Submission to review of Online Safety Act 2021

June 2024

Introduction

This submission contains extensive research-based information about Gaming Disorder and related conditions, and the associated risks and harms. Using that information, it argues for changes to the *Online Safety Act* to contribute to the acknowledgement and prevention of such conditions. In particular, it identifies a need to address the influence of gaming technologies on human decision-making and behaviour, including the area of persuasive design in online games and social media; and suggests a duty of care as one way of protecting users, particularly more vulnerable groups such as children and adolescents. It is also submitted that the Act should mandate the eSafety Commissioner to liaise and partner with professionals and bodies with the requisite skills and knowledge to assess the role of online services in Gaming Disorder and related conditions.

About AGASA

The Australian Gaming and Screens Alliance (AGASA) is a group of academics and health practitioners with substantial expertise and experience in the field of screen and gaming disorders, including several world experts in the field and members who have served on WHO committees investigating gaming disorders. AGASA is a Health Promotion Charity registered with the Australian Charities and Not-for-Profits Commission (ACNC). It seeks to advance health by:

a) promoting the monitoring, prevention, control and treatment of problem gaming and gaming disorder and related technology- and screen-based behavioural addictions and disorders;

b) providing evidence-based, multi-disciplinary information and advice to support individuals, families and schools in the diagnosis, prevention, control and treatment of gaming disorder and related technology- and screen-based behavioural addictions and disorders, and to promote healthy gaming and the use of related technologies;

c) raising public awareness about harmful gaming and the symptoms of gaming disorder and related technology- and screen-based behavioural addictions and disorders, including how to identify problematic gaming and screen-based activities that involve risks and may lead to such disorders; and

d) raising public awareness about how to harness the healthy use of technology and avoid harmful use with a view to preventing the occurrence of gaming disorder and related technology and screen-based behavioural addiction.

In this submission, AGASA provides evidence-based multidisciplinary information and advice as part of its advocacy for healthy public policy in service of the goals mentioned above.

Online harms not explicitly captured

Term of Reference 4 asks '[w]hether additional arrangements are warranted to address online harms not explicitly captured under the existing statutory schemes' and provides an indicative list of online harms that are not yet, but could be, covered by the Act. The list is further elaborated in Part 6 of the Issues Paper.

It is clear that the *Online Safety Act*, in its current incarnation, is focussed on screen-based material that is overtly harmful, including various forms of bullying, harassment and sexual content. AGASA is concerned about all these forms of inappropriate material, but to date our major priority, and therefore the matter on which we have greatest expertise, is the risks and harms to the public from excessive involvement with online activities and consequent addiction-like disorders, as manifested in Gaming Disorder and related conditions. This extends to gaming behaviours that encompass financial risks that might be considered 'gambling-like', such as the risks associated with online purchases of virtual currency or items (e.g., loot boxes).

In this section we provide extensive information to support our submission that the *Online Safety Act* should recognise those risks, harms and conditions as a kind of online harm alongside those from the kinds of material just mentioned. Specifically, the Act should reflect an acknowledgement that children and teenagers are at particular risk of these harms. Such an acknowledgement would not only form the foundations for direct measures to mitigate risk and harm, but open up a much-needed conversation in government about education, research, prevention, harm minimization and treatment.

There are two official screen disorder diagnoses, all to do with gaming:

- 6C51 **Gaming Disorder (GD)** as defined in the World Health Organisation's International Classification of Diseases, Eleventh Revision (ICD-11), published in 2022. The diagnostic criteria are very similar to Gambling Disorder (6C50). Prior to this, in May 2019 the World Health Assembly, comprising the Ministers of Health and the Directors-General of Health from 200 WHO/UN countries, approved the revision to the ICD including Gaming Disorder. There was debate about this, but the vote was unanimously in favour.
- **Internet Gaming Disorder (IGD)** in a section of the DSM-5 TR (American Psychiatric Association) for disorders requiring further research. The criteria are somewhat broader than Gaming Disorder but there is considerable crossover. There are analogies with DSM criteria for Gambling Disorder and considerable crossover with symptoms for substance use disorders.

In addition, in ICD-11 Hazardous Gaming is listed as a health risk factor for subclinical but problematic use.

It is clear that Gaming Disorders share most of the features of addiction to psychoactive substances, as well as the neurobiological changes that result in the "internal driving force" of addiction (quite separate to the cognitive impairments that may result).

