Knowledge about Occupational Therapy among People in Saudi Arabia

Areej Habib Meny¹, Aalia Akhtar Hayat², Qurrat Ul Ain³, Hashem Salman Abu Tariah⁴, Ahmed Jawad Almarhoon⁵, Mohamed Hamid Ahmed Eldigire⁶, Salman Ahmed⁷

¹ Department of Occupational Therapy, College of Applied Medical Sciences, King Saud bin Abdulaziz University for Health Sciences, Jeddah, Kingdom of Saudi Arabia. ² Department of Neuropsychiatry, Maternity and Children Hospital, Makkah Al Mukarama, Kingdom of Saudi Arabia. ³ Institute of Psychiatry, Rawalpindi Medical University, Pakistan. ⁴ Department of Occupational Therapy, Hashemite University, Zarqa, Jordan. ⁵Department of Occupational Therapy, Rehabilitation Centre, Dammam Medical Complex, Dammam, Saudi Arabia. ⁶ Department of Biostatistics, COSHP, King Saud Bin Abdulaziz University for Health Sciences, Jeddah, Kingdom of Saudi Arabia. ⁷ Department of Orthopaedics, King Abdullah Medical City, Makkah, Saudi Arabia.

ABSTRACT

BACKGROUND

The public awareness about occupational therapy and its role is not much studied in Saudi Arabia. Therefore, this study intended to provide baseline data about existing knowledge, as well as to identify the knowledge gaps in specific domains of knowledge which could help in designing precise and targeted strategies to increase awareness about the occupational therapy (OT) services, their role, and scope among the masses.

METHODS

A cross-sectional survey was carried out among people of Saudi Arabia (SA) to explore the degree of knowledge they had about occupational therapy services. A developed and validated online structured questionnaire was used to collect data from people across all the five regions through social media channels.

RESULTS

The total number of participants was 4,440. Females represented 56.8 %, (N = 2520) of the sample, where 43.2 % (N =1920) were males. Majority of the respondents were Saudi 88.6 % (N = 3936), married 58.1 % (N = 2579), held higher educational degrees 71.4 % (N = 3172) and employed 59.9 % (N = 2469). Most of the participants were in the age range of 20 - 30 years 47.4 % (N = 2104). The overall mean score was 9.82 / 21 (SD \pm 7.105) and 46.76 %, implying that the general public had poor knowledge about OT and its applications. One-way analysis of variance indicated a significant difference in knowledge among different regions of SA (P- value = < 0.05). Regionwise the highest mean score knowledge was in the Southern region (10.54), whereas Najran had the highest score (14.22) in city-wise analysis. Higher knowledge was associated with a younger age range (10.84) and level of education (median score 13). On comparing the mean score amongst the four domains of OT knowledge, the highest mean score (1.70, SD \pm 1.348) was regarding OT goals, whereas the lowest (1.64, SD \pm 1.658) was in the OT treatment methods.

CONCLUSIONS

The Saudi masses may not fully understand the specific services that an occupational therapist may provide. They had poor knowledge about OT roles and implications. Degree of knowledge was significantly affected by the level of education and younger age.

KEY WORDS

Occupational Therapy, Knowledge, Saudi Arabia, Attitude, Rehabilitation

Corresponding Author: Areej Habib Meny, Department of Occupational Therapy, College of Applied Medical Sciences, King Saud Bin Abdulaziz University for Health Sciences, Jeddah, Kingdom of Saudi Arabia. E-mail: menyareej@gmail.com

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BACKGROUND

According to the World Health Organization, the number of people who suffer physical, sensory, intellectual, or mental disability is thought to be 15 % of the population, based on which it can be estimated that 4,070,546 people in Saudi Arabia may require rehabilitation services owing to some form of disability.¹ The causes of disability are variable. Child disability with significant impairment accounts for 3.76 per 1000 population while minor impairment is 42.8 per 1000.² A cross-sectional study cited trauma as an aetiology of disability among males and middle-aged patients (16 - 45 years).¹ Within the elderly population, disability was attributable mainly to neurocognitive impairment, the prevalence of which was found to be 45 % in Saudi Arabia which is higher as compared to the other developed and developing countries.³

