OBJECTIVE: To investigate the level of awareness of the occupational therapy profession among final-year health sciences students at Kuwait University. METHODS: This study utilized a survey targeting final-year students in the Health Sciences Center at Kuwait University schools of medicine, pharmacy, dentistry, and allied health sciences. The survey addressed awareness of occupational therapy, its scope of practice, work environments, and preference for learning more about the profession. RESULTS: Of the 244 surveys distributed, 132 were returned, for a 54% response rate. The proportion of those who knew about occupational therapy ranged from 94% (radiologic science) to a low of 17% (medicine). Most respondents learned about occupational therapy from colleagues (77.1%), rather than from their academic programs (28.1%). Results indicated that about one fifth of students (21.4%) were unsure about the role of occupational therapists as members of the health care team. Preferences for learning more about the profession were consistent with interprofessional opportunities, such as observing an occupational therapy session (64.5%) and attending a workshop (63.6%) or presentation (59.8%). CONCLUSION: Although most respondents had some awareness of occupational therapy, specifics about its scope of practice and relevance to the health care team were lacking. Preferences for learning more about occupational therapy were consistent with the current trend for interprofessional education in health care. Implications for interprofessional education are presented. J Allied Health 2015; 44(1):3–9.

IT IS VITAL that members of different health and social care disciplines are knowledgeable about specific contributions of each discipline to the care of different patient populations. Therefore, sowing seeds of teamwork should commence during the didactic phase of a curriculum. Such interdisciplinary learning could commence by strategically integrating case studies during an interprofessional education (IPE) hour set aside for just this purpose. Hence, the goal of having health sciences students learning together is to promote improved collaboration among various inter-related health care professions, leading to improved quality of care and patient outcomes. It is IPE learning environments, in collaboration with practice environments, that provide many opportunities for future health and social care practitioners to learn about the specific roles and contributions of different health care professions. This is particularly important for a professional program new to a country or university, such as with occupational therapy in Kuwait.

Occupational therapy is a health care profession that plays a major role in maximizing the function of patients and integrating them back into the community. In Kuwait, occupational therapy was introduced into the main Physical Medicine and Rehabilitation Hospital in the 1980s, by expatriate occupational therapists from other countries. Since then, the profession of occupational therapy has grown, and the World Federation of Occupational Therapy (WFOT) approved an occupational therapy educational program at Kuwait University which commenced in 2009.

The Health Science Center at Kuwait University is the main health science center in Kuwait and includes four faculties: the Faculties of Medicine, Dentistry, Pharmacy, and Allied Health Sciences (physical therapy, occupational therapy, radiologic science, medical laboratory science, and health care administration). All curricula within the Health Science Center blend didactic and clinical education in a sandwiched fashion, as the graduates are required to be competent as entry-level practitioners.
The unique contribution of occupational therapy to health and social care is not always clear among other health care professionals. Cox and Corr found that only about 20% of medical students knew about the roles of occupational therapists and how to refer their patients to occupational therapy services. In a previous study, Deitch et al. also concluded that mandatory inservices/seminars should be included in medical school curricula to highlight the role of occupational therapy, its goals, and therapeutic interventions.

More recently, a study describing nursing and physician assistant students’ knowledge of occupational therapy was undertaken to determine whether these disciplines received adequate instruction about the unique roles of occupational therapists within the health care system. It was found that the students demonstrated low levels of knowledge regarding the role of occupational therapists, their specific areas of practice, and the key differences between occupational and physical therapy as distinct and independent health care disciplines. Similarly, Smith et al. reported role overlap and confusion between occupational and physical therapy, stressing the need to clarify the delineation between physical and occupational therapy.

In the Middle East, occupational therapy is a relatively new but growing health profession. Abu Tariah, Abulfelat, and Khawaldeh investigated knowledge of occupational therapy among physicians, nurses, and physical therapists. They found that knowledge of occupational therapy was limited for these three professions. Even for those professionals with general knowledge about occupational therapy, a full understanding of occupational therapy’s scope and specialty practice areas was lacking. For example, nurse practitioners recognized the role of occupational therapy in hand rehabilitation, burn management, geriatrics, neurology, orthopedics, and developmental delays. However, they did not recognize the contributions of occupational therapy in other areas of practice, such as acute care units, schools, private practice, oncology, cardiac rehabilitation, and neonatal units.

To address this lack of understanding of occupational therapy, Patel and Shriber advocated further education for nurses about the scope of occupational therapy in order to facilitate appropriate referrals to occupational therapy. Similarly, Chakravorty and Smith and Mackenzie found that having adequate knowledge about occupational therapy led to increasing referrals from general practitioners. Thus, enhancing awareness of occupational therapy and its scope of practice is viewed as important for interprofessional collaborative practice within the health care system, as well as important for future patient referrals. Enhancing awareness is especially important when a professional education program is new to a region or country, as is the case for the Kuwait University Department of Occupational Therapy.

