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Exploring XR-Integrated Serious Games for Therapy in Female Indonesian Students with Autism: A Systematic Literature Review

Combining serious games with extended reality (XR) technology to provide targeted interventions for supporting patients with autism spectrum disorders (ASD) has garnered increased attention from scholars in recent years. However, there remains a lack of comprehensive investigation into how serious games integrated with XR technologies can be utilized to support therapy, particularly for female students in all levels of education with ASD. Therefore, this systematic literature review (SLR) aimed to synthesize research findings on the feasibility, implementation, and effectiveness of serious games combined with XR technologies in supporting female students with ASD within the Indonesian educational landscape. Following the PRISMA framework as the protocol, this study conducted an exhaustive analysis of a diverse dataset sourced from SCOPUS, Web of Science, ScienceDirect, ACM Digital Literacy, and Google Scholar, specifically focusing on publications from 2015 up to 2024. The results highlight that 455 articles were identified in the Covidence software and included in the first screening step. After the first screening, 49 articles have been finalized that include the eligibility criteria for quality assessment criteria. The study indicates that there is no research setting conducted in Indonesia. Additionally, the utilization of serious games and extended reality are seen as separate interventions for ASD patients. Lastly, the intervention given was not distinguished by gender and only focused on child development in general. Additionally, the paper concludes by proposing several recommendations for further study, urging policymakers and stakeholders to consider and take action toward implementing such interventions in Indonesia.

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