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RESEARCH ARTICLE

URINARY INCONTINENCE IN OLDER ADULTS PREVALENCE OF URINARY INCONTINENCE AMONG ELDERLY PATIENTS ATTENDING THE PRIMARY HEALTH CARE CENTERS IN MAKKAH AL-MUKARRAMAH, KSA A CROSS-SECTIONAL STUDY

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ABSTRACT

Urinary incontinence is common in older people, especially women. In Saudi Arabia, urinary incontinence was experienced by more than 30% of adult women, and Stress urinary incontinence alone accounts for up to half of all cases; generally the prevalence of UI considered to be from 20% to 50% with the peak to be in the childbearing age group (up to 40%) and then the prevalence increasing in elderly to reach to 50%. **Aim of the Study:** To estimate the prevalence of urinary incontinence among elderly patients attending the primary health care centers in Makkah, KSA in 2018. **Methodology:** It was a cross-sectional study involving 350 randomly selected elderly patients from different primary health care centers within Makkah. The data collection period was 20 days (four weeks minus weekends) in 2018. Validated self-constructed survey form was used to gather information to estimate the prevalence of self-reported UI among elderly patients attending primary health care centers. **Results:** A total of is 350 elderly patients. Answer ratio was 100%. The age of the respondents ranged from(25-65)years, majority of the respondents were females(57.14%), showed positive correlations between degree of symptoms and signs of diagnosis of incontinence and degree the frequency of symptoms (r = 0.578) and have statistical a significant relation p=0.001. In this study results shown that relation between the degree the Frequency of symptoms and demographic characteristics, showed positive correlations between degree of symptoms and signs of diagnosis of incontinence and degree the frequency of symptoms (r = 0.578) statistically significant p=0.001. **Conclusion:** The incidence of urinary incontinence is underestimated belittled despite the fact that it is normal. Identification of this issue is fundamental for forestalling complexities and improving the personal satisfaction of the older particularly with intellectual debilitation patients.

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INTRODUCTION

Urinary incontinence (UI)is defined by the International Continence Society and the International Urogynecological Association as any unintentional leakage of urine [1]. Urinary incontinence (UI) is defined as the complaint of involuntary loss of urine. Urinary incontinency is often classified as enuresis that is that the involuntary loss of excretion on effort or effort, sneezing, or coughing, Urgency incontinence is that the involuntary loss of urine accompanied by or forthwith preceded by urgency [2]. Urinary incontinence (UI), additionally referred to as involuntary evacuation urination, is any uncontrolled outpouring of urine. It is a common and distressing problem, which can have an oversized impact on the quality of life [3]. It has been known as a crucial issue in geriatric health care [4].

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Urinary incontinence (UI) the loss of bladder control is common among older adults and can have significant consequences for those affected and their caregivers[5,6]. Urinary incontinence will influence the patient's life somehow or another, some miss their preferred games, some are fazed by having to wear hygienic protection, their sex life and intimate relationship are richly plagued by the negative impact of incontinence [7,8]. Probably 20% of community dwelling older adults have enough incontinence to limit some facet of their lives. this will cause diminished social calm and activity, depression, not taking medications like diuretics prescribed for necessary reasons (e.g. symptom heart failure), and money expense for the varied types of incontinence wear starting from thin pads to padded underwear to frank adult diapers. it's additionally seems that the race to the lavatory for frail however freelance old individuals ends up in falls which may not otherwise have occurred [9].

A larger number of ladies are incontinence more than men , but each gender feel the changes of aging neurological and urological systems. Girls have further changes associated with anatomy, and men from endocrine gland enlargement [10] incontinence isn't a constant consistent a piece of growing old and, is treated in entire or halfway with essential improvement in health, cleanliness and confidence. the rates are most noteworthy among ladies, individuals of cutting-edge age, and the individuals who have intellectual and physical handicaps [11,12,13]. Several studies have demonstrated that UI occurs most often among women of advanced age and Multiparty [14]. Caring for an older adult who has UI can be challenging and burdensome, particularly if the person has other complex health issues [15]. The development of feminine UI could influence the decision to place an elderly woman into a geriatric home. Selected downside for Muslim ladies with UI is that the inability to perform daily prayers (Salat). Distinguishing misconceptions regarding UI and reasons for delay in seeking medical recommendation would possibly facilitate to spot areas wherever a desire exists for educating community and healthcare employees. Prevalence of enuresis among Saudi ladies[16,17]. While incontinence doesn't cause death, it will have a profound impact on existence quality similar to stroke, disease, also chronic-obstructive pneumonic disease. Additionally, incontinence accounts for over $20 billion in annual expenditures within the U.S., an amount greater than the annual direct cost of breast, ovarian, cervical, and uterine cancers composed [18].

One of the main risk factors for stress incontinence is vaginal childbearing, it according that one third of feminine tough enuresis five years once their initial canal delivery [19]. Managing odors, containing leakages, providing supervision, and toileting assistance (especially at night) can strain relationships and lead to fatigue, depression, and emotional stress[20]. The term Quality of life is employed typically to point 'happiness', except for each patient it's going to have totally different meaning: high financial gain and cash, sensible family life and relationship with others, job satisfaction, sensible physical and psychological state [21]. The up to date available local researches studied the prevalence of UI, the associated factors, and the barriers to seeking health advice however not relating UI to quality of life. Incontinence remains a silent downside as a major variety of ladies do not ask for treatment, even once their symptoms cause major distress and hinder their daily activities [19].

Rationale: Urinary incontinence remains a silent problem as a significant number of patients do not seek treatment, even when their symptoms cause major distress and hinder their daily activities hence there is absence of enough information and studies about the exact prevalence of UI and its risk factors among male elderly patients attending primary health care centers in Makkah, KSA. The researcher was interested in urinary incontinence because it is a common problem among the elderly and to bridge the gap in local research in the field on urinary incontinence and the researcher have a family history of urinary incontinence so important topic .

Aim of the Study: To estimate the prevalence of urinary incontinence among elderly patients attending the primary health care centers in Makkah Al-Mukarramah, KSA in 2018.

Objectives: To determine the prevalence of urinary incontinence among elders attending Al-Adl primary health care center in Makkah Al-Mukarramah, 2018.

To identify the possible factors associated with urinary incontinence among elders attending Al-Adl primary health care center in Makkah Al-Mukarramah, 2018.

