

## KNOWLEDGE AND AWARENESS LEVEL ABOUT ROTATOR CUFF TEARS AMONG SAUDI POPULATION

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### Abstract

**Background:** One of the most prevalent shoulder disorders, tendinopathy, partial or complete rotator cuff or biceps tendon complex tears, bursitis, or labral lesions are some of the ways that rotator cuff-related discomfort can appear. Despite the symptoms, rotator cuff illness affects persons of all ages, with incidence rates 10% higher in those under the age of 20 and 62% higher in those over the age of 80. Recent genetic research suggests that hereditary variables may influence the occurrence of rotator cuff issues. In the Western world, rotator cuff repairs have significantly increased during the last 15 years.

**Objective:** This study's main objective was to assess the Saudi population's level of knowledge and awareness regarding rotator cuff tears.

**Methods:** A comprehensive cross-sectional study involving 371 participants is set to be conducted in Saudi Arabia between 2023 and 2024. The data will be gathered using a simple English and Arabic questionnaire, which includes questions about rotator cuff tears and the prevalence of relevant knowledge among Saudi Arabians regarding causes, signs, symptoms, detection methods, management procedures, and complications associated with rotator cuff tears. Once the data collection phase is complete, the gathered data will be entered into Microsoft Excel software. Subsequently, this data will be imported into the SPSS application, where it will be subjected to statistical analysis.

**Results:** the total sample size was 371 individuals. Regarding knowledge and awareness score of rotator cuff tears among Saudi population, there were 19.7% of participants demonstrated a good level of knowledge on rotator cuff tears, while 29.6% exhibited a moderate level of knowledge. A significant proportion, 50.7%, showed a low level of knowledge. As regard the relation between knowledge level

of rotator cuff tears and sociodemographic characteristics, there was a statistically significant relation to the occupation ( $p$  value = 0.008) and whether the participants were diagnosed with rotator cuff injury before ( $p$  value = 0.010). It also shows statistically insignificant relation to gender, age, nationality, education level, monthly income, lifestyle, and the dominant hand of the participants. **Conclusion:** the study revealed a concerning lack of knowledge and awareness about rotator cuff tears among the Saudi population, with only a small percentage demonstrating a good level of knowledge on the condition. This lack of awareness is consistent with findings from previous studies in Saudi Arabia, Kuwait, and the United States, indicating a global issue of insufficient understanding about rotator cuff tears.

**Keywords:** Rotator cuff, awareness, KSA, RC.

### Introduction:

One of the most prevalent shoulder disorders, rotator cuff-related discomfort can appear in a variety of ways, including tendinopathy, partial or complete rotator cuff or biceps tendon complex tears, bursitis, or labral lesions [1]. Despite the complaints, rotator cuff illness affects people of all ages, with a frequency of around 10% in those under 20 and 62% in those over 80 [2]. The latest genetic research has indicated that hereditary variables may play a role in the occurrence of rotator cuff injuries [3]. In the Western world, the number of rotator cuff repairs has significantly increased during the last 15 years [4]. With the publication of his work, "De Corpora Humanis Fabrica Libri Septem," anatomist Andreas Vesalius, a 28-year-old Belgian, would alter the direction of anatomical education. By using his method, this medical entrepreneur would revive structured anatomy instruction in Europe and precisely represent the muscle group and tendons that we now collectively refer to as the rotator cuff [5]. In general practice, rotator cuff-related discomfort accounts for more than two-thirds of cases of shoulder disorders, which are the third most frequent musculoskeletal complaint [6]. For instance, the prevalence of rotator cuff tears rises with age, from 9% in people under 21 to 30% to 50% in people over 60 to up to 62% in people 80 years of age or older. However, not everyone with a rotator cuff tear experiences pain or impaired function [7].

In 1983, Neer determined that 95% of instances of rotator cuff tears were caused by mechanical impingement [8]. The most frequent rotator cuff injuries are tears of the supraspinatus muscle, which affect 61.9% of men and 38.1% of women. 36 individuals over the age of 60 frequently get supraspinatus tears, and 70% of those over the age of 80 also experience this condition [9].

