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Research Article

**KNOWLEDGE AND ATTITUDE FOR OVERACTIVE BLADDER
CARE AMONG WOMEN IN SAUDI ARABIA: A CROSS-
SECTIONAL STUDY**

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Abstract:

Introduction: Overactive bladder (OAB) is adversely affecting the health and lives of individuals at a higher extent globally. Its symptoms can also affect the people's social, occupational, psychological, physical and domestic aspects of life. Therefore, the study aims to assess the knowledge, attitude and the impact of symptoms of incontinence on quality of women's life in Saudi Arabia.

Methodology: A Cross-sectional study was used to assess the knowledge and attitude of the selected population. Questionnaires was based on information of the participants towards overactive bladder and assess the impact of symptoms of incontinence on quality of their life by using the ICIQ-UI Short Form. A statistical analysis was used to examine the questionnaires and a chi-square test was used.

Discussion: The knowledge level among women patients of Saudi Arabia was observed to be weak with (56.1%) whereas, the level of attitude was observed to be average with (56.5%). A significant association between age and attitude (P -value=0.000) can be seen. Knowledge plays an essential role in constructing patient's attitude towards the perceived behavioral control and subjective norms. In contrast with the present study, majority of the women do not prefer to discuss their incontinence problem with the health care providers.

Conclusion: The study suggested that a communication campaign should be initiated by the government of Saudi Arabia to enhance the knowledge and attitude of female patients with OAB.

Keywords: Adverse Effects, Attitude, HRQoL, Knowledge, Overactive Bladder

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INTRODUCTION:

The International Continence Society (ICS) has defined overactive bladder (OAB) as a compound syndrome leading to many complexities such as urinary urgency, nocturia and the frequency of infection belonged to urinary tract and other pathologies (1). Various definitions have been used for the OAB symptoms and several urodynamic terms are developed till date such as detrusor overactivity, detrusor hyperreflexia, detrusor function and detrusor instability (2). Overactive bladder is a kind of symptom, which affects approximately 10% of the population of the region (3, 1). Although, overactive bladder is not a life-threatening problem but the associated symptoms of OAB have detrimental influence on the person's HRQoL (3).

Based on the definition by (ICS) and the assessed population, the OAB prevalence ranges from 3% to 43%. However, the prevalence expands with the increase in age due to the musculoskeletal and neurological influences, concurrent medical dysfunction such as diabetes and the degenerative changes occurred (1). Nevertheless, the prevalence of OAB observed greatly among the men as compared to the women, specifically older men. The environmental factors are more likely to have an impact rather than the genetic factors (4).

Primary care physician; with the proper knowledge about OAB and the treatment, make an empirical diagnosis and treat patients (5). Moreover, the high percentage of OAB symptoms are being evaluated in pathologies based on knowledge of physicians (6). Thus, knowledge about OAB among Brazilians has immensely enhanced in the past few years (7). In contrast, patients are also seeking the knowledge about OAB and its conditions. They often approach internet links to attain the information as majority of the population is not provided with adequate knowledge about OAB and its conditions (8). However, the OAB based patients were provided with a treatment that was followed by the clinical ways in 2012. The first-line conservative therapy is based on behaviors and lifestyle while the second-line ways involved a treatment along with the use of anticholinergics. The third-line treatment includes utilization of sacral neuromodulation and nerve stimulation that are based on percutaneous tibial (9).

The prevalence of OAB and urinary incontinence (UI) revealed that both had a negative impact on the quality of life and only women with severe condition seek for the medical treatment (10). The attitudes, perception, and understanding of OAB and its symptoms are being differed in several ways.

However, majority of the patients (65.5%) denied that aging is the symptom of OAB and people will have to live with it (11). The OAB symptoms involved in the Saudi women are not rare but has a noticeable influence on their personal life and its quality (12). Moreover, an association has been observed between knowledge and attitude involved for severe symptoms (15).

Transvaginal ultrasound measure has taken into consideration as an effective and pronounced diagnostic tool to predict the OAB symptoms among women (13). Additionally, a controversy has been created between the classification of OAB and its diagnosis. Some of the sources have classified OAB as "Wet and Dry" form that relies whether on the urgent need to urinate or incontinence. However, wet form seems to be more common than the dry one (14).

