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Study Protocol

Family Members' Experiences as Simulated Patients in Physical Therapy Performance-Based Assessments: A Phenomenological Exploration Protocol

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Abstract

Background: The Covid-19 pandemic caused educational institutions to shift from traditional to distance learning. Higher educational institutions offering bachelor's degrees in Physical Therapy (PT) adapted to the situation by employing various strategies to facilitate learning online. One of the strategies employed is inviting family members as simulated patients in various performance-based assessments (PBA). In the Philippines, the PT department at the University of Santo Tomas made similar changes in the delivery of its courses. Given that family members are one of the primary stakeholders of PT education, it is important to know their experience, insights, and knowledge gained about the profession of PT after playing as a simulated patient (SP) during online performance-based assessments. **Objectives:** This study aims to explore how family members describe their experiences playing the role of patients in PT PBAs. **Methods:** This study will utilize a phenomenological explorative research design. Family members, including parents, siblings, grandparents, cousins, and household helpers who played the role of a patient in any PT PBAs such as case presentation, case discussion, and practical examination, will be invited to participate. Semi-structured one-on-one interviews will be used for data gathering. Qualitative data from interview transcriptions will be analyzed using thematic analysis using NVivo 12 plus program**. Expected Results**: Family Members will offer experiences in role-playing as patients in PBAs. Main themes and findings will be generated from their sharing that will provide insights regarding the improvement of remote PT PBAs.

Key Words*: family members, experiences, role-playing, physical therapy education, performance-based assessments*

INTRODUCTION

The World Health Organization declared a pandemic in March 2020 due to the COVID-19 outbreak.[1] Quarantine protocols have been imposed by governments worldwide to mitigate the spread of the virus. Educational Institutions have transitioned from face-to-face classes to a remote type of learning through online classes affecting learners worldwide. Different learning activities were modified to ensure lessons were delivered virtually through synchronous or asynchronous means, revealing limitations regarding how teaching and learning are implemented.[2] It became necessary for universities offering medical-related programs to pivot to online learning and remove students from their clinical placements to sustain medical education.[3] Specifically in Physical Therapy (PT), a health program that requires communication skills, theoretical and conceptual knowledge, and clinical skills, was affected by the online learning transition.[4]

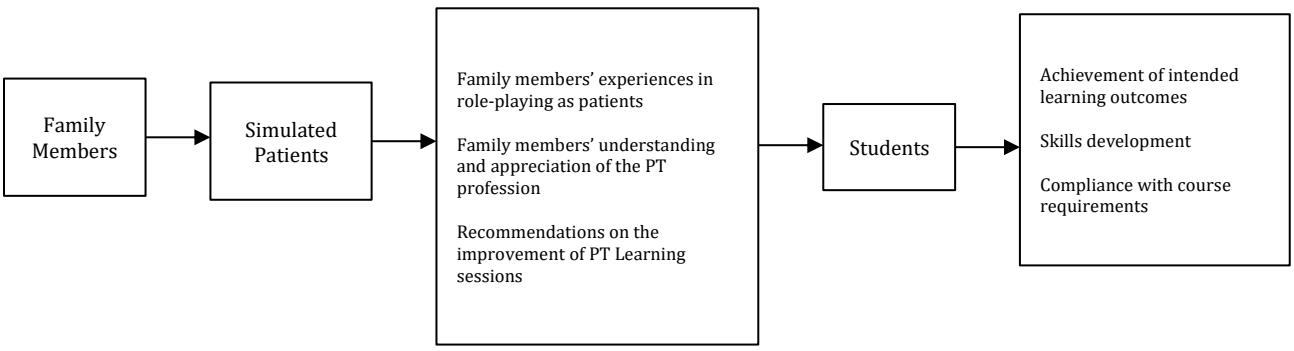
Performance-based assessments (PBA) include case discussions, case presentations, return demonstrations, and practical examinations wherein students are assessed based on objective evaluation through direct examiner observation while simulating real-life practice on

an invited family member.[5] These are graded using a standard grading rubric structured with criteria that evaluate a student's effectiveness in conducting assessments and treatment, and demonstrating interpersonal communication.[5]

On April 2020, the University of Santo Tomas-College of Rehabilitation Sciences (UST-CRS) released Memorandum No. 34 which provided guidelines for the conduction of online classes during the pandemic, including the provision for the faculty members to use online strategies to assess student performance.[6] The faculty held orientation to further discuss how online classes will be done but there were no written guidelines on the specific learning strategies. They advised the students to practice on a simulated patient using either a human-size dummy or a family member to improve clinical performance skills.