Our knowledge of the pathophysiology of rotator cuff illness has increased as a result of studies examining the onset and spread of rotator cuff tears. The region of 15 to 16 mm posterior to the biceps tendon was shown to be the most often torn area inside the posterior cuff tendons by Kim et al. in their investigation of 360 shoulders with partial or full-thickness rip [10].

Yamamoto et al. claim that a symptomatic rotator cuff tear enlarges to 47% of the shoulder after an average of 19 months and at a rate of 3.8 mm and 2.0 mm per year, respectively, for the length and width of the tear, respectively [11].

The meta-analysis found that older age, higher BMI, smoking, and dominant arm were the most common factors. In terms of disease-related variables, we discovered that traumatic experiences and

hypertension were linked to symptomatic rotator cuff tears [12]. Recently, a new descriptive cross-sectional study was done and published in Saudi Arabia between 2022 and 2023. In that study, they were evaluating the level of awareness among the Saudi population about rotator cuff tears. Up to the authors knowledge no other study has been done In Saudi Arabia before except the study mentioned [13]. Furthermore, many studies were conducted in other countries to assess the awareness of their population. In this study, we aim to assess the knowledge and awareness level of rotator cuff tears among the Saudi population through a cross-sectional study. Moreover, we are planning to maximize the accuracy of the recent study result via; a larger sample size and involving both adults and adolescents.

#### **Objectives:**

The primary goal of this study was to measure knowledge and awareness of rotator cuff tears in the Saudi population.

#### **Materials and Methods:**

**Study design:** Based on a standardized questionnaire that the authors created; this study was a cross-sectional questionnaire survey.

**Study setting: Participants, recruitment, and sampling procedure:** The study's population consisted of Saudi population for both genders (aged 18–65 years). The Participants were all Saudi population who received the questionnaire.

#### **Inclusion and Exclusion Criteria:**

Research volunteers were to be: Participants of both genders of Saudi population living in Saudi Arabia. We excluded: Males and females who are younger than 18 or older than 65 and those who refused to participate.

**Sample size:** Based on the Saudi general authority for Statistics, at latest census Saudi Arabia population was 32,175,224. According to that information and based on a 95% confidence level and a 5% margin of error, the minimum sample size to conduct this study was estimated to be 371.

**Method for data collection and instrument (*Data collection Technique and tools*):** the survey instrument was a self-administered questionnaire in English and Arabic, containing questions regarding rotator cuff tears and their related knowledge among the population in Saudi Arabia toward causes, signs, symptoms, how to diagnose the cases of rotator cuff tears, steps of management and what are the complications of rotator cuff tears.

#### **Scoring system:**

Correct answer gets = 3, Maybe = 2, Incorrect answer = 1, IDK = 0

Total possible point is 66

0-22 = low knowledge

23-42- moderate knowledge

43-66 = good knowledge

**Analyzes and entry method:** Data was gathered and entered into the Microsoft Excel application for Windows (2016). Following this, the data was imported into the Statistical Package for Social-Science Software (SPSS), version 20, for further statistical analysis.

## Results:

Table (1) displays various demographic parameters of a group of people. The distribution of participants across different age groups reveals that the majority fall within the 18 to 25 and 25 to 40 age brackets, comprising 37.2% and 24.3% of the sample, respectively. Gender distribution shows a nearly equal split between female and male participants, with 48.5% and 51.5%, respectively. Most participants are of Saudi nationality, with only a small percentage being non-Saudi. In terms of education level, a significant proportion hold a bachelor's degree, while smaller percentages have completed high school, diploma, or master's degree programs. The distribution of participants across various regions of residence in Saudi Arabia is also provided, with Riyadh province having the highest representation. When it comes to monthly income, a notable portion of participants earn more than 15000 Saudi Riyals. The occupation distribution shows a mix of students, healthcare-related professionals, and those not related to healthcare. Additionally, the data includes information on participants' lifestyle, dominant hand, history of rotator cuff injury, and if diagnosed, which hand was affected. This detailed breakdown of participant characteristics sets a solid foundation for further analysis and interpretation of the study findings.

