Combatting Postnatal Depression: Exploring the Role of Serious Games in New Parent Support

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Abstract. This study makes innovative use of digital and serious games technologies as well as early detection innovations that work with perinatal infant mental health (PIMH) clinicians to help new parents and parents during pregnancy, including both birthing and non-birthing parents, combat social stigma towards postnatal depression.

Keywords. serious game, postnatal depression, digital health

1. Introduction

Addressing postnatal depression (PND) in new parents is crucial for both the immediate family and society at large, touching on aspects of health, emotional well-being, economic stability, and social cohesion. It is helpful for people to be aware of symptoms during pregnancy and not just after the baby arrives. This work will also focus on assisting parents during pregnancy, not only those who have already given birth. Given PND is the most common psychological condition following childbirth [1], it is particularly significant to provide innovative early detection and support as many women [2] and men [3] with PND can feel ashamed of their symptoms and may not seek professional help. Finding new ways to support families and clinicians to implement evidence-based and tailored treatment that will improve client outcomes and reduce barriers to care and mental health self-stigma.

2. Methods

The game's design will comprise three co-design sessions with perinatal infant mental health clinicians, game designers, parents during pregnancy and new parents. Once the game design phase is completed, the game will be developed to prepare for large-scale

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assessment. Initially, the well-validated Edinburgh Postnatal Depression Scale [4, 5] (EPDS) will be used to measure shifts in participants' attitudes, knowledge, and behaviours regarding PND, allowing for a clear assessment of the game's educational and detection impact and its ability to alter perceptions of stigma. Further, in-game analytics will be conducted to understand user engagement and identify which aspects of the game are most effective or require refinement. Long-term effects will be evaluated through longitudinal studies, tracking changes in attitudes and behaviours over time to assess the sustained impact of the game.

3. Results

It is expected that the proposed game will contribute to reducing social stigma towards new parents and parents during pregnancy and postnatal depression, which in turn is anticipated to promote earlier detection of symptoms and increased timely professional support seeking.

Compared to traditional interventions, the game intends to be more easily engaged and accessible. New parents can play it at their convenience and in their preferred environment without disrupting their routines. In addition, introducing fun elements and an informal approach is expected to reduce bias among the general public through educational content.

4. Conclusions

This approach will increase awareness and also correct widespread myths, fostering a well-informed community that can identify and empathise with the struggles of PND. By immersing players in the experiences of those affected by PND, the game will build a bridge of empathy. Such immersive experiences encourage players to understand PND's emotional and psychological challenges, shifting perceptions from judgment to compassion. This empathy motivates community members to extend support to new parents and parents during pregnancy, potentially leading to a more inclusive and supportive environment for discussing and dealing with mental health issues.

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