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Developing mental health competency in undergraduate nursing students amid pandemic: A hybrid model approach

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ABSTRACT

COVID-19 has raised a concern about the quality and continuity of education. The uncertain situation has required universities to undertake several innovative measures to continue their educational programs without compromising the quality of education. The aim of this paper is to introduce the hybrid approach for undergraduate nursing students for teaching mental health nursing course, utilizing Gagne's instructional design theory, in a private nursing institution in Pakistan. The nine steps of instructions in Gagne's theoretical framework were utilized for teaching the mental health nursing course. The approach enhanced students' therapeutic communication skills, boosted their confidence level, and assisted them in overcoming their fears in caring patients with psychiatric illnesses. Students appreciated the innovative strategies, such as problem-based learning, case studies, interactions with standardized patients, and learning through movies. The innovative and creative clinical teaching approaches can be used to develop nursing students' competencies, core clinical skills, and to bridge the theory-practice gap.

Introduction

The global pandemic has strained the healthcare system, resulting in a scarcity of required resources and highlighting the systemic weaknesses in the economy, education, and health sector. Globally, the closure of educational institutions due to COVID-19 has raised concerns about the quality and continuity of education. The uncertain situation has required universities to undertake several innovative measures to continue their educational programs and complete them on time without compromising the quality of education in their graduate programs. In this situation, the traditional face-to-face teaching strategy was no longer a viable option (Adnan & Anwar, 2020). Thus, introduction of efficient strategies was required to ensure continuity of students' learning and attainment of the intended outcomes of the course. Nursing education faced similar challenges.

The reason for closing the schools of nursing was two-fold, that is, students' own safety and mitigating the chances of spreading the infection. The nursing programs aim to prepare professionals who can provide safe holistic care to the patients. Lack of sufficient clinical experience during COVID-19, in each specialty-based area, was likely to disrupt students' learning by creating a theory-practice gap. This increased the struggle of nursing institutions to provide hands-on experience to students in patient care, while keeping a balance between their safety and learning requirement.

Like other specialty areas, constant change in health care demands has made it difficult to provide complete in-patient clinical exposure for psychiatry to undergraduate nursing students. Several psychiatry units are either moving towards closure or are considering home-based treatment as priority. A survey by the World Health Organization (WHO), conducted in 130 countries, to evaluate changes in the provision and access of mental health services due to COVID-19, revealed over 60% disturbances in the mental health services for vulnerable groups, and 67% disruption in therapies such as counseling and psychotherapy (WHO, 2020). Moreover, the mental health demands are yet to increase with the periodic waves of covid cases, globally.

Several national and international studies have unveiled the impact of COVID-19 on the mental health of people (Aqeel et al., 2021; Khattak et al., 2020; Mamun & Ullah, 2020). This increased vulnerability to mental health suffering will require more trained nurses who have basic knowledge and skills to recognize, mitigate, and refer the high-risk individuals to the psychiatrists. Moreover, mental health nursing is becoming more challenging, since the major focus of health care amid COVID-19 has placed physical health as a priority (Harder, 2020). Thus, an innovative approach can be facilitative in bridging the gap between theory and practice (Adnan & Anwar, 2020), in order to promote students' critical thinking and clinical

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decision-making and to develop their competence in core clinical skills, particularly with regard to mental health nursing.

Simultaneously, we cannot ignore the challenges that resource constrained countries like Pakistan face, in their journey from a traditional teaching mode to an online mode, during the pandemic (Mumtaz et al., 2021). The Higher Education Commission of Pakistan has mandated all institutions to modify their teaching modalities and to switch the virtual mode (Hashmi & Saleem, 2020). But, while this pandemic has raised challenges, it has given an opportunity to utilize innovative and techno-friendly strategies at maximum capacity, to continue imparting quality education, despite decreased face-to-face interaction in the educational institutes, such as introducing a hybrid model of teaching approach (Bao, 2020).

The undergraduate Bachelor of Science in Nursing (BScN) is a 4-year program in Pakistan that is offered to students with 12 years of education, with majors in medical sciences. The Mental Health Nursing (MHN) course is offered to the third year BScN students, in accordance with the national nursing curriculum. The MHN is a six-credit hour course, three clinical (153 hours) and three theory (51 hours). Moreover, to meet nursing students' learning needs, the implementation of simulation in mental health undergraduate nursing training has been found to be effective (Farooq et.al., 2020).