Simulated Patients (SPs) can be any individual who is skilled at realistically portraying patient roles in health education.[7] They are tasked to portray a patient's illness and deliver it in a manner that each student will be faced with a consistent patient experience.[8] Some barriers that hindered SPs from doing this were lack of training, preparatory activities, guidance from medical educators and context regarding patient's history and the objectives of PBAs, and excessive medical information and jargon.[7] SPs are utilized in PBAs to practice and develop clinical skills and explore clinical histories.7 The use of SPs exposes students to complex, realistic, and varied clinical situations which challenge the students' clinical reasoning skills. Additionally, it helps improve students' assessment, communication, and handling skills which are important in the training of entry-level physical therapists.[9,10]

A family member is anyone who interacts, communicates, and lives in the same household.[11] They play a significant role in a student's school life and academic performance. Based on the conceptual framework of a study, the Naturalistic Paradigm demonstrates that a child's continued educational development and academic achievement rely greatly on parental involvement in their child's education.[12] According to Epstein's Types of Family Involvement Framework, family members who volunteer in school contribute to their children's education and can assist in the educational program.[13] This shows that family-school partnerships influence a student's engagement in school and the family members' perception of it.[13] Based on the framework stated, the diagram below was adopted to show that family members who act as simulated patients will generate experiences and understanding which will help the students in achieving the learning outcomes set and development of clinical skills. The conceptual framework can be seen in Figure 1.



Note: Based on the framework, the diagram was adopted to show that family members who act as simulated patients (SP) will generate experiences and understanding which will help the students in achieving the learning outcomes set and development of clinical skills. The researchers will gather the experiences and perceptions of the participants who acted as SPs to derive recommendations to improve PT performance-based assessments.

Figure 1. Conceptual Framework of the Role of the Family Members

SPs have been utilized as a strategy for decades in healthcare education.[14] Traditionally, during learning activities, students and faculty are the usual SPs.[15] However, due to the limitations caused by the pandemic, there was a need for family members to act as SPs to adapt to the

situation.[5] There is a study that proves that simulation in online learning is effective in helping students build patient education skills.[16] Another study investigated the dynamic power relationships of SPs but only focused on adolescent SPs. In addition, there is a limitation in studies that tackle the perception of people who role-play as patients.[17] There are currently limited published studies that delve into using family members as SPs. Given that family members participated as SPs during online PBAs in PT education, it is essential to know their experience, insights, and knowledge gained about the PT profession. Due to the lack of related studies conducted in the country, this has become a knowledge gap, hence, this study will be done in the Philippines.

The primary objective of this study is to explore how family members describe their experiences playing the role of patients in PT PBAs. The secondary objectives are to 1) describe how the experience helped the family members understand and appreciate the PT profession and 2) gather recommendations on how remote PT PBAs may be improved in the future.

The findings of this study may be used to improve the online delivery of PT courses from the perspective of family members who are considered stakeholders in PT education. Additionally, patients, students, family members, and the general public may benefit from this research as a result of understanding and appreciation regarding the profession. This study will also contribute as a future reference for research concerning role-playing in healthcare professional education.

METHODS

Ethical Considerations. Ethical approval will be obtained from the UST-CRS Ethics Review Committee. This research will abide by the principles of the Declaration of Helsinki, Belmont Report, National Ethical Guidelines 2017, and the Data Privacy Act 2012.

Study Design. A phenomenological design will be used to explore the experiences of undergraduate PT students' family members in role-playing as SPs during online PBAs. It describes the meaning of a lived experience of a particular phenomenon for several individuals.[18] Through participants' descriptions of the phenomenon being investigated, researchers can uncover invariant structures of the investigated phenomenon.[19] Other studies using SPs in health professional education also used phenomenological study design. A study used an interpretive phenomenological approach, exploring power relationships from adolescent SP's perspectives.[17] This study protocol was registered to the Philippine Health Research Registry with a registry number: PHRR220221-004338. The Consolidated criteria for Reporting Qualitative research (COREQ) Checklist was used in drafting this study protocol.[20] (Supplement A)

Study Participants. Recruited participants must have role-played as a patient at least once in the past two years, for experiencing role-playing once can already facilitate experience-based learning.[21] A two-year timeframe was chosen because this was when SP training became common due to the COVID-19 pandemic starting two years ago, March 2020.[1,22] Only adults (18 years old and above) will be recruited to minimize cognitive, linguistic, and social development concerns when interviewing minors.[23] Participants with any knowledge or experience with PT will be excluded from the study to prevent bias, since this may influence the participants' answers and insights regarding their understanding and appreciation for PT. In phenomenological studies, the usual number of participants ranges from six to 10, while data saturation can be achieved with a minimum of six participants.[24] The researchers will recruit six participants, but if saturation is not achieved, more will be recruited. Other criteria can be seen in Table 1.