OT can be defined as a branch of rehabilitation services that enable people to engage in everyday activities, such as self-care, productivity, and leisure, to improve their health and well-being.⁴ People with stroke, dementia, developmental disorders, and arthritis have reported improved outcomes by using OT intervention in cognitive, physical, social, emotional, and behavioural domains, leading to increased independence in Activity of Daily Living and Instrumental Activity of Daily Living.⁵

People may benefit from OT services effectively if they have a sound knowledge about the goals of OT and potential improvements it can make. The data available from regional studies imply that despite its importance in the management of people with different disabilities, a lack of knowledge is not only found among health care professionals (HCPs) and medical students in Jordan,⁶ Taiwan,⁷ Nigeria⁸ and Saudi Arabia (SA)^{9,10} but also within the general masses.¹¹

Literature and research are scarce about OT, its interventions, and efficacy in SA. Baseline data is lacking, such as the existing number of qualified OTs and OT services. Similarly, there is a lack of research about knowledge and awareness about OT services in the region including among HCPs in SA.⁹

The only study found to this date about the level of knowledge among masses was conducted in Jordan by Darawesheh (2018), which found that 48 % of participants lacked knowledge about OT. The study included selective areas of the country and, the authors stressed the need for further research owing to the lack of generalisability of the results in populations with different cultural contexts.¹¹

This quantitative analysis was designed to assess the level of knowledge about OT among residents of SA. This study intended to provide baseline data about existing knowledge, as well as to identify the knowledge gaps in specific domains of knowledge which could help in designing precise and targeted strategies to increase awareness about the OT services, their role, and scope among the masses.

METHODS

It was a cross-sectional descriptive study. All participants were citizens (nationals or residents) of Saudi Arabia. The participants who were 20 years old or above and could read English or Arabic fluently were included.

Data Collection Procedure

Before conducting the research, ethical approval was obtained from the General Directorate of Health Affairs in Makkah.

SA is divided into five main regions geographically and administratively, namely East, West, South, North, and Central. Each area consists of several cities. Data was collected through simple random sampling. A list was made of all the 65 cities (World Population Review, 2020) and 21 cities were chosen randomly by the lottery method. An option of "others" was also provided for anyone who wanted to participate outside the mentioned cities.

An online platform Survey Monkey was used for data collection from different cities in SA using social media channels such as Twitter, WhatsApp, and Facebook. Data was collected from October 2018 to March 2019.

A focal person (OT) in these leading cities was provided with the link and was responsible for spreading the link among the public to get a reasonable response rate. They arranged different activities like an international day for people with disabilities, world autism awareness day, and international epilepsy day in the community. Focal persons facilitated in getting the general public to respond to the online survey before attending the activities. Participants who were willing to fill in the questionnaire were asked to do so at the time of entry and registration at the awareness event before they attended the activity to ensure that they did not fill it in based on the information that they may gain from the activities. OTs were also asked to post the link of questionnaires on their accounts in social media like Twitter, LinkedIn, WhatsApp, and Facebook.

Data Collection Tools

Data was collected using a structured questionnaire¹² about knowledge of OT in Arabic and English languages. The tool was developed and piloted¹² first following established research protocols, details are given in supplementary material. The questionnaire consisted of two parts.

Part one consisted of eight demographic variables.

Part two consisted of 21 questions encompassing knowledge in five main areas of OT namely;

- 1. General knowledge about OT (5 items)
- 2. The goals of OT (3 questions)
- 3. The role of OTs (6 items)
- 4. Methods of OT intervention (4 questions)
- 5. OT practice areas (3 items)

An independent (unscored) open-ended question was added at the end of the questionnaire to include participants' opinions about OT services. "Do you have any comments or suggestions about occupational therapy services?"

