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Use of a Team Building Activity to Teach Clinical Decision-Making Concepts to Physical Therapy Students

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Background & Purpose

Case-based or problem-based learning methods have long been used at health care academic institutions to attempt to create a more "real world" context to student learning. Team building exercises have been popular in the business world for decades. Case-based learning has also been used to help develop clinical reasoning skills in health professions students. The ICF has also been used as a guide for students to assess the needs of patients. Scant literature exists regarding the concept of integrating student and expert team case-based learning with the ICF to develop clinical decision-making skills.

The purpose of this research was to find out if a team building exercise carried out by student groups would facilitate learning how to make clinical decisions involving concepts from the International Classification of Function (ICF).

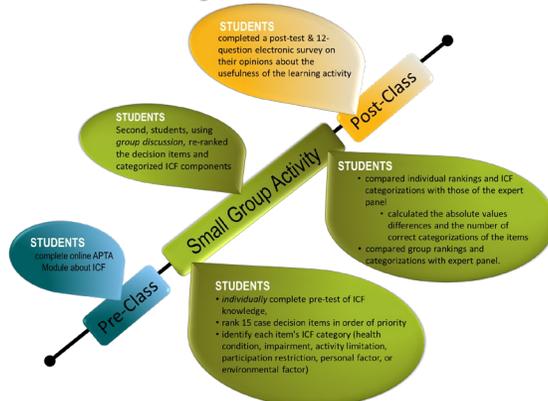
Methods

SUBJECTS : 213 first-year students at the University of Nebraska Medical Center (UNMC) in the first semester of the curriculum of years 2013-2016.

This study was inspired by a UNMC inter-professional educational activity using the Subarctic Survival Situation (Human Synergistics International), a team building exercise. No actual materials from this exercise were used to develop the activity described here.

- A fictitious patient case was developed by an expert panel (PT faculty members) featuring clinical decision making steps that include concepts from the International Classification of Function (ICF).
- The panel completed electronic surveys which required them to rank the decision-making steps in order of priority and identify which aspect of the ICF each step would represent. The ranking was performed again after review of first round results and feedback.

Learning Activities and Process



Instructions for Students about the Activity in Small Faculty-led Groups

"Today you will experience a simulation involving a real-life physical therapy case about which you will make clinical decisions, first individually, then as a group. The objective is to learn how a group can solve problems through the process of sharing knowledge of individuals. The case described here is based on a real patient situation for which real decisions had to be made and for which there were real consequences of those decisions."

Case Profile



E.G. is a 46 year old African-American woman who was referred to you, a home health physical therapist, by her family physician after a 2-day hospital stay initiated by a visit to the emergency department at the local hospital. She went to the emergency room because she suddenly noticed numbness and weakness on the left side of her face and on her left arm and leg, and her speech was somewhat slurred. These were all new events for her. Although she has partially recovered from the events that caused her to go to the ER, she remains at risk. E.G. was referred to you because, upon discharge, she still feels quite fatigued and unsteady when she stands up and walks.

Prior to the ER visit, E.G. had not seen her family physician for about 14 months because she lost her job as a records clerk for a non-profit agency serving the needs of elderly clients in her community. She lost her insurance with the layoff, and has been looking for another job. You, the home health PT, have no access to E.G.'s hospital records and some access to records from the family physician. Between the records and your questions to E.G., you find that she has a history of hypertension and high blood lipid levels, anxiety disorder, type 2 diabetes, she is considered overweight, and has some arthritis in both knees. She was discharged from the hospital with several medications, mostly to treat hypertension, diabetes and anxiety, and a friend loaned her a walker.

Case Decision Items in Random Order of Priority

- Ask E.G. to rate her knee pain on a 0-10 scale.
- Examine how much assistance E.G. requires for bed, toilet and standing transfers and make sure that she can transfer safely.
- Ask E.G. if she has any relatives or friends that can help take care of her for the time being.
- Measure passive range of motion of all of E.G.'s limb joints.
- Examine how E.G. walks with or without the walker and teach her to walk safely.
- Assess vital signs (resting blood pressure, heart rate, and respiratory rate) and call discharge physician if abnormal.
- Teach E.G. how to go up and down stairs with her walker.
- Ask E.G. if she is testing her blood glucose at home and what the recent results have been.
- Measure E.G.'s exercise heart rate response using a test where she steps up and down on a low stool that you provide.
- Ask E.G. if she has been trying to lose weight.
- Use a standardized assessment method to test E.G.'s balance.
- Check to see if E.G. has all the medications listed on her hospital discharge summary and if she has been taking them.
- Test the strength of E.G.'s major muscle groups.
- Check out floor plan of home and where bathroom and kitchen are located relative to where E.G. spends most of her time.
- Apply physical agents (e.g., heat or cold) to E.G.'s knees.

Results

There was a significant difference between average post-test (5.87/8) compared to pre-test scores (5.20/8) on knowledge of ICF Concepts (n = 213, p<.001) using repeated measures t-test. Important differences also noted comparing individual and group decisions for item rankings and ICF matches as compared to those of the experts (Figure 1). Student perceptions of usefulness of the learning activity were also very high (Figure 2).

Figure 1: Comparing Individual and Group Decision Item Rankings and ICF Matches (n = 200 students)

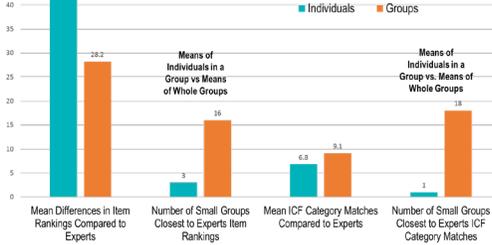
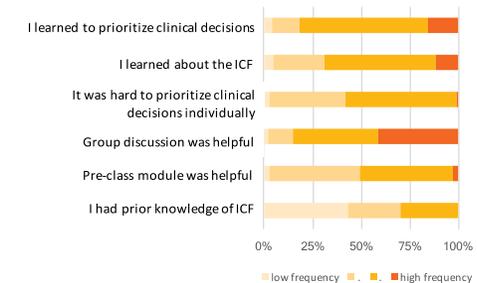


Figure 2: Student Perceptions of the Learning Activity (n=129)



Conclusions

Team decision-making almost always results in better outcomes, as compared to an expert panel, than individual decision-making, especially for novice therapists. Learning about how to use the ICF for decision-making appeared to be enhanced. Overall, the students believed that the activity was useful to their learning. Funding was provided by Division of Physical Therapy Education department funds.