The cumulative evidence reviewed demonstrates a consistent lack of awareness of the practice of occupational therapy services among other health care students and/or practitioners in various parts of the world. However, the level of awareness of occupational therapy among health professional students and practitioners in the state of Kuwait has not been investigated. The authors of this study strongly believe that education is the first and most important initial step from which to start investigating awareness of the profession of occupational therapy. Further, education is the cornerstone from which to promote the role of interprofessional learning and practice among health care professions, thus promoting future provision of holistic health care service delivery to various patient populations.

Therefore, the purpose of this study was to investigate the level of awareness of the profession of occupational therapy among Kuwait University Health Sciences Center students in the Faculties of Medicine, Pharmacy, Dentistry, and Allied Health Sciences. Four research questions guided this study.

1. Are HSC students aware of the scope of occupational therapy practice?
2. Do HSC students recognize occupational therapy and physical therapy as distinct and independent health care professions?
3. What are the students’ main sources for acquiring knowledge about occupational therapy?
4. What are the students’ preferred methods of learning more about occupational therapy?

**Methods**

A convenience sample of potential respondents were final-year students (n=244) of all majors at the Health Sciences Center, Kuwait University. This included the Schools of Medicine (year 7), Pharmacy (year 5), Dentistry (year 6), and Allied Health Sciences (year 4). The Health Sciences Center is the only health care educational center in Kuwait, except for the School of Nursing which is located in different institute from the Health Sciences Center. Only final-year students were surveyed, the rationale being that exposure to theoretical and practical aspects at the professional and interprofessional levels would be almost complete at that time; that is, final-year students for all majors would have completed all academic and clinical courses, whether in their home departments or at a clinical placement. The programs included from the allied
health sciences in this investigation were health information administration, medical laboratory science, physical therapy, and radiologic science. The rationale for including students from these disciplines was that they are most likely to encounter occupational therapists in their future work environments and hence could have a direct impact on referring patients who could benefit from occupational therapy services.

**Study Design and Instrumentation**

This study used a cross-sectional descriptive study design. Based on the reviewed literature, the survey was developed by a panel of four occupational therapy faculty members. To increase response potential, the survey included forced-choice options with additional spaces if respondents wanted to clarify their responses. The main four sections covered in the survey were 1) familiarity with occupational therapy, 2) perceived roles of occupational therapists, 3) comparison of occupational and physical therapy, and 4) preferred methods of learning more about occupational therapy.

**Procedures**

Ethical approval was obtained from the Institutional Review Board of Kuwait University prior to the start of data collection. The survey was piloted with 20 students and faculty members to ensure appropriateness and relevance of the survey items. The survey was then reviewed and modified based on the feedback received by the pilot respondents. The surveys were distributed by seven research assistants (one for each major) to students in classrooms during the school day. The purpose of the study was verbally explained to the students with a brief written handout, and each student signed an informed consent to participate in the study. The survey took respondents about 10 to 15 minutes to complete, and they returned them without identifiers thus ensuring confidentiality.

**Data Analysis**

Survey results were analyzed using the Statistical Program for the Social Sciences (SPSS, ver. 17.0) software program (IBM SPSS, Armonk, NY, USA). Descriptive statistics were utilized to analyze the data. Chi-square and the Fisher’s exact test were used to compare differences between variables, and a $p$-value <0.05 was chosen for statistical significance. Tables and figures were then generated to best represent the results.

**Results**

Of the 244 surveys distributed, 132 were returned, for a response rate of 54%. The majority of the respondents were female (112, 84.8%), reflecting the general ratio of female to male students within these schools. Of all the respondents, 74 (56.1%) were from the School of Allied Health, 23 (17.4%) from the School of Medicine, 21 (15.9%) from the School of Dentistry, and 14 (10.6%) from the School of Pharmacy. Percentages of total respondents, by major, are shown in Table 1.

The majority of respondents reported that they had some knowledge of occupational therapy, and of those who knew about it, 83 (87.4%) believed occupational therapists play an important role as members of the health care team. Regarding the knowledge about occupational therapy, a significant difference existed between students in allied health sciences and students in other faculties ($p<$0.001). The largest percentage of respondents who reported some knowledge about occupational therapy was from the School of Allied Health Sciences, whereas the lowest percentage of respondents with knowledge of occupational therapy was from the Faculty of Medicine (17%). The respondents who heard about the profession of occupational therapy, classified by major, faculty, year, and gender, are shown in Table 2.

From the list of options describing the roles of occupational therapists, the most frequent responses were activities of daily living, followed by family education, with recreation activities and administering assessments the least frequent responses. However, more than one fifth of respondents were unsure about the role of occupational therapists. Furthermore, when asked if both occupational therapists and physical therapists do the same job, 71.9% of respondents answered “no,” 9.4% answered “yes,” and 18.8% were “unsure.”