Scoring

Each question had three options (yes, no, and I do not know). Every correct answer yielded a score of 1 for all items, both other wrong answer options scored 0 including "I do not know" option. The maximum achievable score was 21, while the minimum was 0. Raw scores were converted to mean percent scores.

The knowledge of participants was classified as high if they scored between 70 - 100 %, moderate if they scored between 50 - 69 %, and poor if they scored lower than 50 %.

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The classification of degree of knowledge was done at the time of questionnaire development and was agreed upon by the expert panel as there was no prior classification. The only similar study cited did not give any cut-offs or classified the knowledge in levels.

Once both Arabic and English versions were finalised (details of questionnaire development provided in supplementary material), they were distributed to the participants using Survey Monkey software.

Statistical Analysis

Data were analysed using the Statistical Package of Social Sciences (SPSS) software version 21. Descriptive statistics were run, and frequencies were calculated for categorical variables like gender and education status. To compare the knowledge of OT among the five regions, one-way analysis of variance (ANOVA) test and Bonferroni post hoc test were used. Thematic analysis was used to analyse the qualitative data.

RESULTS

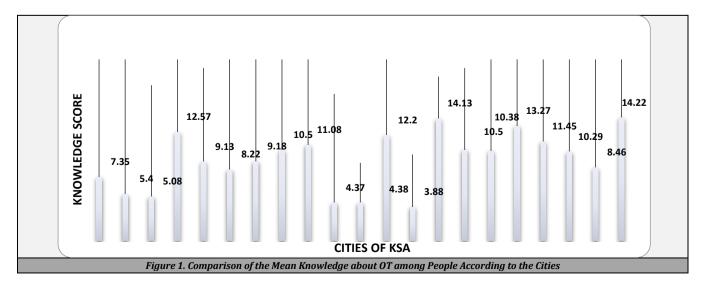
The total number of participants was 4,440. Demographic characteristics are described in Table 1 below. Young participants aged between 20 - 30 years made the highest percentage (47.4 %, N = 2104) of the sample, nearly half sample, 58.1 % (N = 2579) was married, and the majority (71.4 %, N = 3172) of participants held a bachelor or higher educational degree. The mean score of OT knowledge was 9.82 / 21 (SD ± 7.105), which is about 46.76 % mean percent, implying that the people of SA had poor knowledge about OT. Some participants scored zero on the knowledge questionnaire as compared to others who scored 19 / 21 as a maximum. The mean knowledge score revealed that the highest mean score in knowledge about OT was reported in the South region (10.54), while the lowest value was 8.28 found in the North region. Table 2 summarises the descriptive statistics of the OT scale broken down by regions along with the SD, min, max, and the 95 % CI.

One-way analysis of variance indicated a significant difference in knowledge among different regions of Saudi Arabia. The difference in knowledge was found to be most significant in the Northern region after applying the Bonferroni Post Hoc test, P-value = 0.00 (Table 1)

	Characteristics (N = 4,400)	Frequency	Percentage
Gender	Male	1920	43.2
Gender	Female	2520	56.8
	Not disclosed	5	.1
	20 - 30	2104	47.4
Age in years	31 - 40	1369	30.8
	41 - 50	616	13.9
	51 - 70	346	7.8
	Saudi	3936	88.6
Nationality	Others	490	11
	Not disclosed	14	3
	Centre	806	18.2
	South	83	1.9
Regions	North	625	14
	East	1533	34.5
	West	1393	31.4
	Not disclosed	3	.1
Marital status	Married	2579	58.1
Maritai status	Single	1644	37.0
	Divorced	165	3.7
	Not disclosed	83 625 1533 1393 3 2579 1644	.1
	Illiterate	112	2.5
Education status	Primary	66	1.5
Education status	Intermediate	209	4.7
	Secondary	877	19.8
	College / uni	3172	71.4
	Not disclosed	45	1.0
	Not employed	1429	32.2
Employment	Retired	178	4.0
	Employed	2469	55.6
	Total	4440	100

