

Videogames casuales como Potencial Tratamiento de Trastornos Afectivos.

Daniel Sarrió Sánchez

Extended summary

Introduction

In recent years, mental health has been gaining importance in society. This could be due to the increased detection of cases of mental illness. In Spain, about 1 in 10 people over 15 years of age have been diagnosed with some mental disorder during 2017 (Suárez et al. 2019), with depression and anxiety being the most common types of disorders.

Moreover, the global pandemic has aggravated this whole problem, but, it has also raised awareness that new solutions are needed. Video games arrived many years ago to our society, bringing benefits and leaving behind a large number of detractors who see this medium as it brings out the worst of people (Tejeiro, 2009). However, recently studies have begun to be conducted in which video games are used as part of treatments for many mental ailments. The use of "Serious Games" seems less novel, but it is still very recent. Even more recent, however, is the interest in casual video games as possible treatments for affective disorders. Therefore, in order to further investigate this possibility, the research question of the present work is posed:

Are commercial video games effective in treating symptoms of emotional disorders?

Method

The review followed the PRISMA guidelines set out in the work of Urrútia & Bonfill (2010). The type of research was not taken into account, nor was the origin of the participants. All participants had to present symptoms of anxiety or depression. The language chosen was English. The documents had to be recently published, discarding all those prior to 2017. The papers had to deal specifically with casual video games, discarding any experiments with serious games. They also had to be used to reduce depressive and/or anxious symptoms, discarding any experiments using videogames for other purposes. The databases reviewed were Scopus, PubMed and APA PsycInfo.

Results

A total of 191 documents were found in the SCOPUS, PubMed and APA PsycInfo databases. After all the filters, only 5 remained to be reviewed. These are the 5 documents:

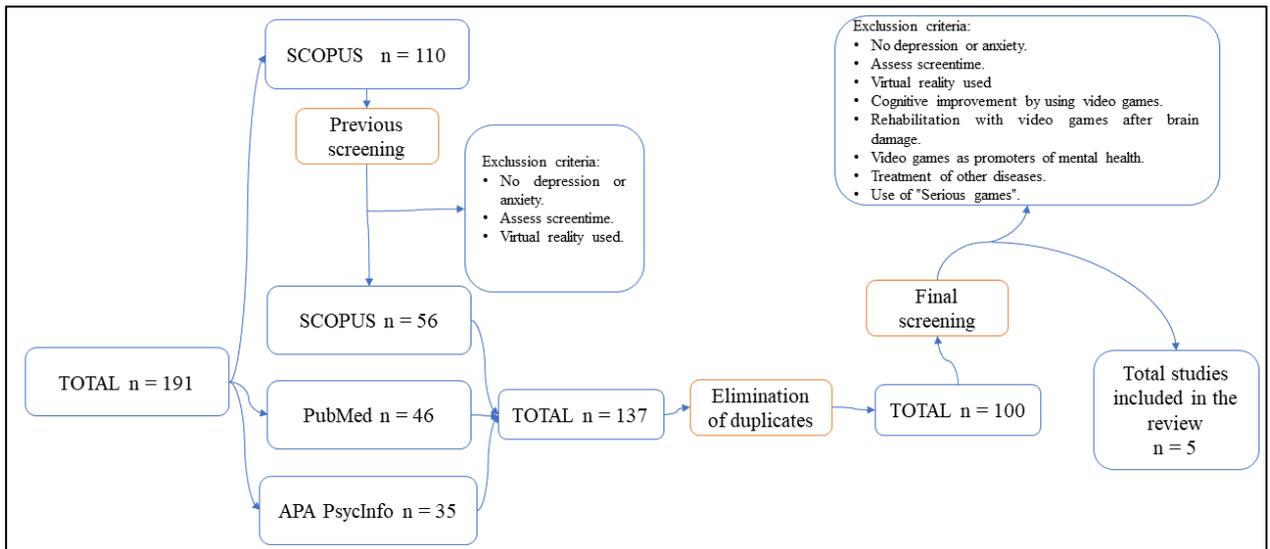
- Examining the effects of casual video gameplay as an intervention to alleviate symptoms of depression on both subjective and objective measures. By Brown-Bochicchio (2020).
- Zombies vs. Anxiety: An augmentation study of prescribed video game play compared to medication in reducing anxiety symptoms. By Fish, Russoniello and O'Brien (2018).
- Fighting depression: Action video game play may reduce rumination and increase subjective and objective cognition in depressed patients. By Kühn, Berna, Lüdtkke, Gallinat, and Moritz (2018).

- Can a commercial video game prevent depression? Null results and whole sample action mechanisms in a randomized controlled trial. By Poppelaars, Lichtwarck-Aschoff, Otten, and Granic (2020).
- The efficacy of playing videogames compared with antidepressants in reducing treatment-resistant symptoms of depression. By Russoniello, Fish, and O'Brien (2019).

