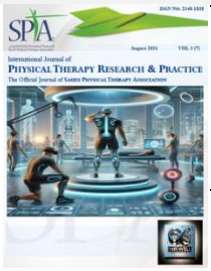

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Original Article

Knowledge and Awareness of Occupational Therapy among Students from Colleges of Medical Sciences in Saudi Arabia: A Cross-sectional Study

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Abstract

There are limitations in studies addressing knowledge and awareness of Occupational Therapy (OT) among medical sciences students in Saudi Arabia. Therefore, the current study aimed to provide insight into the status of knowledge and awareness of occupational therapy among students from colleges of applied or allied medical sciences in Saudi Arabia. Using convenient sampling and snowball methods, students from colleges of applied or allied medical sciences in Saudi Arabia were invited to participate in this cross-sectional online survey. A total of 113 Students responded to our survey. Students had good awareness of OT with some major misconceptions identified such as that OT is a branch of physical therapy. Although participants had higher correct answers on most knowledge questions, the majority had poor to moderate overall knowledge scores with a mean score of 14.53 ± 4.01. Saudi applied or allied medical sciences students had good awareness of OT, yet poor to moderate knowledge about its application in clinical practice. There is a high need for educational and interdisciplinary sessions within academic settings to help clarify and distinguish OT to other future members of the healthcare team. Further research is needed on a variety of different populations within Saudi Arabia.

Keywords: Interprofessional education, Health Sciences education, Knowledge, Awareness, Occupational therapy.

Introduction

Occupational Therapy (OT) is an essential rehabilitation service within the multidisciplinary healthcare team (World Health Organization, 2021). Defined as "the therapeutic use of everyday life occupations with persons, groups, or populations for the purpose of enhancing or enabling participation" (American Occupational Therapy Association, 2020). The field of occupational therapy has undergone significant developments in recent years, including evidence-based practice, interprofessional cooperation, and the

incorporation of technology into interventions. Moreover, the field has expanded in the areas of mental health, rehabilitation, pediatrics, and geriatrics specialties (American Occupational Therapy Association, 2020; World Federation of Occupational Therapists, 2016).

Despite the importance of OT in the healthcare team, other health professionals and the general public have been reported to have limited knowledge of the role and function of occupational therapists (Alotaibi et al., 2018; Poleshuck, 2021; Vij, 2023). In previous studies, insufficient knowledge or understanding of OT was associated not only with the lack of occupational therapists in most settings but also with the limited number of OT training institutions (Collins & Carr, 2018; Porter & Lexén, 2022). Further, this has contributed to the insufficient exposure of other health professionals to the role of OT in their academic training, and the limited or lack of promotion and public awareness of the role of OT by professional bodies regulating OT practices (Olaoye et al., 2016; Wan Yunus et al., 2022).

The importance and role of OT in addressing healthcare needs has been increasingly recognized in Saudi Arabia (Aljabri et al., 2024). King Saud University was the first university to launch an occupational therapy program, and similar programs followed in other Saudi universities (Al-Heizan et al., 2023). Over time, Efforts have been made to enhance educational programs in order to meet healthcare demands (Aljabri et al., 2024). Despite these developments, there is a research gap in understanding the level of awareness of the profession and the provided services among healthcare practitioners (Vij, 2023). In fact, lack of awareness and knowledge of OT has been reported to be a major barrier to the development of the OT profession by OT education leaders (Al-Heizan et al., 2023).

More specifically, there is a lack of studies addressing the knowledge and awareness of OT by health sciences students in Saudi Arabia, particularly students from applied or allied medical science colleges. This is important to understand as they are the future of healthcare, and their views can impact the profession's development, given the dependency of an effective occupational therapy intervention on the understanding and referral of other healthcare providers. Additionally, gaining insight into students' perspectives can help improve curriculum development and address occupational therapy education and practice challenges (Olaoye et al., 2016; Tariah et al., 2012).

