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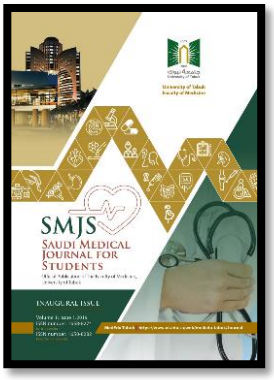

BRIEF COMMUNICATION

AWARENESS AND KNOWLEDGE REGARDING BELL'S PALSY SYMPTOMS, COMPLICATIONS AND MANAGEMENT IN RIYADH CITY.

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ABSTRACT

Background: Bell's palsy is characterized by the inability to close the affected eye, eyebrow weakness, drooping of the angle of the mouth, hyperacusis, ear pain, and impaired taste, all of which affect the quality of life. The cause of involvement of the seventh cranial nerve is unknown, but herpes simplex virus 1 and herpes zoster virus are strongly associated with the condition.

Aim: To assess the awareness and knowledge of Bell's palsy symptomatology, complications, and management among the general population in Riyadh city, Saudi Arabia.

Methods: The current study was a descriptive cross-sectional investigation conducted in Riyadh city, Saudi Arabia through August 2018. Data on Bell's palsy awareness were obtained through a questionnaire. An "overall knowledge score" was calculated for each participant, and the data were statistically analyzed.

Results: Of the 447 subjects surveyed, 380 (85.0%) were aware of Bell's palsy, and friends were the main source of their awareness (349/380; 91.8%). The mean overall knowledge score was 9.65 ± 2.57. Higher overall scores for knowledge of Bell's palsy were significantly associated with advanced age (*P* 0.001) and the use of the internet as a source of information (*P* 0.025).

Conclusion: The general population of Riyadh city, Saudi Arabia, exhibited a moderate level of knowledge about Bell's palsy.

KEYWORDS: Bell's palsy, general population, knowledge, Kingdom of Saudi Arabia

INTRODUCTION

Bell's palsy is the most common peripheral paralysis of the seventh cranial nerve and is defined as an idiopathic rapid unilateral facial nerve weakness (paresis) or complete loss of movement (paralysis) with acute onset.[1-3] This condition can cause inability to voluntarily move the facial muscles on the affected side of the face, either partially or completely.[1]. Based on a study conducted in the UK, the annual incidence of the condition is about 0.02%, and it affects one in 60 people during their lifetime, with no differences among men and women.[4]

Symptoms and signs of Bell's palsy can vary from mild to severe.[5]. The most worrisome indication of Bell's palsy is paresis; about 75% of patients had the illness they assumed it caused by stroke or an intracranial neoplasm.[4] considerably, the palsy occurs suddenly and rapidly prognosis, the maximum facial weakness appears within two days since it started.[4]. Bell's paralysis symptoms are an ipsilateral sluggish eyebrows, fascial sagging, flat nasolabial fold, inability to close the eye completely, pursed lips, or elevation of mouth corner.[6]. A good proportion of patients recover without any intervention; however, 30% have poor recovery of facial muscle control and experience facial disfigurement, psychological trauma, and facial pain.[7]. The main management goals in Bell's palsy are to hasten recovery, reduce long- term complications, and prevent corneal complications.[4,5]. Corneal complications result from the loss of ability to close the eye on the affected side.[5]. To reduce viral replication and its impact on consequent pathophysiological pathways affecting the fascial nerve should start treatment as soon as possible.[4]. The patient may need regular follow up as psychological support required.[4]

This research aimed to assess the awareness and knowledge of Bell's palsy symptoms, complications, and management through a structured questionnaire in Riyadh city. The expected outcome measures were as follows: (1) misconception of the symptoms that accompany facial weakness or paralysis, (2) unawareness of the affected person's prognosis, (3) poor information on how to manage Bell's palsy, and (4) wrong belief and no attention from media.

METHODS

The current study was a descriptive cross-sectional investigation conducted in Riyadh city, Saudi Arabia. It is a questionnaire-based, with random sampling through August 2018. Participants are Saudi, age group "more than 18 years old", male and female. Exclusion criteria: people who had bell's palsy before the study conducted and health-care professionals. The questionnaire includes 26 questions regarding age, gender, region, level of education, level of awareness about symptoms, management, complications, and their source of information.