Of those respondents who reported knowing about occupational therapy, most had acquired their knowledge about the profession through their colleagues or peers, and the fewest from relatives or newspapers. However, for all respondents, including those who did not know about occupational therapy, 99.2% ($n=131$) were satisfied with their current level of knowledge. In other words, more than 25% of the study respondents ($n=36$) were unaware of the profession of occupational therapy accepted their lack of

<table>
<thead>
<tr>
<th>Major</th>
<th>No. of Final-Year Students by Major</th>
<th>No. of Respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>69</td>
<td>23</td>
<td>33%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>29</td>
<td>21</td>
<td>72%</td>
</tr>
<tr>
<td>Dentistry</td>
<td>23</td>
<td>14</td>
<td>61%</td>
</tr>
<tr>
<td>Allied health sciences</td>
<td>123</td>
<td>74</td>
<td>60%</td>
</tr>
<tr>
<td>Total</td>
<td>244</td>
<td>132</td>
<td>54%</td>
</tr>
</tbody>
</table>
knowledge about occupational therapy as a health care profession.

Although 99.2% of the respondents were satisfied with their current level of knowledge about occupational therapy, when asked how they would prefer to learn if they wanted to learn more about the profession, eight preferences were endorsed. Most respondents preferred to observe an occupational therapy session, followed by attending a workshop, and the least preferred option was reading a book about occupational therapy (Figure 3). Finally, when respondents were asked if they expected to work with occupational therapists in the future, 42% reported “yes” and 58% reported “no.”

**Discussion and Implications**

Our findings indicated that most of the health sciences students had heard about occupational therapy, although 27.3% of them reported that they were not aware of occupational therapy as a health care profession. This result is consistent with previous research for the Middle East and similar to survey results in the United States. This lack of awareness of occupational therapy is of concern because it may lead to an inability for all health professionals to meet their patients’ needs. This is of particular concern for a new and only program in Kuwait.

The allied health science students were more aware about the occupational therapy profession than other students of different majors (p<0.001), possibly due to the shared “Introduction to Professions” course for first-year students in the allied health sciences. The course orients allied health students to the philosophy and scope of each profession, enabling them to choose the major desired before being officially admitted. An important finding of this study, however, relates to the fact that only 17% of medical students recognized occupational therapy as a health care profession, the lowest response rate of the seven health professional student groups surveyed. Moreover, this lack of knowledge about occupational therapy was lower than previously reported in the literature. Medical students’ lack of knowledge about a profession new to the region potentially limits future interprofessional collaborations, as well as possibly reducing the amount of appropriate referrals to occupational therapy. As a result, patients who would be well served by occupational therapy services could have diminished quality of care and less than optimal therapeutic outcomes. Therefore, as also suggested by Deitch et al. (1994), we highly support a mandatory in-service/seminar to be incorporated in the medical school curriculum at the Health Sciences Center to highlight the role of occupational therapy, its goals, and therapeutic interventions.

In addition, despite the fact that the majority of the students recognized occupational therapy as a health care profession, their knowledge about its scope of practice was limited. Respondents also demonstrated inadequate understanding of its philosophy and uniqueness. For example, about 30% of the respondents did not differentiate between occupational therapy and physical therapy.
therapy as independent professions and did not know the key difference between them. That was further evident when one third of respondents indicated that physical exercises are a major role of occupational therapists. This finding was congruent with previous research literature.10,11 Similarly, respondents also confused the roles of occupational therapy and psychology, with one quarter of respondents indicating that counseling was a primary role of occupational therapy. Therefore, the uniqueness of occupational therapy should always be clarified and emphasized in IPE at both the didactic and clinical levels.

To illustrate the importance of addressing the role confusion between occupational therapy and other related disciplines, Sheldon et al.19 examined the IPE outcomes of occupational and physical therapy students working together with patients in an acute care setting. Students were required to conduct interprofessional patient care observations and interviews and interprofessional tele-teaching, whereby their treatment sessions were streamed into a classroom for peer learning. Students were positive about the IPE experience, expressed appreciation for the opportunity to learn about each other’s professional roles, and perceived that the experience helped them develop better professional communication. Based on the literature and the findings of the current study, incorporation of IPE within the Health Sciences Center curricula at Kuwait University is likely to enhance students’ understanding of each other’s professional roles and thus ensure better therapeutic outcomes for various patient populations in Kuwait.18,20–24

Health Sciences Center students’ endorsement of IPE was substantiated in their responses to our survey. Thus, the vast majority of the respondents (77.1%) reported that they learned about occupational therapy from their colleagues. However, only 7.3% of the respondents reported learning about occupational therapy from their clinical fieldwork. This finding supports the need for continuing IPE in clinical fieldwork, not just in the didactic phase of Health Sciences Center students’ education. This could be achieved with a grand rounds format in which a clinical case is presented and the contributions of each discipline are discussed in terms of the patient’s progress and outcomes.