Bridging the gap in knowledge and awareness, will ultimately provide recommendations on ways to improve current educational programs to enhance understanding of the occupational therapy profession (Olaoye et al., 2016). In addition, help students recognize the significance of occupational therapy in enhancing people's quality of life and well-being, and understand the provided services of occupational therapy within the healthcare team.

Therefore, the purpose of the current study is to provide preliminary insight into the status of knowledge and awareness of occupational therapy among students from colleges of applied or allied medical sciences in Saudi Arabia.

Method

Participants

Students from Colleges of Applied or Allied Medical Sciences in Saudi Arabia were invited to participate in this cross-sectional online survey. OT students were excluded from the study. All participants studied full-time.

Instrument

The survey tool was designed to evaluate the knowledge and awareness of occupational therapy among Students from Colleges of Applied or Allied Medical Sciences in Saudi Arabia. The questionnaire development was completed by four OT experts with a combined experience of 37 years to ensure content validity. Questions were chosen based on their comprehensiveness and special effort was made to assure coverage of the diverse

OT specialties and areas of practice. The survey consisted of four sections: 1) general characteristics, 2) questions focusing on awareness of OT, 3) questions focusing on knowledge of OT, 4) statements on whether they agree with increasing OT awareness and education. Prior to data collection, the questionnaire was tested on five students and adjustments were made based on their comments on the survey to obtain face validity.

Procedure

Data collection was completed using convenient sampling and snowball methods. The survey was distributed using Outlook Forms (Microsoft Corporation, Redmond, WA) among current students in Saudi Arabia. Participants were provided with detailed instructions about the purpose of the study, confidentiality of their responses, and the right to withdraw at any time. The survey included questions designed to measure participants' knowledge about the occupational therapy profession, their understanding of its scope, and their views of occupational therapy's application in Saudi Arabia. Participation in the study was voluntary, and all participants were provided informed consent upon completing the surveys. Ethical approval for this study was obtained from King Saud University Institutional Review Board (24/1069/IRB).

Data Analysis

Due to the nature of the questionnaire, we used frequencies, percentages, and measures of central tendency to describe survey results. Knowledge questions were used to accumulate a total OT knowledge score (21), a "Yes" answer was assigned a score of 1 and a "No" answer was assigned a score of 0 for each question, except for questions 7 and 19 were reverse scored. The total OT knowledge score was used to categorize the respondent's knowledge ranks as poor (a total score of 0-10), moderate (a total score of 10-17), or good (a total score of 18-21). A one-way analysis of variance (ANOVA) was used to compare groups on total OT knowledge scores controlling for gender, age, and years of studying, and the significance level was set a priori at $\alpha \leq .05$. Pairwise tests were performed to examine differences between groups with Bonferroni correction to p-values. Prior to conducting the analysis, we compared gender, age, and years of studying between groups and tested ANOVA assumptions to assure they were not violated.

Group comparisons on all questions based on gender and major were carried out using a Pearson chi-square test. A Bonferroni correction was applied to account for inflated p-value due to multiple comparisons. A priori power analysis was conducted to determine sample size, and it estimated the need for 100 students to achieve a power of .80 with medium effect and an alpha of 0.05. All statistical analyses were performed using R statistical software (R Core Team, 2022).

Results

A total of 113 Students from Colleges of Applied or Allied Medical Sciences in Saudi Arabia responded to our survey. The mean age of respondents was 21.24 ± 2.7. Most respondents were female 66 (58.4%) and from King Saud University 95 (84.07%). Respondents were from a variety of majors with the largest number being from physical therapy 27 (23.95%) with an overall mean of 3.4 ± 1.28 years of studying within their respective majors. Table 1 shows the sociodemographic characteristics of the respondents).