An "overall knowledge score" was calculated for each participant, and the data were statistically analyzed by using SPSS version 20.0 (IBM Corporation, USA) for Windows XP (Microsoft Corporation, USA).

The study included 447 participants, with a mean age of 36.13 ± 12 years (range: 18–69 years). More than half of the participants (447) were aged 18–35 years, 287/447 (64.2%) were women, and 160/447 (35.8%) were men. The study included 194 (43.4%) individuals from the northern area of Riyadh City, 127 (28.5%) from the eastern area, 35 (7.8%) from the southern area, 71 (15.9%) from the western area, and 19 (4.3%) from the central area of the city. A vast majority of participants were Saudi (430, 96.2%), and most (355, 79.4%) had attended university. The demographic data of the participants are shown in Table 1.

RESULTS

The mean age of the study participants was 36.13 ± 12 (range: 18–69) years. More than half of the participants (%) were aged 18–35 years; 287/447 (64.2%) were women, and 160/447 (35.8%) were men. The study included 194 (43.4%) individuals from the northern, 127 (28.5%) from the eastern, 35 (7.8%) from the southern, 71 (15.9%) from the western, and 19 (4.3%) from the central area of the Riyadh city. A vast majority of participants were Saudi (430, 96.2%), and most (355, 79.4%) had attended a university. The demographic data of the participants are shown in Table 1.

A majority of participants (380, 85.0%) were aware of Bell's palsy (Fig. 1) show in table 3, and friends were the most common source of information (349, 90.2%), followed by the internet (23, 5.9%) (Fig. 2). A total of 397 participants (88.8%) reported that Bell's palsy was not infectious, 67 (15%) reported that it is a chronic disease, while 286 (64%) said it was not a chronic illness and 94 (21%) lacked knowledge of its progression.

The mean score for overall knowledge of Bell's palsy was 9.65 ± 2.57, and the scores ranged from 1 to 17. Correlations between the knowledge of Bell's palsy and the other variables investigated are shown in Table 2. Greater knowledge of Bell's palsy was significantly positively associated with age (*P* 0.001) and the use of the internet as an information source (*P* 0.025).

DISCUSSION

In the present study, 85% of the participants were aware of Bell's palsy, and their main sources of information in decreasing order of frequency were friends, websites, social media, and magazines. Most (88.8%) reported that Bell's palsy is not an infectious disease, and only 15% reported that it is a chronic disease. The mean overall Bell's palsy knowledge score was 9.7/17, reflecting a moderate level of knowledge. Older individuals and those who obtained information via the internet exhibited significantly higher mean Bell's palsy knowledge scores.

It has been reported that age may be an important prognostic indicator in patients with Bell's palsy as it is inversely associated with the recovery rate.[11,12] This is potentially relevant to the observation in the current study that older individuals exhibited the highest levels of knowledge of Bell's palsy. In a study conducted in the Asir region of Saudi Arabia, the frequency of the diagnosis of Bell's palsy peaked in the third decade of life.[13] In a study conducted in Sudan, the condition was most frequently diagnosed in individuals aged 21–40 years.[14]

Several participants in the present study reported that the internet contributed to increasing their knowledge about Bell's palsy, which indicates that accurate content must be made available via the internet, preferably with the involvement of qualified physicians.

STRENGTHS, LIMITATIONS, AND RECOMMENDATIONS:

The study has several limitations, including its relatively small sample size and the lack of any methodologically comparable previous studies, which could have facilitated informative comparisons. Our questionnaire was designed by a specialized ENT physician. Because it was an electronic questionnaire, we found the opposite result that there is high awareness about the disease because most of them are highly educated. Further studies are recommended, especially those using paper questionnaires in order to acquire information on Bell's palsy awareness in other areas of Saudi Arabia and other regions of the world.

CONCLUSION:

The present study showed that a vast majority of participants were aware of Bell's palsy, but overall, the depth of that knowledge is moderate.