Here is the flow chart that explains the selection process (Figure 1):

Figure 1

Flow Chart about Selection Process



After reviewing the 5 papers, 80% of the experiments found benefits in the use of video games for the reduction of depressive and anxiety symptoms. All the interventions lasted approximately 4 weeks and the majority (80%) were carried out on participants between 18 and 65 years old.

Discussion

The results indicate that the use of casual video games for the reduction of symptoms of depression and anxiety may be beneficial and could therefore be used as a treatment. Furthermore, these results are consistent with other systematic reviews such as the one conducted by Pine, Flaming, McCallum, and Sutcliffe (2020). However, these results are not conclusive as few experiments have been analyzed (only 5). Therefore, this work should be taken as a support for researchers who want to continue experimenting with this medium, since, for the moment, it seems to have a lot of therapeutic potential.

Conclusion

As mentioned above, further research into this possible therapeutic avenue would be worthwhile, as, with the increasing demand for mental health care, casual video games could be a solution to the problem of waiting lists for care. The research question is partially answered, since, despite good results, experiments are scarce.



VIDEOJUEGOS CASUALES COMO POTENCIAL TRATAMIENTO DE TRASTORNOS AFECTIVOS

Alumno: Daniel Sarrió Sánchez
Supervisado por: Dra. Berenice Serrano Zárate

INTRODUCCIÓN

Tras la pandemia y desde hace unos años, la salud mental se ha vuelto más relevante para la sociedad de todo el mundo. Particularmente en España, 1 de cada 10 personas fueron diagnosticadas con algún trastorno mental. La mitad de estos diagnósticos fueron de depresión y/o ansiedad (Suárez et al. 2019). Por otro lado, los videojuegos han demostrado ser beneficiosos para las personas (Wilkinson, 2016) pese a la gran cantidad de estigma sobre el medio (Tejeiro, 2009). Y recientemente han empezado a surgir estudios que conectan los videojuegos y la psicología, a modo de utilizar estos como tratamientos para diferentes patologías mentales (Abd-Alrazaq et al., 2022).

OBJETIVOS



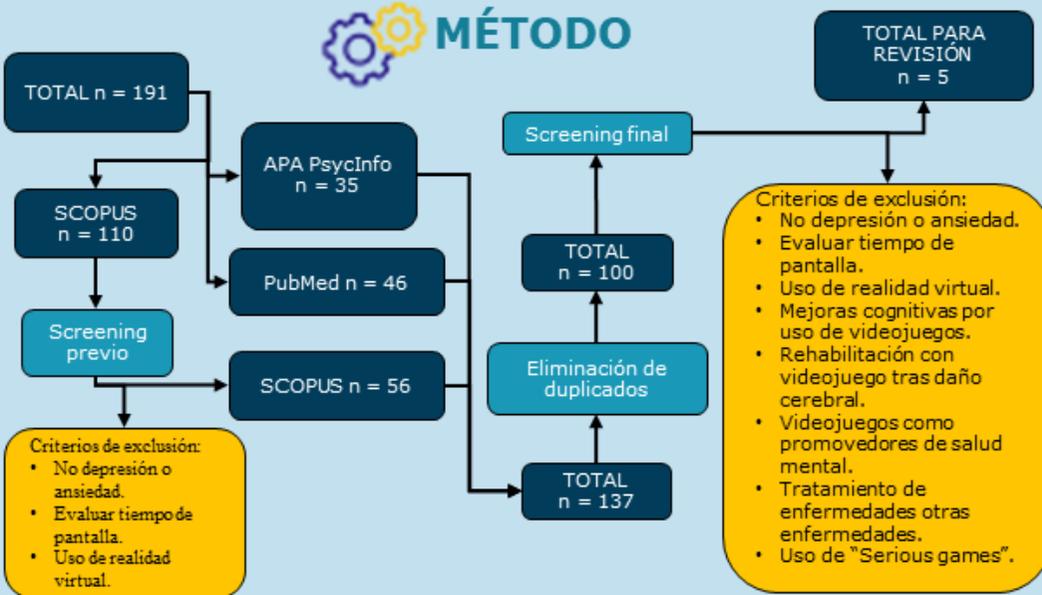
Comprobar si los videojuegos casuales son capaces de reducir los síntomas de los trastornos afectivos (depresión y ansiedad).