LITERATURE REVIEW

The term enuresis is usually used to consult with incontinency primarily in kids, like nocturnal incontinence[22]. pelvic surgery, pregnancy, childbirth, and menopause are major risk factors [23]. Urinary incontinence is usually a result of original medical condition however is under-reported to medical practitioners. There are four main types of incontinence. Urge incontinence, Stress incontinence, Overflow incontinence, then functional incontinence [24]. Gibson et al. in Canadian Geriatrics Society CME Journal (2015) of 275 patients A study revealed that at least 30 % of men older than fifty years getting on report LUTS, whereas 8%needed surgery for relief of bladder outlet obstruction(BOO)because of failure of medical management. Once symptoms like incontinence, urinary urgency and frequency can't simply be explained directly by obstruction, secondary effects of obstruction on the bladder are known as causative factors Nevertheless, in several cases, the reason behind these enervating symptoms remains mostly unknown. within the past, LUTS were mostly attributed to benign prostate dysplasia (BPH), diagnosing most frequently created by history and physical examination alone, and treatment (often surgical) was directed at the prostate gland [25].

In a study in Qatar (2014). Found that (21%) ladies of the total of women 108 included have UI. Bronchial asthma was a major risk issue influencing the incidence of UI. Social and religious factors have a major impact on the Quality of life(QoL)of leaky ladies [26]. Brasha et al(2008). In Kingdom of Saudi Arabia, incontinence was experienced by more than 30% of adult women, and Stress urinary incontinence alone accounts for up to half of all cases; typically the prevalence of UI thought-about to be from 20% to 50% with the height to be within the childbearing age bracket (up to 40%) and so the prevalence increasing in old to succeed into 50%. In a local study done out in 2008 at a medical aid center in Jeddah found that the prevalence of UI was 41.4 % [27]. North American and European studies report that the prevalence of UI in ladies ranges from 9% to 67%. [28, 29, 30] and 12.4% of men over the age of 20 experienced UI in the United States [31]. Several Middle Eastern region countries report a spread of UI between 20% and 41%. The variation in prevalence of UI reflects the employment of variable definitions,study populations and samples, and variations in however, information has been collected [16, 32, 14,15, 33, 34].

Nowall et al., 2014 Conducted A study in Kuwait, 54.5% of ladies,22.4% ofmales had involuntary loss ofurine. Age on top of 45 years(p=0.001)four or additional youngsters(p=0.006), vaginal delivery (p=0.015), BMI bigger than 25kg/m2 (p=0.001), drinking over one-cup of a caffeinated drink per day(p=0.041), and a history of diabetes (p=0.002)were associated with UI in girls. A history of diabetes (p=0.044), and BMI bigger than thirty kg/m2(p=0.041)were associated with UI in men. Obesity was the foremost governable risk issue for UI [35].

Urinary incontinence may be a common condition and affects the social and psychological aspects of the many people worldwide and most typically affects patients of advanced age as well as multiparous ladies but surprisingly, less than half patients with UI report the matter to a health care professional[36,37]. In a study in Egyptian, a complete of 1,652 ladies were enclosed. The prevalence of UI among study subjects is 54.8%. Aging, low instructional level, menopause, higher parity, vaginal delivery, and previous multiple abortions were found to be significantly associated with UI. The prevalence of urge,anxiety, and mixed incontinence, reciprocally exclusive of every different, was 15%, 14.8%, and 25%, severally. The prevalence of severe incontinence is 8.4%. Relating to the standard of live, the foremost distressing problems for sufferers were their inability to pray (90%)[32].

Al-Badr et al., 2012 conducted a cross-sectional study of ladies attending Ministry of Health primary healthcare centers in Saudi Arabia, The mean age of the 379 participants was 35 years and the median parity was 4. The overall prevalence of UI was 41.4% (95% CI, 36.6–46.5). Stress UI, urgency UI, and mixed UI were reported by 36.4% (95% CI, 31.7–41.4), 27.4% (95% CI, 23.2–32.1), and 22.2% (95% CI, 18.3–26.6), respectively. Urinary leakage was reported daily by 17.2%, and 25.5% experienced leakage more than once a week. Risk factors for UI enclosed increased age (P=0.001); parity greater than five (P=0.001); biological time (P=0.004); and history of epithelial duct medicine surgery, chronic cough, or constipation (P≤ 0.001). The medical recommendation wasn't wanted by 85% of ladies with UI. Several of the ladies with UI reported adverse effects on their daily activities [38]. In a clinic-based cross-sectional survey in Saudi Arabia by Altaweel W, Alharbi M. 2012.6,600 women aged twenty years and older were hand-picked. The bother of urinary incontinence symptoms was assessed using the Arabic version of the short kind of system Distress Inventory(UDI-6)form. The authors measured the impact of incontinence on HRQL mistreatmentthe Incontinence Impact form(IIQ-7).They found that: the general prevalence of incontinence instudy was29%. The prevalence of incontinence consistent with its kind was 50%stress urinary incontinence, twenty eighth urgency incontinence, and twenty second mixed incontinence. Older age, obesity, massive baby birth weight, high parity, caesarean, duct delivery, and polygenic disorder were important risk factors. But 100 percent of the ladies during this study reported a big impact of incontinence on their HRQL [36].

In another study in Kingdom of Saudi Arabia, to estimate the prevalence of incontinence among girls of childbearing age at Maternity and Children's Hospital (MCH), Jeddah 2012. Out of 1200 patients attending the gynecology clinic within the MCH, 412(34.3%)were diagnosed as having UI. Their age ranged between fifteen and fifty years with a mean of(34.3 + 7.2)years. Almost 50% indicated that UI affected them badly as wife, mother, their emotions, and their physical and social activities. The most commonly occurring problems were frequent micturition (88.3%), nocturnal enuresis (87.9%). The least happening, were kidney problems (38.6%) and dripping during sexual activities (40.8%). Increasing age and higher parity were significantly associated with limitations in different life domains. Urinary incontinence is common and often disturbing for Saudi women. It adversely impaired their quality of life [39].