**Table (1): Sociodemographic characteristics of participants (n=371)**

<i>Parameter</i>		<i>No.</i>	<i>Percent (%)</i>
<i>Age</i>	18 to 25	138	37.2
	25 to 40	90	24.3
	40 to 49	98	26.4
	50 to 65	45	12.1
<i>Gender</i>	Female	180	48.5
	Male	191	51.5
<i>Nationality</i>	Saudi	365	98.4
	Non-Saudi	6	1.6
<i>Education level</i>	Primary school	3	0.8
	Middle school	3	0.8
	High school	62	16.7
	Diploma	45	12.1
	Bachelor's degree	240	64.7

	Master's degree	13	3.5
	PHD	4	1.1
	Illiterate	1	0.3
<b><i>Region of residence</i></b>	Riyadh province	66	17.8
	Al-Qassim province	32	8.6
	Eastern province	79	21.3
	Makkah province	60	16.2
	Medina province	20	5.4
	Asir Province	32	8.6
	Jazan Province	5	1.3
	Tabuk Province	4	1.1
	Hail Province	28	7.5
	Najran Province	12	3.2
	Al-Jawf Province	4	1.1
	Al-Bahah Province	18	4.9
	Northern Borders Province	11	3.0
<b><i>Monthly income (in Saudi Riyals)</i></b>	Less than 5000	138	37.2
	5000-10000	69	18.6
	11000-15000	57	15.4
	More than 15000	107	28.8
<b><i>Occupation</i></b>	Student	109	29.4
	Related to healthcare	76	20.5
	Not related to healthcare	138	37.2
	Don't work	48	12.9
<b><i>Lifestyle</i></b>	Athletic	145	39.1
	Non-athletic	226	60.9
<b><i>Dominant hand</i></b>	Left	34	9.2
	Right	337	90.8
<b><i>Diagnosed with rotator cuff injury before</i></b>	No	359	96.8
	Yes	12	3.2
<b><i>Diagnosed with rotator cuff injury before in which hand (n=28)</i></b>	Left	10	35.7
	Right	18	64.3

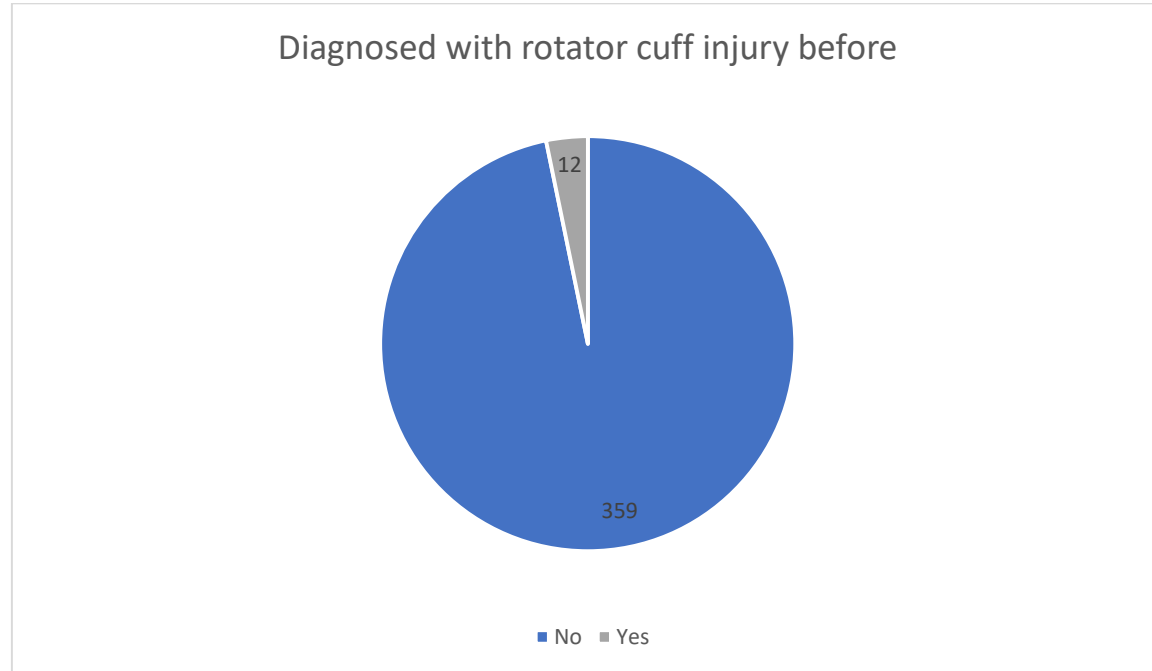
**Figure (1): Illustrates if the participants were diagnosed with rotator cuff injury before.**