RESULTADOS

Participantes • n = 57 • Con síntomas depresivos	Intervención 2 sesiones y 1 mes de juego	Participantes • n = 54 • Con síntomas depresivos y de ansiedad	Intervención • 2 sesiones y 1 mes de juego	Participantes • n = 50 • Diagnóstico de depresión	Intervención • 2 sesiones y 1 mes de juego
Brown-Bocchicchio (2020)		Fish et al. (2018)		Kühn et al. (2018)	
Evaluación • EEG y PHQ-9.	Resultados • Diferencias en PHQ-9 tras el tratamiento.	Evaluación • QIDS y STAI	Resultados • Diferencias en STAI tras tratamiento	Evaluación • PHQ-9, BDI, RSQ y SSTICS.	Resultados • Diferencias significativas en la rumiación.
Participantes • n = 244 • Con síntomas elevados de depresión	Intervención • 4 sesiones y 1 mes de juego	Participantes • n = 49 • Diagnóstico de depresión y con medicación	Intervención • 2 sesiones y 1 mes de juego		
Poppelaars et al. (2020)		Russoniello, Fish y O'Brien (2019)			
Evaluación • CDI, CSR, EGEP, CERN, IMI.	Resultados • No hay resultados significativos.	Evaluación • QIDS, PHQ-9 y HRV.	Resultados • Diferencias en PHQ-9 tras intervención.		

MÉTODO



DISCUSIÓN

- El 80% de los experimentos obtiene resultados positivos.
- Estos resultados siguen el patrón de revisiones anteriores.
- A causa del experimento que obtiene resultados no significativos, se podría inferir que los efectos positivos de los videojuegos son a corto plazo.



CONCLUSIONES

- Pese a que los resultados son positivos, estos no permiten responder a la pregunta de investigación ya que se trata de una revisión con pocos experimentos analizados.
- Sin embargo, este trabajo es un aporte a la comunidad científica para que se continúe investigando esta prometedora vía de tratamiento.

Bibliografía

- Abd-Alrazaq, A., Alajlani, M., Alhuwail, D., Schneider, J., Akhu-Zaheya, L., Ahmed, A., & Househ, M. (2022). The effectiveness of serious games in alleviating anxiety: Systematic review and meta-analysis. *JMIR Serious Games*, *10*(1), e29137. <https://doi.org/10.2196/29137>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5 (R))* (5.^a ed.). American Psychiatric Association Publishing.
- Barr, M., & Copeland-Stewart, A. (2022). Playing video games during the COVID-19 pandemic and effects on players' well-being. *Games and Culture*, *17*(1), 122-139. <https://doi.org/10.1177/15554120211017036>
- Brown-Bochicchio, C. (2020). *Examining the effects of casual video gameplay as an intervention to alleviate symptoms of depression on both subjective and objective measures*. East Carolina University.
- Buitrago Ramírez, F., Ciurana Misol, R., Fernández Alonso, M. D. C., & Tizón García, J. L. (2021). Repercusiones de la pandemia de la COVID-19 en la salud mental de la población general. Reflexiones y propuestas. *Atención primaria*, *53*(7), 102143. <https://doi.org/10.1016/j.aprim.2021.102143>
- Carreras, C. (2017). Del Homo Ludens a la gamificación. *Quaderns de Filosofia*, *4*(1). <https://doi.org/10.7203/qfia.4.1.9461>
- Catalán, A. (2016). *Estudio sobre la evolución del juego de mesa y su transformación en producto editorial. Criterios para la edición, producción y comercialización de un juego de mesa*. <https://www.academia.edu/29616384>

Daniel, R. (2021). Exploring creativity through artists' reflections. *Creativity studies*, 14(1), 1-17. <https://doi.org/10.3846/cs.2021.11207>

Depression. (n.d.). National Institute of Mental Health (NIMH). Recuperado el 14 de junio de 2022, desde <https://www.nimh.nih.gov/health/topics/depression>

Fish, M. T., Russoniello, C. V. y O'Brien, K. (2018). Zombies vs. Anxiety: An augmentation study of prescribed video game play compared to medication in reducing anxiety symptoms. *Simulation & Gaming*, 49(5), 553–566. <https://doi.org/10.1177/1046878118773126>

Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *The American Psychologist*, 69(1), 66-78. <https://doi.org/10.1037/a0034857>

Hall, A. K., Chavarria, E., Maneeratana, V., Chaney, B. H., & Bernhardt, J. M. (2012). Health benefits of digital videogames for older adults: A systematic review of the literature. *Games for Health*, 1(6), 402-410. <https://doi.org/10.1089/g4h.2012.0046>

Huizinga, J. (2000). *Homo ludens*. Alianza.

