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Interprofessional Education: A Team Approach in the Classroom

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Interprofessional education is an increasingly common component of course work for health care professionals. Extant research provides examples of these collaborations across multiple health disciplines, however, there is no research that addresses interprofessional education between the fields of occupational therapy and dietetics. This study was conducted in order to fill the gap of extant research related to unique collaborations between occupational therapy and dietetics. The Interprofessional Attitudes Scale was given to occupational therapy and dietetic students pre/post participation in an interprofessional, active learning, educational case-study. There was one item on the scale that demonstrated a statistically significant change (“shared learning before graduation will help me become a better team worker”), while all other items showed only a slight positive increase. While this study suggests that students value interprofessional education, there is further research needed to determine what types of interprofessional education are most impactful for students at various levels of education.

An interprofessional approach in health care consists of health care delivery providers collaborating with family members, community partners and service providers of different disciplines to support a common goal (Academy of Pediatric Therapy, 2010). The Henry J. Kaiser Family Foundation (2011) has advocated for this type of team-based approach in health care as it has shown to improve health care outcomes (as cited in Stull & Blue, 2016). Team collaboration also contributes to reductions in health care expenditures and improved patient satisfaction (Earnest & Brandt, 2014). It is not just the clients and health care administrators who recognize the benefits of interdisciplinary care. Various health care providers have identified an improved understanding of teamwork as demonstrated by increased positive engagement with others and more effective communication (Jacob, Roe, Merrigan & Brown, 2013). Additionally, many providers perceive an enhanced sense of excellence in their discipline specific health care delivery when collaborating with other disciplines (Jacob et al., 2013). Interprofessional collaboration can facilitate a more holistic health care environment as it contributes to ongoing workplace learning and development, supporting the ever changing health care environment (Martin & Manley, 2017). When health care professionals work together, there is more

comprehensive care as this team-based approach leads to improved record keeping and more appropriate referrals to other health care professionals (Jacob et al., 2013). Interprofessional collaboration, with its many benefits, has a powerful role in meeting the health demands of the public served (Martin & Manley, 2017; Rossit, Freitas, Batista, & Batista, 2018).

Despite the many benefits of interprofessional collaboration, students often have a difficult time developing the skills necessary to provide team-based health care delivery, which is in part due to the fast-paced environment of the clinic (Thomas, Rybski, Apke, Kegelmeyer & Kloos, 2017). To address this deficiency among graduates, more health care programs have begun requiring interprofessional health education as part of their didactic curriculum (Gray et al., 2015). Interprofessional Health Education (IHE) is when two or more professions learn together about providing quality care for their clients (Rossit et al., 2018). Since professionals are increasingly expected to collaborate in practice, there is a need to integrate relevant real life experiences in the educational programming (Robinson, Mole, Hiller, Swenson & Harrington, 2018). In fact, one study found that students, when not exposed to interprofessional practice or education, perceive minimal need to collaborate (Stull & Blue, 2016). When IHE learning activities are integrated into health care programs, students report more improved attitudes toward collaborative practice than students not exposed to IHE activities (Ivey, Bowman & Lockeman, 2018; Shoemaker, Platko, Cleg-horn & Booth, 2016). Didactic integration, and the consequent improved attitudes toward collaboration may better prepare students for the work force. In addition to improved attitudes toward collaborative care, students have also demonstrated greater professional behaviors, including respect for others, knowledge of ethics, and increased pursuit for persistent learning (Rossit et al., 2018). Interprofessional health care education must be studied in various contexts to better prepare the future health care work force in delivering competent, coordinated and comprehensive care, which is a key marker of quality health care (Shi & Singh, 2019).