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Table 1. Participants' demographic characteristics

Characteristics		N (%) or range/mean ± SD
Sex	Female	287 (64.2%)
	Male	160 (35.8%)
Age	Range/mean ± SD	18–69/36.13 ± 12
(years)	18–35	232 (52.5%)
	36–55	187 (42.3%)
	≥ 56	23 (5.2%)
Riyadh city region	Northern	194 (43.5%)
	Eastern	127 (28.5%)
	Southern	35 (7.8%)
	Western	71 (15.9%)
	Central	19 (4.3%)
Nationality	Saudi	430 (96.2%)
	Non-Saudi	17 (3.8%)
Highest education	Primary	2 (0.4%)
	Intermediate	9 (2.0%)
	Secondary	81 (18.1%)
	University	355 (79.4%)

SD, standard deviation

Table 2. Correlations between overall knowledge of Bell's palsy and the other variables

Variable		Mean	SD	*P*-value
Age (years)	18–35	9.2	2.6	0.001
	36–55	10.0	2.5	
	≥ 56	10.7	2.0	
Sex	Male	9.8	2.5	0.253
	Female	9.5	2.7	
Nationality	Non-Saudi	8.6	3.1	0.1
	Saudi	9.7	2.5	
Highest education	1	10.0	1.4	0.384
	2	9.3	3.2	
	4	9.2	2.4	
	5	9.8	2.6	
Information source	Internet	10.8	2.0	0.025
	Facebook	10.7	2.9	
	Friends	9.6	2.6	

Table 3. Knowledge of bell's palsy

Knowledge of bell's palsy			N(%)
clinical feature and complication of bell's palsy	Affect the movement of face muscle.	No Yes I do not know	1 (0.2%) 417 (93.3%) 29 (6.5%)
	Affect taste sensation.	No Yes I do not know	78 (17.4%) 124 (27.7%) 245 (54.8%)
	Associated with muscle strain in arm or leg.	No Yes I do not know	144 (32.2%) 52 (11.6%) 251 (56.2%)
	Affect hear sensation.	No Yes I do not know	91 (20.4%) 127 (28.5%) 228 (51.1%)
	Cause a pain around the ear.	No Yes I do not know	36 (8.1%) 203 (45.4%) 208 (46.5%)
	Affect smell sensation.	No Yes I do not know	106 (23.7%) 66 (14.8%) 275 (61.5%)
	Cause eye dryness.	No Yes I do not know	51 (11.4%) 164 (36.7%) 232 (51.9%)
	Affect vision ability.	No Yes I do not know	68 (15.2%) 177 (39.6) 202 (45.2%)
	Cause sudden death.	No Yes I do not know	214 (47.9%) 14 (3.1%) 219 (49.0%)
	Affected side of the face.	One side Both side Not affect the face	404 (91.3%) 32 (7.2%) 7 (1.6%)
Management of bell's palsy	Spontaneous resolve Physical therapy Acupuncture Anti-viral medication Surgery Cauterization Herbal Panadol Aspirin No treatment		84 (18.8%) 382 (85.5%) 104 (23.3%) 64 (14.3%) 28 (6.3%) 67 (15.0%) 19 (4.3%) 5 (1.1%) 7 (1.6%) 22 (4.9%)

Figure 1: Awareness of Bell's palsy

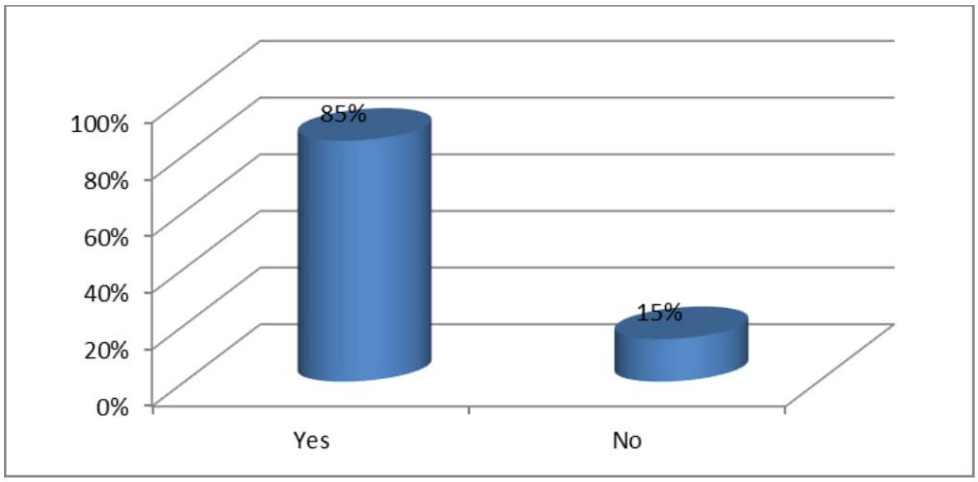

Figure 2: Sources of information in Bell's palsy