Table (2) outlines various parameters related to rotator cuff injuries, including the respondents' awareness of what rotator cuff injury is, the potential causes of such injuries (such as trauma, overactivity of the arm, diabetes mellitus, hypertension, and thyroid diseases), as well as the symptoms and signs associated with rotator cuff tears. It is evident from the data that there is a range of awareness levels among the participants, with varying percentages of respondents indicating their knowledge or lack thereof regarding different aspects of rotator cuff injuries. For instance, while a significant portion of respondents seem to be aware of symptoms like nocturnal pain, raising hand pain, swelling, and pain on rest, there are also notable percentages of individuals who may not possess sufficient knowledge about certain aspects of rotator cuff tears. This data underscores the importance of enhancing awareness and education about rotator cuff injuries within the Saudi population, potentially through targeted informational campaigns or educational initiatives aimed at improving understanding and early detection of such conditions.

**Table (2): Parameters related to knowledge and awareness level of rotator cuff tears among Saudi population (n=371).**

<i>Parameter</i>	<i>Yes</i>	<i>No</i>	<i>Maybe</i>	<i>I don't know</i>
<b>Do you know what rotator cuff injury is?</b>	66 17.8%	257 69.3%	48 12.9%	-
<b>Rotator cuff injury caused by trauma</b>	68 18.3%	44 11.9%	68 18.3%	191 51.5%
<b>Rotator cuff injury caused by overactivity of arm</b>	93	30	71	177

	25.1%	8.1%	19.1%	47.7%
<b>Rotator cuff injury caused by diabetes mellitus</b>	22 5.9%	64 17.3%	63 17.0%	222 59.8%
<b>Rotator cuff injury caused by hypertension</b>	22 5.9%	73 19.7%	63 17.0%	213 57.4%
<b>Rotator cuff injury caused by thyroid diseases</b>	17 4.6%	67 18.1%	65 17.5%	222 59.8%
<b>Symptoms and signs of rotator cuff include nocturnal pain</b>	88 23.7%	27 7.3%	54 14.6%	202 54.4%
<b>Symptoms and signs of rotator cuff include raising hand pain</b>	113 30.5%	15 4.0%	57 15.4%	186 50.1%
<b>Symptoms and signs of rotator cuff include swelling</b>	82 22.1%	33 8.9%	61 16.4%	195 52.6%
<b>Symptoms and signs of rotator cuff include pain on rest</b>	45 12.1%	44 11.9%	71 19.1%	211 56.9%
<b>Symptoms and signs of rotator cuff include increased range of movement</b>	35 9.4%	73 19.7%	52 14.0%	211 56.9%