Table 2 shows the respondents answers to questions regarding their awareness of OT. 94 (83.18%) of the respondents reported that they have heard of OT before, however, only 77 (68.14%) reported that they were aware of OT as a profession. 83 (73.45%) correctly answered a question regarding the main goal of OT not being to find job opportunities for unemployed people, which is a major misconception of OT. On the contrary, 74 (65.48%) believed that OT is a branch of physical therapy, which is another common misconception about OT in Saudi Arabia. The majority of

respondents 101 (89.38%) reported that OT's work in rehabilitation centers.

Table 3 shows the respondents answers to questions regarding their knowledge of OT. Most questions had a higher percentage of correct responses than incorrect; however, this was not consistent through the questions. For example, 56 (about 50%) of the respondents answered that OT does not have a role in either Cardiopulmonary Rehabilitation or with patients with Diabetes. Surprisingly, 35 (30.97%) of the respondents believed that OT could perform minimally invasive surgery.

Table 1: Sociodemographic Characteristics of the respondents

Sociodemographic Category		N (%)
Gender	Female (%)	66 (58.4)
	Male (%)	47 (41.6)
Age	Mean (SD)	21.24 (2.7)
	Range	18-34
University	King Saud University (%)	95 (84.07)
	Other (%)	18 (16.92)
Current level of Education	Bachelor's (%)	105 (93)
	Other (Masters, Diploma, PhD) (%)	8 (7)
Major	Physical Therapy (%)	27 (23.9)
	Biomedical Technology (%)	15 (13.27)
	Respiratory Therapy (%)	15 (13.27)
	Speech and Language Pathology / Audiology (%)	12 (10.61)
	Community Health Sciences (%)	11 (9.73)
	Optometry and Vision Sciences (%)	8 (7)
	Radiological Sciences (%)	7 (6.19)
	Dental Health (%)	7 (6.19)
	Other (%)	11 (9.73)
Years of Studying	Mean (SD)	3.40 (1.28)
	Range	1-8

Table 2: Questions regarding the respondent's awareness of OT and the distribution of their answers

Question	Responses	N	%
Q1: Have you heard about Occupational Therapy before?	Yes	94	83.18
	No	19	16.81
Q2: Are you aware of Occupational Therapy as a profession?	Yes	77	68.14
	No	36	31.85
Q3: Have you or any of your friends or relatives received Occupational Therapy?	Yes	37	32.74
	No	76	67.25
Q4: The main goal for Occupational Therapists is to find job opportunities for Unemployed people?	Yes	30	26.54
	No	83	73.45
Q5: Occupational Therapy is a branch of Physical Therapy?	Yes	74	65.48
	No	39	34.51
Q6: Occupational Therapy is synonymous with Recreation Therapy?	Yes	42	37.16
	No	71	62.83
Q7: Occupational therapists work in:	Rehabilitation Centers	101	89.38
	Sports Centers	83	73.45
	Research Centers	73	64.60
	Schools	54	47.78
	NICU	37	32.74
	Industrial Settings	36	31.85
	Forensic Settings	15	13.27

Table 3: Questions regarding the respondent's knowledge of OT and the distribution of their answers