OAB has no cure but its symptoms can be managed by using multiple approaches. The treatment follows the step of conservative to the most obtrusive involvement. The treatment pathways include, lifestyle (loss in weight, minimizing alcohol and caffeine), behavioral techniques (management of fluids, bladder control training and strategies and pelvic muscle training), oral pharmacotherapy and pre-dominantly anticholinergics (mirabegron seems to be initial option). If the aforementioned therapies get failed, then other options will be added such as stimulation based on sacral nerve, mirabegron, tibial nerve stimulation, botulinum toxin injection and surgery. However, instead of the availability of alternate treatments, patients are more likely to use oral drugs without noticing additional improvements. Moreover, the inadequate physical and psychological sequelae to manage OAB can be weaken and have a significant influence on the HRQoL of the patients. Moreover, it is important for physicians to have appropriate knowledge about OAB as they make their first contact with the patient and the lack of knowledge in this respect will result in underdiagnoses and low quality of life. Due to the lack of data, a comparison is provided to evaluate the best suitable evidence that can allow to make decisions between several treatments. Additionally, the knowledge and attitude toward UI among the patients will lead to the self-management and reducing the severity of the problem. Therefore, the study aims to assess the knowledge and attitude for overactive bladder care among women in Saudi Arabia.

LITERATURE REVIEW:

The occurrence of overactive bladder in women is

massively seen; therefore, previous studies have examined knowledge, attitude, impact, and management of OAB among the affected patients. For instance, (15) assessed the knowledge and attitude related to OAB and the associated treatment. A systematic literature and qualitative analysis design were used for the patients and the providers. A total of 104 women were taken as the sample of the study that seemed to be 27% who received the related treatment. The study resulted in different knowledge and attitude along with the different levels of ICIQ-UI scores. Furthermore, a significant difference was observed among the women with knowledge and attitude about OAB and the treatment level between the women and naïve cases. In line with (16), the knowledge and attitude of OAB among physicians is dependent on the services provided in terms of physiotherapy. The study revealed that obstetricians and gynecologists in Nigeria possess good knowledge of physiotherapy. However, the physicians still lack knowledge about the physiotherapy for the women related to OAB.

Filipetto et al (2014) assessed the patient's knowledge and attitude towards OAB by using a survey-based questionnaire (11). The study revealed that female patients and physicians both possessed higher knowledge level of OAB as compared to male patients and physicians. Udokang, Inyang & Dick (2016) revealed a significant association between physiotherapy services and awareness level of OAB (24). Therefore, the study reported that poor knowledge lead to poor health seeking behavior among Nigerian women with urinary incontinence.

Jang, Y et al (2015) identified the current level of knowledge and practices towards urinary incontinence (UI) among the Korean (25). To reveal the findings, study utilized a cross sectional design along with a written questionnaire to examine the knowledge and behavior towards practices of 756 healthcare providers. The study resulted in upper intermediate knowledge of UI whereas, lack of knowledge was found towards the risk factors of UI. However, the knowledge level of the physicians seemed to be higher as compared to the healthcare providers. The practice behavior of the nurses towards OAB was observed to be higher than the health care providers.

Azuma et al (2008) revealed that OAB seemed to be a normal concept among women. However, a general perception is highlighted that women with UI need to be treated more explicitly as compared to the men in Malaysia (26). They also possessed good knowledge about UI among women; however, they often face

difficulty in applying that knowledge in their clinical settings (17). De Gagne et al (2015) aimed to identify the self-management program of UI among the women aged 55 in South Korea (8). The study used pre and post-test design to measure the interventions made towards the knowledge and attitude of UI and revealed significant improvement in the level of knowledge and attitude among the affected women.

Azuma et al (2008) examined that the information for the management of UI is very important for the patients in Malaysia. Without identifying appropriate treatment and management of UI, it may result in adverse social and psychological complications such as embarrassment, depression, low self-esteem, and anxiety. HRQoL indicated the level of impact of OAB and its treatment among the patients in their daily life.

Jang et al (2015) have identified the management status of urological issues among the physicians (25). The study used a cross sectional design along with a written questionnaire to examine the management level of UI among the Korean health care providers. A total of 756 healthcare providers from 11 hospitals belonged to metropolitan areas of Korea were taken into consideration. A total number of 42.6% respondents indicated that 50 or more patients suffered from urological issues. Due to this, 68.1% patients were sent to the urologists on the daily basis. Moreover, participants shed light on their collaboration with the other hospital's urologists and consultation about the risk factors of urological problems.

Leading to the research gap, the above-mentioned studies have highlighted lack of knowledge and attitude among women with OAB in several regions such as Malaysia and Nigeria. Moreover, high adverse effects can be seen if OAB symptoms are not considered to be important among the affected women.