**Figure (2): Illustrates if the participants know what rotator cuff injury is.**

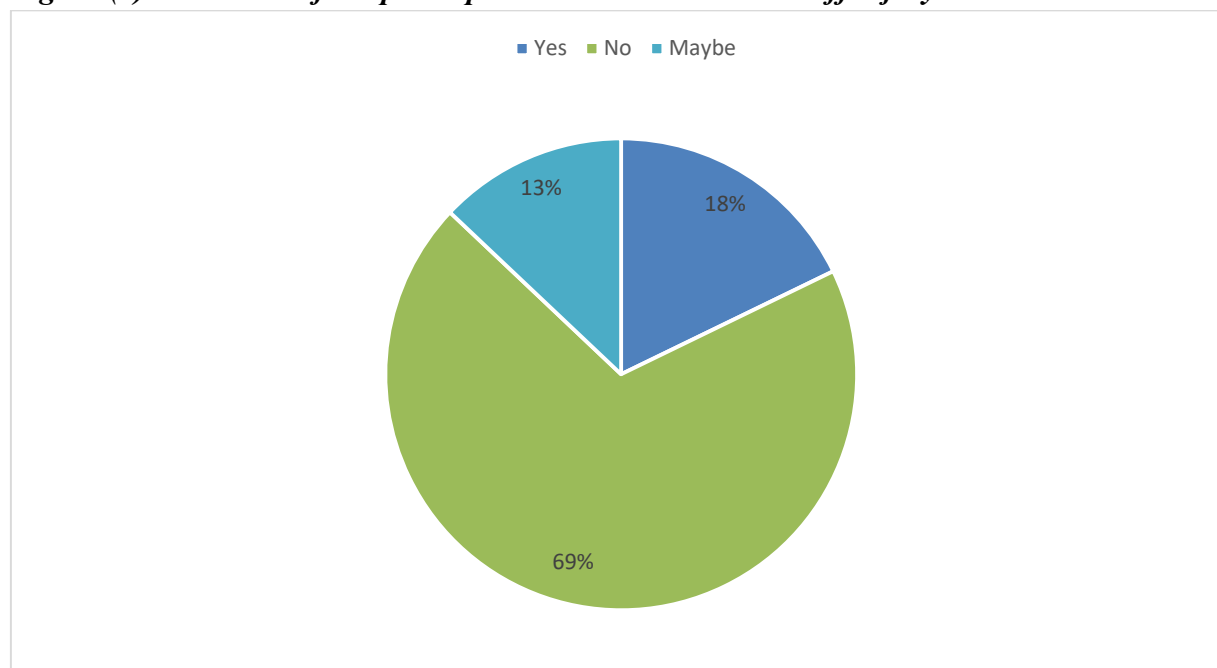


Table (3) outlines various parameters related to the diagnosis and management of rotator cuff injuries, as well as the complications associated with such injuries. It is evident from the data that a significant proportion of respondents rely on clinical diagnosis (86 individuals, 23.2%) and MRI (114 individuals, 30.7%) for diagnosing rotator cuff tears. Interestingly, a smaller number of individuals indicated the use of x-ray (63 individuals, 17.0%) and CBC (20 individuals, 5.4%) for diagnosis. In terms of management steps, the majority identified physiotherapy (155 individuals, 41.8%) as a key component, followed by



analgesics (122 individuals, 32.9%) and surgery (87 individuals, 23.5%). The data also highlights the complications associated with rotator cuff injuries, including complete tear (20 individuals, 5.4%), partial tear (107 individuals, 28.8%), inflammation (108 individuals, 29.1%), and shoulder dislocation (83 individuals, 22.4%). This information underscores the importance of enhancing knowledge and awareness among the Saudi population regarding the diagnosis, management, and potential complications of rotator cuff tears.

**Table (3): Parameters related to knowledge and awareness level of rotator cuff tears among Saudi population (n=371).**

<b>Parameter</b>	<b>Yes</b>	<b>No</b>	<b>Maybe</b>	<b>I don't know</b>
<b><i>We diagnose cases of rotator cuff clinically</i></b>	86 23.2	28 7.5	66 17.8	19 51.5
<b><i>We diagnose cases of rotator cuff by MRI</i></b>	114 30.7	23 6.2	62 16.7	172 46.4
<b><i>We diagnose cases of rotator cuff by x-ray</i></b>	63 17.0	60 16.2	64 17.3	184 49.6
<b><i>We diagnose cases of rotator cuff by CBC</i></b>	20 5.4	106 28.6	54 14.6	191 51.5
<b><i>Steps for management of rotator cuff injury include physiotherapy</i></b>	155 41.8	12 3.2	54 14.6	150 40.4
<b><i>Steps for management of rotator cuff injury include analgesic</i></b>	122 32.9	24 6.5	65 17.5	160 43.1
<b><i>Steps for management of rotator cuff injury include surgery</i></b>	87 23.5	38 10.2	77 20.8	169 45.6
<b><i>Steps for management of rotator cuff injury include anti-inflammatory</i></b>	93 25.1	38 10.2	67 18.1	173 46.6
<b><i>Complications of rotator cuff injury include complete tear</i></b>	20 5.4	72 19.4	41 11.1	238 64.2
<b><i>Complications of rotator cuff injury include partial tear</i></b>	107 28.8	16 4.3	71 19.1	177 47.7
<b><i>Complications of rotator cuff injury include inflammation</i></b>	108 29.1	20 5.4	64 17.3	179 48.2
<b><i>Complications of rotator cuff injury include shoulder dislocation</i></b>	83 22.4	33 8.9	73 19.7	182 49.1