Question	Responses	N	%
Q1: Occupational Therapy treats patients with bone and joint injuries?	Yes	79	69.91
	No	34	30.08
Q2: Occupational Therapy treats patients with amputations?	Yes	89	78.76
	No	24	21.23
Q3: Occupational Therapy has a role with burn patients?	Yes	74	65.48
	No	39	34.51
Q4: Occupational Therapy has a role in Neurological Disorders?	Yes	96	84.95
	No	17	15.04
Q5: Occupational Therapists are qualified to fabricate splints?	Yes	65	57.52
	No	48	42.47
Q6: Occupational Therapists are qualified to take wheelchair measurements?	Yes	81	71.68
	No	32	28.31
Q7: Occupational Therapists aim mainly to improve the function of the Upper Extremities, and Physical Therapists aim to improve the function of the Lower Extremities?	Yes	65	57.52
	No	48	42.47
Q8: Occupational Therapy has a role in Cardiopulmonary Rehabilitation?	Yes	57	50.45
	No	56	49.55
Q9: Occupational Therapy has a role in Osteoarthritis Cases?	Yes	87	76.99
	No	26	23.01
Q10: Occupational Therapy has a role with patients with Diabetes?	Yes	57	50.45
	No	56	49.55
Q11: Occupational Therapy has a role with patients with visual impairments?	Yes	76	67.25
	No	37	32.74
Q12: Occupational Therapy can improve a patient's ability to manage medications?	Yes	72	63.71
	No	41	36.28
Q13: Occupational Therapy has a role with Alzheimer's disease patients?	Yes	75	66.37
	No	38	33.62
Q14: Occupational Therapy has a role with ADHD patients?	Yes	84	74.33
	No	29	25.66
Q15: Occupational Therapy has a role with patients with cognitive impairments?	Yes	86	76.10
	No	27	23.90
Q16: One of Occupational Therapy's interventions is modifying the environment to be suitable for patients with physical and cognitive impairments?	Yes	97	85.85
	No	16	14.15
Q17: Occupational Therapy has a role in psychiatric disorders?	Yes	79	69.91
	No	34	30.08
Q18: Occupational Therapists can work on improving self-care (e.g., Bathing) with Psychiatric patients?	Yes	96	84.95
	No	17	15.05
Q19: Occupational Therapists can Perform minimally invasive surgery?	Yes	35	30.97
	No	78	69.03
Q20: Occupational Therapy has a role in Oncology cases?	Yes	63	55.75
	No	50	44.25
Q21: One of the Occupational Therapy interventions is educating the patient a compensatory technique/s and/or prescribe assistive device/s to obtain maximum independence?	Yes	103	91.15
	No	10	8.85

Interestingly, only 65 (57.52%) of respondents believed that OTs are qualified to fabricate splints, similarly, about the same percentage of respondents responded that OT aim mainly to improve the function of the upper extremities, and physical therapists aim to improve the function of the lower extremities.

The overall mean total OT knowledge score was 14.53 ± 4.01 with scores ranging from 2-21, with 36 (31.85%) of respondents having good knowledge of OT while the rest had a knowledge ranging from poor 20 (17.7%) to moderate 57 (50.44%). Students classified as having good knowledge had a score of 18.72 ± 0.74, while those classified as having moderate knowledge had a score of 14.28 ± 1.55, and those classified as having poor knowledge had a score of 7.7 ± 2.10.

No statistically significant differences were found between groups on gender, age, and years of studying. There was a significant difference in total OT knowledge scores for the three knowledge rank groups $F(2,107) = 363.5$, $p < .001$ while controlling for gender, age, and years of studying. Pairwise comparison between groups on total OT knowledge scores revealed significant differences between the means of all three groups. Further, no statistical significance was observed among comparisons on both awareness and knowledge questions based on either gender or college major.

The respondents were given three general statements regarding increasing OT awareness and education and were asked whether they agreed with the statement or not. 108 (95%) agreed with the statements: “In my opinion, the Saudi society should be more educated about Occupational Therapy and its role”, and “In my opinion, health care students and practitioners should be more educated about Occupational Therapy and its role”. In addition, 94 (84%) agreed that they would like to learn more about Occupational Therapy and its role.

Discussion

Compared to other healthcare professions, OT is considered a relatively new healthcare profession in the Gulf region in general and in Saudi Arabia in particular. Recognizing the significance of OT as a profession and its implications in practice is the key to better development of the profession in general starting from enhancing it in academia (Al-Heizan et al., 2023; Olaoye et al., 2016; Tariah et al., 2012). Thus, this preliminary study aimed to investigate the knowledge and awareness of OT and its importance in different specialties, more specifically among healthcare students in Saudi Arabia. The targeted population were students from Applied or Allied Medical Sciences Colleges in Saudi Arabia where OT is one of its programs. Therefore, it’s crucial to have an insight into their understanding of the profession as they’re also expected to work together in the near future within a multidisciplinary team.