During pre-covid times, students had a chance to experience face-to-face interaction with simulated and actual patients in the lab and the psychiatric wards. However, keeping in mind the current circumstances of the pandemic and complying with the standard operating principles (SOPs), more flexible and innovative clinical teaching approach was required to develop nursing students' clinical competence in mental health. Thus, the pandemic created an opportunity for developing a more reliable and sustainable hybrid model that blends both virtual and face-to-face teaching (Bao, 2020), to maximize the clinical experience. Taking up the challenge, the MHN course teaching team developed a hybrid model (synchronous and asynchronous) for the clinical component of the course that provided students a step-by-step exposure to help them integrate theoretical knowledge, improve communication skills, enhance critical thinking, and gain confidence to manage clinical scenarios.

This paper aims to present the hybrid approach for teaching the clinical component of the MHN course, based on Robert Gagne's model that was developed for the undergraduate nursing students at a private nursing institution in Pakistan.

Theoretical Framework: Integrating Gagne Theory in Hybrid Teaching

Based on the cognitive information of processing learning, Gagne theory provides nine events of instructions to formulate "conditions of learning" for learners (Miner et al., 2015). The theory provides a significant framework for educators to design a learning pathway for students to achieve their desired learning outcomes. According to Gagne's theory, there is a systematic way through which a teacher can deliver the information to the students, by using the appropriate design of instructions (Gagné & Gagné, 1985). These nine events of instructions include: gaining attention, informing learners about the objectives, stimulating recall of prior learning, presenting stimulus, providing learner guidance, eliciting performance, providing feedback, assessment of performance, and enhancing retention and transfer (Miner et al., 2015). The model has been utilized earlier for teaching psychomotor skills to students (Buscombe, 2013). These systematic steps were employed to steer student's learning in the MHN course (Table 1).

Table 1
Gagne events of instructions.

Events of instructions	Description
Gain attention	Present a stimulus to gain students' attention
Inform learners about objectives	Provide objectives prior, to enable students to understand what they will learn and what they are expected to do
Stimulating recall of prior learning	Help students to connect the dots by relating the new information to the previously known knowledge
Present stimulus	Use strategies to present the content
Provide learner guidance	Provide students some strategies to learn further
Elicit performance	Ask students to apply the learned knowledge
Provide feedback	Provide timely feedback
Assess performance	Test to evaluate the extent of outcomes achieved
Enhance retention and transfer	Connect retained information to core concepts and real-life scenarios

Setting the Ground (Step 1 & 2)

To gauge students' *attention* and interest, measures were taken to stimulate students towards learning through the hybrid model. An interactive discussion and sharing of resources, such as YouTube videos, facilitated in gaining students' attention before beginning the course. A detailed discussion was held for addressing their fears and anxieties related to the hybrid model of learning, building rapport with the facilitators, and promoting an open communication during the course. The expected learning outcomes (*objectives*) were also shared with the students to enable *them to understand what they will learn and are expected to perform.* Review of course syllabus as a prerequisite facilitated the discussion and helped clarify the expected performance and assessment criteria for the course.

Stimulating and Guiding (Steps 3 to 5)

The facilitators capitalized on the students' *prior knowledge,* gained through courses attended in the past and their personal and professional experiences. Students were encouraged to share their stories and experiences that could possibly impact their active engagement in learning from this course. This discussion *stimulated* students to connect the dots (Miner et al., 2015) by relating the new information to their previous experiences.

Multiple strategies were used to structure the hybrid model such that it provided *guidance* to students. This included engagement in problem-based learning, case studies, discussions, presentations, online learning platforms/courses, learning theatres, and simulated cases, using standardized patients. Table 2 outlines the key activities used in the hybrid model. Each activity included close guidance from the facilitator, in small groups. Exemplar of detailed guidelines is provided in Box 1: integrated case-based performance guidelines to learn case management of common mental illnesses and Box 2: guidelines for movie theater. Group work was also promoted to enhance peer-learning. Simulation cases and case studies were thoughtfully developed, considering contextually relevant current trends.

Box 1 *Integrated case-based performance guidelines*

Each clinical group was assigned a different case scenario to perform the series of tasks that were spread over two days.
Day 1: Outline the case (20 minutes for each group)
1. Role play the given scenario.
   a. Demonstrate the signs and symptoms of the disorder appropriately and comprehensively.

2. Demonstrate nurses' interaction with patient and family.
   a. Obtain detailed history and perform mental status examination.
   b. Demonstrate use of therapeutic communication skills in assessment.
3. Share key findings of assessment and relate the disease (that is based on the reading from appropriate literature).
4. Integrate recent articles (published in the last two years) related to the given disorder presented in the case scenario.

Day 2: Integrated care plan (30 minutes for each group)

1. Building on the key findings presented the day before, share the prioritization of patient care needs. Plan for relevant nursing care for at least three priority needs.
2. Relate possible treatment modalities (including psychopharmacotherapy) and specify their implementation, as relevant to the patient case.
3. Demonstrate interaction with patient that is focused on implementing therapeutic modalities and nursing care that the group has outlined.
4. Present additional articles (published in last two years) that relate to the treatment/ care proposed for patient care.

