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Abstract

In response to COVID-19, the widespread cancellation of professional practice placements, and the increased uptake of telehealth, Monash University Department of Occupational Therapy developed a simulated clinical placement adapted for online delivery. This paper describes the placement, and reports on the benefits and challenges of participating from the student perspective. This exploratory, descriptive study used a cross-sectional design with a web-based survey administered to students who completed the placement. Participants were first year Master of Occupational Therapy Practice students (n = 33), and second year Bachelor of Occupational Therapy students (n = 32). Numerical data were analyzed descriptively. Content of the open text responses were analyzed using content analysis. The majority of students reported they found the placement either extremely useful or moderately useful. The aspect reported as being the most useful was receiving immediate supervisor feedback, followed by interviewing a patient and interviewing a stakeholder. Working in a telehealth environment was identified as extremely or moderately useful by most students. Four content categories were identified: An incredible chance to practice in a safe environment; The good and the bad about working in groups; Too many tasks to juggle; and Online delivery prepares for working in telehealth. Use of telehealth in occupational therapy practice will continue into the future. Educators therefore need to ensure their graduates have the skills needed for this practice area. Participating in a simulated clinical placement delivered online enables students to practice communication in a safe environment, while gaining valuable skills to prepare for working in telehealth.

Keywords

Simulation; occupational therapy education; telehealth practice

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ABSTRACT

In response to COVID-19, the widespread cancellation of professional practice placements, and the increased uptake of telehealth, Monash University Department of Occupational Therapy developed a simulated clinical placement adapted for online delivery. This paper describes the placement, and reports on the benefits and challenges of participating from the student perspective. This exploratory, descriptive study used a cross-sectional design with a web-based survey administered to students who completed the placement. Participants were first year Master of Occupational Therapy Practice students (n = 33), and second year Bachelor of Occupational Therapy students (n = 32). Numerical data were analyzed descriptively. Content of the open text responses were analyzed using content analysis. The majority of students reported they found the placement either extremely useful or moderately useful. The aspect reported as being the most useful was receiving immediate supervisor feedback, followed by interviewing a patient and interviewing a stakeholder. Working in a telehealth environment was identified as extremely or moderately useful by most students. Four content categories were identified: An incredible chance to practice in a safe environment; The good and the bad about working in groups; Too many tasks to juggle; and Online delivery prepares for working in telehealth. Use of telehealth in occupational therapy practice will continue into the future. Educators therefore need to ensure their graduates have the skills needed for this practice area. Participating in a simulated clinical placement delivered online enables students to practice communication in a safe environment, while gaining valuable skills to prepare for working in telehealth.

Introduction

The onset of COVID-19 in 2020 resulted in widespread social and economic impacts internationally, including border closures, travel restrictions, and educational facilities closed or limited to online learning (Chu et al., 2020). Melbourne, Australia, the setting for this study, had some of the strictest and longest lockdowns in the world (Beck & Hensher, 2020). In the higher education sector, the need for social distancing as a means to control the spread of COVID-19 meant that gatherings of students on campus in lecture halls, tutorial rooms and laboratories were stopped (Sahu, 2020). In Australia, as in other parts of the world, many university campuses closed (except for essential services) and quickly transitioned to online teaching platforms to deliver courses (Keegan & Bannister, 2021; Leigh et al., 2020; Sahu, 2020). Academic staff rapidly adapted curriculum content to remote learning approaches such as recorded demonstrations of hands-on intervention techniques, virtual classrooms, audio podcasts, and videoconferencing software such as Zoom (Wong, 2020). More specifically, in health professional courses such as occupational therapy, practical skills sessions, workshops or tutorials had to be revised for online delivery (Pather et al., 2020). In addition, there was widespread cancellation of practice placements, a fundamental component of health education programs (Golos & Tekuzener, 2019).