METHODOLOGY

Study Design: A cross-sectional study has been conducted to estimate the prevalence of self-reported UI among elderly patients attend to primary health care centers in Makkah Al-Mukarramah in date collection period 2018

Study Area: Makkah Al-Mukarramh is the holy city of every Muslim in the world. It is the main place commonof the pilgrims to perform Umrah and Hajj. Makkah is a modern city and there is a continuous working to improve the infrastructure of Makkah for the sake of both Makkah citizens and pilgrims. Makkah Al-Mukarramah has many schools in every educational level in addition to Umm Al-Qura University which has medical college. Makkah has many hospitals in addition to King Abdullah Medical city which is tertiary center. Also, it has 85 PHC centers under supervision of Directorate of Health Affairs of Makkah Al-Mukarramah. These centers distributed under 7 health care sectors and each sector contains around 10 – 14 primary health care centers. Three health care sectors inside Makkah Al-Mukarramah city (urban) with 37 primary health care centers underneath and four sectors are outside Makkah (rural) with 48 primary health care centers. The three healthcare sectors inside Makkah Al-Mukarramah are Al-Ka'akya with 11 primary healthcare centers, Al-Adl with 12 primary healthcare centers and Al-Zahir with 14 primary healthcare centers. [40].(annexes 1)

Study Population: This study was carried out the elderly patients(60 years old or older)attending the Al-Adl primary health care center in Makkah Al-Mukarramah .

Eligibility Criteria

Inclusion Criteria

- All Saudi elderly patients(males and females)attending Al-Adl primary health care center in Makkah Al Mukarramah City during the study period.
- Patients who can write and read in Arabic Language

Exclusion criteria:

- Patients who refuse to participate in the study.
- Persons who have reported severe mental disabilities

Sample Size: The number of elderly patients attending Al-Adl primary health care center (under Al-Adl health care sector) in one month is 1711. Based on this information sample size has been calculated using a website (raosoft.com). The estimated sample size is (n) has been (350) elderly patients by adding about 10% for balance non-responder, with expected frequency = 50%. Worst acceptable result = 5%. With 95% confidence interval the calculated sample size according to the "sample size calculator RAOSOFT"

Sampling Technique: Regarding health care center selection, there are three health care sectors inside Makkah Al-Mukarramah which are Al-Ka'akya, Al-Zahir, and Al-Adl. By using simple random sample technique (by using randomizer.org), al-Adl health care sector was selected. There are 12 primary health care centers under Al-Adl health care sector which enumerated from 1 to 12. Again, by using simple random sample technique Al-Adl primary health care center

was selected (by using randomizer.org website). Regarding patients' selection, the total number visiting Al-Adl PHC is 1711 per month and the sample size is 314. The data collection period has been 20 days(four weeks minus weekends,August in 2018)Every day there nearly 85 patients attending in Al-Adl PHC in both section (male and female sections). To collect data from sample size, it needs nearly 16 patients per day to collect desired sample size. The researcher has been selecting every 3rd patient to cover the sample size during data collection period.

Data Collection Technique: Arabic version Urinary Incontinence Questionnaire A questionnaire to measure the extent to which people are aware of the disease Urinary Incontinence Questionnaire. The researcher has been Arabic version of the questionnaire since the target population are since the target population Saudi elderly[7](annexes3). The questionnaire has been distributed to all patients attending Al-Adl primary health care center during the data collection period. The questionnaire has been distributed equally between male and female units because it is a separate department. The researcher will train 2 nurses on how to fullfil the questionnaire in order to optimize the interrater reliability. The researcher has been distribute the questionnaire in the waiting area in male section while in female section a trained nurse has been distribute the questionnaire in female waiting area. After that, the researcher will collected the paper daily from the nurse for data entry and analysis after thanking the participants for their precious time and effort.

The services: the researcher has been providing the participants with a simple gift as an appreciation for their participation in the study, after collecting questionnaire from them.

Data collection tool (instrument) Questionnaire

- The validated international Self UrinaryIncontinence, including Medical, Epidemiologic, and Social aspects of Aging questionnaire (MESA, questionnaire), has been used in collecting data , categorizing type of urine leakage and perception. (annex 2)
- Associated risk factors and comorbidities inquired about included self-reported diabetes, high blood pressure, prostate problems, kidney problems, stroke and parity... etc.has beenrecorded.
- A dichotomous question determined whether respondents had reported UI to a doctor; open- and closed-ended questions explored their reasons will be added.

The first section is concerned with personal general information about the participants (age, nationality, job title, educational level).

The second section is concerned with Urinary Incontinence Assessment in Older Adults.

The third section risk factors and comorbidities inquired about included self-reported.

Study Variables

Dependent Variables

- Prevalence ofdepression among elderly patients

Independent Variables

- Age.
- Gender.
- Marital status.
- Educational level.
- Monthly income.
- Occupation.
- Presence ofchronic disease.
- Presence ofdisabilities (cognitive, motor).

Reliability: The researcher assessed the test-retest reliability test on 10% of the sample size.

Data Entry and Statistical Analysis: Statistical analysis has performed using SPSS software program (Statistical Package for Social Sciences), version 24.0. Descriptive using listing and frequency and analytic statistics using chi-square test to investigate the association and the difference between two qualitative categorical variablesor t test for two quantitative categorical variables.

Significance: P value less than 0.05 is considered statistically significant

Pilot Testing: A pilot study was conducted on 10% of the sample size to test ifthe study questionnaire is understandable and acceptable, and to check the methodology and the environment.

Ethical Considerations

- Research committee approval was obtained.
- All necessary official approvals fulfilled from the Joint Program of Family Medicine and Community Medicine in Makkah Al-Mukarramah.
- An approval from administration, public health was obtained.

An individual written consent to participate in the study was obtained before data collection from the following:

- Primary health care centers sectors directors.
- All data was kept confidential and was not used except for the purpose ofthis scientific research.
- At the end of data collection, the researcher has acknowledged the supervisor, facilitator, and participants in this study.

Budget, Fund or Grant: The study was self- funded.

RESULTS

Socio-demographic characteristics of the participants. The study included is (350) elderly patients: Most of the respondents were females 57.14%, while the male were 42.86. Respondents ages were reached from (25-65) years, with Mean ±SD were (37.87±12.088). Responders level of education was among Secondary education (34.29%) and high education (31.43%. Regarding the occupational statusmost participant were employed (54.29%) while the unemployed were (45.71%). Regarding the economic level, 40% had a high income, average income 32.86%, and low income (27.14%).

Table 1. Frequency of urine leak you urinate day and night.

	N	%
How often do you get up at night to urinate?		
1	46	13.14
2	65	18.57
3	89	25.43
more than 3	150	42.86
How often do you urinate during the day?		
less than 5	90	25.71
5-10.	150	42.86
more than 10	110	31.43

Face frequent urination: There was statistically significant Face frequent urination more than one time P-value=0.00,X2(173.18)while Weight80.64%. The common of respondents (84.86 %) were reported the(moderately and All of the time were face frequent urination). While the described (not in the least)4.92 % anddescribed (once in a while)10.86%.