Such disorders cause harmful changes to brain structure and function, notably:

- loss of grey matter in key areas such as the frontal lobes, which house the executive functions (inhibitory control of behaviours, emotions and attention; working memory; flexible thinking; and higher order functions such as planning and complex problem solving);
- Changes to temporoparietal regions (associated with attention processes and self-concepts);
- Changes to frontolimbic and subcortical regions (connected to emotion regulation and reward processing);
- instability of white matter, which is crucial to efficient brain function and connectivity;
- Reduced interhemispheric connectivity and altered network activity;
- changes to the brain reward system similar to those found in other addictions; and
- loss of cognitive function (e.g., see Mestre-Bach et al., 2023; Moshel et al.,. 2023; Schettler et al., 2022, Yao et al., 2017).

The recent meta-analysis of cognitive function in screen disordered versus normal people found loss of function across the board with the biggest losses to attention/focus and executive function, and with effects for problematic/disordered use of social media, internet and phones, not just video games (Moshel et al., 2023; see also Neophytou et al 2021).

These brain structure and function changes are similar to those found in other addictions; as Kuss et al noted:

> The included studies suggest that compared to healthy controls, gaming addicts have poorer response-inhibition and emotion regulation, impaired prefrontal cortex (PFC) functioning and cognitive control, poorer working memory and decision-making capabilities, decreased visual and auditory functioning, and a deficiency in their neuronal reward system, similar to those found in individuals with substance-related addictions. (Kuss et al, 2018, page 10)

AGASA members who have encountered screen disorders clinically have seen extreme examples of those disorders creating havoc in the lives of those with the disorder and those around them. The negative impacts in key areas of life include:

- school refusal, including cases of missing years of school, as well as poorer academic results;
- reduced sleep and consequent effects on mental health, functioning and schoolwork;
- behavioural problems including aggression and violence (at times requiring police intervention), as well as emotion dysregulation;
- mental health problems such as depression, anxiety and suicidality (Saunders et al., 2017);
- low self-esteem and a loss of confidence to negotiate the offline world;
- a range of physical health problems including heart rate variability, poor dietary habits and obesity, lower bone density, musculo-skeletal problems, headaches and vision problems;
- negative effects on social and emotional development (e.g., see Marshall et al., 2022; Neophytou et al., 2021; Warburton et al, 2024).

Gaming Disorders (GD, IGD) both have a significant prevalence in teens, although there is more prevalence research for IGD (and more research generally), because IGD has been a diagnosable disorder for substantially longer.

Worldwide prevalence for GD was recently estimated at 3.3% (Kim et al., 2022), and for IGD at 3.05% (Stevens et al., 2021). In the last Australian study to publish IGD prevalence, it was 2.8% (Warburton et al., 2022). Recent Australian studies, including forthcoming papers on the latest data, find higher rates, and in particular higher rates of 'smartphone addiction'. It is also estimated that 10% or more of teenagers in total have some form of problematic screen use, whether it is disordered (clinical) or at hazardous but sub-clinical levels. Problematic screen use typically involves levels of screen use having a substantial negative impact on one or more important areas of life such as schooling, relationships or mental or physical health. The 10% estimate is based on earlier studies finding rates of 8% and 5-10% in Australia (Porter et al., 2010; Tam & Walter 2013) and 8.5% in the US (e.g., Gentile, 2009), and other indicators likely to suggest increased prevalence since then. These include the growth in screen disorder prevalence during COVID-19 lockdowns, an increase in the sophistication of persuasive design elements in screen products and technology designed to keep people at screens at unhealthy levels, and unpublished findings in Australia showing higher rates than 10% for both problematic gaming and problematic phone use.

Some groups are more vulnerable than others, most notably neurodiverse people, and recent longitudinal studies find that screen-based disorders tend to persist across development in many young adults unless treated (Coyne et al., 2020).

Thus, problematic screen use and screen disorders need to be taken seriously as a potential online harm from emerging technologies. They are a relatively new and rapidly growing phenomenon, and we can expect that future games will have more addictive elements and be concomitantly more harmful. Yet knowledge, identification, treatment and legislation are growing more slowly. AGASA welcomes the opportunity that this review presents to catch up.

Addressing persuasive design

Persuasive design is an important component of the development of online games, and consistently involved in disordered gaming risk. It uses psychology and neuroscience to increase the degree of user engagement with the product and the length of time spent consuming it. Others refer to the "game architecture" or the structural elements of games. All of these elements seek to keep people at screens at levels that can be problematic, addictive and/or disordered. As the degree of engagement seems to equate with the degree of addiction potential, AGASA submits that these matters should be regulated under the Act.

Persuasive design in gaming typically involves four predominant elements:

1. **Presence/Telepresence:** This refers to the extent to which individuals experience the virtual environment as real, creating a feeling of actually being present within it.