In analyzing the data presented in Table (4) regarding the knowledge and awareness level of rotator cuff tears among the Saudi population, several key observations can be made. The table indicates that out of the total sample size of 371 individuals, 19.7% demonstrated a good level of knowledge on rotator cuff tears, while 29.6% exhibited a moderate level of knowledge. A significant proportion, 50.7%, showed



a low level of knowledge on this medical condition. These findings suggest a varying degree of awareness and understanding among the Saudi population when it comes to rotator cuff tears. It is crucial to delve deeper into the factors influencing these knowledge levels, such as access to healthcare information, education, and cultural beliefs.

**Table (4): Shows knowledge and awareness level of rotator cuff tears among Saudi population score results.**

	Frequency	Percent
Good knowledge	73	19.7
Moderate knowledge	110	29.6
Low knowledge	188	50.7
Total	371	100.0

Table (5) shows that knowledge level of rotator cuff tears among Saudi population has statistically significant relation to the occupation ( $p$  value = 0.008) and whether the participants were diagnosed with rotator cuff injury before ( $p$  value = 0.010). It also shows statistically insignificant relation to gender, age, nationality, education level, monthly income, lifestyle, and the dominant hand of the participants.

**Table (5): Relation between knowledge level of rotator cuff tears and sociodemographic characteristics among Saudi population.**

Parameters		Level of knowledge			Total (N=371)	P value*
		Good	Moderate	Low		
<b>Gender</b>	Female	30	57	93	180	0.340
		41.1%	51.8%	49.5%	48.5%	
	Male	43	53	95	191	
		58.9%	48.2%	50.5%	51.5%	
<b>Age</b>	18 to 25	30	41	67	138	0.177
		41.1%	37.3%	35.6%	37.2%	
	25 to 40	23	28	39	90	
		31.5%	25.5%	20.7%	24.3%	
	40 to 49	11	27	60	98	
		15.1%	24.5%	31.9%	26.4%	
	50 to 65	9	14	22	45	
		12.3%	12.7%	11.7%	12.1%	
<b>Nationality</b>	Saudi	73	108	184	365	0.464
		100.0%	98.2%	97.9%	98.4%	
	Non-Saudi	0	2	4	6	
		0.0%	1.8%	2.1%	1.6%	
<b>Education level</b>	Illiterate	0	1	0	1	0.492

		0.0%	0.9%	0.0%	0.3%	
	Primary school	1	1	1	3	
		1.4%	0.9%	0.5%	0.8%	
	Middle school	0	2	1	3	
		0.0%	1.8%	0.5%	0.8%	
	High school	12	21	29	62	
		16.4%	19.1%	15.4%	16.7%	
	Diploma	5	14	26	45	
		6.8%	12.7%	13.8%	12.1%	
	Bachelor's degree	50	69	121	240	
		68.5%	62.7%	64.4%	64.7%	
	Master's degree	3	1	9	13	
		4.1%	0.9%	4.8%	3.5%	
	PHD	2	1	1	4	
		2.7%	0.9%	0.5%	1.1%	
<b>Residence</b>	Riyadh province	10	15	41	66	<b>N/A</b>
		13.7%	13.6%	21.8%	17.8%	
	Al-Qassim province	10	15	7	32	
		13.7%	13.6%	3.7%	8.6%	
	Eastern province	15	26	38	79	
		20.5%	23.6%	20.2%	21.3%	
	Makkah province	8	20	32	60	
		11.0%	18.2%	17.0%	16.2%	
	Medina province	4	4	12	20	
		5.5%	3.6%	6.4%	5.4%	
	Asir Province	4	7	21	32	
		5.5%	6.4%	11.2%	8.6%	
	Jazan Province	3	0	2	5	
		4.1%	0.0%	1.1%	1.3%	
	Tabuk Province	1	1	2	4	
		1.4%	0.9%	1.1%	1.1%	
	Hail Province	3	9	16	28	
		4.1%	8.2%	8.5%	7.5%	
	Najran Province	2	3	7	12	
		2.7%	2.7%	3.7%	3.2%	
	Al-Jawf Province	1	2	1	4	
		1.4%	1.8%	0.5%	1.1%	
	Al-Bahah	4	7	7	18	

