

Mental Health in the Digital Space: Key Lessons From a Cross-Sector Approach

Gino A. Mortillaro, MD, Erika Bonnevie, MA

Before the COVID-19 pandemic, almost half of adolescents reported living with a mental health condition;¹ the COVID-19 pandemic exacerbated the need and led to the current state of emergency in children's mental health.² There is a need for new approaches that meet young adults where they are, with messaging that aligns with ways in which they consume information.

Esports (from "e-sports") represent a promising yet under-researched environment to deliver mental health interventions. Esports are competitive video games played in organized environments and watched by fans, mimicking aspects of traditional sports. The global esports audience is estimated to total 577 million by 2024.³ Digital interventions and gaming are potentially effective, relatively inexpensive, and accessible avenues to promote positive mental health among young adults.⁴⁻⁶ Four pillars have been cited to maximize the impact of mental health interventions within gaming: user-centered design and approaches; sustained user engagement; cross-sector collaboration on development, testing, and implementation; and measurement of effectiveness.⁷ In 2020, Kaiser Permanente (KP) partnered with esports organization Cloud9 to create Presence of Mind, the first mental health initiative embedded into pre-existing professional esports networks. The initiative integrates each of the four pillars into its activities, with the goal of supporting the mental health of 14- to 25-year-old esports fans. We will summarize Presence of Mind's first year of implementation and comment on lessons we learned toward optimizing health interventions that impact youth.

Presence of Mind Implementation

Presence of Mind is rooted in cross-sector collaboration, as a collaborative venture between Kaiser Permanente and professional esports organization Cloud9. Leveraging their joint expertise, educational and interactive multimedia content was created to ensure clinically

approved resources were delivered to esports players and fans in genuine and engaging ways, where they already interact with one another. Messaging focused on mental health education and sharing of vetted resources. Content was developed collaboratively with clinicians from Kaiser Permanente and notable esports players, and was delivered through interactive videos, social media content, a live Twitch stream series, and trainings for esports moderators on managing and responding to mental health issues during gameplay. Presence of Mind also partnered with ten nationally recognized youth mental health nonprofit organizations.

After the first year of implementation, there were nearly 7 million views of content on YouTube, 57K Twitch Stream Series episode views, 51,232 viewers completed a mental health training, and there were 37.8K visitors to the Presence of Mind website (findyourwords.org/presence-of-mind). There were 11 million impressions (number of times content is displayed to users) on a week-long December 2021 social media takeover (a coordinated partnership with 10 influential gaming streamers, musician, and KP clinicians who filmed short videos), and 9 million impressions on an October 2021 Twitter Chat (KP clinicians and subject matter experts answered submitted questions from gamers). Finally, effectiveness was evaluated through a quasi-experimental longitudinal study conducted by external evaluator the Public Good Projects (PGP) measuring mental health-related knowledge, attitudes, and intended behaviors. Results showed that gamers who had engaged with the initiative had significantly better attitudes toward mental health and the gaming community, compared to those who had not engaged with the initiative.⁸ In particular, those engaged were twice as likely to agree that there has been an improvement in the way the esports community deals with mental health, compared to those not engaged.

Key Lessons

We gleaned key lessons we believe are critical to support future efforts to positively engage gamers in mental health-related initiatives:

LESSON #1: Accuracy and Authenticity Are Equally Important.

Balancing accurate information with a genuine approach is key to successful delivery. As health professionals, we often focus on the accuracy of health messages, yet communicating that information authentically is essential and should be prioritized in the creation of health programs. Presence of Mind leveraged the expertise of clinicians and esports athletes to deliver accurate clinical content embedded within user-centered esports environments that resonated with young adult gamers. The initiative was guided by people with intimate knowledge of the esports community, meeting young gamers where they are. We believe that this was a critical factor in the program's success and high digital metrics.

LESSON #2: Plan for Multiple Engagement Tactics to Encourage Sustained User Engagement and Learning.

By adopting multiple activities, a program can encourage multiple engagements with the same program over time, while also strategically planning for the different ways that people learn. For example, Presence of Mind activities were created to acknowledge the fact that visual learners may find value in watching a stream series with personalities that they already follow in the gaming world, whereas more academic learners may prefer taking a training course that includes scenarios that are relevant to their lives. This strategy also allows for iteration on activities: multiple engagement strategies provide the ability to use real-time digital metrics to understand which tactics are most engaging, allowing resources for less engaging tactics to be redirected.

LESSON #3: Acknowledge and Address Shortcomings.

Curbing toxic gaming (when gamers negatively impact a game intentionally) is a pervasive challenge in the esports community. When possible, it is important to address the shortcomings of an environment head on, even if it may not directly relate to the program goal. Toxicity has negative impacts on mental health and was addressed by Presence of Mind in various ways: the initiative included education on defining and reducing use of stigmatizing language and helping players to identify the groups affected by, and the negative effects of, common gamer insults (many of which are slights and insults against LGB+ /TGNB+, female, differently abled, and neurodiverse populations). In addition, Presence of Mind developed training for game moderators to help them learn how to set boundaries on toxic players and provide resources for gamers who need support.