Participant recruitment will be carried out over the course of four weeks. Family members who have role-played as patients in online PBAs will be identified and recruited to participate in the study by posting an invitation on Facebook with the attached participant information sheet (PIS) and informed consent (English and Filipino). Once they have read the PIS, they will have an

Table 1: Recruitment Criteria

Type of Criteria	Qualifications
Inclusion Criteria	Family members (i.e., parents, grandparents, siblings, cousins, household helpers, or anyone living with them) of Year 1-3 undergraduate PT students at the UST-CRS Must have played the role of a patient at least once during a case presentation, practical examination, or case discussion in any of the courses offered in the Bachelor of Science in PT Program of UST during the Academic Year 2021-2022 18 years old and above Must speak the Filipino or English language 18 years old and above Must speak the Filipino or English language
Exclusion Criteria	Have gotten PT in the past Is a PT student or have had any PT education Is a physical therapist by profession Is a family member of the researchers Is acquainted with the researcher Has a medical condition that might hinder them from participating coherently during the interview, such as cognitive decline (MMSE score of <24), slurring of speech, severe visual or hearing loss

Note: The table above shows the inclusion and exclusion criteria that are used in the recruitment of participants.

option to set a clarificatory session with the researchers regarding inquiries they may have with the study. Thereafter, the family members will answer the consent form, which is entirely voluntary if they wish to participate or not. Following their agreement they will answer the preliminary survey questionnaire, a screening tool to determine eligible family members to participate in the study; hence, a purposive specifically, criterion sampling will be used. Selected participants will be contacted via email to set a schedule for the interview that is most convenient for them.

Setting. Due to pandemic restrictions, the study will be conducted in the Philippines through the use of online platforms such as Email, Facebook Messenger, Google forms, and video conferencing platforms (e.g. Zoom Meeting, Google meet, etc.) that is most convenient to the participants.

Tools. Researchers will specifically use semi-structured one-on-one interviews, a qualitative data collection strategy, including open-ended questions to obtain data that investigate participants' thoughts, feelings, and beliefs about a topic and dive deeply into personal and sometimes sensitive issues.[25] This method is the most frequent qualitative data source in health research because it consists of a conversation between researcher and participant, is conducted by a flexible interview protocol, and is supplemented by follow-up questions and comments. It also allows interviewers to gain insight into their attitudes and experiences. In addition, with one-on-one interviews, respondents do not have to worry about group dynamics that inevitably occur in focus groups that might affect responses. The guide questions, based on a study by Pritchard et al. in 2019, are drafted to achieve our study objectives.[7] These questions will be further validated for content and alignment with research objectives by an external methodological expert. This expert is an educator and a researcher who has attained a master's degree in health profession education and has the capability of validating the guide questions. Researchers will conduct a pilot interview to determine whether the guide questions are valid, clear, and understandable and to estimate the interview duration which generally covers 30 to 60 minutes.26 In the pilot interview, a participant will be recruited, and the interview will be conducted by the principal author, an educator, and a researcher, to simulate the actual flow of the proposed interview procedure. The data gathered from this participant will not be included in the data collection.

Data Gathering Procedures. Participant recruitment and screening described earlier will then be conducted using Google Forms which includes information about the study and

questions (Supplement B) related to the inclusion and exclusion criteria. Two transcribers will identify the participants at the start, and when data has been transcribed and validated, participants will be assigned a code to be anonymized. All research information will be kept in encrypted or locked files, and only research personnel with essential needs will have access to the files.

From the list of eligible family members, participants will be randomly invited in one-on-one (one researcher and one interviewee) semi-structured interviews to obtain their perspectives and experiences about role-playing as patients during an online PT PBA. Before the interview, guide questions will be sent to the participants to reflect on their answers and minimize thinking time.