			95 % Confidence Interval for Mean					
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minin um	ı Maxi mum
North	625	8.28	6.748	.270	7.75	8.81	0	21
South	83	10.54	7.438	.816	8.92	12.17	0	21
West	1393	9.76	7.112	.191	9.39	10.14	0	21
East	1533	10.47	7.161	.183	10.12	10.83	0	21
Centre	806	9.80	7.045	.248	9.31	10.29	0	21
Total	4440	9.82	7.105	.107	9.61	10.03	0	21

The highest knowledge by age was in the range of 20 - 30 (mean 10.80, 46.95 %).



More than 53 % (N = 2858) of participants reported that they never heard about OT, whereas 44.3 % (N = 1969) reported that they had heard about OT, and 2.4 % (N = 108) were not sure. The differences in understanding of OT by the educational level of participants was also studied. Highly educated individuals were more knowledgeable about the OT components compared to none or lesser-educated participants. For the total scores of all the domains of OT, the highest median score was calculated at 13 for college graduates, compared to 6 and 4 median scores for participants with illiteracy and primary educational levels, respectively.

In response to the question "Have you received OT intervention before?" the highest percentage (67.5, N = 2998) of participants reported that they had not received any such intervention before, and 1.6 % (N = 735) were not sure.

On comparing the mean score amongst the four domains of OT knowledge, the study found that the highest mean score (2.83, SD = 2.40) was in the domain of OT roles whereas the lowest mean score (1.58, SD = 1.249) was in the OT work settings (Table 3).

	Minimum	Maximum	Mean	Std. Deviation	
Occupational therapy general knowledge	0	5	2.08	1.663	
Occupational therapy goals	0	3	1.70	1.348	
Occupational therapy roles	0	6	2.83	2.404	
Occupational therapy treatment methods	0	4	1.64	1.658	
Occupational therapy work settings	0	3	1.58	1.249	
Table 3. Comparison of People's Knowledge about					
Occupational Therapy in the Five Domains					

 			Yes	No	I Do not know
General knowledge and concepts about occupational therapy Call (163 sp) 222 (163 sp) 229 (163 sp) 229 (163 sp) 229 (153 sp) 209 (15 sp) 209 (16 sp) 200	Conoral knowledge and concepts	Occupational therapy is provided to find jobs for jobless people	1245 (28 %)	1133 (25.5 %)	2062 (46.4 %)
about occupational therapy373 (8.4 %)2489 (56.1 %)1578 (35.5 %)Occupational therapist works with all disorders, diseases and disabilities (arm, strunk) only676 (15.2 %)675 (37.7 %)2087 (47 %)Occupational therapist works with all disorders, diseases and disabilities (arm, strunk) only676 (15.2 %)675 (37.7 %)2087 (47 %)To maintain the existing skills of Activity of Daily Living (e.g. eating, dressing, toleting)2316 (52.2 %)418 (94.9 %)1604 (38.4 %)To improve the individual's independency with Activity of Daily Living 		Occupational therapy is same as physiotherapy	723 (16.3 %)	2228 (50.2 %)	1488 (33.5 %)
Occupational therapist works with all disorders, diseases and disabilities (e.g. autism, stroke, arthritis)1691 (38.1 %)691 (15.6 %)2058 (46.4 %)Occupational therapist works with client on upper extremities (arms, trunk) only676 (15.2 %)1675 (37.7 %)2087 (47 %)To maintain the existing skills of Activity of Daily Living (e.g. eating, dressing, toileting)2316 (52.2 %)418 (9.4 %)1706 (38.4 %)To improve the individual's independency with Activity of Daily Living to expansional therapist assesses people's cognitive skills (concentration, memory, problem solving)2594 (58.4 %)232 (52.9 %)1614 (36.4 %)Occupational therapist assesses people's cognitive skills (concentration, memory, problem solving)1942 (43.7 %)558 (12.6 %)1940 (43.7 %)Occupational therapist assesses people's behaviours (biting, spinning, clapping objects, buttoning)1906 (42.9 %)506 (11.4 %)2022 (45.5 %)Occupational therapist assesses people's sensory skills (putting things in mouth, liking being touched, putting hands on ears when hears sound)1993 (44.9 %)392 (88.4 %)392 (88.5 %)Occupational therapist assesses people's ensory skills (putting things in mouth, liking being touched, putting hands on ears when hears sound)1993 (44.9 %)392 (88.4 %)2032 (45.5 %)Methods of occupational therapist assesses people's ensory skills (putting things is place)1993 (44.9 %)392 (88.9 %)1612 (36.3 %)Occupational therapist uses play as treatment method (solvinging, sliding, immorth, hands)1993 (44.9 %)392 (88.9 %)1612 (36.3 %)Methods of occupational therapist uses glay a		Occupational therapy is same as psychotherapy	373 (8.4 %)	2489 (56.1 %)	1578 (35.5 %)
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practice Occupational therapist works in schools for special needs 2113 (47.6 %) 428 (9.6 %) 1898 (42.7 %) Occupational therapist works in day-care centers 2058 (46.4 %) 341 (7.7 %) 2041 (46 %)	Areas of occupational therapy		2828 (63.7 %)	297 (6.7 %)	1295 (29.2 %)
Table 4. Detailed Domain-Wise Frequency of Responses for All 21 Questions				341 (7.7 %)	2041 (46 %)