Although comparison on awareness questions based on gender and college major did not reveal statistically significant results, questions focusing on OT awareness still showed some interesting findings. The answers revealed that most respondents either had heard about OT 94 (83.18 %) or were aware of OT 77 (68.14 %) which is consistent with previous studies among healthcare students in different populations (Olaoye et al., 2016; Opoku & Ndaa, 2021). Moreover, most respondents were aware that the main goal of OT is not to find appropriate job opportunities for those unemployed 83 (73.45%). Shockingly, 74 (65.48%) of the respondents believed that OT is a branch of physical therapy (PT), which is a major misconception about OT in Saudi Arabia. This misconception of the role confusion between OT and PT was reported in the early 2000s in the United States (Katz et al., 2001), which encouraged researchers to clarify the role confusion between the two professions (Lysaght & Wright, 2005; Tariah et al., 2012). In fact, Katz and colleagues (2001) believed that this role confusion creates tension between OT and PT and may hinder the quality of services given in practice. Therefore, increasing interaction between students from entry levels using interprofessional education through

curricular and extracurricular activities may contribute to eliminating this common misconception between OT and PT (Meny et al., 2021; Mthembu et al., 2022). While the majority of the respondents correctly indicated that OTs work in rehabilitation centers, many lacked the awareness that OTs can work in the NICU and industrial settings. This may indicate that although there may be general awareness of OT in Saudi Arabia, there is limited awareness of the scope and role of OT's within specialized areas of practice such as in the NICU and/or industrial settings.

A good percentage of respondents showed moderate to good knowledge about OT's role in maximizing independence through assistive technologies, wheelchair measurements, compensatory technique and modifying the environment. Also, they had high knowledge responses regarding OT role in psychiatric disorders, cognitive impairments, ADHD patients, Alzheimer's disease patients, visual impairments, Osteoarthritis Cases, Neurological Disorders, amputations, bone and joint injuries managements. Which is consistent with a previous study that reported higher knowledge among health science students (Opoku & Ndaa, 2021).

Similar to the awareness questions, comparisons between groups based on gender and college major on knowledge questions did not yield statistical significance. However, statistically significant differences were found between the three knowledge rank groups indicating gaps in knowledge among study participants. Although a large number of questions had an adequate rate of correct answers, responses showed inconsistency. For instance, half of the respondents understood that OT does not intervene in Cardiopulmonary nor Diabetes conditions, while OT has a crucial role with cardiopulmonary conditions through improving respiratory functioning in mobility, functional capacity, independence, and quality of life (McCowan et al., 2023). Also, OT has a role with diabetes management through preventative and interventional approaches such as condition education, medication management, physical activity, self-monitoring and psychological intervention (Pyatak et al., 2018; Shen & Shen, 2019). Another inconsistency was detected in the findings, is the role of OT and PT in upper and lower extremities. Many agreed that OTs main goal is to enhance the physical abilities of the upper extremities while PTs focus on the capabilities of the lower extremities, even though, OT has major role in lower extremities intervention such as ambulation, transfer, equipment prescription, orthosis and prosthesis and joint replacement management (Al-Heizan et al., 2023; Guihan et al., 2022). Almost half of respondents did not know of OT's role in splinting, which appear to be a common misconception according to similar study (Darawsheh, 2018), while orthosis fabrication and prescription falls mainly under OT role in addressing different conditions as OT educational background gives them more confidence in splinting and access to splinting guidelines (Kilbride et al., 2013; Schofield & Schwartz, 2020).