2. **Online Flow** (Gaming Flow): This involves the structured progression of game challenges and demands, where the difficulty increases in line with the player's skill level. This ensures that players remain engaged by constantly feeling challenged. If the game demands significantly

exceed the player's skills, it can lead to distress and disengagement. Conversely, if the game demands are too low, players may become bored and disengage.

3. **User-Avatar-Bond:** Customization options allow players to merge with their avatars through:

   - **Identification:** Players perceive themselves as their avatars.
   - **Immersion:** Players experience their avatar's needs as their own, often prioritizing them over real-life needs.
   - **Compensation/Idealization:** Players create avatars that embody qualities or possessions they aspire to have in real life.

4. **Machine Learning AI:** This technology tracks player data to personalize the game interface, enhancing engagement. However, this personalization can sometimes lead to over-engagement or disordered engagement.

It should also be noted that the human reward system typically has a brake for reward seeking behaviours: on reaching a point of satisfaction, GABA release reduces dopamine (a neurotransmitter that, among other things, is linked to reward seeking behaviour) and the neurotransmitter serotonin is released, facilitating a sense of contentment and satisfaction that reduces the urge to seek pleasure. Screen-based products typically are designed to facilitate ongoing dopamine release with frequent small rewards that keep users at the screen, but to never let the user reach the point of closure or satisfaction that would cause them to leave the screen.

These elements should be considered in forming the core of regulations. Gamers/consumers have the right to be aware/informed about the features of the products/games they are consuming and how these may prolong their usage. If deemed necessary the use of certain mechanics such as ML AI to amplify engagement should be considered to be regulated.

AGASA draws your attention also to current research aiming to establish a scale (SHARP-G) that would quantify the risk of developing problematic/addictive gaming by taking into consideration and rating the relevant structural features of games and gaming (Kim et al, 2024). Features identified include loot boxes, collectables, guilds and leaderboards. While the scale is yet to be validated, it represents an important step in beginning to answer the key question of what it is that makes some games addictive. AGASA notes the applications of SHARP-G noted by the authors, and building on their suggestions (p. 11) makes the following recommendations:

> The SHARP-G scale is potentially a helpful tool that could be used to identify elements of games that could be more harmful. Using such instruments, the gaming industry *might be required to provide "addiction ratings" for their games* and to update these ratings for each new version of their games. Furthermore, from a policy-level, such indicators could be used to regulate the gaming industry through *more stringent taxing for games with higher addictive risks*. Taxes for higher-risk games or games with gambling-like elements could be used to support health research initiatives, in the same way that taxes on Casino revenues are used to fund health initiatives for problem gamblers. Consequently, a tax system could financially support prevention and intervention programs. By applying high-level pressure to promote non-addictive gameplay, regulators could *compel the industry and developers to modify specific structural characteristics of their games*—including gambling-like features— to make them less addictive. Finally, *independent bodies dedicated to overseeing and regulating the gaming sector could be established* to circumvent customer exploitation.

AGASA commends the incorporation of these ideas into Australian law.

Regulatory arrangements, tools and powers

ToR 5 asks '[w]hether the regulatory arrangements, tools and powers available to the eSafety Commissioner should be amended and/or simplified through consideration of the introduction of a duty of care requirement towards users and ensuring industry acts in the best interests of the child.'

AGASA notes that the arrangements, tools and powers were not designed for the new phenomenon of problem gaming, including Gaming Disorder. The introduction of a duty of care to protect the best interests of addicted persons (often adolescents) may be an appropriate response.

Penalties, roles, responsibilities and powers

ToRs 6 and 7 address:

> 6) Whether penalties should apply to a broader range of circumstances.
> 7) Whether the current scope of the eSafety Commissioner's roles and responsibilities and the information gathering powers, investigative powers, enforcement powers, civil penalties or disclosure of information provisions should be amended.

In our view it will be necessary to broaden the application of penalties and to extend the eSafety Commissioner's roles, responsibilities and powers to fashion appropriate and effective protections for people suffering with Gaming Disorder and other screen addictions.

Harm prevention: online safety education and promotion

The only meaningful reference in the Issues Paper to harms associated with disordered gaming and addiction is the reference to the eSafety Commissioner's published research into the "risks and benefits of online gaming for children and young people" (page 31, under 'Online safety promotion'). Although this report is intended to educate parents about both risks and benefits of gaming, and notes a range of benefits for gamers, it does not address a range of issues AGASA believes are important, and notes in it's limitations section that the research did not address 'fraud, scams, malware, viruses[,] age-inappropriate gambling content [or] "internet gaming disorder"' and that 'research into psychological harms and online gaming is best conducted by an agency or institution with the requisite clinical expertise to design and conduct this research in a robust and safe manner'. In this context, it appears that issues around the harms of screen disorders and problematic screen use are 'slipping through the cracks'. AGASA would argue that the remit of bodies like the Office of the eSafety Commissioner need to be widened to include such harms, and that such bodies should be required to partner with professional associations with the qualifications and experience to do this.