Simulation utilizes a range of interactive activities and methods to replicate issues that students are likely to encounter when on a traditional placement (Chu et al., 2019). Students are guided by clinical supervisors who support them to develop professional skills and competencies (Maran & Glavin, 2003). Purpose built simulated environments such as mock home and ward environments can be used, while mannequins, simulated patients, and video footage provide authentic learning experiences for students. Simulation in health education is regarded as an adjunct to practice-based learning (Bradley et al., 2013). Recent evidence has indicated that simulation can be used to partially substitute for clinical placement hours and supports student learning outcomes in nursing and the allied health professions (Hill et al., 2021; Imms et al., 2018). A recently published scoping review recommended that occupational therapy courses continue to incorporate simulation while simultaneously ensuring that learning outcomes are carefully aligned with the activities provided (Grant et al., 2021).

Alongside the onset of the COVID-19 pandemic, and the recognition of the useful role of simulation in health education, has been the growing understanding of the value of telehealth. The Australian Government Department of Health and Aged Care describes telehealth as the patient consulting with their healthcare provider remotely when it has been determined a physical examination is not needed, and the patient cannot be seen in person (Commonwealth of Australia, 2023). The field of telehealth and telemedicine was expanding prior to COVID-19. The onset of the pandemic presented healthcare services with unprecedented challenges, but also opportunities (Wosik et al., 2020). Many health, education and social care agencies shifted their services from direct face-to-face care to approaches such as telehealth or telerehabilitation to enable clients to continue to receive services, but in a safe way (Robinson et al., 2021). There are a number of benefits for rehabilitation and medical services being delivered via telehealth for people with chronic illnesses or significant disabilities. These include providing more

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convenient access to care, and increasing communication with healthcare providers (Kruse et al., 2017; Woo et al., 2011). As governments have begun to understand this, many jurisdictions now offer rebates for medical and other services delivered via telehealth (Commonwealth of Australia, 2022). In order to prepare work ready graduates, telehealth placements and training are important components to include in entry level training for the allied health workforce (Tarlow et al., 2020). Combining simulation-based learning with training in telehealth to create an online simulated placement could be a viable solution to provide professional practice placements while simultaneously catering to the need for telehealth training in health education. However, little is known regarding the experience of occupational therapy students who have participated in an online simulation program.

Context

As one way of managing the widespread cancellation of professional practice placements due to COVID-19, Monash University Department of Occupational Therapy rapidly developed a simulated clinical placement (SCP) based on a design previously tested on a large scale, national randomized controlled trial (Imms et al., 2018). This SCP was adapted to be delivered online.

Two cohorts of students completed this SCP: Second year students enrolled in the Bachelor of Occupational Therapy course (BOT; n= 136) completed eight days of placement in the second half of 2020; and students enrolled in a Master of Occupational Therapy Practice (MOTprac; n= 45) who were midway through their accelerated two-year, full-time graduate entry course, completed four days of placement in May 2020. A large metropolitan fictional healthcare network was used as the practice context. Simulated patients were receiving services from general medical and neurological wards, community based physical rehabilitation services and mental health services. The learners' level and associated learning outcomes were carefully considered when designing the SCP. Students were required to complete a range of simulated activities and work processes that replicated practice which included interacting online with simulated clients, stakeholders and significant others relevant to the case. Criteria of authenticity, complexity, and immediacy to practice were taken into consideration in the design of the activities. Simulated patients were paid actors working from paper-based scenarios, while significant others and stakeholders were academic staff or volunteers who acted in these roles according to the scenarios. Case scenarios were based on the available open access materials developed by Imms et al. (2018) and funded by the Australian Department of Health (Imms et al., 2018). More detailed information about the activities completed can be obtained from the authors on request. The learning outcomes for the SCP were commensurate with the stage of learning of the students and aligned with the Occupational Therapy Council Accreditation Standards (Occupational Therapy Australia Council, 2018). The objectives for the placement were to demonstrate: professional self-conduct and professional behavior; time management and organizational skills; skills in effective client information gathering through initial

assessment and initial interview; ability to identify a client's occupational performance issues and assess the impact of environmental and social factors on the client's ongoing participation and engagement; ability to identify appropriate client-centred goals; documentation skills.