	Province	5.5%	6.4%	3.7%	4.9%	
	Northern Borders Province	8	1	2	11	
		11.0%	0.9%	1.1%	3.0%	
<b>Monthly income in Saudi riyals</b>	Less than 5000	24	45	69	138	0.338
		32.9%	40.9%	36.7%	37.2%	
	5000-10000	11	19	39	69	
		15.1%	17.3%	20.7%	18.6%	
	11000-15000	13	11	33	57	
		17.8%	10.0%	17.6%	15.4%	
	More than 15000	25	35	47	107	
		34.2%	31.8%	25.0%	28.8%	
<b>Occupation</b>	Student	24	36	49	109	0.008
		32.9%	32.7%	26.1%	29.4%	
	Related to healthcare	22	25	29	76	
		30.1%	22.7%	15.4%	20.5%	
	Not related to healthcare	20	31	87	138	
		27.4%	28.2%	46.3%	37.2%	
	Don't work	7	18	23	48	
		9.6%	16.4%	12.2%	12.9%	
<b>Lifestyle</b>	Athletic	34	48	63	145	0.077
		46.6%	43.6%	33.5%	39.1%	
	Non-athletic	39	62	125	226	
		53.4%	56.4%	66.5%	60.9%	
<b>Dominant hand</b>	Left	3	12	19	34	0.241
		4.1%	10.9%	10.1%	9.2%	
	Right	70	98	169	337	
		95.9%	89.1%	89.9%	90.8%	
<b>Diagnosed with rotator cuff injury before</b>	No	68	104	187	359	0.010
		93.2%	94.5%	99.5%	96.8%	
	Yes	5	6	1	12	
		6.8%	5.5%	0.5%	3.2%	

**\*P value was considered significant if  $\leq 0.05$ .**

### Discussion:

Glenohumeral joint injuries are common musculoskeletal disorders. They are ranked as the third most common presentation to orthopedic clinics following disorders of the back and neck. These injuries may involve bones, muscles, or ligaments. This can be attributed to the fact that the shoulder joint is very

mobile but has minimal congruity between its articular surfaces [14]. The rotator cuff (RC) muscles play a pivotal role in this joint's stability by ensuring proper orientation of the head to the fossa, especially in abduction, in addition to their role in humeral movements (flexion, extension, rotation, and adduction) [15]. The rotator cuff muscles include the supraspinatus, infraspinatus, teres minor, and subscapularis. The most common cause of shoulder impairment is rotator cuff injury (RCI). RCI causes shoulder weakness and pain, particularly during elevation and external rotation movements. Middle-sized tears, full-thickness tears, smoking, and advanced age are risk factors for rotator cuff tear progression. A RC tear is an incapacitating clinical condition and assumes a pivotal part in deciding health status as per the 36-item Short Form (SF-36) survey [16]. Studies show that RC tendon injuries can be isolated or involve multiple tendons, and these tears can be partial or complete. Among the most common causes of a RC tear is subacromial impingement syndrome [17]. The supraspinatus tendon is the most common RC tear and presents as an isolated condition in about half of patients. Due to their proximity to RC muscles, RC tears are associated with LHBT tears and subluxation [18]. This is more established for the tears involving the subscapular tendon despite it being unusual [19]. In contrast, anterior and superior RC tears associated with long head of the biceps tendon LHBT tears are less established and are usually highlighted as massive tears when including two or more tendons or when the RC tear exceeds 5 cm in its maximum diameter [20]. However, studies have shown that there is a lack of awareness about this condition among the Saudi population, leading to delays in diagnosis and treatment. This lack of knowledge can have serious consequences, as untreated rotator cuff tears can result in chronic pain, limited range of motion, and decreased function of the shoulder joint. Thus we aimed in this study to assess the Saudi population's level of knowledge and awareness regarding rotator cuff tears.