In light of the evidence presented, there is a high need for a more knowledgeable and aware healthcare sector regarding OT, including practitioners, students, and faculty members. Almost all the respondents agreed with the statements "Saudi society should be more educated about OT and its role", and "healthcare students and practitioners should be more educated about OT and its role". In addition, the majority agreed that they would like to learn about the profession and its diverse specialties. Previous studies highlighted the role of occupational therapists and occupational therapy associations locally and globally in addressing the misrepresentation of OT and increasing the awareness about the profession and its implications among their community members and healthcare sector (Alotaibi et al., 2018; Meny et al., 2021; Olaoye et al., 2016). Different approaches and strategies could be used to effectively reach and engage a targeted population on different levels; Interprofessional courses for students in college, rotational clinical posting across all healthcare disciplines in fieldwork, educational lectures, seminars, workshops and media for multi

sectoral levels, and its role in spreading the awareness among society (Meny et al., 2021; Olaoye et al., 2016).

Majority of participants were from King Saud University which was not surprising given that King Saud University is considered the biggest university with the highest number of students enrolled in applied or allied medical sciences colleges in Saudi Arabia (Al-Heizan et al., 2023; Althubaiti & Alkhazim, 2014). Further, most participants were undergraduate students and that is due to the limited number of postgraduate programs and their enrolled students compared to the undergraduate ones in the applied medical sciences colleges in Saudi Arabia (Alanazi & Mohamud, 2020; Alqahtani et al., 2022). Nonetheless, the range of participants' age and years of study as well as the diversity of majors gives the study a comprehensive perspective regarding awareness and knowledge of OT.

While the study provides valuable insight into the status of knowledge and awareness of occupational therapy among students from colleges of applied or allied medical sciences in Saudi Arabia, it is important to acknowledge some of the limitations and weaknesses that were encountered. The sample was not large (113 participants), which could impact the generalizability of the findings. Moreover, an incomplete illustration of the knowledge and awareness among students from different Saudi universities and with different educational backgrounds could be resulted from the fact that most of the participants were KSU students. Another limitation is the absence of medical or nursing students in the sample which may lead to an inadequate representation of medical healthcare disciplines. Therefore, further and enlarged studies are justified and recommended among other students in medicine, nursing, dentistry, and others in the healthcare system.

Conclusions

Saudi applied or allied medical sciences students had good awareness of OT, yet poor to moderate knowledge about its application in clinical practice. There is a need for strategies to address these limitations within academic settings. This may include more emphasis on interprofessional education within academic institutions including clinical rotations. Further, common misconceptions were identified such as that OT is branch of PT or that OT has a limited role in certain clinical populations such as cardiopulmonary or diabetic patients. Addressing these misconceptions through appropriate awareness and/or educational programs is essential. Given the importance of having a knowledgeable multidisciplinary team for OT clinicians to serve within healthcare in the best matter possible, there is a need for improvements in knowledge of some of the specific areas of practice for OT that were identified in the current study for current students (i.e. future healthcare providers). Further studies with a larger and more diverse sample is indicated. dentistry, and others in the healthcare system.

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Disclosure

The authors report no conflicts of interest in this work.

Reference

Alanazi, A. A., & Mohamud, M. S. (2020). Masters of Health Professions Education: Review of Current Programs in Saudi Arabia. Health Professions Education, 6(2), 136–141. https://doi.org/10.1016/j.hpe.2019.12.002

Al-Heizan, M. O., Alhammad, S. A., Aldaihan, M. M., & Alwadeai, K. S. (2023). Occupational Therapy Education

in Saudi Arabia: Barriers and Solutions From a Cross-Sectional Survey Study. Cureus. https://doi.org/10.7759/cureus.36139

Al-Heizan, M. O., Shoman, A., Tawffeq, A., Banamah, A., Balkhair, F., Filimban, S., Alsinan, W., Batouk, O., & Turkistani, T. (2023). The Efficacy of a Preoperative Occupational Therapy Educational Session for Saudi Patients Undergoing a Lower Extremity Joint Replacement. Journal of Multidisciplinary Healthcare, Volume 16, 31–38. https://doi.org/10.2147/JMDH.S394761

Aljabri, N. Q., Bulkeley, K., & Cusick, A. (2024). The Occupational Therapy Profession in Saudi Arabia. Occupational Therapy International, 2024, e9982661. https://doi.org/10.1155/2024/9982661