Frequency of urine leak: There was no statistical significance frequency urine leakP-value=0.00 X2(83.42%)while Weight% (75.86%). The majority (70.86%)of respondents were reported (moderately and followed by All ofthe time were frequency of urineleak) while thereported (not at all) were 6.29%, and reported(rarely)22.86%.

Repeated the Leakage. There was a statistically significant repeated leakage in the sample P-value =0.00, while Weight77.21%.The majority (72.86%) of respondents were reported the (moderately and followed by All of the time repeated the Leakage). The reported (not at all) were 8.57%, reported (rarely) were 8.57%.

Regarding the **small amounts of leakage (drops)**, there was a statistically significant drops in the sample P-value=0.00, X2 (138.43%) Weight 67.57%. The majority (66.57%) of respondents were reported the(moderately and followed by All the time small amounts of leakage). While (not at all)were reported by 11.43%, (rarely) 22.00%.

Difficulty-emptying bladder. There was a statistically significant P-value =0.00, X2(94.37%) Weight (76.64%).The majorityof respondents (73.15%) were reported the (moderately and followed by All the time difficulty emptying bladder). Whilethereported (not at all) were 5.43%, (rarely) 21.43%

In regard to (Do you have to rush to the bathroom because you get a sudden, strong need to urinate?): There was a statistically significant P-value =0.00, X2(66.87%) Weight 71.43%.The majority of respondents (65.71%) were reported the (moderately and followed by All ofthe time have to rush to the bathroom). The reported (not at all) were 7.71%, and (rarely) 26.57%.

Leakage related to physical activity: There was a statistically significant P-value=0.00, X2(203.90%)Weight 82.21%.The majority of respondents (82.85%) were reported the(moderately and followed by All of the time were leakage related to physical activity). While the reported (not at all) were 9.14%, and rarely8%

Leakage related to physical activity, coughing, or sneezing A statistically significant P-value =0.00, X2 (54.91%) Weight% (69.43%) of leakage related to physical activity, coughing, or sneezing. Most ofthe respondents (63.71%) were reported the (moderately and followed by All of the time leakage related to coughing, or sneezing).Not at all reported in 25.14 % and(rarely)11.14%

Presence ofpain or discomfort in lower abdominal or genital area: There was a statistically significant P-value =0.00, X2(133.22%) Weigh 79.07%.73.14% of the respondents were reported (moderately and followed by All of the time pain or discomfort in lower abdominal). While the (reported not at all) 5.43%, and rarely 21.43%

Impact of Urinary Incontinence on Participant's Perceived Quality of Life

Items 1 and 2 = physical activity: There a statistically significant P-value=0.00, X2(56.15%) Weight 70.43%. Participants reported (moderately and followed by greatly were Ability to do household chores) were 67.72%.While (can't not at all Ability to do household chores) were 22.29%, slightly10.00%. Physical recreation such as walking, swimming, other exercise had a statistically significant P-value=0.01, X2 (11.28%) Weight 61.29%. Moderately and followed by greatly Physical recreation were reported by 46.86% of respondents while (can't not at all) 30.00%, (slightly) 23.14%

Items 3= travel: A statistically significant P-value=0.00, X2(29.86%) Weight 70.21%. Participants reported (moderately and followed by greatly Ability to travel by car or bus more than 30 minutes) were 64.29%while (cant not at all Ability to travel by car or bus) 15.71%, and (slightly)20%

Item 4 = social/ relationships; Items 5 = emotional health: There was a statistically significant P-value=0.00, X2(247.23 %) while Weight 84.14%. The majority (83.14%) of respondents were reported the(moderately and followed by greatly Ability to participation in social activities). (can't not at all participation in social activities) 6.29%, (slightly)10.57%. Emotional health P-value (0.00), X2(57.06%) while Weight 73.50 %. The 66.28%of respondents were reported the (moderately and followed by greatly emotional health), (can't not at all emotional health)9.43%, and (slightly) 24.29%.

Signs and symptoms of diagnosis of incontinence: The testing tool included 5 questions about Signs and symptoms of diagnosis ofincontinence, the 5 questions had answers limited to Yes or No. These questions were investigated using the Chi square analysis. high percentage answered "yes" and it is statistically significant P-value=0.00. In Questionnaire (**Q 1** Do you usually have a strong sense of urgency to urinate? And **Q 2**Are there times when you don't make it to the bathroom and leak urine)respondents answering respectively(88.57%, 64.29)while Questionnaire(3,4,5) There were no statistically significant in respondents answering respectively(54.29,53.71 and 56.00%).The other tests, which, when combined with the results of Chi square test, were respectively (208.28, 28.571, 2.571, 1.931 and 5.040) indicate the signs and symptoms of diagnosis of incontinence. The testing tool also included (5)questions about Signs and symptoms of diagnosis of incontinence the 5 questions had answers limited to Yes or No. These questions contribute to the severity problem of urinary incontinence, these questions were analyzed using the Chi square analysis. There was a high percentage answering " NO " andthey were respectively (73.71,79.43,84.29 ,64.86,71.71).

Table 2. Urinary Incontinence Assessment in Older Adults

Do you experience, and if so, how much are you bothered by			Urinary Incontinence Assessment				Weight%	Chi-square	
			Not at all	Rarely	Moderately	All of the time		X^2	P-value
1	Do you face frequent urination?	N	15	38	150	147	80.64	173.18	0.00
		%	4.29	10.86	42.86	42.00			
2	Frequency of urine leak	N	22	80	112	136	75.86	83.42	0.00
		%	6.29	22.86	32.00	38.86			
3	Repeated the Leakage	N	30	65	99	156	77.21	98.71	0.00
		%	8.57	8.57	28.29	44.57			
4	Small amounts of leakage (drops)	N	40	77	180	53	67.57	138.43	0.00
		%	11.43	22.00	51.43	15.14			
5	Difficulty emptying bladder	N	19	75	120	136	76.64	94.37	0.00
		%	5.43	21.43	34.29	38.86			
6	Do you have to rush to the bathroom because you get a sudden, strong need to urinate?	N	27	93	133	97	71.43	66.87	0.00
		%	7.71	26.57	38.00	27.71			
7	Leakage related to physical activity	N	32	28	97	193	82.21	203.90	0.00
		%	9.14	8.00	27.71	55.14			
8	Leakage related to physical activity, coughing, or sneezing	N	88	39	86	137	69.43	54.91	0.00
		%	25.14	11.14	24.57	39.14			
9	Pain or discomfort in lower abdominal or genital area	N	19	75	86	170	79.07	133.22	0.00
		%	5.43	21.43	24.57	48.57			