Program Context

There has been an increase in literature regarding IHE in various health care fields, but there is no known research on IHE between Dietetics and Occupational Therapy. This study examined what the impact of a case-based interdisciplinary educational experience has on the attitudes and perceptions of post-secondary occupational therapy and dietetic students. The focus on interdisciplinary education is a growing trend in training programs for health care professionals. Interdisciplinary education is considered so important that both The Accreditation Council of Occupational Therapy (2018) and The Accreditation Council of Education in Nutrition and Dietetics (2017) requires it to be included in didactic educational programs. Current literature supports the benefits of integrating interdisciplinary experiences into educational programs for health care professionals. Research demonstrates that interdisciplinary educational opportunities increases students' knowledge of other health

care disciplines roles and responsibilities (Shoemaker et al., 2014; Ivey et al., 2018; Zamjahn, Alig, Mercante, Carter & Gualdo, 2018). Additionally, IHE improves student self-efficacy in interdisciplinary practice (Ivey et al., 2018) and enhances the benefits of interdisciplinary collaboration (Shoemaker et al., 2014) for both occupational therapy and a variety of other health care disciplines. Literature suggests that participation in interdisciplinary education has the potential to impact student's attitudes and perceptions of collaborative practice (Shoemaker et al., 2014; Ivey et al., 2018; Kim, Radloff, Stokes & Lysaght, 2018; Zamjahn et al., 2018).

While there is a significant amount of research to support the need for interdisciplinary educational opportunities in post-secondary health care curriculum, there is limited literature that examines the impact of specific interdisciplinary educational opportunities for students. Furthermore, there is no research available that focuses on the interdisciplinary relationship between occupational therapy students and dietetic students. The purpose of this research study was to examine the attitudes towards interdisciplinary education of occupational therapy and dietary students after participating in a case-based interdisciplinary educational opportunity.

Overview of Approach

In the fall of 2018, faculty from Eastern Kentucky University's Bachelors of General Dietetics and Masters of Occupational Therapy programs collaborated to engage students in an IHE, in which students worked as a team to provide care in a case-based learning activity with real-life relevance. Within each discipline, students are taught via lecture and readings about the role of each health care member and the need for collaboration. To prepare for the interprofessional activity, students from both programs were provided with a case study involving a client with Parkinson's Disease, modified to meet didactic preparation. Students reviewed the case study and came prepared to discuss disease management related to their own discipline. This management included assessment strategies and plan of care. In addition, students completed the Interprofessional Attitudes Scale (IPAS) to determine their initial attitude towards the IHE experience. Students were paired in groups of two with a peer from the opposite program, as smaller groups have been found to increase time spent practicing (Ivey et al., 2018). Students were expected to take the lead during the learning activity, and were asked to apply their didactic knowledge to best simulate real world collaborations.

Students met in an occupational skills labs which allowed student access to multiple devices used to aid in food intake and other activities of daily living. Students were paired up to include one dietetic and one occupational therapy student (one group had two occupational therapy students with one dietetic student). Once students were paired up, they reviewed the case study aloud from the lens of their own health discipline. All groups were encouraged to include specific details but were also allowed freedom to discuss anything else related to the case that they saw fit.

Occupational therapy students included specific details related to the adaptive feeding equipment available in the lab to add to the depth of explanation during the plan of care. Students freely took notes by hand or on the computer related to the interaction and identified key points that were unique to each group.

Following the end of the allotted collaboration time, the faculty debriefed the students to receive verbal feedback about the activity overall and impressions about the team interaction. At this time, faculty prompted the group to identify what each discipline had in common and what each discipline could do to aid the other in achieving the goals of their care plan. Prior to leaving the class, students completed the IPAS again to identify how attitudes changed following the activity.

Analysis

Fifteen first-year, master's level Occupational Therapy students and fourteen Dietetic students participated in the interdisciplinary, case-based educational activity. All students participated in all components of the activity, including the pre- and post-data analysis. Participation in the classroom component was mandatory; however, completion of the Interprofessional Attitudes Scale was voluntary.

The Interprofessional Attitudes Scale (IPAS) utilizes a 5-point likert scale to understand an individual's thinking in regards to interprofessional competencies (Norris et al., 2015). The IPAS consists of 27 items in 5 sub-scales which are: (a) "teamwork, roles, and responsibilities"; (b) "patient centeredness"; (c) "interprofessional biases"; (d) "diversity and ethics"; and (e) "community centeredness" (Norris et al., 2015). Scores from both the pre and post IPAS scales were input into an Excel spreadsheet for analysis. The means for each pre and post item on the IPAS were found and paired t-tests ($p < 0.05$) were utilized to analyze changes in the thinking of students before and after participating in an interdisciplinary case-based, active-learning experience.

