Submission No 32

INQUIRY INTO PREVALENCE, CAUSES AND IMPACTS OF LONELINESS IN NEW SOUTH WALES

Organisation: University of New South Wales, Big Anxiety Research Centre [BARC]

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UNSW
Big Anxiety
Research Centre

University of NSW, Big Anxiety Research Centre [BARC] submission to Inquiry into the prevalence, causes and impacts of loneliness in New South Wales

Date: 26 September 2024

Introduction

UNSW BARC welcomes the opportunity to provide this submission to the NSW Legislative Council, Standing Committee on Social Issues.

In this submission, we address:

- Terms of Reference g. the identification of existing initiatives by government and non-government organisations to mitigate and reduce loneliness and social isolation

- Terms of Reference j. steps that community, technology/social media companies, organisations, and individuals can take to reduce impact of loneliness on individuals and the community.

We focus on the opportunities of **artificial intelligence** [AI] in respect of addressing loneliness. Specifically, our current research, development and testing indicates that:

- The companionship provided by artificially intelligent [AI] conversational agents may provide valuable social connection, improving loneliness and quality of life.

- At scale, well targeted "AI companions have the potential to alleviate part of the epidemic-level loneliness" now affecting fast-ageing societies (Oxford Analytica, 2022).

Recommendation: Invest in development of co-designed AI products that meet the psychosocial needs of consumers of all ages. This should include identifying strategies for addressing loneliness within different user groups/demographics; and development and integration of AI into person-centred service-provision.

Background

- Loneliness—defined as “the perception that one’s social needs are not met by the quantity and especially the quality of one’s social relationships” (Hawkley & Cacioppo, 2010)—affects people of all ages.
- Loneliness significantly impacts older people, living alone and/or those who are socially or geographically isolated.
- Loneliness also affects people who are not isolated; for example those in aged care (Neves et al, 2019) and/or in circumstances where *quality* of social relationships is lacking or diminished.
- Psychological research on loneliness suggests that a focus on promoting social connection alone may not influence loneliness if it fails to address how individuals approach and think about their social relationships (Hawkley & Cacioppo, 2010; Campaign to End Loneliness, 2020).
- Talking about loneliness and its challenges can be a form of “regulative coping with loneliness”, giving rise to insight and perspective (Schoenmakers, 2020).
- Given this, it is important to consider how AI companionship may fill the gap when social connection is lacking – and how we can ensure that it does this in safe, meaningful and effective ways.

Artificial intelligence

- Research and anecdotal evidence from users indicates that the companionship provided by artificially intelligent [AI] conversational agents may provide valuable social connection, improving loneliness and quality of life.
- In particular, the success of generative AI chatbots, designed for intimate interpersonal relationships indicates that users may form strong bonds/social connections with AI companions: e.g. Replika (Laestadius et al, 2022) or Xiaoice, a younger female avatar with over 660M users (Zhou et al, 2020).
- These chatbots are often oriented to younger markets. Older users have shown greater engagement with conversational agents when “topics are more intimate” and focus on “goals” and “challenges of ageing” (Razavi, et al 2020).
- AI companions can facilitate conversations on topics that people may not feel confident to broach with family and friends.

- The UNSW BARC research team has developed a suite of digitally embodied, AI companions (see fEEL below). Working closely with people with lived experience of a range of mental health and emotional challenges, we focus on the development of relatable peer companions who serve as friendly listeners, able to offer informal psychosocial support and access specialist 'background knowledge' when needed.

- Based on iterative testing with communities, we are evolving new AI modules to address some of the key limitations of existing commercial products. These specifically enable AI agents to respond more effectively to users' emotional states and to support planning/goal directed behaviour in relation to loneliness and related mental health/wellbeing concerns.

Limitations/risks

- There is concern among professionals that hastily developed commercial AI solutions to loneliness may risk impoverishing rather than enhancing social connectivity (Prinzing & Fredrickson, 2023; Walsh, 2023).

- Apps such as Replika (which offer "romantic" features) may engender "dysfunctional emotional dependence" (Laestadius et al, 2022).

- Current commercial products are not designed to support goal-based discussion of loneliness and its challenges (the goal of commercial chatbots is to keep conversation going, maximising "conversation-turns per session" [Zhou et al, 2020] rather than to address the objective of reducing loneliness or the specific goals of users).

- The advent of opensource Large Language Models has made AI conversational agents easily accessible. This means that in the absence of bespoke products, people may access chatbots that have not been developed or trained to address loneliness in safe and effective ways.

Opportunities/indications

- AI companions may fill a gap when desired human companionship is not available. They may provide cognitive stimulation, emotional reassurance, support for reflection, reasoning and/or working through concerns.

- An effective AI approach to loneliness should go beyond the provision of generic/diversionary chat to engage productively with people's thoughts, feelings and goals over time.

- This may entail proactively supporting progress via an “upward spiral out of loneliness” (Fig. 2; Campaign to End Loneliness, UK) or similarly conceived trajectory, reflecting agreed goals.

- AI companionship does not replace but *supplement*s human relationships. It may also reinforce person-centred care if/when effectively integrated into systems. For example, our team is working with aged-care service-providers/consumers to determine how AI companions may extend personalised support. Effective products/systems should be co-designed and tested with stakeholders.

Video

Associated Press [AP] (2024), AI companion for people living with dementia. apnews.com Video 5:52; retrieved from: https://youtu.be/R2f7Qe-yWGM?si=EHFnrnubLKRUdk0J.

UNSW fEEL https://feel-lab.org/research_projects/ai-viv-and-friends/

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Figures 1, 3, 4, 5: AI companions by fEEL @ UNSW BARC;
Figure 2. Upward spiral out of loneliness, adapted from Campaign to End Loneliness, The Psychology of Loneliness: Why it matters and what we can do, July 2020.