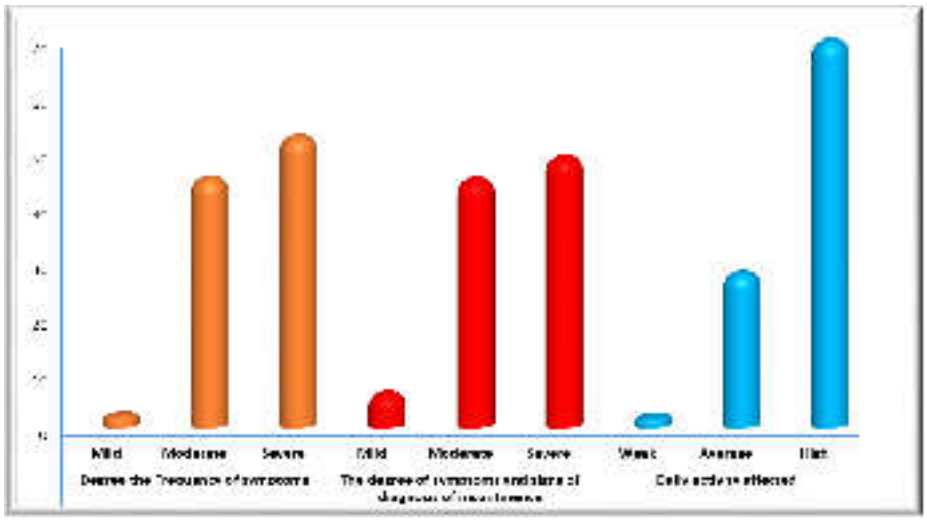

Figure (1) Symptoms and signs of diagnosis of urinary incontinence and its effect on daily activity

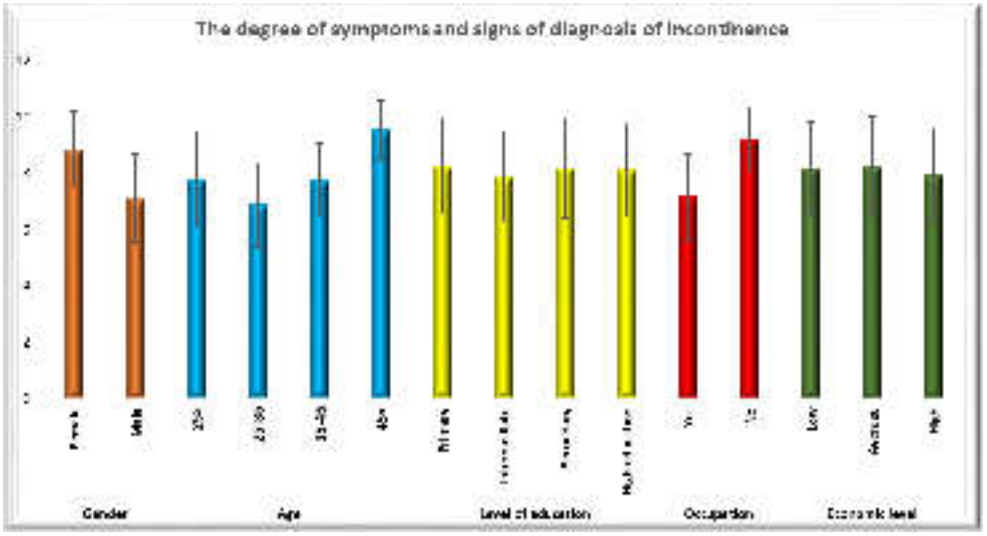

Figure 2. Distribute of the relation between the degree of symptoms and signs of diagnosis of incontinence and demographic data

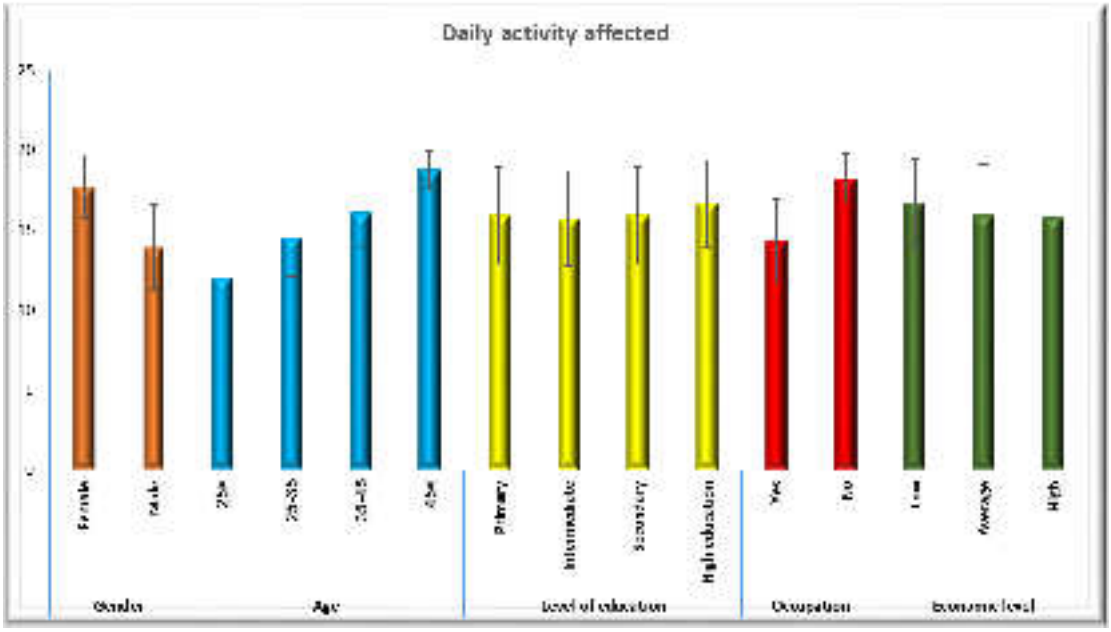

Figure 3. Distribute of the relation between the Daily activities affected and demographic data. (gender, age, level of education, occupation and economic level)

There were a statistically significant P-value =0.00 in respondents answering. The other tests, which, when combined with the results of Chi square test, were respectively (78.731, 121.246, 164.571, 30.903, 66.010) indicate the signs and symptoms of diagnosis of incontinence.

