UNIVERSITY of MARYLAND
SCHOOL OF PHARMACY

Examining Impact of Educational Program for Interprofessional Students Partnering to Achieve Respect & Collaboration in Teams

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Background

The World Health Organization identifies interprofessional education (IPE) as a necessary step toward the development of healthcare professionals who collaborate effectively in practice.

Studies suggest that if health professional students learn together, they will ultimately work better together in the work force.

Therefore, there is a need to study educational teaching strategies for student health care professionals directed at fostering knowledge, respect, and collaboration among teams.

Objective

To examine an educational program's [Interprofessional Students Partnering to Achieve Respect and Collaboration in Teams (I-SPARCT)] impact on students respect, knowledge, and attitudes of interprofessional practice in a pediatric ambulatory gastroenterology (GI) care setting.

Methods

- This study was a prospective, convenience sample, pre-post survey to assess respect, knowledge and attitudes about IPE. IRB approval was obtained.
- The study took place in a pediatric GI clinic, with faculty from UMB School of Medicine, Social Work, Nursing, Physical Therapy, and Pharmacy practicing as an interprofessional team for approximately 2 years prior to this study.

Procedures:
- Students were recruited from 6 schools: University of Maryland, Baltimore (UMB) School of Law, Medicine (medicine and physical therapy students), Social Work, Nursing, Dental, and Pharmacy.
- Students completed the pre-survey and attended three lunch and learn sessions to discuss interprofessional practice and team based care. Immediately following the lunch and learn sessions, students transitioned to clinic practice. Students obtained the history and physical from the patients as a team, and then presented the findings to the clinical faculty. Students then completed the post-survey at the end of the 3 weeks (except for Dental and PT students completed the survey after 1 week).
- Lunch and learn modules: Module 1: Identify differences and similarities in scope of practice, education requirements, professional values, professional cultures, and license requirements. Identify and dispel myths about each profession. Module 2: Discuss barriers to IPE and practice and strategies to overcome. Discuss strengths and challenges and successes of clinic practice from the previous week. Module 3: Present a case study for the students to apply knowledge gained from previous discussions and clinic practice.

Methods Continued

Outcome Measure:
- Our survey measurement tool was modified from the validated attitudes towards healthcare team scale (Heinmann, 1999). Pre and post survey questionnaire were measured on a student's knowledge and attitudes questionnaire. The survey asked questions regarding different professional training and their roles in patient care to determine student's knowledge. Questions about the importance of collaboration and communication on a team evaluated student's attitudes.

Data Analysis:
- Participants' background information was analyzed using descriptive statistics for frequencies. To detect differences between pre and post survey, paired t-test was performed using a matched dataset for reducing inter-subject variability. In addition, associations of overall mean scores of each part in the post survey were analyzed using one-way analysis of variance (ANOVA) and independent t-test.

Results

Table 1. Demographics

Characteristic, (n,%)	Pre (n=95)	Post (n=81)	Matched (n=40)
Gender, male	15(15.8)	11(13.6)	1(2.5)
Age, years			
20-25	43(45.3)	27(33.3)	16(40)
26-30	35(36.8)	39(48.2)	16(40)
31-40	16(16.8)	15(18.5)	8(20)
41-50	1(1.1)		
Race			
Asian or Pacific Islander	22(23.9)	20(26.7)	7(18)
Black, non-Hispanic	8(8.7)	3(4)	2(5.1)
Hispanic	2(2.2)	2(2.7)	1(2.6)
White, non-Hispanic	55(59.8)	47(62.7)	27(69.2)
Other	4(4.2)	3(3.7)	2(5)
Program			
Dentistry	33(34.8)	23(29.5)	12(30)
Law	5(5.3)	1(1.3)	1(2.5)
Medicine	14(14.7)	10(12.8)	4(10)
Nursing	13(13.7)	11(14.1)	9(22.5)
Pharmacy	12(12.6)	16(20.5)	4(10)
Physical therapy	2(2.1)	0(0)	0(0)
Social Work	15(15.8)	17(21.8)	10(25)
Attended prior interprofessional activities	49(51.6)		22(55)

Table 2. Attitudes Towards Healthcare Teams

Mean scores across pre and post survey (n=40)	Pre Mean(SD)	Post Mean(SD)	P Value
Team meetings foster communication among team members from different disciplines	87.0(23.8)	97.0(8.5)	0.022*
Patients receiving team care are more likely than other patients to be treated as whole persons	81.0(25.6)	94.0(10.3)	0.0052*
Working on a team keeps most health professionals enthusiastic and interested in their jobs	73.3(24.0)	87.2(13.4)	0.0009*
The give and take among team members help them make better patient care decisions	85.3(21.7)	93.0(12.4)	0.041*
The physician has the ultimate legal responsibility for decisions made by the team	52.3(27.8)	63.5(26.0)	0.031*
The team approach makes the delivery of care more efficient	72.4(22.8)	85.5(20.2)	0.0033*
Having to report observations to the team helps team members better understand the work of other health professionals	83.7(21.7)	96.0(8.1)	0.0035*
Overall mean score (questions 1-20)	69.0(15.5)	78.3(9.7)	0.0009*

Results

Table 3. Beliefs and Bias

Mean scores across pre and post survey (n=40)	Pre Mean(SD)	Post Mean(SD)	P Value
To what extent do you envision healthcare delivery as a team activity?	89.1(16.0)	96.3(9.0)	0.014*
What do you think your ability is to envision the "big picture" in healthcare?	80.9(15.8)	93.8(11.0)	<0.0001*
How aware are you of your own existing biases toward other healthcare professionals?	64.7(24.8)	85.0(13.6)	<0.0001*
How aware are you of your own personal strengths and weaknesses?	77.6(13.8)	88.1(12.6)	0.0003*
How would you rate your ability to communicate effectively with other healthcare professionals?	73.7(17.2)	86.9(13.9)	<0.0001*
How confident are you in general about your ability to work as part of a team with other healthcare professions?	76.9(17.6)	92.5(11.6)	<0.0001*
How effective do you think you are in motivating others toward a common goal?	76.3(15.1)	85.0(16.8)	0.003*
How effective do you think you are in managing group conflict (facilitating consensus)?	67.3(16.4)	78.8(18.4)	0.001*
Overall mean score	75.6(12.0)	88.3(8.3)	<0.0001*

Table 4. Knowledge and Respect Scores

Question (matched, n=40)	Pre Mean (SD)	Post Mean (SD)	P Value
Extent of knowledge about educational requirements for each profession	57.2 (15)	74.5 (14.6)	<0.0001*
Extent of knowledge about the scope of practice for each profession	62.2 (10.9)	79.8 (13.8)	<0.0001*
Your level of respect for each profession	91.9 (9.8)	95.7 (6.9)	0.0064*

Discussion

Interprofessional students' attitudes, knowledge, and respect improved in a pediatric ambulatory care setting after participation in ISPARCT.

Confidence and the ability to communicate as part of a team with other health care professionals significantly increased after the IPE education experience. Study participants reported the give and take among team members helped them make better patient care decisions and the delivery of care more efficient. Participants reported patients treated by a team are more likely to be treated as a whole patient.

These findings support a three week educational interprofessional experience can make significant improvements in health care professional attitudes towards the benefits of team-based care.

Limitations:
Participants were mostly female, dental and physical therapy students did not attend all 3 sessions, and this was a single site study.

Future work should identify the relationship between team-based care and patient outcomes in an ambulatory care setting.

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