with efficiency.

Second, considering a BI is the key step in engaging individuals with GD, a practical training manual should be provided to develop an effective BI. The practical manual might also benefit the training for mental health providers. Third, a screening tool, such as the Chen Internet Addiction Scale—Gaming Version [10] or the Ten-Item Internet Gaming Disorder Test [19], should be employed to determine whether an individual should be referred to a psychiatrist. Furthermore, the screening tool for mental and physical risks of GD, such as irritability, delay in sleep, or immobilization, should be developed for the preventive intervention of HG, particularly for those who lack insight into their gaming behavior. Fourth, a consensus on CGI rating should be reached through empirical evidence [3•, 10] to efficiently determine the necessary treatment resources and to prevent overburdening individual resources.

Conclusion

The ICD-11 proposes the criteria of GD and HG based on a public mental health approach to develop intervention and prevention for GD [4]. The SBIRT model can be implemented based on the ICD-11 diagnostic system. This model could provide an efficient distribution system for transferring patients into a collaborative network comprising a school, clinic, and hospital services. The treatment resource network shall be developed and trained as soon as possible when the restriction for COVID-19 is about to relieve.

Author Contribution Ju-Yu Yen writes the draft; Susumu Higuchi revised it critically for important intellectual content; Shu-Fang Su contributes to the conception of the treatment model; Chih-Hung Ko designed this work and approved the final version of the manuscript.

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Declarations

Competing Interests The authors declare no competing interests.

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Papers of particular interest, published recently, have been highlighted as:

- Of importance
- Of major importance

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