Question 11 for female When urinary difficulty began the testing tool included four questions about Signs and symptoms of diagnosis of incontinence for female when urinary difficulty began. The questions had answers limited to Yes or No. These questions were analyzed using the Chi square analysis. Answer "NO" for these questions were respectively(87.5, 72.5, 92.5, 47.5)There were a statistically significant in respondents answering P-value =0.000 .The other tests, which, when combined with the results of Chi square test, were respectively (200.000)indicate the signs and symptoms of diagnosis of incontinence for female.

Symptoms and signs of diagnosis of urinary incontinence and its effect on daily activity: Regarding the degree of the Frequency of symptoms, most of the sample (52.6%) answer severely. Moderately and mild were 45.1%, 2.3% respectively while regarding degree of symptoms and signs of diagnosis of incontinence the majority (48.9%) answer severely. Moderately and mild were 44.9%, 6.3% respectively but regarding daily activity affected the majority of our study proportions high followed by average and weak were 70.0 %, 28.0%, 2.0%respectively

Distribute of the relation between the degree the Frequency of symptoms and demographic data: There is a significant relation between the degree the Frequency of symptoms and gender T= (27.977), p-value=0.000 and Mean ± SD (31.220±3.423)in female. In male (21.733± 2.714).a significant relation between degree the Frequency of symptoms and age were F=(1037.473)and p-value =0.000 while age> 45 Mean ± SD(33.864 ±2.056), in age 35-45(27.252±1.863),in age 25-35 Mean ± SD(22.616±1.097), in age <25 Mean ± SD(17.949±2.025). no significant relation between degree the Frequency of symptoms and level of education p-value=0.112 and F=(2.012)in High education Mean ± SD (28.155±5.288)in Primary education (27.044±5.448) and Intermediate (26.173±5.510)while Secondary Mean ± SD(26.892±6.047). While occupation a significant relation between degree the Frequency of symptoms and occupation p-value =0.000 and T=(861.513). YES we work Mean ±SD (22.784±3.172)and no not work Mean ±SD (32.344±2.864).The economic level is no significant relation between degree the Frequency of symptoms and economic levelp-value=0.092 and F=(2.406). Low socioeconomic status Mean ±SD (28.221±5.397), average Mean ±SD (26.896±6.155), high level of economic Mean ±SD (26.643±5.320) .

Distribute of the relation between the degree of symptoms and signs of diagnosis of incontinence and demographic data. Study shows that significant relation between degree of symptoms and signs of diagnosis of incontinence and gender T= (11.022) p-value=0.000 in female Mean ± SD (8.855±1.343), male(7.127±1.586). While between The degree of symptoms and signs of diagnosis of incontinence and age were F=(70.281) and p-value =0.000 while age> 45 Mean ± SD (9.545 ±1.037)in age 35-45(7.783±1.316)in age 25-35 Mean ± SD(6.872±1.501) in age <25 Mean ± SD (7.792±1.689). There is no significant relation between degree of symptoms and signs of diagnosis of incontinence and level of education p-value =0.558 and F=(0.692)in High education Mean ± SD(8.127±1.660)in Primary education(8.267±1.684)and Intermediate(7.880±1.602)while Secondary Mean ± SD(8.192±1.760).Occupation shows a significant relation with the degree of symptoms and signs of diagnosis of incontinencep-value =0.000 and T=(198.631)YES we work Mean ± SD(7.184±1.502)and no not work Mean ± SD(9.219±1.131)but no significant relation between degree of symptoms and signs of diagnosis of incontinence and economic levelp-value=0.411 and F=(0.891). Low level of economic Mean ± SD(8.168±1.661) and average Mean ± SD(8.243±1.755)but high level of economic Mean ± SD (7.971±1.640) .

Distribute of the relation between the Daily activity affected and demographic data: Study analysis shows a significant relation between between the Daily activity affected and gender T= (15.337) p-value =0.000 in female Mean ± SD(17.730±1.943), in male(13.947±2.672).Also, significant relation between the Daily activity affected and age F=(135.457) p-value =0.000 while age> 45 Mean ± SD(18.782 ±1.136)in age 35-45(16.096±2.123)in age 25-35 Mean±SD (14.558±2.505) in age <25 Mean ± SD(12.026±2.356). Regarding the level of education there is no significant relation with the Daily activity affectedp-value =0.096 and F=(2.134) in high education Mean±SD(16.682±2.689)in Primary education(15.911±3.006)and Intermediate (15.693±2.995) while Secondary Mean±SD (15.917±3.091). Occupation showsrelation with the Daily activity affectedp-value=0.000 and T=(284.184) YES we work Mean±SD(14.295±2.632)and no not work Mean ± SD(16.684±2.726).But in the economic level there is no significant relationwith the Daily activity affectedp-value =0.075 and F=(2.616). Low level of economic Mean±SD (16.684±2.726) and average Mean ± SD (15.991±3.139) but high level of economic Mean ± SD (15.814±2.908) .

Correlations analysis between degree of symptoms and signs of diagnosis of incontinence, Daily activity affected and Degree the Frequency of symptoms. And Correlations analysis between Daily activity affected and degree of symptoms and signs of diagnosis of incontinence: There are positive correlations between the degree of symptoms and signs ofdiagnosis of incontinence and degree the Frequency of symptoms (r = 0.578)which is statistically significant relation p = 0.001. Plus, positive correlations between the Daily activity affected and degree the Frequency of symptoms (r = 0.767) statistically significant relation p = 0.001. Positive correlations between Daily activity affected and the degree of symptoms and signs of diagnosis of incontinence (r = 0.515) statistically significant p = 0.001.

