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Research Article

Assessment of Psychological Symptoms and Quality of Life among Women with Urinary Incontinence

Abstract

Objective: Urinary incontinence (UI) is a common condition and a global health concern, the burden of this condition is greatest in developing countries of Asia, South America and Africa. The current study aims to assess and compare the psychological symptoms and quality of life (Qol) of women with UI in Assiut (Egypt) and Sana'a (Yemen).

Materials and Methods: A comparative study included 150 women from Yemen and 150 from Egypt, all of them complaining of UI. Tools used for the study were interview questionnaires included personal data, Incontinence Severity Index (ISI), which categorized UI into mild, moderate and severe, World Health Organization Qol scale and Symptoms Checklist-90-Revised (SCL-90-R).

Results: Significant differences were found between Yemeni and Egyptian women as regard psychological and social relationship domains of Qol. Yemeni women had higher percentages of depression and anxiety more than Egyptian women with statistically significant differences.

Conclusion: Both Yemeni and Egyptian women with UI showed impaired Qol and had high percentage of psychological symptoms especially among women with severe UI. Involvement of the incontinent women in behavioral and group therapy, the presence of psychiatrist in UI clinics to address the psychological effects and increase awareness of nursing staff regarding the effects of UI on the psychological condition and Qol is mandatory.

Introduction

Urinary incontinence (UI) is a frequent condition and a global health concern. It affects both sexes, although it is twice as common in women and prevalence increases with age [1].

The trouble of this UI is mainly in developing countries; in Asia, South America and Africa. In 2008 a total of 250 million women in Asia, South America and Africa were affected by UI and this number is predictable to increase to approximately 303 million by 2018 [2].

The most common types of UI in women are stress incontinence (SUI), defined as an involuntary passage of urine during an increase in intra-abdominal pressure (coughing, sneezing, laughing and physical effort). Urge incontinence (UUI) presenting as an involuntary passage of urine associated with an overwhelming urge to urinate as a result of abnormal depressor activity and not related to increased intra-abdominal pressure. A mixed type (MUI) as the simultaneous presence of both symptoms of stress and urge types of incontinence [3].

Although incontinence is not a life-threatening disease, the loss of bladder control can affect social, psychological, familial, occupational, physical and sexual aspects of patient's lives [4].

Not only can the incontinence cause wetness, odor, discomfort, skin breakdown, pressure ulcer, urinary tract infection, falls and fracture as physical problem , but it can also damage self-esteem as a result of the shame and embarrassment some feels [5]. UI is a socially embarrassing situation, causing withdrawal from social situations and reduced quality of life [6].

The extent to which UI affects the psychological health of afflicted women in Arab environment is however largely sparse. Therefore this study was conducted to assess the psychological symptoms and Qol among women with UI in different localities in Egypt (Assiut) and Yemen (Sana'a).

Material and methods

This study was a prospective comparative study, conducted

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at The Urinary Incontinence Outpatient Clinic at the Woman's Health hospital, Assiut University, Egypt and The Urology and Gynecology Outpatient Clinics at Al-Thawra Modern General Hospital, Sana'a, Yemen over a period of 6 months from 1st of May to 31st of October 2015 compassing the psychological symptoms and Qol among women with UI among different populations Egypt and Yemen.

We included women aged 18-55 years with any type of UI who agrees to participate in the study.

The following tools were used to collect data from the participants of the current study:

1- **Structured Interview Questionnaire:** this questionnaire collect information about

a) personal data: as age, educational level, employment status, residence, marital status and income

b) Clinical data: as type of incontinence, medical diagnosis and duration of illness.

c) Severity of UI: was assessed by the modified Sandvik Severity Index (SSI). SSI is a valid questionnaire that includes two questions and its overall score is calculated by multiplying the frequency of urinary incontinence and the amount of urine leakage: mild (1-2), moderate (3-6), severe (8-9) and very severe (12) [7].

2- **World Health Organization Quality of Life (WHO-Qol) [8]:**

The tool contains 54 questions over 5 broad domains of Qol within which 18 facets are covered to determine the quality of life. These 5 domains include physical, social, psychological, environment, perceived Qol. Within each domain several sub domains (facets) of Qol summarize that particular domain of Qol. The 5 main domains are:

a) Physical health domain including: Activities of daily living, pain and discomfort, energy and fatigue, sleep and rest, work capacity, mobility and dependence on medication.

b) Psychological domain including: Negative feeling, positive feeling, self-esteem and religious and personal beliefs.

c) Social relationships domain including: Personal relationships, social support and sexual activity).

d) Environment domain including: Physical environmental, safety and security health and social care).

e) Perceived quality of life domain.

