



## EXPERIENCES OF NURSING FACULTY AND STUDENTS WITH TELEPRESENCE ROBOTS DURING COVID-19 PANDEMIC

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## PURPOSE

- To describe the experiences of nursing faculty and students with telepresence robots used in nursing education during the COVID-19 pandemic and explore their satisfaction with the use of telepresence robots.

## BACKGROUND

- Telepresence robots deliver real time video and audio communication enabling the user to replicate their presence in a distant location.



## METHODS

- Informal survey with questions about how the telepresence robots were used, any technology difficulties encountered, and overall satisfaction.
- Overall satisfaction was rated from 1= Very Unsatisfied to 5= Very Satisfied.



## METHODS

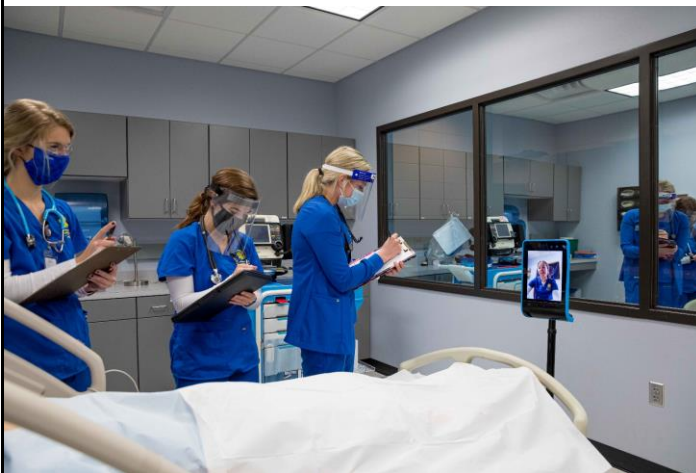
### Setting

- Midwest college of nursing with four campus locations.
- Classroom, simulation, skills lab



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## INITIATORS



The individuals who initiated the use of the telepresence robots (N=35) were:

- Instructors (n=17)
- Simulation coordinators (n=9).
- Facilitators (n=4).
- Observers (n=3), and students (n=2).



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## INTERACTORS

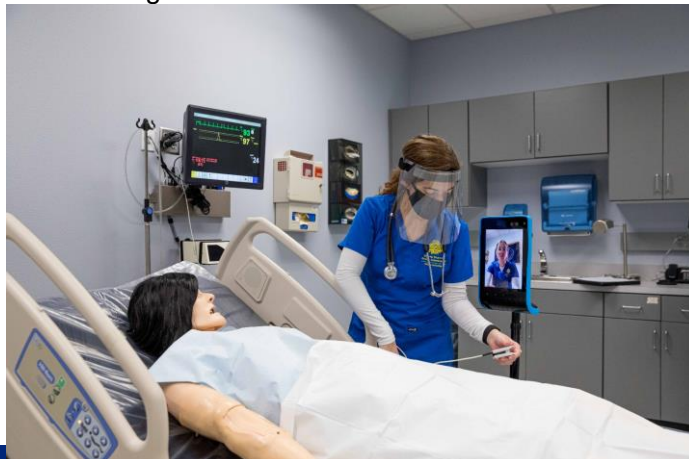


On the other hand, the users who fully interacted in the telepresence robot learning sessions included

- Instructors (17.14%, n=6).
- Students (82.85%, n=29).

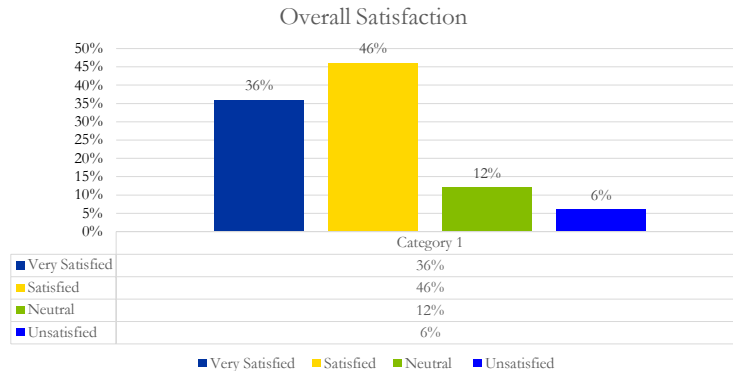
## RESULTS

- Over two-fifths (42.85%, n=15) of the robot usage was in the simulation learning environment



## RESULTS

- Overall satisfaction: Faculty and students were very satisfied (36%), satisfied (46%), or neutral (12%) with the telepresence robots.



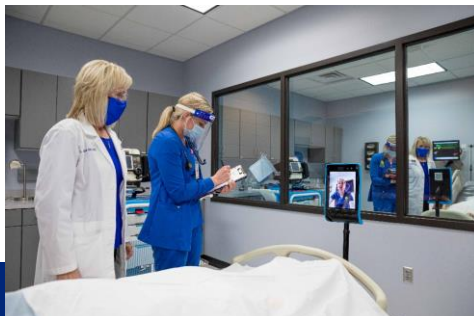
- Only two individuals (6%) were unsatisfied with using the telepresence robots.

## RESULTS

- One faculty member stated, *“The controls were easy to use remotely, and I was able to interact easily with the students. When we were in the debriefing room, it was difficult to hear the students, so I found it a little challenging to interact during debriefing.... When I worked with students who were on the robots, I really didn't have any issues other than the occasional disconnection. I felt that they were helpful in allowing students to continue to participate in simulation. I also think they will help students prepare for the 'real world' as they are likely to utilize a variety of technology and telehealth when they work as nurses. Overall, I thought they were beneficial.”*

## RESULTS

- Another faculty member shared the following: *“I had the opportunity of using the robots multiple times throughout this academic year.... This helped bring the simulation to life for the students and also allowed them to see what it was like to work with patients via telehealth. That experience in itself was valuable, as many of the providers are now using telehealth due to COVID restrictions. Overall, the experiences were beneficial for everyone involved and allowed us to provide meaningful experiences for the students.”*



## CHALLENGES & LIMITATIONS

- There were some technology difficulties identified by faculty and students.
- Challenges included difficulty hearing the discussion, particularly when used within a larger room.
- Unstable internet connection.
- Overall, very few issues were noted with the use of the telepresence robots.
- Small sample size can affect the generalizability of the results.

## IMPLICATIONS

- Telepresence robots were helpful in navigating and overcoming the challenges presented by the COVID-19 pandemic.
- The telepresence robots enabled faculty members and students to engage in learning sessions and be remotely present without being “physically” present.
- Telepresence robots offer a variety of helpful applications in nursing education.

## CONCLUSION

- Telepresence robots were effective tools in overcoming teaching and learning barriers caused by the COVID-19 pandemic.
- The audio, video, and mobility features of the telepresence robots facilitated faculty or student remote presence in a variety of educational environments.
- Overall, informal feedback indicated users were pleased with the telepresence robots, and the few initial operational challenges were easily overcome.
- Further research is indicated to evaluate the impact of robot use on student learning outcomes and interprofessional education outcomes



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