To simulate the work process, each student was assigned a clinical supervisor, who was an occupational therapist, and were required to complete daily statistics and time sheets. To simulate clinical practice, students received a referral to a primary patient who they worked with across the placement. The BOT students worked in groups of 12 and conducted the interviews in groups of 2-3, while the MOTprac students worked in groups of 4-5 for the entire process. In these small groups they conducted an initial interview with their primary patient (paid actor) via Zoom videoconferencing software (Zoom Video Communications Inc., 2016), with each student being required to conduct part of the interview. Students were given time prior to the interview to plan their questions and work out which student would ask which questions and how they would take notes. This provided students with the opportunity to learn how to manage communicating with multiple people in an online environment. The clinical supervisors were present as observers for each of these interviews. Authentic learning was supported by the students being able to watch video footage of the patients' (actors) home environment, which included patients completing a functional task for the students to observe (e.g. making a cup of tea). In the same small groups, the students also interviewed the patients' primary stakeholders (e.g. ward doctor, neighbour, husband, physiotherapist and case manager) via Zoom. Later in the week a follow-up interview was conducted with the patient in the same groups, to ask clarifying questions and confirm patient goals. Students were required to complete their own reports and notes, which included writing up the initial interview, a home assessment report, progress notes, identification of occupational performance issues, and intervention goals. Students were required to present a verbal report at a simulated online case conference at the end of the week.

Additional work tasks were given to the students, the purpose of which were to simulate time management and multi-tasking skills. Each individual student was assigned a secondary client who had a specific clinical problem that required the student to research a solution and provide a report. These clinical problems were a combination of adapted scenarios from the available open access materials developed by Imms et al. (2018) or developed by the occupational therapy teaching team. In addition, each small group was required to complete a brief evidence-based review of a particular practice or intervention for the primary client, which was presented to their supervisors, and student peers at the completion of the placement. Students were expected to be available from 9am – 5pm to simulate a normal working day. They spent on average 4-5 hours online, with breaks from Zoom throughout the day when they were working on research or writing notes.

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Clinical supervisors observed and guided the students' clinical reasoning, reflective practice and online communication skills throughout the SCP. This was done through structured and unstructured supervision and debriefing sessions at the end of each day. Some advantages of being online included: sessions could be recorded for students or supervisors to view later; and, the online Learning Management System enabled supervisors to provide feedback on clinical documents flexibly and in a timely way. At the completion of the SCP, clinical supervisors provided written feedback and completed placement evaluation documentation for each student using the Student Practice Evaluation Form – Revised 2nd Edition (SPEF-R (https://www.spefr.online/). This is an assessment tool that is used to evaluate occupational therapy students undertaking professional practice placements in Australia. The objective of this study was to identify the benefits and challenges of participating in a simulated clinical placement delivered online from occupational therapy students' perspectives. The research question was: what are the benefits and challenges of participating in a simulated clinical placement delivered online as perceived by a cohort of first year MOTprac students and a cohort of second year BOT students?

Methodology

Study Design

This exploratory, descriptive study used an anonymous online survey (Qualtrics©, Provo, UT, 2020) to gather data to identify the benefits and challenges of participating in a simulated clinical placement delivered online, from the students' perspective. The survey was developed by the two authors based on the main components of the SCP. The survey consisted of eight forced Likert response questions and two open-ended questions. The Likert response questions are included in Table 1. The two open text questions were: 1. *What were the main areas of learning for you? Please list all of them*; and 2. *Are there any other comments you would like to make*? The survey took approximately 20 minutes to complete. The survey was pilot tested prior to release to the students. Ethics approval for the study was obtained from Monash University Human Research Ethics Committee (number: 62067).

Recruitment

Following completion of the MOTprac and BOT SCP, a link to the survey was posted on the online learning management system (LMS) used by the students. A message was posted to the forum of the LMS by an academic staff not involved in teaching the students to invite students who had completed the SCP to complete the online survey. The post included information that the survey was voluntary and that there were no implications for non-participation.

