

Official Title: The Impacts of Immersive Virtual Reality (iHealthEd-IVR) and a Mobile Online Game (V-Care) on Interprofessional Education: A Multi-Methods Study

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Approved by the Human Subjects Ethics Sub-committee of
The Hong Kong Polytechnic University on 02-Oct-2024

Identifier:

To	Liu Yat Wa Justina (School of Nursing)		
From	Leung Yee Man Angela, Chair, Departmental Research Committee		
Email	angela.ym.leung@polyu.edu.hk	Date	02-Oct-2024

Application for Ethical Review for Teaching/Research Involving Human Subjects

I write to inform you that approval has been given to your application for human subjects ethics review of the following project for a period from 02-Sep-2024 to 02-Sep-2025:

Project Title:	The Impacts of Immersive Virtual Reality (iHealthEd-IVR) and a Mobile Online Game (V-Care) on Interprofessional Education: A Multi-Methods Study
Department:	School of Nursing
Principal Investigator:	Liu Yat Wa Justina
Project Start Date:	02-Sep-2024
Project type:	Human subjects (non-clinical)
Reference Number:	HSEARS20240827002

You will be held responsible for the ethical approval granted for the project and the ethical conduct of the personnel involved in the project. In case the Co-PI, if any, has also obtained ethical approval for the project, the Co-PI will also assume the responsibility in respect of the ethical approval (in relation to the areas of expertise of respective Co-PI in accordance with the stipulations given by the approving authority).

You are responsible for informing the PolyU Institutional Review Board in advance of any changes in the proposal or procedures which may affect the validity of this ethical approval.

Leung Yee Man Angela

Chair

Departmental Research Committee (on behalf of PolyU Institutional Review Board)

INFORMATION SHEET

The Impacts of Immersive Virtual Reality (iHealthEd-IVR) and a Mobile Online Game (V-Care) on Interprofessional Education: A Multi-Methods Study

You are invited to participate in the above project conducted by Prof. Justina LIU, who is a professor of the Department of School of Nursing in The Hong Kong Polytechnic University. The project has been approved by the PolyU Institutional Review Board (“PolyU IRB”) or its delegates. [Reference Number: HSEARS20240827002]

Interprofessional education (IPE) encourages collaborative practice, allowing students from different healthcare fields to learn from, with, and about each other. IPE can also enhance patient care, teamwork, and awareness of professional roles, and is essential to collaboratively addressing complex health issues. With the rapid development of Immersive virtual reality (IVR) technology, the application of IVR in healthcare education has become increasingly widespread. IVR enables students from different disciplines to share knowledge and perform activities together based on real clinical cases, consistently showing positive outcomes in IPE. Game-based learning is another approach to IPE. In game-based learning, students can solve problems through cooperation and competition in specific learning situations that are set up to motivate them to participate and achieve learning outcomes.

PURPOSE OF THE STUDY

The aim of this project is to compare the effectiveness of Immersive Virtual Reality (iHealthEd-IVR) and a mobile online game (V-Care) in interprofessional education. The goal is to determine which approach better facilitates learning outcomes and collaboration among healthcare students.

INVOLVEMENT OF THE SUBJECT

You are eligible to take part in this study because you are undergraduate and pre-registration master’s nursing students, as well as undergraduate physiotherapy students, from the School of Nursing and the Department of Rehabilitation Sciences at the Hong Kong Polytechnic University. The programs will be embedded within a gerontological nursing course. Nursing students will need to take this course to fulfill their normal credit requirements, while physiotherapy students can earn practicum hours by participating.

PROCEDURES

All nursing students enrolled in the course will be invited to join the study. Physiotherapy students will be invited to fulfill practicum hours.

You are invited to complete a questionnaire before and after the program, which will take you about half an hour. The questionnaire encompasses four key domains: Participants’ subjective experiences related to the target activity, “readiness” of healthcare students for shared interprofessional learning, dimensions of sense of community and student learning outcome on the knowledge of IPE. You will

then be asked to take part in a qualitative focus group to explore students' experiences within one week after the program. Total four semi-structured focus groups with 4 to 5 students in each group. The semi-structured focus group conversations will be recorded in the form of audio recordings, solely for the purpose of analysis in this study. The whole investigation will take about two hours.

