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The impact of on-line learning on 'General Nursing Students Skills' within clinical practice during the COVID-19 Pandemic.

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Abstract

The impact of the COVID-19 Pandemic on the teaching and learning activities within medical facilities has been reflected on the skills of medical and nursing students while practising in the clinical areas. Due to the sudden outbreak many nursing staff have been relocated to other areas to help with the pandemic, putting them in the frontline and causing psychological stress⁶. This study investigates the nature of how the COVID-19 Pandemic has affected the under and post graduate nurses when transitioning to clinical areas. This qualitative study looks at the effects that on-line education had on the practical skills of transitioning graduates into the workforce.

Keywords: Online learning, Clinical, Psychological, Practical skills, Limitations, Competence.

Introduction

According to the World Health Organization (WHO), as of February 2020 COVID-19 has impacted and affected more than 10,000 people and caused more than 3000 deaths worldwide.¹ The interruption to normal classes and clinical experience has been interrupted in many nursing training facilities globally.² The limited knowledge of COVID-19 added also to the anxiety and fear these nurses had in the new task force communities, while isolation added to the existing fear and frustration which gave rise to stress levels.³ The isolation and quarantine process led to staff members distancing themselves from loved ones, grief, anxiety, and stress, giving rise to long term psychological effects.⁴ It was noted that the existence of lack of knowledge among new graduates has affected the clinical skills of new nurses post pandemic, and also contributed to post pandemic stress levels due to non-competence in the clinical areas.

Literature review

The literature for this study was identified through various sources and relevant articles taken from various databases including, PUB-Med, Elsevier, Science Direct, and Research Gate. The journal dates were updated because the COVID-19 pandemic was recent. The focus of the literature review was to confirm what was already known about the effect that the pandemic had on undergraduate and post graduate nurses. This gave the study an international prospective looking at how different countries dealt with their training and clinical practice.

As nursing education involves theoretical and practical education, it primarily includes in-person lectures, simulation laboratories, and rotations within clinical placements.⁵ Healthcare is a fast-paced and ever-changing environment. For nursing students to develop into competent professional nurses and reach their full potential, they must maintain high levels of focus while developing theoretical and practical skills.⁶ In 2020 measures to combat the COVID-19 pandemic led to the implementation of many changes globally, including changes to the educational and healthcare systems. Social distancing was significant, particularly for this study, including distance learning and working from home.⁷ COVID-19 caused many nursing universities worldwide to resort to remote learning, with online lectures and reduced

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to no clinical placements. Due to the high nursing shortage, some countries recruited senior nursing students to join the workforce and care for the high number of COVID positive patients.⁸

A Mixed-method study aimed to understand better the factors that affected nursing students' theoretical and practical learning during COVID-19.⁹ The results revealed that online learning was perceived to be difficult as it involved high levels of self-directed learning and required the students to be highly motivated. Additionally, the participants of Ozkan, Taylan and Ilaslan's¹⁰ study found they had low motivation due to stress, anxiety, fear, and lack of interaction with their peers and lectures.¹⁰ According to Kim, Kim and Lee¹¹ virtual learning also requires high concentration levels. However, the students of Park and Seo's¹² study

lacked concentration, leading to their decreased motivation to learn, mainly when lecturers read from the slides without further explanation. These findings were similar to Ozkan, Taylan and Ilaslan's¹⁰ phenomenological study, where communication was a barrier as many lectures were pre-recorded, making asking questions impossible. Furthermore, difficulties with online classes faced by the students in these studies were related to connection, network, or equipment issues, as seen in Park and Seo's¹² study. Ozkan, Taylan and Ilaslan¹⁰ added that students lacked good internet signals and technical issues, which interrupted the learning flow.

Distance learning failed to meet students' requirements for skills, experiences, and behaviour that would have been met in clinical laboratory practices and the clinical environment, as watching videos on lab practices led to a lack of development of motor skills.¹³ Similarly, the students in Korea of Park and Seo¹² study perceived online learning negatively and associated it with missed opportunities, as the lack of clinical practice meant they failed to gain the necessary clinical skills required from clinical experiences. However, they were also worried about how they would be assessed as there was a lack of clinical practice, their stress had increased due to the higher number of academic assignments.¹³ Senior nursing students in Ozkan, Taylan and Ilaslan¹³ interviews expressed experiencing anxiety due to the lack of clinical exposure, resulting in a loss of their professional skills and confidence in practice. Similarly, Li et al.'s¹⁴ study showed that the more senior the students, the more dissatisfied they were with online learning due to the unavailability of clinical experiences. This led to a more extensive theory-to-practice gap.¹⁴

In contrast, the students of Godbold et al.¹⁵ qualitative study in England were employed as part of the workforce during the COVID-19 pandemic due to the significant shortage. Nevertheless, these students also had negative experiences related to role strain, the theory-to-practice gap, and personal health and well-being.¹⁵ The theme of role tension was due to the students receiving a salary for their work, yet were still undergraduates and did not have a degree of license to practice; organizations also found it challenging to allocate the students to specific units as they were worried about them and wanted to support them as best, they could.¹⁶ However, as they were still undergraduates, they required signatures from their mentors. Yet, due to the major shortage, most failed to see their mentors; this led to a disregard for clinical proficiency that needed completing

to graduate.¹⁷ It was also found that during the pandemic as a lot was unknown, being exposed to clinical areas led to feelings of vulnerability and increased risks for mental health effects.¹⁷

Participants also perceived virtual clinical training to allow for more profound knowledge gained and understanding. Particularly in Park and Seo's¹² study, proactive case studies allowed students to practice problem-solving skills and multiple tasks proactively. Specifically, when this virtual training was before physical hospital training, the learning gained was strengthened and positively boosted their clinical performance capacity.