The overall score starts from 54-162 points, and it is interpreted into three categories: low Qol (54-89 scores), fair Qol (90-126 scores) and high Qol (127-162scores).

3- **Psychological Assessment Questionnaire (Symptoms Chick List 90 –Revised SCL-90-R):**

The SCL-90-R is designed to reflect psychological symptom status in a broad spectrum of individuals, ranging from non-patients (normal) respondents through medical patients of various types, to individuals with psychiatric disorders.

The test helps in measuring nine primary symptom dimensions and these dimensions are:

Somatization: It reflects the distress arising from perceptions of bodily dysfunction.

Obsessive compulsive: It reflects symptoms that are highly identified with the standard clinical syndrome of the same name. This measure focuses on thoughts, impulses, and actions that are experienced as unremitting and irresistible by the individual but are of an ego alien or unwanted nature.

Interpersonal sensitivity: It focuses on feelings of personal inadequacy and inferiority particularly in comparisons with others.

Depression: It reflects a broad range of the manifestations of clinical depression.

Anxiety: It's composed of a set of symptoms and signs that are associated clinically with high levels of manifest anxiety. General signs such as nervousness, tension and trembling are included in the dimension.

Hostility: It reflects thoughts, feelings or actions that are characteristics of the negative affect state of anger.

Phobic anxiety: Is defined as a persistent fear response to a specific person, place, object or situation which is characterized as being irrational and disproportionate to the stimulus and which leads to avoidance or escape behavior.

Paranoid ideation: the cardinal characteristics of projective thought, hostility, suspiciousness, grandiosity, centrality, fear of loss of autonomy and delusions are viewed as primary reflections of this disorder.

Psychoticism: items indicative of a withdrawn, isolated, schizoid life style are included.

The current study was conducted in two phases: the preparatory phase and implementation phase.

Phase 1: preparatory phase

It was concerned with selection, construction and preparation of data collection tools (Structured interview, WHO-Qol and SCL-90-R).

A pilot study was conducted on 30 women (10% of the study subjects). The purpose of the pilot study was to detect any particular problem in the statements clarity, feasibility, and applicability of the tool. No change was done in the data collection tools. The women recruited for the pilot study was included in the main study. This phase took about 2 months duration.

Phase II: Implementation phase

The investigator interviewed the women who fulfilled the criteria of the current study. Clarification of the nature and purpose of the study was explained at initial interview by the assistance of the female staff nurse in the clinic to each woman individually. The investigator emphasized that the participation in the study is absolutely voluntary. Oral informed consent was obtained from them and they were assured about confidentiality of the information which will be used only for the research purposes. Research proposal was approved from Ethical Committee in the Faculty of Nursing of Assiut University and Sanaa University.

Although the tools of the study are considered as a self-report measures, the investigator with the assistance of female nurse in the clinics interviewed each participant in the waiting area of the outpatient clinics in order to facilitate reading (reading on) due to the high rate of illiteracy in the study subjects to fulfilled the tools.

Statistical analysis was performed using SPSS software Chicago, IL, USA, version 21. Comparison between categorical variables in both groups was done by Chi-square test as they were presented as frequency, percentage and continuous variables were compared using Student T-test. For statistical analysis, we tested the different variables for normality by Kolmogorov-Smirnov test and they were normally distributed, so they are presented as mean ± standard deviation and compared using the Student T-test. We considered P value < 0.05 as a significant value.

Results

In Egypt; out of 183 eligible women presented to our hospital, 150 consented to participate. Twenty women didn't meet the inclusion criteria and 13 women were not willing to share in the study. In Yemen; out of 195 eligible women presented to our hospital, 150 consented to participate. Thirty-five women didn't meet the inclusion criteria and 10 women were not willing to share in the study.

The demographic data of the two groups are shown in Table 1. There were statistically significant differences between Yemeni and Egyptians women in age, level of education, occupation, and residence (p<0.001). Mean age of the studied Yemeni and Egyptian women was 39.3±3.9 and 44.6±7.1 years, respectively. According to the marital status the majority of studied Yemeni and Egyptian women (84.7% and 88.0% respectively) were married.

Table 2. summarizes the distribution of the study participants according to their clinical characteristics. There was a statistically significant difference between Yemeni and Egyptians women as regards type of UI (p=0.003). There are no statistically significant differences between them in duration and severity of UI. According to duration of UI, most of Yemeni and Egyptian women were complaint of UI since more than one year ago (62.0% & 63.3% respectively). Regarding the types of

Table 1: Demographic data of the study participants.