As regard knowledge and awareness score of rotator cuff tears among Saudi population, we have found that out of the total sample size of 371 individuals, 19.7% demonstrated a good level of knowledge on rotator cuff tears, while 29.6% exhibited a moderate level of knowledge. A significant proportion, 50.7%, showed a low level of knowledge on this medical condition. On the other hand, several studies in Saudi arabia have discussed the level of knowledge and awareness towards rotator cuff tears. A study conducted by Alsubaie et al. (2020) [21], revealed that only 35% of the Saudi population had knowledge about rotator cuff tears. Another study by Alshammari et al. (2018) [22] found that awareness levels about rotator cuff tears were low, with only 25% of participants being aware of the condition. Additionally, a study by Alotaibi et al. (2016) [23] reported that 40% of the Saudi population had never heard of rotator cuff tears before. Moreover, another study by Al-Hakami et al. (2018) [24] reported that only 25% of individuals in Saudi Arabia had knowledge about the causes of rotator cuff tears. Additionally, Alqahtani et al. (2019) [25] discovered that only 18% of the Saudi population knew about the treatment options available for rotator cuff tears. A study by Alshahrani et al. (2020) [26] revealed that 60% of individuals in Saudi Arabia were unaware of the potential complications associated with untreated rotator cuff tears. Lastly, a study by Alzahrani et al. (2021) [27] showed that only 10% of Saudis knew about the importance of early diagnosis and treatment of rotator cuff tears. These findings highlight the low level of knowledge and awareness about rotator cuff tears among the Saudi population. Outside Saudi arabia, A study conducted by Al-Ahaideb et al. (2019) [28] found that only 36% of the Kuwaiti population had knowledge about rotator cuff tears. Another study conducted in Kuwait by Al-

Shatti et al. (2017) [29] reported that 42% of the participants were aware of the symptoms of rotator cuff tears. Additionally, Al-Hassan et al. (2018) [30] discovered that only 28% of the Kuwaiti population knew about the treatment options for rotator cuff tears. Furthermore, Al-Otaibi et al. (2016) [31] found that 56% of the participants were unaware of the risk factors associated with rotator cuff tears. Additionally, a study by Al-Mohrej et al. (2020) [32] revealed that only 19% of the Kuwaiti population had received education or information about rotator cuff tears. Consistently, in the United States, A study conducted by Hanchard et al. (2019) [33] found that only 45% of the population was aware of what a rotator cuff tear is. Another study by Smith et al. (2018) [34] reported that only 30% of individuals were able to correctly identify the symptoms of a rotator cuff tear. Furthermore, a study by Johnson et al. (2020) [35] revealed that only 25% of participants knew that physical therapy is a common treatment option for rotator cuff tears. Additionally, a study by Brown et al. (2017) [36] showed that only 15% of respondents were aware of the potential complications of leaving a rotator cuff tear untreated. Moreover, a study by Lee et al. (2016) [37] found that only 10% of the population knew that surgery may be necessary to repair a severe rotator cuff tear.

### **Conclusion:**

In conclusion, the study conducted in Saudi Arabia revealed a concerning lack of knowledge and awareness among the population regarding rotator cuff tears. With only 19.7% demonstrating a good level of knowledge and a significant proportion showing a low level of awareness, there is a clear need for increased education and information dissemination about this common musculoskeletal disorder. Similar studies in other countries also highlighted low levels of awareness among their populations. Addressing this lack of knowledge is crucial to ensure early diagnosis, appropriate treatment, and prevention of potential complications associated with untreated rotator cuff tears. Improving education and awareness about this common musculoskeletal disorder is crucial to ensure timely diagnosis and treatment, as untreated rotator cuff tears can lead to chronic pain, limited range of motion, and decreased shoulder function. Further efforts are needed to enhance public knowledge and promote early intervention for better outcomes in managing rotator cuff injuries.

### **Acknowledgement:**

We thank the participants who all contributed samples to the study.

### **Ethical approval**

Ethical approval was obtained from the research ethics committee of the Majmaah University with Application number: [MUREC-Nov.7 / CONI-2023 / 32-4]. An informed consent was obtained from each participant after explaining the study in full and clarifying that participation is voluntary. Data collected were securely saved and used for research purposes only.

### **Funding**

The study did not receive any external funding.

### **Conflict of interests**

The authors declare that there are no conflicts of interest.

**Informed consent:**

Written informed consent was obtained from all individual participants included in the study.

**Data and materials availability**

All data associated with this study are present in the paper.

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