Evaluating the Impact of an Interprofessional Childhood Obesity Course on Students’ Interprofessional Socialization and Valuing

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Background

- Childhood obesity is a significant health concern of importance to interprofessional education (IPE) and practice.
- Given the interplay of individual and social factors, solutions require collaboration across disciplinary boundaries.
- Healthcare students need preparation for interprofessional collaborative practice to address childhood obesity.
- Few studies have examined how IPE can prepare health professional students with collaborative competencies needed to address complexities of childhood obesity in practice.
- Long-term solutions to the childhood obesity epidemic will require concerted interdisciplinary efforts sensitive to both individual and social determinants.

Objectives

- Evaluate impact of an IPE intervention on students’ learning within two specific IPE competencies
  - Roles / Responsibilities
  - Teams / Teamwork
- Intervention consisted of three learning mechanisms
  1. 14-hour classes with explicit IPE content
  2. 4-hour service-learning sessions whereby students implemented a childhood obesity prevention curriculum
  3. Structured opportunities for reflection

Junior Doctors of Health® Curriculum

- The Junior Doctors of Health® (JDOH) program offers health professional students the opportunity to work together on interdisciplinary teams (Figure 1)
  - Deliver health education for childhood obesity prevention within a community setting
  - Philosophy: empower young children about their futures by developing healthy habits and providing career role models
  - Health professional students are taught about various causes and contributors of childhood obesity
  - Learn about roles / responsibilities of each profession and their contribution to patient care
- Interdisciplinary teams deliver a 4 session obesity prevention curriculum to elementary school children in underserved communities (Table 1)

Methods

- 24 Item Interprofessional Socialization and Valuing Scale was used to assess perceptions of teamwork competencies at pre- and post-intervention (Table 2)
- Adapted version of Attribution of Responsibility of Reducing Childhood Obesity Scale was used to assess students perceptions of the roles / responsibilities of other professionals in addressing childhood obesity
- Students completed two structured reflection assignments
  - Experience working in an interprofessional team
  - Overall course

Results

- Students reported stronger perceptions of responsibility for addressing childhood obesity for all health professionals from the beginning to the end of the course (Table 2)
  - Significant improvements were noted in relation to perceptions of pharmacists and public health professionals
- Students’ perceptions of their ability to work with others, value in working with others and comfort in working with others significantly increased
  - Roles / Responsibilities
  - Students gained knowledge about the roles / responsibilities of other professionals
  - Challenged previously held conceptions about specific professional roles
  - Enhanced value and respect for different professionals
- Teamwork / Collaboration
  - Importance of communication for functioning and effectiveness of interprofessional teams
  - Learning how to effectively work together
  - Discussions could help identify team members’ strengths and maximize individual roles within future lessons

Table 1: Overview of the JDOH Program Curriculum

<table>
<thead>
<tr>
<th>Session</th>
<th>Goals</th>
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</table>
| I. Nutrition | 1. Allow children and classroom peers to participate in health promotion.  
2. Educate children about healthy foods and healthy eating practices.  
3. Discuss ways to improve eating habits.  
4. Encourage healthy behaviors and health promotion with family members. |
| II. Exercise and the human body | 1. Respective children and elementary students.  
2. Educate children about the importance of physical activity.  
3. Suggest ways to increase physical activity.  
5. Encourage healthy behaviors and sharing information with family. |
| III. Health Professionals | 1. Reduce the risk of childhood obesity and diabetes.  
2. Discuss impact of health education.  
3. Hold graduation ceremony and distribute completion certificates. |
| IV. Advocacy | 1. Open and sign pledge of individual healthy behavior with community leaders.  
2. Encourage children to educate family about importance of healthy eating and exercise.  
3. Participate in a youth advocacy project. |

Table 2: Pre- and post-comparisons on key interprofessional competency domains

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPE Domain: Teams / Teamwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability working with others</td>
<td>5.49</td>
<td>5.47</td>
<td>4.61</td>
<td>0.28</td>
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<tr>
<td>Ability working with others</td>
<td>5.77</td>
<td>5.69</td>
<td>4.61</td>
<td>0.28</td>
</tr>
<tr>
<td>Confidence working with others</td>
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<td>4.90</td>
<td>4.01</td>
<td>0.21</td>
</tr>
<tr>
<td>IIPE Domain: Roles / Responsibilities</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Workers</td>
<td>4.69</td>
<td>4.64</td>
<td>3.33</td>
<td>0.44</td>
</tr>
<tr>
<td>Exercise Scientists</td>
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<td>4.30</td>
<td>3.18</td>
<td>0.32</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>3.69</td>
<td>3.18</td>
<td>2.33</td>
<td>0.59</td>
</tr>
<tr>
<td>Public Health/Professionals</td>
<td>4.62</td>
<td>4.44</td>
<td>4.66</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Significant values are marked with * (p<0.05), ** (p<0.01), *** (p<0.001), **** (p<0.0001)

Student Comments

“This collaborative service learning experience affected my perception of pharmacists more than any other profession... Before embarking on this experience, it had never occurred to me that pharmacists played a role in obesity prevention.”

“The most obvious benefit that I gained... was having each of the professions represented and define their role within the context of childhood obesity. This clarified any pre held misconceptions I may have had of the roles of these professions.”

“Working as a member of an interdisciplinary team highlighted the importance of open communication, respect for other professionals and their unique perspectives and flexibility, particularly in a cooperative program planning and implementation.”

“After the first session, our team came together and each member talked about what they thought went well and what they thought should change. Through this debrief we came up with a consistent system that we used for the remainder of the sessions.”

“This interprofessional course taught me the realities of what it means to work in a team... I learned how to be a leader but also how too step back and let others organize, plan, and execute health programming...”

Conclusions

- Findings suggest that an interprofessional course focused on a specific complicated health issue such as childhood obesity holds promise in preparing health professional students for interprofessional collaboration and teamwork
- Students reported gaining competencies related to teamwork
- Students described gaining important knowledge related to the roles and responsibilities of other health professionals
- May foster development of knowledge and attitudes critical for interprofessional care of complex health concerns
- Prospective study utilizing these IPE strategies to promote interprofessional collaborative competency development among students

References