Box 2 *Guidelines for movie theater*

Watch Movie # 1- Out of Darkness

Objectives:

By the end of the movie, learners will be able to:

1. List the risk factors leading to the psychiatric disorder in the main character.
2. Observe the classic signs and symptoms of the disease process.
3. Analyze the adverse effects of pharmacotherapy on the patient and its consequences.
4. Discuss the role and significance of family support.

Watch Movie # 2- Silver Linings Playbook

Objectives:

After this movie, you will be able to:

1. Identify the reason of admission of the main character.
2. Observe and list the signs and symptoms presented by the characters in the movie.
3. Recognize the stimulus for the main character.
4. Foresee the consequences of not being complaint to the medicines.
5. Describe the role of the healthcare provider in helping the patient with behavior modification.

Reflections:

Learners are required to post a reflection after watching each movie. Write a reflection of *not more than 100 words* for each movie and describe how you were able to translate and relate the theoretical knowledge learned with the movie. You need to reflect on the following:

- How did you feel?
- How differently would you handle your patients in a psychiatric ward?

Table 2
Key activities for the hybrid model.

Week	*Key activities Mode: Zoom/Microsoft teams
I	• Review of tools of psychiatric nursing and nursing process for psychiatric patients. • Arrange physical set-up. Develop guiding assessment questions and practice. • Live demonstration and video recordings on assessment of mental status examination. • Student-led assessment on provided scenarios. • Practice documentation.
II	• Student-led assessment on provided scenarios. • Interactive session on Critical integrated map (CIM) development. • Group activity for preparing CIM on assigned psychiatric disorder, gallery, and discussion. • Live demonstration to practice process recording. • Practice interpretation of patient assessment and documentation through recorded videos.
III	• Integrated case based performance activity [refer Box: 1 for detailed guidelines]. • Structured clinical conferences on current trends in psychiatric nursing. • Practice interpretation of patient assessment and documentation through recorded videos.
IV	• Briefing on Learning through Movie Theater [refer Box 2: for objectives for each movie and reflections]. • Watch two movies: 1. Out of Darkness 2. Silver Linings Playbook. • Virtual visit of drug rehabilitation center and interaction with clients. • Interaction with Standardized Patients (SP), in pair, and documentation.
V	• Interaction with Standardized Patients (SP) in pair and documentation. • Psychological first aid course - Coursera https://www.coursera.org/learn/psychological-first-aid • Virtual Reality Simulation- Body Interact Tutorial and completion of the assigned case(s). https://web.bodyinteract.com/WebGL/ • Structured clinical conferences on current trend in psychiatric nursing.
VI to XI	• Rotational face-to-face clinical of students in the psychiatric ward.

Scenarios for practice: Communication with patients who is/has: Mute, suicidal, overfamiliar, aggressive, crying spell, delusions, hallucinations.

* Students' self-reflection, and faculty and peer feedbacks were integral components of each activity. Virtual activities were in groups of 13-14 students, with one facilitator. Whereas, for face-to-face clinical, each group comprised of seven students, with one facilitator.

Action and Evaluation (Steps 6 to 9)

Students' *performance* was *elicited* through their application of the learned knowledge and skills. Students were engaged in role plays to depict a case scenario, to enhance their assessment skills. Next, a 2-day extended activity was planned that integrated the learned concepts, the assessment skills, and their integration, to strategize possible nursing interventions and therapeutic modalities. Step-by-step guidelines were provided to the students to experience a close-to-real clinical setting. Each activity in the model was followed by provision of *feedback* by the facilitator and peers, using a feed-forward approach to enhance students' learning and consecutive performance.

Continuous formative assessment including self, individual, peer, and group feedback during the course helped both the facilitator and the students to identify areas of improvement and to work to improve the skills further. Additionally, summative assessment at the end of the course, including assessment of theoretical knowledge and performance through case-based and in clinical setting, helped to determine the overall performance of the students.

Retention and transfer of knowledge was the step followed intermittently during the entire course. A series of interactions with

simulated patients, pre-recorded videos on history taking and mental status examination, and role plays were some of the strategies used to enhance knowledge retention and its transferability. Periodic performance of the students indicated the retention of core concepts and clinical skills. Summative assessment, as mentioned above, also provided evidence of use of therapeutic communication principles during their encounter with simulated patients and case-based examinations.