Data Collection and Analysis

The survey was open for four weeks immediately after the placement completion. Completed data were downloaded from the Qualtrics platform into a Microsoft Excel spreadsheet. Quantitative data from questions 1- 8 were analyzed descriptively and reported using simple descriptive statistics (count and frequency (n [%]) for categorical

variables. Content of the two open text responses were analyzed using content analysis (Elo et al., 2014). The first author independently coded the text responses, using an inductive process. Once potential categories were developed, a process of constant comparison was completed, and discussion between the two researchers occurred until final categories were decided, named and described. Both authors have extensive clinical and academic experience. The second author has extensive experience in developing, delivering and evaluating simulated placements. Both researchers reflected on their experience in education, clinical practice and simulation-based learning when interpreting the qualitative results.

Results

A total of 65 students completed the survey: 50.77% (n=33) were MOTprac students (73% response rate), and 49.23% (n = 32) of these were BOT students (24% response rate).

Quantitative Data

The responses to the forced Likert response questions (questions 1-8) can be found in Table 1. Overall the responses to the survey questions indicated that students found the simulated placement useful, with the majority of students reporting that they found the placement either extremely useful or moderately useful: BOT (96.96%), MOTprac (84.85%). The aspect reported as being the most useful was receiving immediate feedback: BOT (93.88%), MOTprac (90.91%). The other aspects that students reported as either extremely or moderately useful were: interviewing a patient: BOT (96.97%), MOTprac (84.84%); interviewing a stakeholder: BOT (90.63%), MOTprac (84.84%); and completing hospital documentation: BOT (90.63%), MOTprac (78.78%). Working in a telehealth environment was identified as extremely or moderately useful by most students: BOT (84.38%), MOT (84.84%). Working in a group was reported as being either extremely or moderately useful by most students: BOT (90.63%), MOTprac (69.69%). However, 21.21% of students in the MOTprac cohort reported working in a group as not very or not at all useful.

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Table 1

Results of Online Survey

Variable	MOTprac (n=33)	MOTprac (%)	BOT (n=32)	BOT (%)
Usefulness of the virtual simulated fieldwork workshop				
Extremely useful	11	33.33	11	36.36
Moderately useful	17	51.52	20	60.61
Neither useful or unuseful	2	6.06	1	3.03
Not very useful	3	9.09	0	0
Not at all useful	0	0	0	0
How useful was interviewing a simulated patient/client?				
Extremely useful	15	45.45	17	51.52
Moderately useful	13	39.39	14	45.45
Neither useful or unuseful	4	12.12	1	3.03
Not very useful	1	3.03	0	0
Not at all useful	0	0.00	0	0
How useful was interviewing a stakeholder?				
Extremely useful	12	36.36	9	28.13
Moderately useful	16	48.48	19	62.50
Neither useful or unuseful	3	9.09	4	9.38
Not very useful	0	6.06	0	0
Not at all useful	0	0.00	0	0
How useful was working in a group?				
Extremely useful	11	33.33	16	50.00
Moderately useful	12	36.36	13	40.63
Neither useful or unuseful	3	9.09	3	9.38
Not very useful	6	18.18	0	0
Not at all useful	1	3.03	0	0
How useful was getting practice in a telehealth environment?				
Extremely useful	22	66.67	8	25.00
Moderately useful	6	18.18	19	59.38
Neither useful or unuseful	3	9.09	3	9.38
Not very useful	1	3.03	2	6.25
Not at all useful	1	3.03	0	0

How useful was completing simulated hospital documentation?				
Extremely useful	9	27.27	17	53.13
Moderately useful	17	51.52	12	37.50
Neither useful or unuseful	3	9.09	3	9.38
Not very useful	3	9.09	0	0
Not at all useful	1	3.03	0	0
How useful was having multiple tasks to juggle requiring time management and organisation?				
Extremely useful	10	30.30	10	31.25
Moderately useful	12	36.36	17	53.13
Neither useful or unuseful	7	21.21	4	12.50
Not very useful	3	9.09	1	3.13
Not at all useful	1	3.03	0	0
How useful was getting immediate feedback from clinical supervisors?				
Extremely useful	22	66.67	23	71.88
Moderately useful	8	24.24	8	25.00
Neither useful or unuseful	3	9.09	1	31.25
Not very useful	0	0	0	0
Not at all useful	0	0	0	0

