

## **Creative Applications for Socially Assistive Robots to Support Mental Health: A Patient-Centered Feasibility Study**

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**Abstract :** The use of the arts in therapy and rehabilitation is well established, and there is growing recognition of the value of the arts for improving health and well-being across diverse populations. Combining arts with socially assistive robots is a relatively under-explored research area. This paper presents the results of a feasibility study conducted within an existing arts and health program to scope the possibility of combining visual arts with socially assistive robots to promote mental health and well-being. Using a participatory research design with participant-led perspectives, we present the results of our feasibility study with a collaborative drawing robot among an adult population with mild to severe mental illness. We identify key methodological challenges and advantages of working with participatory and human-centered approaches. Based on the results of three pilot workshops with participants and lay health workers, we outline suggestions for authentic engagement with real stakeholders toward the development of socially assistive robots in community health contexts. Working closely with a patient population at all levels of the research process is key for developing tools and interventions that center patient experience and priorities while minimizing the risks of alienating patients and communities.

**Keywords :** arts and health, visual art, health promotion, mental health, collaborative robots, creativity, socially assistive robots

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