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LonelinessVR

Motivation

- **Loneliness** is a subjective experience that arises from the discrepancy between a person's desired and actual social relationships. It is an emotional state felt differently by each individual; one person might have few relationships and not feel lonely, while another could have a large social circle but still feel lonely.^{[1][2][5]}
- Statistics from New Zealand show different categories of people who are feeling lonely, and **recent migrants** are one such community.^[6]
- There is a possibility of helping migrants alleviate their loneliness with culturally sensitive **Virtual Reality (VR)** interventions.



Lonely migrants ©Freepik

Why are migrants lonely?

Not having a sense of belonging^{[3][4]}

- Acculturation, missing family traditions, unable to perform cultural practices.

Unable to build meaningful relationships^{[3][4][5]}

- Limited people from same ethnicity to interact, language barriers, culture shock, experience negative social ties and interactions.

Being socially disconnected^[5]

- Stigma, shyness, fear.

Existing Digital Interventions for Loneliness

Traditional interventions for loneliness:

- Online language teaching services, online counseling, mentoring and coaching support services, social networking applications, internet delivered cognitive behavioral therapy (CBT).

Limited research with VR based interventions:

- Virtual spaces to connect older adults in care centers, reminiscence therapy through VR, VR games, Social VR (e.g. VRChat, AltspaceAR, SecondLife).^[7]

Research

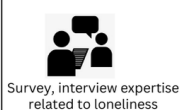
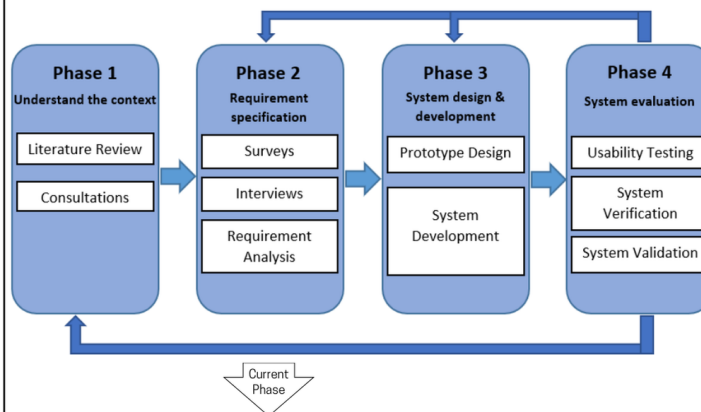
Problem

Need for interventions focusing on loneliness and different cultural contexts (e.g. regions, neighborhoods, families) exploring adult participants from a range of cultures within a New Zealand context.

Objectives

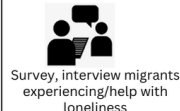
- **Investigate** the role of culture and technology in addressing loneliness among migrant adults.
 - Literature, survey and interview study.
- **Develop** a culturally sensitive gamified immersive intervention to alleviate loneliness of migrant adults (18 to 65 age).
 - VR environment following User Centered Design (UCD) approach.
- **Evaluate** the developed intervention.
 - Conduct user studies with New Zealand migrant communities.

Methodology



Survey, interview expertise related to loneliness

- Psychosocial standards and practices within New Zealand context for migrants.
- Relationship between culture and alleviating loneliness.
- Benefits, limitations and challenges with existing interventions to help with loneliness.



Survey, interview migrants experiencing/help with loneliness

- Problems and challenges related to loneliness of migrants.
- Missing one's culture and how it has led to loneliness.
- Benefits, limitations and challenges with existing digital interventions to help with loneliness.

Proposed Solution

Social VR application for migrant adults



Migrants immersing with their home culture through VR

Virtual Environment

Avatars, Familiar social spaces, Language, Social focal points, User generated content

Cultural Components

Elements, Language, Patterns, Institution

Game Mechanics

Challenges, Collectibles, Events, Language, Storytelling

- Create Sense of Belonging
- Establish Meaningful Relationships
- Promote Social Engagement

How can Social VR help? (Belonging, Relationships, Engagement)

- Culturally sensitive Avatars (actors).
- Culturally related objects and spaces (worlds).
- Cultural events & celebrations (network of actors).
- Multilingual communication.
- Education & Cultural exchange.
- Social interaction & support groups.

References

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Project Page: <https://ecs.wgtn.ac.nz/Groups/HCI/LonelinessVR>