IPE was further endorsed when 65% of our respondents preferred to learn more about occupational therapy by observing an occupational therapy session. Hence, our findings about how our respondents preferred to learn more about occupational therapy is consistent with IPE activities.19,20,24 To illustrate, Mohaupt et al.24 examined the application of an interprofessional simulation program among pharmacy technician, occupational therapy assistant, physical therapy assistant, nursing, and paramedic students in their final year of study. These students were engaged in interactive contact opportunities, which led to positive perceptions of IPE, a better understanding of similarities and differences between these professions, and positive attitudes toward these inter-related professions. Based on the literature and our results, interactive IPE experiences throughout the curricula of Health Sciences Center students will help to firmly establish their knowledge base about the value and contribution of each health and social care discipline as an important element of the collaborative interprofessional health care team.25

In order to promote the idea of IPE in Kuwait or other countries just developing occupational therapy in schools or practice, it is highly desirable to hold local, national, and/or regional conferences stressing the value and benefit of IPE. This can be facilitated through networking with developed countries in which the idea of IPE is well established. For example, at a recent edu-

**FIGURE 2.** Source of knowledge about occupational therapy.

**FIGURE 3.** Respondents’ opinion on preferred ways to be educated about occupational therapy.
cational conference in the United States, multiple sessions addressed the issues and advantages of IPE opportunities. In these presentations, the benefit of developing increased awareness of occupational therapy within the health care team was partnered with improving educational outcomes. Such interprofessional opportunities could also mitigate one of our most disturbing findings, that among those students who did not know about or knew little about occupational therapy, they were still satisfied with their current level of knowledge.

Limitations and Recommendations

First, in order to increase the probability of a high response rate, the survey was not detailed enough to capture more specific issues that would have added richness to the study findings. Hence, the survey mainly addressed the “medical” roles of occupational therapy and did not mention its broader wellness focus of promoting lifestyle changes and resumption of previous roles needed for community re-integration. It also lacked important elements regarding the philosophy, domains, and branches of occupational therapy. Future studies are therefore encouraged to address a more comprehensive understanding about occupational therapy, thus acquiring more insight about students’ perception concerning our profession.

Second, though the survey was developed by occupational therapists and was pilot-tested, its reliability and validity were not established. Third, this survey would have been much more inclusive and relevant if a specialist with survey design had been consulted. Therefore, similar future studies should consider consulting an expert in survey design, thus leading to better instrumentation.

Also, the small sample size of the respondents in each major limited comparisons between the different majors. Thus, future studies should consider inclusion of other batches of students in each major in addition to the final-year students, which could yield more comprehensive findings. Future studies are also encouraged to include qualitative questions enquiring about ways/strategies and/or contributing/limiting factors for implementing IPE within their educational curricula. Finally, the study did not include nursing students and psychology/social work students, who are located in different and separate colleges. It is recommended that in future studies, students of all health and social care professions be included.

Despite these limitations, the current study adds to the knowledge about the existing gap in understanding the role of occupational therapy among health science students and how IPE could play a significant role in filling this gap and promoting collaborations among future health care professionals in Kuwait. Further, the evidence demonstrates that students enjoy and greatly benefit from this type of learning, as it establishes their knowledge base about the value and contribution of each health and social care profession as an important element of the collaborative interprofessional health care team.

It is also recommended that a future study be conducted to review the educational curricula of the Health Sciences Center programs to ascertain their inclusion of IPE to facilitate desired future interdisciplinary teamwork. A qualitative component to such a study is recommended to investigate the barriers and facilitators for the inclusion of specific courses/seminars addressing IPE in all of the Kuwait University Health Sciences Center program.

Moreover, based on our findings, a future study is needed to examine the level of readiness among clinical sites supervising health care students, to integrate IPE into the clinical practice environment. For example, administering the “practice site readiness for interprofessional education (PRIPE)” could play a key role in assessing the strengths and weaknesses of implementing IPE within the clinical environment. A quality improvement study could also examine and document IPE progress.

Conclusion

In conclusion, this study added to the body of knowledge by identifying health sciences students’ awareness of the scope of occupational therapy practice, documenting the confusion among students about the differences between occupational therapy and physical therapy as distinct and independent health care professions, identifying students’ main sources for acquiring knowledge about occupational therapy, and documenting students’ preferred methods of learning more about occupational therapy. Recommendations for IPE in the didactic and clinical phases of health sciences curricula were made, as well as recommendations for future research on IPE in the health sciences.

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