Qualitative Data

The analysis of the comments and feedback for the two open text response questions resulted in four content categories:

1. An incredible chance to practice communication in a safe environment
2. The good and the bad about working in groups online
3. Too many tasks to juggle
4. Online delivery prepares for working in telehealth

An Incredible Chance to Practice Communication in a Safe Environment

Overall, the feedback given by the students from both cohorts was positive. There was recognition that the online simulation placement had to be designed and organized in a very short time (clinical placements were cancelled in March 2020 for MOTprac students and the simulation was delivered mid-May 2020). “I found the last four days such an incredible chance to practice the things we have learnt over the last couple of units. I particularly found it beneficial to have so much detailed feedback on communication skills, formulating questions and then presenting on a case” (MOTprac student). “It was extremely comforting to know that we could not inflict any real harm and that we could talk to the patient afterwards and get feedback” (BOT student). Students referred to the opportunity to practice online communication in a safe environment as a positive experience. One BOT student stated that one of the main areas of learning was “learning interviewing techniques online”.

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The Good and the Bad about Working in Groups Online

There were mixed feelings from both groups of students regarding working in groups in an online environment. The online environment heightened the need for group cooperation and forward planning as to what roles and questions group members would ask to minimize people talking over one another. Some students found it useful to learn from other students and work to the strengths of the different group members: “I believe it was very helpful to work in a group and discuss lots of our documentation together as opposed to individual documentation” (BOT student). However, there were perceptions that some group members did more work than others, particularly in the MOTprac cohort. “The group work dynamic detracted significantly from my experience, not because of the need to collaborate and assign tasks, but more because I felt limited by my group members” (MOTprac student).

Too Many Tasks to Juggle

The clinical placement was designed in such a way as to drip feed tasks to students in a similar way to that which would occur at a face-to-face placement. One of the learning objectives was to improve students’ time management and organization skills. A number of students commented on having too many tasks to juggle and feeling overwhelmed, particularly at the beginning of the placement. Consistent with Table 1, most comments relating to time management challenges were made by the BOT students. “There was a lot of uncertainty around tasks we had to do on the first week of placement” (BOT student). However, several of the MOTprac students recognized the value of being challenged to manage their time use. One student stated that an advantage was “effectively working with a team with time constraints.” It was not clear whether time management challenges were heightened due to the online environment.

Online Delivery Prepares for Working in Telehealth

There were a few comments from the BOT students about Zoom being tiring, but these were outweighed by the recognition by many students that they would learn relevant skills to prepare them for working in telehealth in their future practice. One BOT student said that a main area of learning for them was “online communication” and another identified “online communication with clients” as useful. The MOTprac students in particular recognized the value of this online experience as part of work-integrated learning, with multiple MOTprac students listing “telehealth” as one of the main areas of learning for them. One MOTprac student said: “I think this is a great experience to aid in telehealth practice in the future. I have gained confidence in situations like those created during this simulation.”

Discussion

The objective of this study was to explore the benefits and challenges of participating in a simulated clinical placement delivered online from the perspectives of two cohorts of occupational therapy students. Despite the unusual circumstances and the extremely tight timeframes required to design and deliver the pilot SCP, the students’ perceptions of the placement were largely positive.

One of the strengths about participating in the online SCP noted by both groups of students were the skills gained that would prepare them for working in a telehealth or telecare environment. The field of telehealth and telemedicine was expanding prior to COVID-19, but grew exponentially during the pandemic (Graham et al., 2020; Wosik et al., 2020). Two of the learning objectives for this SCP related to professional self-conduct and demonstration of professional behavior, and skills in effective client information gathering through initial assessment and initial interview (OT Australia, 2018). There are subtle differences in these skills within a telehealth environment compared to face-to-face communication (Leigh et al., 2020). When using Zoom or similar videoconference platforms, observation of non-verbal communication can be impaired by the position and/or angle of the camera, and can inhibit eye contact (Yudkowsky et al., 2011). This can lead to misinterpretation or misunderstanding of the patient's emotions. Students became aware of the need to learn ways of overcoming these limitations, for example, by asking more reflective or clarifying questions. Such learnings can be applied when the students graduate and are working in telehealth settings, which will become a larger component of health and disability work going forward in the future (Graham et al., 2020).