DISCUSSION

The objective of this study was to estimate the prevalence of urinary incontinence among elderly patients attending the primary health care centers in Makkah Al-Mukarramah, KSA. This study focused on only incontinent in the primary health care centers in Makkah Al-Mukarramah, among elderly patients. The findings that urinary incontinence was more common among females (57.14%), as compared to males (42.86 %). In other study found that males had a higher risk of urinary incontinence compared to females this contrasted with our studies [41]. Advance age was associated with urinary incontinence. The odds ofthe elderly aged 35 - >45 years and above having urinary incontinence were (61.43%). In this study, urinary incontinence may be related also with difficulty in mobility and transferring and ability to do household chores (cooking, Housecleaning, and laundry). Many studies have shown very high prevalence rates of urinary incontinence in those aged 85 and older[42,43,44,45]. Other Studies have shown that in addition to changes of normal aging, diseases such as dementia and cognitive impairment, which are commonly experienced by the elderly, may contribute to the problem of urinary incontinence Urinary tract infections, diabetes mellitus, benign prostatic hyperplasia, and immobility are also typical examples of conditions that may impact urinary incontinence. Higher age group being a risk factor for developing incontinence was reported by many researchers. [46] Sinclair and Ramsey reported emotional impact of incontinence to include emotional health (nervousness, Depression, social and recreational isolation from anxiety and fear of being incontinent in public. in our study were P-value (0.00), X2(57.06%) Weight 73.50%. [47] The mass of respondents (66.28%) were reported the (moderately and followed by greatly emotional health). The findings of an earlier study in Kuwait, were comparable with our study as 75% of their female participants said they did not perceive their urinary incontinence as a health challenge and therefore did not seek medical care. Reports from other Arab countries were contradictory to the Kuwaiti findings; the Qatari study reported that 79% of his Qatari women participants reported moderate to severe negative impact on their lives. [48,49]. The Jordanian women felt it had a negative impact on their psychosocial well-being, and the Emirati women felt urinary incontinence was cumbersome, disrupting their social and religious activities. The Saudi women in both Jeddah and Riyadh reported adverse effect on their lives yet majority ofthem did not seek medical

Conclusion

We acknowledge the fact that urinary incontinence is a common and poorly understood problem in our community. Another problem in the elderly age group is cognitive impairment, which also contributes to urinary incontinence. Prevalence of urinary incontinence is most likely underestimated. Detection of this problem is essential for preventing complications and improving the quality of life of the elderly. The prevalence of urinary incontinence in this study is most likely underestimated due to the study's limitation in determining the presence of urinary incontinence by a self-report method based on the BI. It is possible that mobility problems contributed to the presence of urinary incontinence among the respondents in this study.

Limitation and Recommendation

Presence of a multi-disciplinary team approach involving diabetic team, dieticians, the physiotherapist, psychologist and urology nurses should be introduced as part ofthe management ofincontinent women. A larger and more in-depth study might reveal a much higher prevalence. Detection of this problem is essential for preventing complications and improving the quality oflife ofthe elderly.

List of Abbreviations

UIurinary incontinence
DMDiabetes Mellitus
PHCCPrimary Health Care Center
WHOWorld Health Organization
CDCCenters for Disease Control and Prevention
UDI Urinary Distress Inventory
LUTSlower urinary tract symptoms
MOHMinistry of Health
BOO bladder outlet obstruction
HRQL Health Related Quality of life
IIQ Incontinence Impact quality
KSA Kingdom of Saudi Arabia
SPSSStatistical Package for Social Sciences
MCH Maternity and Children's Hospital
MESA Medical, Epidemiologic, and Social aspects of Aging

REFERENCES

1. Haylen, B. T., Maher, C. F., Barber, M. D., Camargo, S., Dandolu, V., Digesu, A., ... & Schaer, G. N. (2016). An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic organ prolapse (POP). *International urogynecology journal*, *27*(2), 165-194.
2. Faltin, D. L. (2009). Epidemiology and definition of female urinary incontinence. J Gynecol Obstet Biol Repod., 38(8 Suppl), S146-52.
3. Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J, et al.(2010).An International Uro-gynecological Association (IUGA)/ International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. Inturogynecol j, 21(1):5-26.
4. Liu CU, Andrews GR. Prevalence and incidence of urinary incontinence in the elderly: a longitudinal study in South Australia. Chin Med J. 2002;115(1):119–122 .
5. Felde G, et al. Anxiety and depression associated with urinary incontinence. A 10-year follow-up study from the Norwegian HUNT study (EPINCONT). Neurourol Urodyn 2017;36(2):322–8.
6. Schluter PJ, et al. Falls and hip fractures associated with urinary incontinence among older men and women with complex needs: a national population study. Neurourol Urodyn 2018;37(4):1336–43.
7. Senra, C., & Pereira, Mg. (2015). Quality of life in women with urinary ncontenance. Rev Assoc Med Bras, 61(2), 178-83.
8. Babic, U., Santric-Milicevic, M., Terzic, Z., Argirovic, A., Kojic, D., Stjepanovic, M., et al. (2015). Impact of Voiding and Incontinence Symptoms on Health-Related Life Quality in Serbian Male Population. Urol J, 12(3), 2196-203.
9. Wagg, A., Kung Chen, L., Johnson II, T., Kirschner-Hermanns, R., Kuchel, G., Markland, A., ... & Wyman, J. (2017). Incontinence in frail older persons. *Incontinence: 6th International Consultation on Incontinence, Tokyo, September 2016*, 1309-1442.
10. Khandelwal, C., & Kistler, C. (2013). Diagnosis of urinary incontinence. *American Family Physician*, *87*(8), 543-550.
11. Deandrea, S., Lucenteforte, E., Bravi, F., Foschi, R., La Vecchia, C., & Negri, E. (2010). Risk factors for falls in community-dwelling older people:" a systematic review and meta-analysis". *Epidemiology*, 658-668.
12. Luo, X., Chuang, C. C., Yang, E., Zou, K. H., Araiza, A. L., & Bhagnani, T. (2015). Prevalence, management and outcomes of medically complex vulnerable elderly patients with urinary incontinence in the United States. *International journal of clinical practice*, *69*(12), 1517-1524..
13. Markland, A. D., Richter, H. E., Fwu, C. W., Eggers, P., & Kusek, J. W. (2011). Prevalence and trends of urinary incontinence in adults in the United States, 2001 to 2008. *The Journal of urology*, *186*(2), 589-593.
14. Berardelli, M., De Rango, F., Morelli, M., Corsonello, A., Mazzei, B., Mari, V., ... & Passarino, G. (2013). Urinary incontinence in the elderly and in the oldest old: correlation with frailty and mortality. *Rejuvenation research*, *16*(3), 206-211.
15. Rizk DEE, Shaheen H, Thomas L, Dunn E, Hassan MY (1999). The prevalence and determinants of health care-seeking behavior for urinary incontinence in United Arab Emirates women. IntUrogynecol J, 10(3):160-5.
16. Langa, K. M., Fultz, N. H., Saint, S., Kabeto, M. U., & Herzog, A. R. (2002). Informal caregiving time and costs for urinary incontinence in older individuals in the United States. *Journal of the American Geriatrics Society*, *50*(4), 733-737.
17. Al-Badr A, Brasha H, Al-Raddadi R, Noorwali F, Ross S. (2012). Prevalence of urinary incontinence among Saudi women. IJGO, 117(2):160-3.
18. Brasha, H., Al-Raddadi, R., Noorwali, F., & Ross, S. (2012). Prevalence of urinary incontinence among Saudi women. *International Journal of Gynecology & Obstetrics*, *117*(2), 160-163.
19. Barber, M. D., Mullen, K. J., Dowsett, S. A., & Viktrup, L. (2005). The impact of stress urinary incontinence on sexual activity in women. Cleveland ClinicJ Med,72(3),225-232.
20. Riss, P., & Kargl, J. (2011). Quality of life and urinary incontinence in women.Maturitas,-68,137-142.
21. Bliss D, et al. Health literacy needs related to incontinence and skin damage among family and friend caregivers of individuals with dementia. *J Wound Ostomy Continence Nurs* 2013;40(5):515–23.
22. Robertson, A. S., Griffiths, C. J., Ramsden, P. D., & Neal, D. E. (1994). Bladder function in healthy volunteers: ambulatory monitoring and conventional urodynamic studies. *British journal of urology*, *73*(3), 242-249.
23. Wong, S. S. W. (2017). *Choice of urinary diversion after radical cystectomy: A UK perspective* (Doctoral dissertation, Newcastle University).
24. Sultan, A. H., Monga, A., Lee, J., Emmanuel, A., Norton, C., Santoro, G., ... & Haylen, B. T. (2017). An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female anorectal dysfunction. *International urogynecology journal*, *28*(1), 5-31.
25. Gibson, W., & Wagg, A. (2015). Urinary incontinence in the frail elderly. *Canadian Geriatrics Society CME Journal*, *5*(2), 56-70.
26. Ghafouri A, Alnaimi AR, Alhothi HM, Alroubi I, Alrayashi M, Molhim NA, Shokeir AA. Urinary incontinence in Qatar: A study of the prevalence, risk factors and impact on quality of life. Arab J Urol. 2014 Dec;12(4):269-74. doi: 10.1016/j.aju.2014.08.002. Epub 2014 Sep 10.
27. Brasha, H. (2008). Urinary incontinence among women: Prevalence, risk factors and barriers to health seeking in primary health care centers in Jeddah [dissertation]. Joint Program of Family & Community Medicine, Jeddah.
28. Buckley BS, Lapitan MCM (2010). Prevalence of urinary incontinence in men, women, and children-current evidence: Findings of the fourth international consultation on incontinence. Urology, 76(2):265-70.
29. Coyne KS, Kvasz M, Ireland AM,Milsom I, Kopp ZS, Chapple CR (2012). Urinary incontinence and its relationship to mental health and health-related quality of life in men and women in Sweden, the United Kingdom, and the United States. EurUrol, 61(1):88-95.
30. Thomas TM, Plymat KR, Blannin J, Meade TW (1980). Prevalence of urinary incontinence. Br Med J, 281(6250):1243-5