The principal author will assume the role of facilitator of interviews and primary extractor of data. In this research, DL is a male researcher that would act as the interviewer, has a master's and doctorate degree in PT, and is currently a professor who has been teaching for several years and has participated in professional training which made him experienced interviewing participants in qualitative research.

Semi-structured interviews will be conducted in the participants' chosen online video conferencing platform and will be scheduled based on the time most convenient for participants. Aside from the facilitator and the participant, one researcher (HCF) will be present during the interview to take notes in case of recording malfunction.[24] The interview's consented audio-visual recording will be done to create an accurate transcription of the conversation that would include the participant's non-verbal cues.

During the actual interview, a PowerPoint presentation will be used to guide both the participant and facilitator in which questions they are in. Considering that it is a semi-structured interview, additional questions may be asked if deemed fit and necessary. Data will be extracted from the discussion and participants' answers.

Two assigned researchers will independently transcribe the recording, including translating Filipino words to English. Transcriptions will be sent back to the respective participants to ensure transcribed data's validity, completeness, and accuracy. The participants will be informed of the study results through email after the completion of the study.

Synthesis and Analyses. Validated transcribed data will be analyzed using thematic analysis by two data encoders. There are six steps in the analysis and interpretation of the thematic analysis.[27] The six steps include 1) transcribing data and arranging it into different types, 2) reading the data and recording general thoughts, 3) coding of data, 4) using the coding process to generate descriptions of setting or people and themes for analysis, 5) deciding how the themes will be represented in the qualitative narrative, and 6) making an interpretation of findings and results.[27]

First, key responses will be cataloged by similarities and differences. Data gathering will be concluded once data saturation is reached. Data saturation is the point in the research process wherein no new information could be discovered in data analysis; this redundancy could confirm emerging themes.[28] Next, data familiarization will be done by repeatedly reading the text while actively trying to cipher meanings in answers gathered from the interview. New data would then be noted and recorded for future reference. All data obtained will be coded in the NVivo software to be organized and classified. An inductive approach, which builds from the data to broad themes to a generalized theory, will be used for coding to achieve general themes from several sub-themes.[27] After coding is finalized, themes and categories for analysis will then be identified together with their descriptions with a coding tree that will help in categorizing the data. The description and themes will be represented through a narrative passage approach to convey the findings of the analysis. A narrative passage is defined as a detailed discussion presenting a chronology of events including sub-themes, specific illustrations, multiple perspectives from individuals, and quotations.[27] Lastly, the study's findings will be interpreted.

Rigor is ensured by using a member checking technique. Interview transcription will be sent back to each participant to ensure validity and accuracy of transcribed data. An audit trail can

ensure dependability. The researchers will describe the step-by-step process of decision-making to ensure transparency. Study findings will be consistent with the raw data collected, and nothing will be missing throughout the process. Transferability is ensured by the study's inclusion and exclusion criteria, data sampling procedure and analysis, and participant's description and setting. These will provide enough evidence that the study results can be transferred to other possible contexts. Finally, confirmability ensures that the researchers' point of view will not influence the study by observing reflexivity to reduce the likelihood of researcher bias. Since the study is about participants' experiences, researchers will examine their own beliefs and judgments throughout the research process.

EXPECTED RESULTS

This study expects to generate main themes among the lived experiences of family members in role-playing as patients in PT PBAs. The findings of the study will provide insights from family members on how remote PT PBAs may be improved.

Individual Author's Contributions

D.L.: conceptualized the research project, supervised the protocol revisions, co-wrote the protocol, formulated the guide questions; guidance for the other authors. C.C.: helped conceptualize the research project, co-wrote the protocol, checked the protocol for technical and ethical considerations, guidance for the other authors. N.A.: Distributed the tasks, co-wrote the protocol, led submissions, and performed protocol revisions. F.A., K.B., M.E., H.F., D.M., M.M., J.P., T.S.,: co-wrote protocol, performed protocol revisions.

Disclosure Statement

The authors declare no relevant financial relationship.

Conflicts of interest

The author Donald S. Lipardo, PhD, is an associate editor of the Philippine Journal of Allied Health Sciences (PJAHS). Other authors have no conflict of interest.

Supplementary Materials

Supplementary Material A. Consolidated Criteria for Reporting Qualitative Research (COREQ) Checklist

Supplementary Material B. Guide Questions For The Semi-Structured Interview

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