About 29.39 % (N = 1305) of the participants gave comments and suggestions about OT in response to the openended question at the end of the questionnaire. The responses were categorised according to four main identified themes.

- 1. A desire to know more about OT.
- 2. The need of creating more OT vacancies.
- 3. The need to provide short OT courses and training for families and teachers of children with special needs as well as for the interested individuals.

The desire to know the difference between OT and other related professions like physiotherapy and behaviour therapy.

DISCUSSION

Occupational therapy can play a vital role in enabling clients to reorganise their physical lives so they can meet their occupational needs more consistently. The results confirm the

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notion that many remain unaware of the concept of OT and its valuable services.

We found that the mean score of OT knowledge was 9.82 (46.76 %), which indicates that people in SA had poor knowledge about OT services. This was in line with several previous studies in the region which found that there was a lack of knowledge about OT among school teachers,13 healthcare professionals, 6,8,9,14 and the general public.11 Moreover, more than half of the participants (N = 2858) reported that they never heard about OT. The reasons can be manifold. OT is a relatively new field in the region, and knowledge is poor amongst not only the masses but also healthcare professionals. A small number of referrals to OT services by healthcare professionals could be a reason that people have less awareness about the existence of this field. OT is not included in the basic medical curriculum taught to medical and allied health specialities. The number of OTs working in the field is limited as well. It's been only a few years that graduates from local OT programs have started working in the field. They are generally concentrated in a few big cities and hospitals and are mainly working in specialised or tertiary care centres.

Another reason for this poor knowledge can be the unauthentic sources of knowledge acquisition. Jordanian researchers reported that about 23 % of public gained knowledge about OT from social media and the Internet, followed by TV and radio (20 %).¹¹ Lack of policy and checking while publishing such materials online might be a reason for inaccurate knowledge dissemination about OT.

The most knowledgeable city was Najran, followed by Riyadh. This could be explained by the fact that Najran is one of the fastest-growing cities in the kingdom with a high literacy rate, i.e., 87.8 %, whereas Riyadh is the capital city and place where the first OT program started. Out of six universities providing OT programs, three are based in Riyadh. Understandably, the most knowledgeable region was the South. It included the city with the highest knowledge that is Najran. One reason for the high rate of awareness about OT in this region, despite the absence of any OT programs, could be that usually people in this region go out to study and work in other more developed cities like Riyadh and Dammam (Ministry of Municipal and Rural Affairs, 2018).