Aims and Objectives of the Study

The Aims

1. Identify areas that need more attention to detail.
2. Approach the teaching of students with COVID-19 restrictions.
3. Enable students and postgraduate nurses to get enough clinical practice experience, as is necessary.
4. Enable students to practice procedures that are needed for their level of study.

The Objectives

1. Enhance the clinical skills of student and post graduate nurses.
2. Identify a time and place for extra teaching and practice.
3. To enhance the need for extra teaching practice.
4. Allocate a time for tutorial on specific needs.

Ethical Approval

Ethical Approval was taken from the organizational 'Ethical Approval Committee'. All participants were consented, and confidentiality was maintained. A research study rationale information sheet was given to all consented participants who took part in the study.

Design Methodology

The research study design methodology was that of a qualitative approach with one-to-one interviews based on the participant's timetable. Participants were approached by one of the researchers and asked if they wanted to take part after explanation of the rationale was given to them. 99% of the approached students and graduates agreed. The 1 % who did not take part were either not available at the time of interviewing or on annual leave. Most of the participants were extremely happy that they would get their say on what they needed as students in clinical practice areas or postgraduate because of the lack of specialised training in cardiac related nursing, due to the COVID-19 pandemic and their exclusion from clinical placement in the MKCC during this time. The exclusion was due to the closure of some units and the cancelling of elective surgeries, the participants themselves as students within the university were also given placements in COVID-19 clinics within the Kingdom of Bahrain as part of the COVID-19 task force during April 2020 and December 2021.

The interviews took the form of semi-structured interview questions with open ended format. Prompts were also added to assist in the understanding of the direction of the questions themselves. This helped the participants to fully understand the nature of the questions being asked. The strengths of semi-structured interviews are that of taking part in deep conversation and the researcher can critically scrutinise the varied responses and arrive at the multiple

conclusions⁸. The interviewer can synthesise different themes and be flexible in the similarities, this can give access to more room for free responses from the interviewee. It was noted that semi-structured interviews have given a deeper context and an easy processing task that can give more options for identifying similarities.¹⁵

The participants will be that of newly graduated nursing students and existing students who are sponsored by the chosen organization who were involved in clinical practice during the COVID-19 pandemic stage. The lack of clinical hospital experience especially within the cardiac centre was because the COVID-19 task for the Kingdom of Bahrain utilised all students and excess staff to the Kingdoms COVID-19 centres. This along with the cancelling of elective surgeries and cardiac outpatient clinics turning to telemedicine, gave an excess of staffing, therefore students were not allocated to the centre because of the lack of patients.

Data Analysis

Data analysis was carried out by colour coding the narrative, giving the rise to thematic analysis, themes, and sub-themes. Consequently, this led to specific major themes which resulted in the recommendations for change to the strategies for students and new graduate orientation packages. These orientation packages had an added element after the general orientation was completed. The added element consisted of one week of intense cardiac training on all aspects of care of a cardiac patient.

The data was transcribed and coded according to the frequency of wording and transferred onto a structured table. This will give the words and phrases mostly used during the one-to-one interviews. The similarities will be grouped and transcribed towards themes and sub-themes. This then showed major themes which were taken as recommendations for the change and implementation of the newly structured in-house cardiac course.

Discussion and findings

Our aim in this research was to see what is needed to scaffold the internship training post-graduation and the need for support in ensuring clinical competency in practice. All the narrative was charted onto a table then colour coded to enhance similarities in responses. The similarity in the responses were noted and taken to the next thematic analysis level of themes and sub-themes.

After transcribing the narrative to a chart, the themes started to emerge. The sub-themes were diverse and took in all aspects of the online concepts. Some undergraduate students did however quote the following.

“Meeting lecturers was hard. Some lecturers we never met in person”.

“Face-to-face lectures or interactions were kept to a minimum; only clinical skills laboratory sessions were ongoing but even they were put on hold eventually”.

“Only met my lecturer 2-3 time in the academic year and that was for practical exams”.

The four main themes were as follows:

1. Not enough exposure during the pandemic to clinical areas.
2. Not enough clinical hands on with patients especially cardiac related cases.
3. Online classes being scheduled at different times, with

the lack of time for questions.

4. Post-graduation cardiac related training was inadequate for the specialised areas.

Many aspects have affected the students in the pandemic. Constant changes in the university schedules caused anxiety among some students, lack of reliable internet sources, online learning not adequate, practical training hours were cut, movement to other medical centres looking after COVID-19 patients, working in COVID-19 testing centre, and no chance to practice. Another theme was that of extra teaching post graduation, learning new skills, updating knowledge, learning skills in cardiac skills, and good mentorship from the current staff. Refreshing knowledge was also noted by some students in the 3rd year of training during the COVID-19 pandemic when allocated to the COVID-19 centres. This was due to exposure to actual patients and not as per simulation.

Recommendations

Recommendations from this research study findings will be presented to the administrator and centre director. Extra teaching and training will be organised and carried out by the training department within MKCC. This training is crucial for the first 3-6 months in the transitioning from student to staff nurse.

Summary and Conclusion

This study was carried out in order to find out what extra teaching undergraduate and post graduate students needed after graduation. From the major themes we were able to see what areas are lacking because of their online teaching during the crucial years of undergraduate nurse training. Patient contact was only possible within the COVID-19 centres where the students did placements. Specialist hospitals were not able to take students during the COVID-19 pandemic due to the lack of elective operations and outpatient visits being cut down to minimum.

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