There was one item that demonstrated statistical significance from pre- to post-test scores, which stated "shared learning before graduation will help me become a better team worker" ($p = 0.01$). There were two additional items that neared statistical significance, which stated "prejudices and assumptions about health professionals from other disciplines get in the way of delivery of health care" ($p = 0.09$) and "It is important for health professionals to work on projects to promote community and public health" ($p = 0.06$). While there were limited items that demonstrated at or near a statistically significant change, all items on the IPAS except for one demonstrated a positive change.

Overall, the results of this study support extant research. Students valued participation in this interdisciplinary activity and believed it would assist them in becoming a better team member in the future. While qualitative comments were not collected specifically for analysis, the investigators observed positive statements from students during classroom discussions that supported this finding. These results

demonstrate the need for educators to seek out interdisciplinary learning opportunities for their students.

Findings for the other two items that neared statistical significance were surprising since content regarding prejudices or community projects were not included in the provided case study. However, allowing students to engage in open conversations without a structured script may have allowed students to delve into a variety of discussions that interested them. This further supports didactic curriculum that includes situations for students to engage in transparent interdisciplinary activities in a casual context, allowing students opportunities for self-learning that is specific to their interests.

Limitations that may have impacted this study are that the IPAS may not be sensitive enough to detect change over such a short period of time. Additionally, this activity was a one hour case study, which may not have been adequate time to change students' perspectives in a variety of areas. Finally, collection of qualitative data would be beneficial in the future to obtain a more thorough understanding of students' experiences.

Discussion

After participating in the IHE activity, students from both programs felt that shared learning before graduation would contribute to their ability to be a team collaborator after graduation; this is consistent with Ivey, Bowman and Lockeman (2018) that found the experience of interprofessional education improved student understanding of collaboration more than just saying, "we need more team work" (p. 202). The educators in this study noted the students were confident about knowledge previously learned and they worked together efficiently to problem solve aspects of the case. Other studies have also shown that students demonstrate improved team work skills as a result of IHE, which may be due to the improved understanding of the roles of other health care professionals (Cahill, O'Donnell, Warren, Taylor & Gowan, 2013). This understanding of professional roles was also observed in this study. Although the study did not collect data related to role development, educators observed that students from both programs were more articulate in explaining their own professional roles to their peers during the IHE experience. Rossit, Freitas, Batista, and Batista (2018) found that IHE experiences can enable students to reflect on their own practice through this professional role sharing which prompts students to rethink the way they practice. They suggest that this role sharing and advanced personal reflection may indicate the development of student professional identity (Rossit et al., 2018). However, a clear measurement for professional identity was not included in this study and it is unclear if professional identity was increased due to the IHE experience. Stull and Blue (2016) also suggested that one class is not enough to measure the development of professional identity. Additionally, it is important to consider the educational level of students and at what point

professional identity is developed within a professional program. Inclusion of professional identity for future research is recommended.

The student's ability to work without a directed script in this study allowed for a broad learning experience that may have affected the survey results. Although not clinically significant, surprising results of the study included students reporting 1) "Prejudices and assumptions about health professionals from other disciplines get in the way of delivery of health care" and 2) "It is important for health professionals to work on projects to promote community and public health." These results were unexpected because they were not part of the IHE learning activity, yet the collaborative experience may have contributed to student learning in ways not formally assessed. As a result, a qualitative research facet is recommended for future research. Many positive benefits of IHE experiences are consistently documented in this study and previous studies, making these types of learning opportunities relevant for the development of future coursework in various health care didactic programs.

A limitation of this study is the short time spent in IHE experience, with students engaging in only one class. It is unknown if the survey tool is sensitive enough to measure change in a short period of time. Additional research is recommended to include students in more than one IHE experience. Additionally, only a small number of students were used in this study. A study with a larger sample size in the future would be beneficial. The results of the study were not separated by class and each educator may have prepared students for the activity differently; future studies should consider separating results by discipline. Collaborative practice and comprehensive care continues to show its importance in health care literature throughout the world (Rossit et al., 2018) and preparing health care students for this aspect of care is of utmost importance. A variety of approaches have been examined related to the type of IHE experience that is most beneficial, but not broadly enough in all disciplines to support specific recommendations. Health care educators who strive to provide meaningful and effective IHE experiences should consider the type of learning activities and their benefits when implementing changes into the curriculum.

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