MATERIALS AND METHODS:

This is a descriptive cross-sectional study, conducted in of 5 different regions of Saudi Arabia; Mecca, Jeddah, Albaha, Riyadh and Taif, during a period from July to October 2018. The data were collected via a structured questionnaire translated into Arabic language and pre-tested among a small group of people in a mall which was not included in the study, socio-demographic information were taken with 16 questions about knowledge , 15 questions about attitudes and the ICIQ-UI Short Form used to provides a brief and robust measure to assess the impact of symptoms of incontinence on quality of life

and correlation with level of knowledge and attitude of the subjects . The participants were interviewed with the questionnaire after informed consent was taken. We register all malls in 5 different regions which was 56 then systemic randomization selection was done. The sample size was 515 participants, all of them were females. The study population were consecutively selected, included participants who were adult (more than 15 year old), Saudi nationality and who answered the question (Have you heard of overactive bladder syndrome (OAB)) by (yes).Participants who disagree to participate in the study were excluded.

RESULTS:

A cross sectional study was conducted to identify the knowledge and attitude about overactive bladder OAB among women of Saudi Arabia. A total of 515 patients with OAB were examined by the healthcare providers of 5 different regions of Saudi Arabia. The demographics of the selected patients are shown in table 1 below. Most of the patients (55.1%) were married and seemed to be less than 25 years. Majority of the patients (69.9%) were graduated and post graduated as they completed their education in more than 4 years (69.9%).

Table 1: Demographics of patients with OAB

	N	%
Marital status		
Married	284	55.1
Single	231	44.9
Age		
<25	205	39.8
25-35	126	24.5
35-45	89	17.3
45-55	61	11.8
>55	34	6.6
Occupation		
No job	117	22.7
Student	164	31.8
Housewife	68	13.2
Employee	166	32.2
City or valley		
Makkah	283	55
Jeddah	122	23.7
Albaha	32	6.2
Riyadh	15	2.9
Taif	15	2.9
Other	48	9.5
Education		
Illiterate	8	1.6
Primary or no formal education	42	8.2
Secondary	155	30.1
Graduate and postgraduate	310	60.2
Completed year of education		
No	8	1.6
<4	147	28.5
>4	360	69.9
ICIQ Score		
Weak	443	86
High	72	14

Majority of the patients (62.7%) seek for the treatment if they suffer from OAB. Moreover, most of the patients (42.9%) want to know about the disease so they do an online research on OAB. Due to the adverse effects of OAB, patients face embarrassment (41.2%) that has a direct impact on their quality of life i.e. (40.2%). Patients with OAB do not avoid the OAB symptoms (32.6%). Moreover, the knowledge and attitude among women patients toward overactive bladder is shown in the table 2.

Table 2: Knowledge and attitude about OAB among women patients

								Chi-square	
			1	2	3	4	5	X ²	P-value
1	How likely Are you to ask your doctor about OAB?	N	82	62	69	58	244	244.505	0.000
		%	15.9%	12.0%	13.4%	11.3%	47.4%		
2	If you have OAB, how likely are you to seek treatment?	N	19	24	68	81	323	615.592	0.000
		%	3.7%	4.7%	13.2%	15.7%	62.7%		
3	How likely will you research about OAB?	N	38	57	104	95	221	197.379	0.000
		%	7.4%	11.1%	20.2%	18.4%	42.9%		
4	How likely Are you to seek pharmacological (drug) treatment for OAB?	N	24	46	85	102	258	328.544	0.000
		%	4.7%	8.9%	16.5%	19.8%	50.1%		
5	How likely are you to seek behavioral (such as Kegel exercise) treatment for OAB?	N	39	45	90	101	240	256.330	0.000
		%	7.6%	8.7%	17.5%	19.6%	46.6%		
6	How likely are you to seek surgery for OAB?	N	123	110	114	89	79	13.029	0.011
		%	23.9%	21.4%	22.1%	17.3%	15.3%		
7	How likely will you seek other medical treatment for OAB? (e.g. Acupuncture, yoga, meditation, herbal medicine, etc.)	N	71	69	117	129	129	36.194	0.000
		%	13.8%	13.4%	22.7%	25.0%	25.0%		
8	How likely will side effects of a treatment affect your decision to seek treatment?	N	40	61	166	123	125	102.777	0.000
		%	7.8%	11.8%	32.2%	23.9%	24.3%		
9	What Is the likelihood OAB Is causing you embarrassment?	N	48	45	89	121	212	182.427	0.000
		%	9.3%	8.7%	17.3%	23.5%	41.2%		
10	How likely will OAB affect your quality of life?	N	27	50	86	145	207	208.291	0.000
		%	5.2%	9.7%	16.7%	28.2%	40.2%		
11	How likely will cost affect your decision to seek treatment of OAB	N	105	116	108	97	89	4.175	0.383
		%	20.4%	22.5%	21.0%	18.8%	17.3%		
12	What Is the likelihood that wearing pads for protection will bother you?	N	42	54	86	92	241	248.311	0.000
		%	8.2%	10.5%	16.7%	17.9%	46.8%		
13	How likely will you simply ignore the OAB problem?	N	168	131	110	61	45	98.893	0.000
		%	32.6%	25.4%	21.4%	11.8%	8.7%		
14	How likely will you be to support a public health campaign about OAB awareness?	N	30	47	76	101	261	331.670	0.000
		%	5.8%	9.1%	14.8%	19.6%	50.7%		
15	How likely would you be to discuss OAB with friends and family?	N	68	83	85	108	171	64.058	0.000
		%	13.2%	16.1%	16.5%	21.0%	33.2%		
16	How likely would you be to continue with OAB treatment despite side effects?	N	78	105	140	101	91	20.835	0.000
		%	15.1%	20.4%	27.2%	19.6%	17.7%		

