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Background

Medical errors are the third most common cause of death, totaling more than motor vehicle accidents, firearms, suicide, and COPD combined, 70% of these errors are attributable to a failure in communication between healthcare professionals in different disciplines. Existing gaps in inter-professional training have resulted in students being unable to engage in effective communication while working in multidisciplinary teams, thereby contributing to suboptimal quality of care and patient safety. Structured trainings in successful collaboration can not only decrease the burden on care providers and increase patient satisfaction but have also been shown to increase patient safety and quality of care¹. Improving inter-professional communication would assist in preparing healthcare professionals for effective future collaborations with patients, families, communities, and other healthcare professionals, in the field². Among eight sub-competencies of communication defined by the Interprofessional Education Collaboration³, the following three are explored in a structured training to be delivered as an online asynchronous foundational module at the University of Michigan.

Sub-competency

Express one's knowledge and opinions to team members involved in patient care and population health improvement with confidence, clarity, and respect, working to ensure common understanding of information, treatment, care decisions, and population health programs and policies.

Listen actively and encourage ideas and opinions of other team members.

Recognize how one's uniqueness (experience level, expertise, culture, power, and hierarchy within the health team) contributes to effective communication, conflict resolution, and positive interprofessional working relationships.

Purpose: To examine the effectiveness of the new online asynchronous foundational module created for all health professional students in the University of Michigan undergraduate and graduate communities.

Method

Participants: Occupational Therapy Doctorate, Master of Public Health, and Master of Health Care Management students at UM-F.

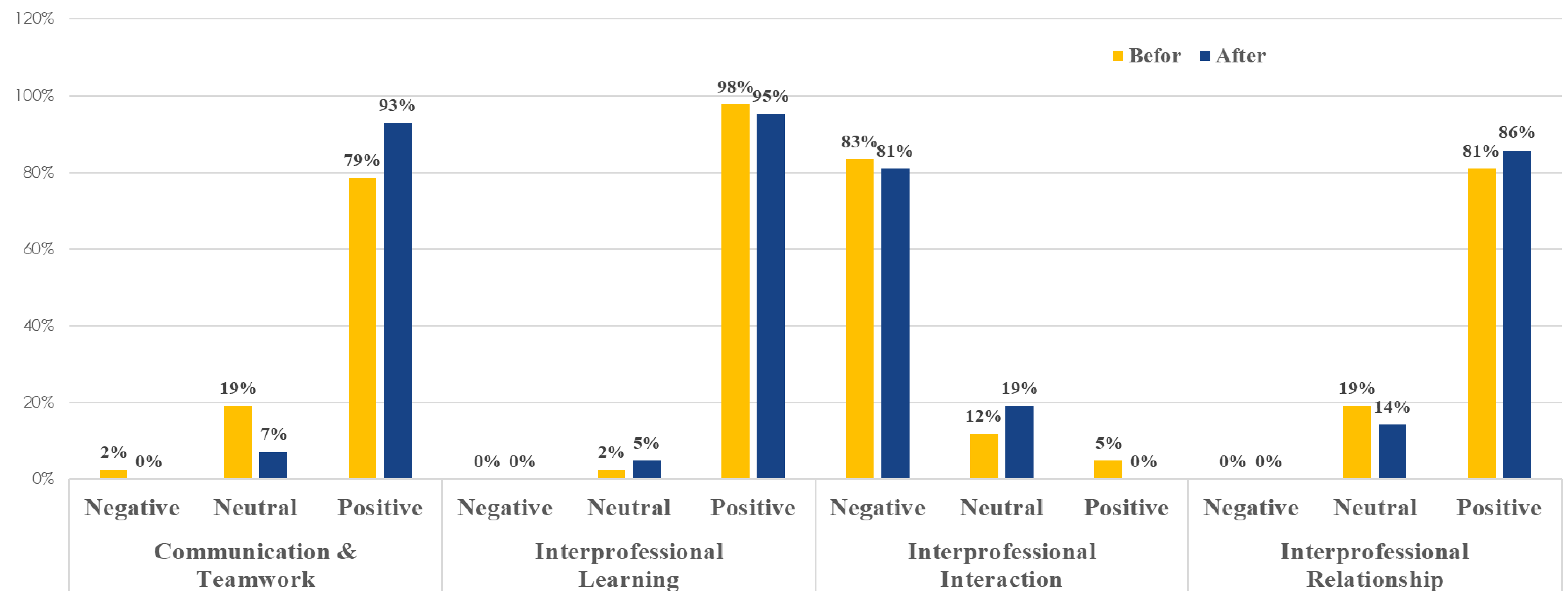
Theoretical framework: According to social constructivism, learning process is mediated and moderated by the social factors affecting the meanings and concepts⁴. Learner-learner and collaboration can create an engaging learning environment⁴. The collaboration between learners creates a Zone of Proximal Development⁵ in which some learners with more knowledge and experience can help others assimilate the new knowledge.

Teaching Method: In order to cover all learning styles, we used different teaching methods: slides (included text, graphs, pictures), lecture, case scenarios, and videos. Students from OTD and MPH worked together on teams on each case.

Assessments: Each submodule has different assessment tools, which examine the mastery level of students regarding the learning objectives. "The UWE Interprofessional Questionnaire", which examines the communication competency in four domains: Communication and Teamwork, Interprofessional Learning, Interprofessional Interaction, and Interprofessional Relationship. In each domain, the score can be categorized as "positive", "neutral", and "negative". Twenty-six students participated in the module.

Statistical Analysis: We compared the results of before and after taking the module using Chi square for categories and Wilcoxon Signed Rank Test for scores.

Results



Wilcoxon Signed Rank Test showed the difference between "Communication and Teamwork" and "Interprofessional Relationship (IPR)" were significantly improved after taking the IPE Communication Module.

Conclusion

Many healthcare professionals have some levels of communication and teamwork experience also one of the main aims of trainings is preparing individuals for teamwork. Despite significant changes in communication were not expected, the scores of this domain are more likely to be shifted toward positive. Interprofessional Interaction was shifted from negative toward neutral, which is a considerable change. Also, Inter-professional Relationship showed more positive and less neutral after taking the module. These findings were different from previous studies we conducted using the IPECM only among MPH students. Including Occupational Therapy Doctorate students to the module significantly increased the effectiveness of the module in "Communication and Teamwork." Hence, the IPECM can improve communication and teamwork skills; moreover, improves "Interprofessional Relationship" among students from different disciplines.

Next Step: We include Respiratory Therapy students to the module in Fall 2021. Students' feedback helped us to focus more on team activities and case studies that can facilitate Interprofessional Learning and Interactions. We are working on specific cases that incorporates all three disciplines and create the abovementioned opportunities for students.

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