An alarming finding from this study was that the mean knowledge of young people in an age range of 20 - 30 years was poor (10.80, 46.95 %). This is the age of choosing a career path, and this can negatively affect the recruitment of future OT professionals. This implies that to increase recruitment for future OTs, the concerned departments need to devise and provide practical strategies to enrich people with knowledge about OT in SA to facilitate their future career choice. There is a need to upgrade the curricula as well as introducing a system of education where students can have a choice from various minor subjects like psychology, rehabilitation medicine, and occupational therapy, etc. Similarly, most of the participants in this study had bachelor level education or above (71 %), the results showed that they lacked adequate knowledge about OT.

The study highlighted various common myths and misconceptions about OT services. While responding to domain 1 (general knowledge), it revealed that most of the participants (46.4 %, N = 2062) were not sure about what is the job of OT. People thought that OT was responsible for providing employment to the masses, deriving the verbal

meaning of an occupation, whereas others confused it with physiotherapy and psychology. This is in line with previous literature where people and HCPs exhibited such beliefs,^{6,8,9,11} which found that people had confusion in understanding and differentiating between the OT role and other professions.

Another important finding in this study was that most of the participants (46.4 %) were not sure whether OTs work with all kinds of disabilities, diseases, and disorders, or on the upper extremities only. This result is in accord with the recent study indicating that the people believed that OTs mainly work with children with disabilities and focused on the upper extremities.¹¹ This is a concerning finding as it might result in missing out on the elderly population with disabilities.

In response to the use of assistive equipment and treatment modalities (domain 3), over 45 % of people were not aware that OTs use toys, activities, and adaptive / assistive equipment as treatment methods. The results contradicted the findings of a previous study, which found that most health care professionals knew the treatment methods used by OTs.⁹ Most likely explanation could be the different study populations in both studies. The previous study assessed the knowledge of healthcare professionals, whereas this one was targeting laypeople, which included a mix of educated and uneducated people.

In the section about the OT work settings (domain 5), the highest percentage (63.7 %) of participants reported that OTs work in hospitals. The finding is following the previous studies that showed that most healthcare professionals believed that OTs mainly work in hospitals.^{6,9,11} As OTs play a vital part in providing early intervention and rehabilitation services for many disabilities and disorders, their placement in child rehabilitation centres and autism centres is unknown. This can result in people not expecting or demanding these services in the centres mentioned above, causing a barrier in service.

Some valuable suggestions and comments were also provided by the participants at the end of the survey. There was mention of the inability to differentiate between OT and other related therapies with a request to describe the difference between them. Confusion between the role of OTs and other specialities in SA could not only be due to somewhat similar and overlapping aims of the therapies but also due to the newly devised policy by the Ministry of Labour and Social Development. The policy stated that if the physiotherapists or special education had forty hours of training in OT, they would be able to work as OTs in any setting, especially in day-care centers for disabilities. Providing opportunities for other specialities to cover the role of OTs could increase the chance of misunderstanding the role of OTs.

CONCLUSIONS

The study highlights an important issue that the OT's role and goals are unclear to people in the community. It is an essential and well-timed finding as OT services are still in their developmental phase in SA. This can help the authorities, stakeholders, and policymakers to improve the general understanding of people about OT. It is the right of people in a community to be informed about the services available for them, such as OT, and to be able to access and benefit from them. A multisectoral approach is needed to address this issue. The Saudi Occupational Therapy Association, the official government body of OT in SA, needs to spread awareness and

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educate the public about the meaning, need, and role of OT using modalities such as lectures, workshops, seminars, social media, and the mass media.

Limitations

Despite a large and homogeneously spread sample from across the country, the study was limited by being a survey and lacking randomisation of individual participants. Future studies, quantitative and qualitative, with more robust designs, need to be carried out to discern this vital area further.

Data sharing statement provided by the authors is available with the full text of this article at jemds.com.

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