Instituto Nacional de Estadística (2021, 26 de abril). *Encuesta Europea de Salud en España (EESA)* [Comunicado de prensa]. https://www.ine.es/prensa/eese_2020.pdf

Kowal, M., Conroy, E., Ramsbottom, N., Smithies, T., Toth, A. y Campbell, M. (2021). Gaming your mental health: A narrative review on mitigating symptoms of

depression and anxiety using commercial video games. *JMIR Serious Games*, 9(2), e26575. <https://doi.org/10.2196/26575>

Kühn, S., Berna, F., Lüdtke, T., Gallinat, J. y Moritz, S. (2018). Fighting depression: Action video game play may reduce rumination and increase subjective and objective cognition in depressed patients. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.00129>

Lewis, J. E., Trojovsky, M., & Jameson, M. M. (2021). New social horizons: Anxiety, isolation, and Animal Crossing during the COVID-19 pandemic. *Frontiers in Virtual Reality*, 2. <https://doi.org/10.3389/frvir.2021.627350>

Ozamiz-Etxebarria, N., Dosil-Santamaria, M., Picaza-Gorrochategui, M., & Idoiaga-Mondragon, N. (2020). Stress, anxiety, and depression levels in the initial stage of the COVID-19 outbreak in a population sample in the northern Spain. *Cadernos de Saude Publica*, 36(4), e00054020. <https://doi.org/10.1590/0102-311X00054020>

Pine, R., Fleming, T., McCallum, S. y Sutcliffe, K. (2020). The effects of casual videogames on anxiety, depression, stress, and low mood: A systematic review. *Games for Health*, 9(4), 255–264. <https://doi.org/10.1089/g4h.2019.0132>

Poppelaars, M., Lichtwarck-Aschoff, A., Otten, R. y Granic, I. (2020). Can a commercial video game prevent depression? Null results and whole sample action mechanisms in a randomized controlled trial. *Frontiers in Psychology*, 11, 575962. <https://doi.org/10.3389/fpsyg.2020.575962>

Ruiz, M., Moreno, M., Girela-Serrano, B., Díaz-Oliván, I., Muñoz, L. J., González-Garrido, C. y Porras-Segovia, A. (2022). Winning the game against depression: A systematic review of video games for the treatment of depressive disorders. *Current Psychiatry Reports*, 24(1), 23–35. <https://doi.org/10.1007/s11920-022-01314-7>

Russoniello, C. V., Fish, M. T. y O'Brien, K. (2019). The efficacy of playing videogames compared with antidepressants in reducing treatment-resistant symptoms of depression. *Games for Health*, 8(5), 332–338. <https://doi.org/10.1089/g4h.2019.0032>

Shalaev, V., Emelyanov, F., & Shalaeva, S. (2020). Social functions of games in modern society: Educational perspectives. *Proceedings of the International Scientific and Practical Conference on Education, Health and Human Wellbeing (ICEDER 2019)*.

Sajeev, M. F., Kelada, L., Yahya Nur, A. B., Wakefield, C. E., Wewege, M. A., Karpelowsky, J., Akimana, B., Darlington, A.S. y Signorelli, C. (2021). Interactive video games to reduce paediatric procedural pain and anxiety: a systematic review and meta-analysis. *British Journal of Anaesthesia*, 127(4), 608–619. <https://doi.org/10.1016/j.bja.2021.06.039>

Suárez Cardona, M., Ichaso Hernández-Rubio, M. de los S., y González Yuste, P. (2019). Encuesta Nacional de Salud ENSE, España 2017. Serie informes monográficos #1-SALUD MENTAL. Madrid: Ministerio de Sanidad, Consumo y Bienestar Social.

https://www.mscbs.gob.es/estadEstudios/estadisticas/encuestaNacional/encuestaNac_2017/SALUD_MENTAL.pdf

Tejeiro Salguero, R., Pelegrina del Río, M., y Gómez Vallecillo, J. L. (2009). Efectos psicosociales de los videojuegos. *Comunicación: revista Internacional de Comunicación Audiovisual, Publicidad y Estudios Culturales*, 1 (7), 235-250.

Urrútia, G. y Bonfill, X. (2010). Declaración PRISMA: una propuesta para mejorar la publicación de revisiones sistemáticas y metaanálisis. *Medicina clínica*, 135(11), 507-511. <https://doi.org/10.1016/j.medcli.2010.01.015>

Wilkinson, P. (2016). A brief history of serious games. En *Entertainment Computing and Serious Games* (pp. 17-41). Springer International Publishing.

Zayeni, D., Raynaud, J.P. y Revet, A. (2020). Therapeutic and preventive use of video games in child and adolescent psychiatry: A systematic review. *Frontiers in Psychiatry*, 11, 36. <https://doi.org/10.3389/fpsy.2020.00036>

Zhu, L. (2021). The psychology behind video games during COVID-19 pandemic: A case study of Animal Crossing: New Horizons. *Human Behavior and Emerging Technologies*, 3(1), 157-159.