Discussion

Millennial-tech savvy individuals are well versed in the use of technology and the latest gadgets. They are comfortable and at ease while dealing with this fast-paced digital world (Bajt, 2011). As a result, the increased use of technology during this pandemic period has created an opportunity for millennial to benefit the most from it. With this transition, the transformation in the teaching and learning strategies helped the facilitators provide enriching experiences for the nursing students in the MHN course. The Gagne model was integrated systematically, which provided a clear event of instructions to align the course objectives, learning pedagogies, and outcomes. This model has proven to improve students learning experience (Hassan & Baloch, 2020; Miner et al., 2015). The model helped the facilitators to reflect, rationalize, and opt for evidence-based practices to accomplish the course objectives to continue to deliver quality education to the nursing students.

Likewise, students appreciated the thoughtfully planned activities in the formative evaluation of this course and found them beneficial in increasing their confidence to deal with psychiatric patients. Moreover, it reduced their anxiety and increased their comfort level, before interacting with actual patients in a clinical setting. Moreover, students' learning was enhanced by practically performing different modalities, such as interviewing standardized patients, developing concept integrated maps from tailored scenarios, students' role plays on case studies, and problem-based learning of various mental health disorders. In addition, it was evident in students' feedback that they found history taking and mental status examination with standardized patients, followed by debriefing sessions, helpful as this developed and strengthened their interviewing skills. Furthermore, recorded mental status examinations and live demonstrations by the facilitators were beneficial for students' face-to-face interactions with psychiatric patients. All the strategies helped the students to translate their theoretical knowledge into practice.

Virtual clinical enhanced the self-reflection abilities among students, as they were able to identify their areas of improvement after each activity and showed improved performance in the consecutive virtual and face-to-face interactions with the patients. Our findings were consistent with earlier studies on university students that revealed reflective activities enhances students' in-depth self-perception and critical thinking which enables them to identify sources and ways of problem solving in their profession (Abiogu et al., 2020; Bubnys, 2019; Van Rensburg et al., 2018).

Similarly, debriefing sessions were practiced after each activity, such as role plays, scenario-based activities, and interaction with the standardized patients. A structured debriefing method is important in simulation education, as it improves students' performance appreciating critical thinking, clinical problem solving, and decision-making yields to satisfaction among students (Bussard, 2017; Lee et al., 2020). Also, peer learning was promoted by encouraging small group tasks and providing constructive feedback. The peer learning activities were closely monitored by the faculty. Literature also affirms that constant feedback is positively associated with academic achievement in higher education (Cartney, 2010).

Moreover, a blend of asynchronous and synchronous mode provided students room to perform the learning activities at their convenient time and at their own pace. The planned activities included tasks such as submission of reflective writing, completion of reports, and documentation, to instill accountability, ownership, and independent learning among students.

Students appreciated the pre-recorded mental status examination videos, and live demonstrations on interviewing skills by the faculty. In addition, the scenario practice and exposure to standardized patients increased students' confidence and improved their therapeutic communication skills. On the other hand, cyber patient activity was not helpful, as students found it time-consuming. However, there is a need for fine tuning in the clinical teaching approach considering the current pandemic situation, to develop students' competence in the required core clinical skills. More research studies are also needed to evaluate the applicability of Gagne's theory on other nursing courses using the hybrid teaching model.

The application of the Gagne's model, along with the hybrid approach, helped the course team in several ways. It helped in minimizing unforeseen challenges that emerged with the advent of COVID-19. Moreover, integration of this model helped the team to deliver the course content using the virtual medium, which decreased the need of using physical space. Furthermore, the students enrolled for the MHN course were from diverse geographical settings, some residing in places where internet connectivity was unstable. These students were allowed to stay in the university dorms, whereas other students residing in cities were instructed to connect from their place of residence, to reduce physical interaction and to conform to the recommended SOPs. Additionally, this approach boosted the confidence and motivation of the facilitators and enabled them to integrate, deliver, and assess the core concepts among students, as well as prepare nursing students to become competent healthcare professionals. It also curtailed the need to utilize external psychiatric healthcare facilities for providing face-to-face clinical experience by providing similar hands-on experience through virtual simulated clinical and brief face-to-face interactions in clinical settings.

Conclusion

Application of Gagne' theory in hybrid teaching in the mental health course helped students to understand the mental health concepts and to apply the learnt theoretical concepts during virtual and face-to-face clinical. Virtual clinical through simulation, adopted as an innovative strategy, ensured uninterrupted students' learning and enhanced their clinical experience. The strategy increased students' confidence and improved their therapeutic communication skills. This approach aided in having flexibility in clinical teaching, considering the current pandemic situation, to develop students' competence in the core clinical skills required. However, more research studies are needed to evaluate the applicability of Gagne's theory on other nursing courses that require clinical competency and knowledge enhancement, following the hybrid teaching model.

Declaration of competing interest

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