LESSON #4: Rigorous Evaluation is Critical. Evaluation was a priority for all partners.

Throughout the year, PGP consulted with Kaiser Permanente and Cloud9 to align evaluation methods with the initiative. Oftentimes, rigorous evaluation is considered a “nice to have” element, particularly for a digital campaign with the potential to collect impressive metrics. However, by employing a quasi-experimental design modeled after other gold standard evaluations of mental health initiatives, we now have a more holistic understanding of shifts in knowledge, attitudes and behaviors, which digital metrics alone cannot provide.

The Future of Health Initiatives

We need to raise the bar on the way we design and implement health initiatives and acknowledge that siloed work is likely to produce limited impact. This is particularly true for programs that target young adult digital natives, who have high expectations and can often recognize when content originates from outside their community. Presence of Mind was created by and for young gamers, by partnering with esports communities and embedding activities within pre-existing networks. Health initiatives need to evolve with their target audiences. As healthcare and public health professionals, it is critical to acknowledge both our expertise as well as our shortcomings and rely on a collaboration of cross-sector experts—in our case, within healthcare, esports, and public health. We believe there remains a largely untapped potential to mirror this model in other sectors (eg, by partnering with sports or music industries), or for other critical health topics that often affect young adults (eg, substance use). Sharing lessons learned from innovative and accessible programs is key to both manage the current youth mental health crisis and guide the continued development of new health promotion approaches.

Take Home Summary

There is a need for new, cross-sector collaborations to create innovative programs that meet young adults where they are to better support their mental health needs. Presence of Mind is an example of one such collaboration.

References

1. National Institute of Mental Health (NIMH). Mental Illness. Published 2023. Accessed April 7, 2023. <https://www.nimh.nih.gov/health/statistics/mental-illness>
2. AAP, AACAP, CHA. Declaration of a National Emergency in Child and Adolescent Mental Health. Published 2021. Accessed March 3, 2022. <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>
3. Influencer Marketing Hub. The Incredible Growth of eSports. Published 2021. Accessed March 3, 2022. <https://influencermarketinghub.com/esports-stats/>
4. Kowal M, Conroy E, Ramsbottom N, Smithies T, Toth A, Campbell M. Gaming Your Mental Health: A Narrative Review on Mitigating Symptoms of Depression and Anxiety Using Commercial Video Games. *JMIR Serious Games*. 2021;9(2):e26575. <https://doi.org/10.2196/26575>
5. Hollis C, Falconer CJ, Martin JL, et al. Annual Research Review: Digital health interventions for children and young people with mental health problems – a systematic and meta-review. *Journal of Child Psychology and Psychiatry*. 2017;58(4):474-503. <https://doi.org/10.1111/jcpp.12663>
6. Grist R, Porter J, Stallard P. Mental Health Mobile Apps for Preadolescents and Adolescents: A Systematic Review. *J Med Internet Res*. 2017;19(5):e176. <https://doi.org/10.2196/jmir.7332>
7. Fleming TM, de Beurs D, Khazaal Y, et al. Maximizing the Impact of e-Therapy and Serious Gaming: Time for a Paradigm Shift. *Front Psychiatry*. 2016;7:65. <https://doi.org/10.3389/fpsy.2016.00065>
8. Bonnevie E, Paczkowski MM, Barth C, Janzen T, Wartella E, Smyser J. A Collaboration Between Health Care and Esports to Impact Youth Mental Health and Wellness: Evaluating the Presence of Mind Initiative. *NEJM Catalyst*. 3(6):CAT.22.0050. <https://doi.org/10.1056/CAT.22.0050>

About the Authors

Gino Mortillaro, MD, is currently a partner physician in the Kaiser Permanente Healthcare System in Southern California where he serves as core faculty for the residency and fellowship programs as well as associate clinical professor at the Kaiser Permanente School of Medicine. He completed his college and medical schooling at Tulane University before moving to Boston to complete his residency and fellowship with Harvard Medical School at the Harvard South Shore and Boston Children's Hospital programs, respectively. Throughout his education, Dr. Mortillaro has had the opportunity to spearhead development of LGBT+ focused educational initiatives and research aimed to reduce the health disparities for this patient population. Dr. Mortillaro serves as a member of Kaiser Permanente's Regional Mental Health Gender Care Committee, a member of AACAP's media committee, and chairs a Kaiser Permanente national initiative aimed at reducing mental health stigma.

Erika Bonnevie, MA, is the director of research at The Public Good Projects (PGP), where she serves as the strategic lead for the scientific direction of all research within the organization. She has a master's degree in human rights and has spent much of her career working at the intersection of public health, marketing, and communications. She has 15 years of experience working in both domestic and global public health across a variety of topics, including mental health, gender-based violence, human rights law, maternal/child health, obesity, substance use, tobacco control, and infectious disease.

The authors have reported no funding for this work.

Disclosure: Dr. Mortillaro and Ms. Bonnevie have reported no biomedical financial interests or potential conflicts of interest.

Correspondence to Erika Bonnevie, MA; e-mail: erika.bonnevie@publicgoodprojects.org

This article was edited by Andrés Martin, MD, PhD.