Alotaibi, N. M., Manee, F. S., Murphy, L. J., & Rassafiani, M. (2018). Knowledge about and Attitudes of Interdisciplinary Team Members toward Occupational Therapy Practice: Implications and Future Directions. Medical Principles and Practice, 28(2), 158–166. https://doi.org/10.1159/000495915

Alqahtani, J. S., AlAhmari, M. D., Al-Otaibi, H. M., AlRabeeah, S. M., Al Khathlan, N. A., Aldhahir, A. M., Alqahtani, A. S., Alwadeai, K. S., Algarni, S. S., Siraj, R. A., Alqarni, A. A., Almeshari, M. A., Alghamdi, S. M., AlTaweel, M., Alnasser, M., Sreedharan, J. K., Almojaibel, A. A., Alahmari, M., Aldabayan, Y. S., … Alzahrani, E. M. (2022). Needs Assessment for the Establishment of Master's Degree Programs in Respiratory Care in the Kingdom of Saudi Arabia. Advances in Medical Education and Practice, 13, 1113–1121. https://doi.org/10.2147/AMEP.S377559

Althubaiti, A., & Alkhazim, M. (2014). Medical Colleges in Saudi Arabia: Can We Predict Graduate Numbers? Higher Education Studies, 4(3), 1–8. https://doi.org/10.5539/hes.v4n3p1

American Occupational Therapy Association. (2020). Occupational Therapy Practice Framework: Domain and Process—Fourth Edition. The American Journal of Occupational Therapy, 74(Supplement_2), 7412410010p1-7412410010p87. https://doi.org/10.5014/ajot.2020.74S2001

Collins, P., & Carr, C. (2018). Exposure to, Knowledge of, and Interest in Occupational Therapy and Physical Therapy as Career Options. The Open Journal of Occupational Therapy, 6(2). https://doi.org/10.15453/2168-6408.1357

Darawsheh, W. B. (2018). Awareness and Knowledge about Occupational Therapy in Jordan. Occupational Therapy International, 2018, e2493584. https://doi.org/10.1155/2018/2493584

Guihan, M., Roddick, K., Cervinka, T., Ray, C., Sutton, C., Carbone, L., & Weaver, F. M. (2022). Physical and occupational therapist rehabilitation of lower extremity fractures in veterans with spinal cord injuries and disorders. The Journal of Spinal Cord Medicine, 45(1), 33–41. https://doi.org/10.1080/10790268.2021.1890680

Katz, J. S., Titiloye, V. M., & Balogun, J. A. (2001). Physical and Occupational Therapy Undergraduates' Stereotypes of One Another. Perceptual and Motor Skills, 92(3), 843–851. https://doi.org/10.2466/pms.2001.92.3.843

Kilbride, C., Hoffman, K., Baird, T., Tuckey, J., Marston, L., & Souza, L. D. (2013). Contemporary splinting practice in the UK for adults with neurological dysfunction: A cross-sectional survey. International Journal of Therapy and Rehabilitation, 20(11), 559–566. https://doi.org/10.12968/ijtr.2013.20.11.559

Lysaght, R., & Wright, J. (2005). Professional Strategies in Work-Related Practice: An Exploration of Occupational and Physical Therapy Roles and Approaches. The American Journal of Occupational Therapy, 59(2), 209–217. https://doi.org/10.5014/ajot.59.2.209

McCowan, A., Gustafsson, L., Bissett, M., & Sriram, B. K. (2023). Occupational therapy in adults with chronic respiratory conditions: A scoping review. Australian Occupational Therapy Journal, 70(3), 392–415. https://doi.org/10.1111/1440-1630.12861

Meny, A. H., Hayat, A. A., Ain, Q. U., Tariah, H. S. A., Almarhoon, A. J., Eldigire, M. H. A., & Ahmed, S. (2021). Knowledge about Occupational Therapy among People in Saudi Arabia. Journal of Evolution of Medical and Dental Sciences, 10(22), 1703–1708.

