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O28 - Toward Inclusive Astronomy Communication: A Multimodal Astronomy Visualization Program for Individuals in Mental Health Recovery

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Individuals in mental health recovery often face barriers to participating in science outreach and informal STEM learning, highlighting the need for more accessible and inclusive approaches to astronomy communication. This study proposes a multimodal astronomy visualization program designed to promote meaningful engagement with astronomy among volunteers in mental health recovery who have expressed curiosity about the universe and its wonders.

The program combines three educational tools: Stellarium for virtual night-sky exploration and discussions of the Solar System, constellations, and notable deep-sky objects such as the Orion and Crab Nebulae; SpaceEngine for immersive exploration of the universe beyond the Solar System; and telescope images captured by the researcher during previous astronomical observation sessions, providing authentic examples of celestial observations. These resources offer an accessible alternative to traditional telescope-based outreach while fostering curiosity and scientific understanding.

Using a mixed-methods approach, the study aims to recruit at least five volunteer participants. Each participant will attend a one-on-one, one-hour astronomy visualization session led by the researcher, during which they will be encouraged to ask questions and engage in discussions about astronomy and space science. Approximately 24 hours after the session, participants will complete a feedback questionnaire consisting of validated quantitative measures and qualitative reflections assessing science engagement, perceived accessibility of astronomy, sense of wonder, and overall learning experience.

Rather than serving as a therapeutic intervention, the program examines how inclusive astronomy communication can create welcoming opportunities for individuals in mental health recovery to participate in science learning and public engagement. The findings are expected to contribute to research on accessibility, diversity, equity, and inclusion in astronomy communication by demonstrating how freely available digital platforms and researcher-generated astronomical imagery can deliver meaningful, low-cost, and scalable outreach experiences that broaden participation in astronomy.

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