POTENTIAL RISKS / DISCOMFORTS AND THEIR MINIMIZATION

The main risks are those associated with inability to adapt to the spatiality of VR devices. Some users may feel dizzy during use, you will be immediately stop using the VR device, dizziness will be relieved by deactivating the device.

POTENTIAL BENEFITS

Students will benefit from studying IPE. Meanwhile, this study will provide evidence on the effectiveness of technology-based strategies in IPE, comparing IVR and game-based learning to improve delivery and integration of IPE curriculum. The findings will enhance pedagogical frameworks, promoting interprofessional collaboration, and provide a better experience for students in their courses. After completing the IVR or game-based training, you will participate in another training condition to ensure equal learning opportunities.

CONFIDENTIALITY

The information you provide as part of the project is the research data. Any research data from which you can be identified is known as personal data. Personal data does not include data where the identity has been removed (anonymous data). We will minimize our use of personal data in the study as much as possible. The researcher and her team, supervisor, collaborator (including Prof. Justina LIU, Dr. Kitty CHAN, Dr. Patrick Pui Kin Kor, Mr. Curtis WONG, Dr Katherine CHANG and Ms Bonnie MA in Hong Kong Polytechnic University.) The data is not accessible to professors located outside of Hong Kong. will have access to personal data and research data for the purposes of the study. Responsible members of The Hong Kong Polytechnic University may be given access for monitoring and/or audit of the research.

DATA RETENTION

All information related to you will remain confidential and the questionnaire content is exclusively intended for researchers, the Principal Investigator has sole management authority and will assign separate and confidential identifiers to other researchers in order to identify them and grant access. The information collected will be remained anonymize and securely stored until 3 years after project completion/publication or public release of research results. The Hong Kong Polytechnic University takes reasonable precautions to prevent the loss, misappropriation, unauthorized access or destruction of the information you provide.

PARTICIPATION AND WITHDRAWAL

You have every right to withdraw from the study before or during the measurement without penalty of any kind. All student's participation in the study is entirely voluntary and will not affect their academic results in the subject.

QUESTIONS AND CONCERNS

If you have any enquiries, you may ask our helpers now or later, even after the study has started.

You may contact Prof. Justina LIU (tel. no.: 27664097/ email: justina.liu@polyu.edu.hk) of PolyU under the following situations:

- a. if you have any further enquiries in relation to the study even after the study;
- b. if, under very rare conditions, you become injured as a result of your participation in the study; or
- c. if you want to get access to/or change your personal data before the end of this Semester.

In the event you have any complaints about the conduct of this research study, you may contact the Secretary of PolyU Institutional Review Board in writing (institutional.review.board@polyu.edu.hk) stating clearly the responsible person and department of this study as well as the Reference Number.

In case of a serious adverse event¹, please report to the Principal Investigator/Chief Investigator immediately and the Principal Investigator/Chief Investigator will be required to report it to the PolyU IRB within 48 hours upon the receipt of your report.

Thank you for your interest in participating in this study.

Prof. Justina LIU

Principal Investigator/Chief Investigator

¹ SAE is any adverse event that:

- results in death
 - is life threatening, or places the subject at immediate risk of death from the event as it occurred
 - leads to hospitalization or prolonged hospitalization of a subject
 - causes a subject persistent or significant disability or incapacity
 - leads to congenital anomalies or birth defects
 - is another condition which investigators judge to represent significant hazards
- (Reference: NIA Adverse Event and Serious Adverse Event Guidelines.
<https://www.nia.nih.gov/sites/default/files/2018-09/nia-ae-and-sae-guidelines-2018.pdf>)

CONSENT TO PARTICIPATE IN RESEARCH

The Impacts of Immersive Virtual Reality (iHealthEd-IVR) and a Mobile Online Game (V-Care) on Interprofessional Education: A Multi-Methods Study

I _____ hereby consent to participate in the captioned research conducted by _____.

I understand that information obtained from this research may be used in future research and published. However, my right to privacy will be retained, i.e. my personal details will not be revealed.

The procedure as set out in the attached information sheet has been fully explained. I understand the benefit and risks involved. My participation in the project is voluntary.

I acknowledge that I have the right to question any part of the procedure and can withdraw at any time without penalty of any kind.

Name of participant _____

Signature of
participant _____

Name of researcher _____

Signature of
researcher _____

Date _____