According to the figure 1, the knowledge level among women patients of Saudi Arabia was observed to be weak with (56.1%) whereas, the level of attitude was observed to be average with (56.5%).

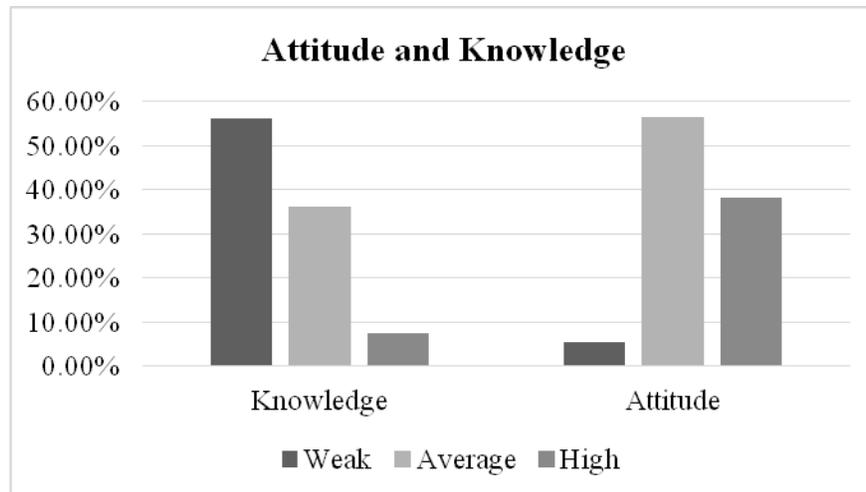


Figure 1: Evaluation of attitude and knowledge in the study sample

The association between the knowledge and the demographical data of the patients is depicted in table 3. Hence, a significant association between knowledge of OAB and the marital status of the patients (P-value 0.05) was observed. Moreover, education is another factor that has a strong association with the level of knowledge (P-value=0.017).

Table 3: The relation between knowledge and Demographic data (age, Marital status, Occupation, Education, Completed year of education and Chronic disease)

Demographic data	N	Knowledge		F or T	ANOVA or T-test	
		Mean	± SD		test value	P-value
Age	<25	205	7.098 ± 2.651	F	1.539	0.190
	25-35	126	7.333 ± 2.653			
	35-45	89	6.551 ± 2.892			
	45-55	61	7.410 ± 3.175			
	>55	34	7.676 ± 3.914			
Marital status	Married	284	7.352 ± 2.977	T	1.925	0.05*
	Single	231	6.870 ± 2.696			
Occupation	No job	117	6.641 ± 2.926	F	2.088	0.101
	Student	164	7.317 ± 2.581			
	Housewife	68	7.632 ± 2.748			
	Employee	166	7.102 ± 3.090			
Education	Illiterate	8	5.750 ± 4.097	F	1.051	0.370
	Primary or no formal education	42	7.476 ± 3.487			
	Secondary	155	7.284 ± 2.691			
	Graduate and postgraduate	310	7.052 ± 2.818			
Completed year of education	No	8	5.750 ± 4.097	F	4.136	0.017*
	<4	147	6.660 ± 2.595			
	>4	360	7.361 ± 2.911			
Chronic disease	No	386	7.098 ± 2.766	T	-0.482	0.630
	Yes	129	7.248 ± 3.140			

Table 4 has also shown a level of attitude associated with the demographics. A significant association between age and attitude (P-value=0.000) can be seen. Marital status (P-value= 0.010) and occupation (P-value= 0.000) both were associated significantly with attitude.