AGASA would also like to comment on the prevalence, in research by the Office of the eSafety Commissioner, of young people's views on gaming and other media. While we acknowledge that a child rights approach requires the inclusion of the voice of children and young people, a fully rounded approach would give at least equal weight to the views of parents and the findings of objective scientific and clinical research in the field. It may be appropriate to include such a mandate in the Act's description of the Commissioner's powers and responsibilities.

Other measures

While the following proposals are outside the remit of the *Online Safety Act* as currently conceived, AGASA wishes to put forward a vision where legislation can address comprehensively the risks and harms associated with use of online services. These are some of the measures that we believe such a vision would incorporate.

Warnings on harm and limits on advertising

Online gaming should be seen in a similar light to other addictive products and activities that pose a risk to public health. This could lead to the attachment of warnings on the general risk of harm and warnings at key points in the course of gaming; for example after a certain period of continuous play. Warnings could also be used to make consumers aware of the key elements of persuasive design described above and the risks that these elements pose, similar to all other **consumer products,** and in line with informed consent considerations.

Similarly, limits on advertising could be fashioned to place restrictions on the promotion of games carrying features that heighten the risk of addiction or problematic use.

A national surveillance monitoring system

This could follow the structure of the Treatment Demand Index applied throughout the EU to monitor new treatment-demand cases regarding traditional forms of addictions. This protocol involves the prevalence and incidence of treatment seeker cases per different geographical regions and guides the allocation of funding to timely address emerging rises. It could inform other measures such as regulations, taxes, warnings on harm and limits on advertising.

Standardised evidence-based interventions

Legislation could mandate harm minimisation initiatives similar to those used for gambling, such as limit-setting, personalised messaging and pop-up reminders. Key to the success of these would be good quality health information, which could be derived from household-, school- and college-based and mobile phone surveys. These could build on instruments developed in other countries or for other purposes (e.g.,for smoking, alcohol use or suicide and self-harm). The online gaming industry has detailed player account data which could be utilised to track online behaviour and identify where harm is potentially occurring.

Establishment of specialist services

AGASA would support the establishment throughout the country of specialist services following the model of the gaming disorder clinic at Fiona Stanley Hospital, WA. This is the first outpatient clinic for gaming disorder, hazardous gaming, social media addiction etc in a public hospital in Australia, and soon it will be integrated with an inpatient unit for behavioural addictions.

AGASA note that Australia lags far behind many other countries in this regard. This view is shared by the Victorian Coroner Pareda Spanos in their 2022 report on the suicide-death of a 13 year old boy with an apparent gaming disorder. In addressing services and public health responses in Australia related to gaming disorders, Coroner Spanos noted:

> 86. Comparatively, Australia has not acted as proactively as other nations and actions and policy are not informed by local information or standardised. Most education and information for intervention in preventing unsafe adolescent and young adult gaming use is aimed at parents and is focused on privacy and security and not psychological harms.

> 87. Furthermore, there are no specially public funded services specific to gaming disorder and/or its prevention in Australia. Professional help is also not standardised and much of it is linked to gambling or addiction services or is promoted by private practitioners as a speciality area of practice

> 89. There is therefore a need to increase the commitment to research to establish the prevalence and incidence of gaming disorders and unhealthy internet use and to expand current advice and intervention information to include a standardised approach to the prevention of behaviours that may contribute to the development of psychological harms and a gaming disorder.

This dearth of specialised screen disorder services in Australia contrasts poorly to several neighbouring countries in the Asia-Pacific region that have dozens of specialised clinics (e.g., 80 or more in Japan alone) and to services in many other developed countries.

Teaching materials

There is a dire need for training of professionals around the country in diagnosing and treating screen use disorders, and where appropriate referring clients to appropriate services. This depends on the development of appropriate teaching materials, which would in turn require an appropriate process to ensure quality and rigour. We refer once again to the points above about the need to partner with qualified and experienced professionals and researchers, which apply equally here.

Cost recovery

ToR 10 asks '[w]hether it would be appropriate to cost recover from industry for eSafety's regulatory activities'. AGASA notes that gaming is a multi-billion dollar worldwide industry which can easily fund monitoring, educational and regulatory activities.

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