Students in this study commented on the positive experience of being able to practice online communication skills in a safe environment. One of the acknowledged advantages of using traditional simulation in health education is that it provides an authentic but supportive learning environment (Andrzejewski et al., 2020; Bethea et al., 2014). Bethea and colleagues reported the results of a survey of 245 entry level occupational therapy courses regarding benefits and challenges of using simulation. In a similar finding to our study, one of the reported benefits was that simulation allowed for the application of knowledge and skills in a safe environment (Bethea et al., 2014). Communicating with patients and establishing rapport using videoconferencing platforms such as Zoom has inherent additional challenges compared to face-to-face communication. These challenges include maintaining eye contact, lack of personal contact, and establishing a sense of connectedness with the patient (Dahl-Popolizio et al., 2020; Yudkowsky et al., 2011). As the field of telehealth expands in occupational therapy practice, these are important skills for students to develop during their training (Dahl-Popolizio et al., 2020).

Interestingly no students in this study commented on the challenges associated with using online platforms or being reliant on the internet. A recently published systematic review regarding allied health student engagement in telehealth clinical placements, found that students required appropriate training in the use of the technology, and how to problem-solve technology failures (Bridgman et al., 2022). The absence of this as a finding in our study could partly be because these two groups of students had been using the Zoom platform for online learning for several months prior to participating in the SCP, and already had skills in problem solving technology difficulties.

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The aspect of SCP online that was reported as being most useful in the quantitative results of this study was receiving immediate feedback. This is consistent with another occupational therapy study that reported that students appreciated timely, detailed feedback and supervision during the simulated placement, making feedback and supervisor support key elements of a quality placement (Rodger et al., 2011). Debriefing and reflective practice in simulated placement design is an essential component and is associated with a higher level on professional competency achieved, self-reflection and satisfaction with simulation-based learning (Ryoo et al., 2015). Our study finding supports that quality feedback and supervision could not only be achieved when the simulated placement is delivered online, but provides additional opportunities to occur.

It should be noted, that simply trying to modify a clinical placement designed for face-to-face delivery to online delivery may not meet the learning needs of students. In order to provide a well-structured authentic experience, time needs to be taken to orientate clinical supervisors and students to the online program being used, and to train staff and students to problem solve when using new technologies. Although experienced clinicians were recruited to implement this online SCP, many staff were not familiar with using Zoom for teaching or clinical work. Students also needed to learn to use various videoconferencing functions such as creating meetings, use of breakout rooms, sharing screens and using chat functions to work collaboratively online.

Limitations

As this was a pilot program with a sample from one university in Victoria, Australia, the results cannot be generalized to other countries. There was an element of nonresponse bias, particularly in the BOT cohort, therefore the answers may not represent the whole cohort. The text responses of the open-ended questions of the survey were coded and analyzed by the authors who designed the simulated placements delivered online, and therefore were informed by their knowledge and experience. While both authors had deep understanding of pedagogy and clinical practice, one author had limited experience in developing and delivering simulated placement while the other has extensive experience in this area. Biases in data analysis could be reduced by including academic staff not involved in simulated placement design and delivery in the data analysis. Including the perspectives of the occupational therapy clinical supervisors would have enhanced the richness of the data collected. Acknowledging that this study was conducted during COVID-19 lockdowns, it may be useful to run the same research again and compare the responses.

Implications for Occupational Therapy Education

Use of telehealth in occupational therapy practice will continue into the future. Educators therefore need to ensure their graduates have the skills needed for this practice area. Participating in a simulated clinical placement delivered online enables students to practice communication in a safe environment, while gaining valuable skills to prepare for working in telehealth. Educators need to ensure that there is a clear conceptual framework underpinning the simulated clinical placement and be mindful of the challenges of students working in groups.

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