Table 4: The relation between attitude and Demographic data (age, Marital status, Occupation, Education, Completed year of education and Chronic disease)

Demographic data	N	Attitude			F or T	ANOVA or T-test	
		Mean	±	SD		test value	P-value
Age	<25	205	54.249	± 10.188	F	6.158	0.000*
	25-35	126	58.333	± 6.521			
	35-45	89	59.090	± 8.934			
	45-55	61	57.131	± 10.574			
	>55	34	55.059	± 11.521			
Marital status	Married	284	57.458	± 9.427	T	2.595	0.010*
	Single	231	55.277	± 9.555			
Occupation	No job	117	56.197	± 8.690	F	7.101	0.000*
	Student	164	53.982	± 10.551			
	Housewife	68	58.456	± 8.523			
	Employee	166	58.337	± 8.914			
Education	Illiterate	8	55.250	± 12.430	F	1.399	0.242
	Primary or no formal education	42	53.762	± 10.704			
	Secondary	155	57.077	± 7.418			
	Graduate and postgraduate	310	56.581	± 10.196			
Completed year of education	No	8	55.250	± 12.430	F	2.213	0.110
	<4	147	55.129	± 9.712			
	>4	360	57.058	± 9.367			
Chronic disease	No	386	56.370	± 9.188	T	-0.449	0.654
	Yes	129	56.806	± 10.546			

According to the results, a significant correlation between knowledge and attitude (P -value=0.001) among the female patients with OAB of Saudi Arabia can be observed in figure 2. Table 5 has presented relationship between ICIQ scores and demographic data. The findings have shown a significant and positive relationship between ICIQ scores and age, qualification, marital status, and educational level. These relationships are significant at 5% confidence interval.

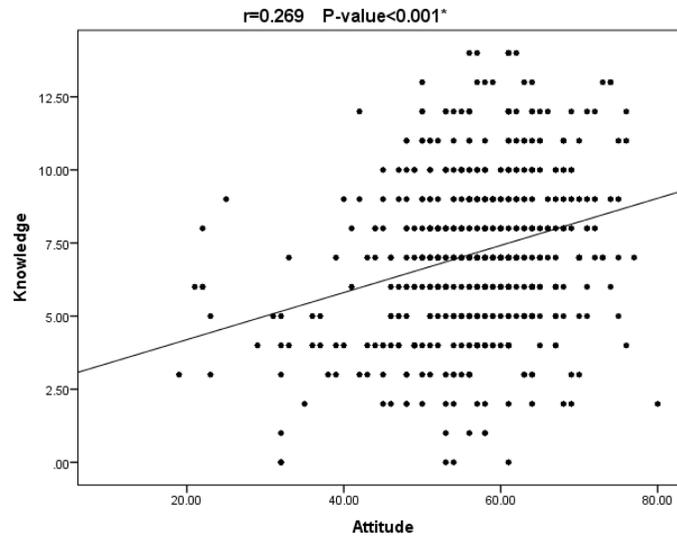


Figure 2: The correlation between knowledge and Attitude

Table 5: The relation between ICIQ score and Demographic data (age, marital status, and Occupation, Education and Completed year of education)

		ICIQ score						Chi-square	
		Weak		High		Total		X ²	P-value
		N	%	N	%	N	%		
Age	<25	197	44.5%	8	11.1%	205	39.8%	48.576	<0.001*
	25-35	112	25.3%	14	19.4%	126	24.5%		
	35-45	69	15.6%	20	27.8%	89	17.3%		
	45-55	40	9.0%	21	29.2%	61	11.8%		
	>55	25	5.6%	9	12.5%	34	6.6%		
Occupation	No job	96	21.7%	21	29.2%	117	22.7%	19.717	<0.001*
	Student	155	35.0%	9	12.5%	164	31.8%		
	Housewife	51	11.5%	17	23.6%	68	13.2%		
Education:	Employee	141	31.8%	25	34.7%	166	32.2%	20.821	<0.001*
	Illiterate	7	1.6%	1	1.4%	8	1.6%		
	Primary or no formal education	26	5.9%	16	22.2%	42	8.2%		
	Secondary	130	29.3%	25	34.7%	155	30.1%		
Completed year of education	Graduate and postgraduate	280	63.2%	30	41.7%	310	60.2%	8.115	<0.001*
	No	7	1.6%	1	1.4%	8	1.6%		
	<4	116	26.2%	31	43.1%	147	28.5%		
	>4	320	72.2%	40	55.6%	360	69.9%		