Mthembu, T. G., Nkosi-Mafutha, N. G., & Maunye, J. T. (2022). South African nursing students' awareness and knowledge of the occupational therapy profession. South African Journal of Occupational Therapy, 52(1), 45–55. https://doi.org/10.17159/2310-3833/2022/vol52n1a6

Olaoye, O. A., Emechete, A. A. I., Onigbinde, A. T., & Mbada, C. E. (2016). Awareness and Knowledge of Occupational Therapy among Nigerian Medical and Health Sciences Undergraduates. Hong Kong Journal of Occupational Therapy, 27(1), 1–6. https://doi.org/10.1016/j.hkjot.2016.02.001

Opoku, E. N., & Ndaa, P. O. (2021). Awareness and knowledge of final year health science students on

Occupational Therapy in a public university in Ghana. Health Science Investigations Journal, 2(1), 189–195. https://doi.org/10.46829/hsijournal.2021.6.2.1.189-195

Poleshuck, L. (2021). Interprofessional Faculty Members' Knowledge of Occupational Therapy [Ph.D., State University of New York at Buffalo]. https://www.proquest.com/docview/2555593337/abstract/CAB4852A7CBF4B14PQ/1

Porter, S., & Lexén, A. (2022). Swedish occupational therapists' considerations for leaving their profession: Outcomes from a national survey. Scandinavian Journal of Occupational Therapy, 29(1), 79–88. https://doi.org/10.1080/11038128.2021.1903992

Pyatak, E. A., Carandang, K., Vigen, C. L. P., Blanchard, J., Diaz, J., Concha-Chavez, A., Sequeira, P. A., Wood, J. R., Whittemore, R., Spruijt-Metz, D., & Peters, A. L. (2018). Occupational Therapy Intervention Improves Glycemic Control and Quality of Life Among Young Adults With Diabetes: The Resilient, Empowered, Active Living with Diabetes (REAL Diabetes) Randomized Controlled Trial. Diabetes Care, 41(4), 696–704. https://doi.org/10.2337/dc17-1634

R Core Team. (2022). R: A Language and Environment for Statistical Computing [Computer software]. R Foundation for Statistical Computing. https://www.R-project.org/

Schofield, K. A., & Schwartz, D. A. (2020). Teaching orthotic design and fabrication content in occupational therapy curricula: Faculty perspectives. Journal of Hand Therapy, 33(1), 119–126. https://doi.org/10.1016/j.jht.2018.08.003

Shen, X., & Shen, X. (2019). The Role of Occupational Therapy in Secondary Prevention of Diabetes. International Journal of Endocrinology, 2019, e3424727. https://doi.org/10.1155/2019/3424727

Tariah, H. S. A., Abulfeilat, K., & Khawaldeh, A. (2012). Health Professionals' Knowledge of Occupational Therapy in Jordan. Occupational Therapy In Health Care, 26(1), 74–87. https://doi.org/10.3109/07380577.2011.635184

Vij, S. (2023). Physicians' Knowledge and Perceptions of Occupational Therapy Practice. The Open Journal of Occupational Therapy, 11(4), 1–7. https://doi.org/10.15453/2168-6408.2141

Wan Yunus, F., Ahmad Ridhuwan, N. F., & Romli, M. H. (2022). The Perception of Allied Health Professionals on Occupational Therapy. Occupational Therapy International, 2022, 2588902. https://doi.org/10.1155/2022/2588902

World Federation of Occupational Therapists. (2016). Minimum Standards for the Education of Occupational Therapists (https://wfot.org/) [Text/html]. WFOT; WFOT. https://wfot.org/resources/new-minimum-standards-for-the-education-of-occupational-therapists-2016-e-copy

World Health Organization. (2021). Rehabilitation Competency Framework. https://www.who.int/publications-detail-redirect/9789240008281