Items	Yemen		Egypt		p-value
	No.	%	No.	%	
Age group					
Mean ± SD	39.3 ±3.9		44.6 ±7.1		<0.001*
Education					
Illiterate	54	36.0	24	16.0	
Read and write	22	14.7	42	28.0	
Primary school	24	16.0	17	11.3	<0.001*
Secondary	41	27.3	27	18.0	
University	9	6.0	40	26.7	
Occupation					
Employee	20	13.3	47	31.3	<0.001*
House wife	130	86.7	103	68.7	
Marital status					
Married	127	84.7	132	88.0	
Divorced	12	8.0	6	4.0	0.343
Widow	11	7.3	12	8.0	
Residence					
Urban	95	63.3	75	50.0	0.021*
Rural	55	36.7	75	50.0	

* Statistical significant difference (p<0.05)

Table 2: Distribution of the study participants according to their clinical characteristics.

Clinical characteristics	Yemen		Egypt		p-value
	No.	%	No.	%	
Duration of UI					
Months	57	38.0	55	36.7	0.811
Year/s	93	62.0	95	63.3	
UI type					
Stress UI	70	46.7	43	28.7	
Urge UI	43	28.7	48	32.0	0.003*
Mixed UI	37	24.7	59	39.3	
UI severity					
Mild	58	38.7	69	46.0	
Moderate	58	38.7	57	38.0	0.261
Severe	34	22.7	24	16.0	

UI; urinary incontinence, * Statistical significant difference (p<0.05)

UI, 46.7% of Yemeni women had SUI, while 39.3% of Egyptian women had MUI.

All types of UI affect QoL with statistically significant difference between Yemeni and Egyptians women; more than half of Yemeni women (58.7%) and largest percentage of Egyptian women (73.3%) have moderate Qol (Table 3).

Table 4. summarizes the impact of UI on different domains of Qol. It mainly affects the physical and psychological domains with statistically significant differences between Yemeni and Egyptian women as regard psychological status and social relationships domains (p=0.020 & 0.002). Patients with UI suffered from different types of psychological symptoms with statistically significant differences between Yemeni and Egyptian women as regards symptoms of anxiety and depression (p=0.003). The largest percent of psychological

symptoms among Yemeni women were in anxiety and depression; while in Egyptian women were somatization and phobic anxiety (Figure 1).

Table 5. shows correlation between psychological symptoms and Qol among the study participants. There were negative correlation between Qol and all psychological symptoms with high statistically significant differences.

Table 3: The quality of life level among the study participants.

Quality of life level	Yemen		Egypt		p-value
	No.	%	No.	%	
Low	38	25.3	27	18.0	
Moderate	88	58.7	110	73.3	0.023*
High	24	16.0	13	8.7	

*Statistical significant difference (p<0.05)

Table 4: The individual domains of quality of life among the study participants.

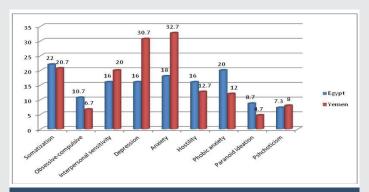| Qol domains	Yemen	Egypt	p-value
	Mean±SD	Mean±SD	
Physical health	42.39±9.03	41.09±8.56	0.202
Psychological status	23.71±5.74	25.27 ±5.82	0.020*
Social relationships	17.83±3.47	19.17±3.99	0.002*
Environmental condition	15.8±2.74	16.08±1.7	0.289
Perceived quality of life	5.25±1.72	5.51 ±1.46	0.169

* Statistical significant difference (p<0.05)

Figure 1: Distribution of the study participants according to their psychological symptoms.

Table 5: Correlation between psychological symptoms and quality of life among the study participants.

Psychological symptoms	Quality of life			
	Yemen		Egypt	
	r	p-value	r	p-value
Somatization	-0.82	0.000*	-0.73	0.000*
Obsessive-compulsive	-0.85	0.000*	-0.72	0.000*
Interpersonal sensitivity	-0.82	0.000*	-0.72	0.000*
Depression	-0.85	0.000*	-0.74	0.000*
Anxiety	-0.85	0.000*	-0.77	0.000*
Hostility	-0.84	0.000*	-0.74	0.000*
Phobic anxiety	-0.85	0.000*	-0.75	0.000*
Paranoid ideation	-0.86	0.000*	-0.76	0.000*
Psychoticism	-0.86	0.000*	-0.77	0.000*

* Statistical significant difference (p<0.05)

Discussion

Urinary incontinence is one of the most unpleasant and stressful problems from which any person can suffer [2]. Incontinence has a physical, psychological as well as social impact on sufferers. Not only does it cause wetness, odour, discomfort and skin breakdown, but it can also have a harmful effect on confidence as a result of shame and embarrassment, it may adversely affect sexual relationships and those affected may become socially isolated and depressed [5].