The correlation between ICIQ score and attitude and knowledge is presented in table 6. According to the findings, there is an insignificant but positive correlation between ICIQ score and knowledge of patients, which indicates that lack of knowledge among patients increase the severity level of urinary incontinence and vice versa. In contrast, the findings have shown an insignificant and negative relationship between attitude and ICIQ score. This indicates that patients' negative attitude will highly increase the severity of urinary incontinence.

Table 6: The correlation between ICIQ score and Attitude and Knowledge

Correlation	ICIQ score	
	r	P-value
Knowledge	0.068	0.123
Attitude	-0.020	0.648

DISCUSSION:

The knowledge of OAB among Saudi women was observed to be low whereas their attitude towards the same problem observed to be average. The patients seek for the treatment if they suffer from OAB and want to know about the disease, so they can prefer to be aware about OAB through online research. As OAB has adverse effects, patients have a direct impact on their quality of life. Knowledge plays an essential role in constructing patient's attitude towards the perceived behavioral control and subjective norms (15). In contrast with the present study, majority of the women do not prefer to discuss their incontinence problem and its symptoms with the health care providers. The reason behind is the lack of knowledge, embarrassment and wrong concepts about the treatment (18). Therefore, patients who do not prefer an appropriate treatment reveals less understanding of UI symptoms and the availability of the effective treatment (19). Leading to this, OAB has a negative impact on the quality of life that can highly affect their self-esteem. Patients with OAB face embarrassment, reduced social and professional relations and it affect their overall well-being (15). Due to the lack of knowledge, many patients feel that their urinary symptoms do not allow doctor's consultation. Therefore, they consider their unavoidable outcomes as an aging factor (11). Poor health seeking attitude among women in Nigeria with urinary incontinence result in poor physiotherapy services. Hence, an effective physiotherapy services are highly dependent on the knowledge and attitude of women with UI in Nigeria (20, 21).

Similar to the present study, higher level of knowledge about urinary incontinence and higher social support play a significant role to promote the adaptive measures for the disease. The study indicated that high enhanced knowledge can result in

less harmful conditions among women, and appropriate knowledge of UI will provide assistance to the women to maintain their UI conditions (22). Moreover, ENUGU (2016) revealed that 12.7% women had enough knowledge about the physiotherapy as a treatment for OAB. One of the 34 women that reported their urine leakage underwent the physiotherapy services to manage their conditions. However, many factors influence the health seeking decision for UI conditions among which poor knowledge about the treatment is the main factor affecting the decision. According to (23), many patients think that health care providers prescribe medications too quickly. Therefore, patients are likely to seek knowledge about their symptoms and conditions through internet to gain enough knowledge. The factors such as good communication between patients and health care providers, thorough examination of the symptoms, long-term follow-ups and improved education are associated with the patient's knowledge. This results in enhanced quality of life among the patients suffered from OAB.

CONCLUSION:

The impact of OAB on the quality of life of the patient is complex to understand. Majority of the patients with OAB are observed to manage their own symptoms rather than seeking for an appropriate treatment. Whether elderly or young patients of OAB initially make an attempt to manage their condition by adaptive measures but the medical attention is needed before it gets worse. This consequently can affect the HRQoL of the sufferers and also put a considerable financial burden on the patients as worse condition will increase with the time. Similarly, the present study revealed (56.1%) weak level of knowledge among women with OAB in Saudi Arabia. Whereas, attitude level was seemed to be average with (56.5%). This can result in negative

impact on the quality of life of women, which directly lead to the physiological and psychological issues among the patients. OAB will not allow the patients to perform daily activities. Moreover, patients who discuss their symptoms with the physicians do not seek for the treatment. Many women patients avoid discussing their issues with anyone due to which a communication campaign should be initiated by the government of Saudi Arabia. This will be to enhance the knowledge and attitude of female patients with OAB. With the high magnitude of the health-related problem, it is crucial to pay more attention on the early interventions of OAB symptoms. This will result in the alleviation of complaints, minimize the burdens and suffering of urinary incontinence and its adverse effects on QoL.

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