This study aimed to assess the psychological symptoms and Qol of women with UI in Assiut (Egypt) and Sana'a (Yemen). In the current study, the mean age of the Yemeni and Egyptian women was 39.3±3.9 and 44.6±7.1 years respectively. This nearly quite similar to the study conducted by Idris (2014), who assessed the Qol among adult woman with UI on (50 adult women) in Cairo, Egypt and she found that the mean age of adult women with UI was (41.2 years) [9].

Regarding to the marital status, the majorities of the Yemeni and Egyptian women (84.7% and 88.0% respectively) were married. This result in agreement with finding of Sensoy et al that reported the majority of women with UI were married [10].

More than half of the Yemeni and Egyptian women were from urban area (63.3% and 50% respectively). This is quite similar to the findings of Kowen & Lee who investigated the prevalence, risk factors, Qol, and healthcare-seeking behaviors of women with UI in South Korea and they reported that 72% of women were from urban area [11]. So, the present study and previous research explore that UI is an important health problem related to advanced age, low level of education, occupation as house wife and married women.

Our study reported that the most common type if UI among Yemeni and Egyptian women is SUI, This finding also consistent with these of Kilic et al., Altaweel et al, Al-Badr et al. They found that SUI was the commonest subtype of UI in their studies. This result can be explained by lower mean age of Yemeni women than Egyptian women and early age at marriage with it follows of high parity, poor antenatal, natal and postnatal care in rural areas [12-14] .

The severe UI was more among Yemeni than Egyptian women. The reasons for these differences are not clear, but could possibly be related to differences risk factor of UI as early marriage and parity. The second explanation may be low educational level of the Yemeni women. These results have been in line with the study of El-mowafy et al who studied the prevalence of UI among middle age women and associated risk factors in Port-Said, Egypt. They revealed that the educational level is correlated with the occurrence of UI. So, the increase in education level may help in avoid the occurrence of UI [15].

Our study found that UI affect that Qol with statistically significant difference between Yemeni and Egyptian women as regards to the total level of Qol. This supported with the study carried out among four developed countries who found

that the total mean scores on the Qol among women with UI were generally lower in; France and UK than in than USA and Germany [16].

More than half of Yemeni women (58.7%) and largest percentage of Egyptian women (73.3%) have moderate Qol. This finding supported with a study of Charalambous &Trantafylidi who show the total impact of UI on Qol in Austrian women. They found that 65.7% of the women consider that the disorder was detrimental to their Qol and indeed 18.3% stated that the detriment was average to grave [17].

As regards to total mean score of the different domain of Qol, the present study revealed that the UI affect the all aspect of women's life to some extent with statistically significant differences were found between them in psychological and social relationships domains, Yemeni women had lower mean score in compare to Egyptian women. This agree with Tozun et al, Bartoli et al, Unsal et al, and Abiola et al, who evaluate Qol among women with UI, and found that UI impacts many aspects of a patient's life, including psychological well-being, social interactions, activities, sexual and interpersonal relationships [18–21].

The present study showed a statistically significant differences between Yemeni and Egyptian women as regards symptoms of anxiety and depression (p=0.003).The largest percent of psychological symptoms among Yemeni women were in anxiety and depression, while in Egyptian women were somatization and phobic anxiety. This result in agreement with Senra et al [22] who reported that more than one third of women with UI had depressive and anxiety symptoms. Additionally, Knorst et al found that depressive symptoms were among 39.6% of studied women [23].

Smith showed that UI symptom does not directly affect the mental well-being, but that symptoms influence Qol, which in turn influences well-being [24]. The present study revealed that there were negative correlations between Qol and all psychological symptoms.

The present study was limited by small number selection of the women coming to referral hospital, which represented those who were motivated to seek treatment for their symptoms rather than a large number who stay at their home due to stigma prevent them to seek medical help. Second, we could hardly exclude the adverse effects of war against Yemen which continued since 1 year ago simultaneously effects on the Qol of Yemeni women.

Conclusion

Both Yemeni and Egyptian women with UI showed impaired Qol and had high percentage in psychological symptoms. We recommend involvement of the incontinent women in a behavioral and group therapy, the presence of psychiatrist in UI clinics to address the psychological effects and increase awareness of nursing staff regarding the effects of UI on the psychological condition and Qol is mandatory.

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