31. Markland AD, Richter HE, Fwu CW, Eggers P, Kusek JW (2011). Prevalence and trends of urinary incontinence in adults in the United States, 2001 to 2008. J Urol, 86(2):58993.
32. Ahmed El-Azab, Eman Mostafa Mohamed, Hanaa I Sabra , The prevalence and risk factors of urinary incontinence and its influence on the quality of life among Egyptian women. , 2007 in Neurourology and urodynamics.
33. Saleh N, Bener A, Khenyab N, Al-Mansori Z, Al Muraikhi A (2005). Prevalence, awareness and determinants of health care-seeking behaviour for urinary incontinence in Qatari women: A neglected problem? Maturitas, 50(1):58-65.
34. Shakhatreh FMN (2005). Epidemiology of urinary incontinence in Jordanian women. Saudi Med J, 26(5):830-5.
35. Nowall A Al-Sayegh, Al-Batool Leri , Amna Al-Qallaf, Hanan Al-Fadhli & Shouq Al-Sharrah , Urinary Incontinence in Kuwait: Prevalence and Risk Factors of Men and Women , International Journal of Health Sciences December 2014, Vol. 2, No. 4, pp. 47-57 ISSN: 2372-5060 (Print), 2372-5079
36. Altaweel W, Alharbi M. (2012). Urinary incontinence: Prevalence, risk factors, and impact on health related quality of life in Saudi women. Neurourol and Urodynam, 2; 31(5):642645
37. Minassian VA, Drutz HP, Al-Badr A (2003). Urinary incontinence as a worldwide problem. IJGO, 82(3):327-38. Norton PA (1990). Prevalence and social impact of urinary incontinence in women. ClinObstetGynecol, 33(2):295-7.
38. Ahmed Al-Badr, , Hadya Brasha, , Rajaa Al-Raddadi, Fatma Noorwali, and Susan Ross : Prevalence of urinary incontinence among Saudi women, International Journal of Gynecology. & Obstetrics , Volume 117, Issue 2 , May, 2012 . Pages 160–163
39. Marwan A. Bakarman1 & Sadiah S. Al-Ghamdi, The Effect of Urinary Incontinence on Quality of Life of Women at Childbearing Age in Jeddah, Saudi Arabia , Global Journal of Health Science; Vol. 8, No. 2; 2016 ISSN 1916-9736 E-ISSN 1916-9744.
40. CDSI. Central Department Of Statistics & Information. 2015; Available from: http://www.cdsi.gov.sa/english/
41. Golbidi, S. and Laher, I. (2010) Bladder Dysfunction in Diabetes Mellitus. Frontiers in Pharmacology
42. Herzog AR, Fultz NH. Prevalence and incidence of urinary incontinence in community-dwelling populations. J Am Geriatr Soc. 1990;38(3):273–281.
43. Campbell AJ, Reinken J, McCosh L. Incontinence in the elderly; prevalence and prognosis. Age Ageing. 1985;14(2):65–70.
44. Homma Y, Imajo C, Takahashi S, Kawabe K, Aso Y. Urinary symptoms and urodynamics in a normal elderly population. Scand J Urol Nephrol Suppl. 1994;157:27–30
45. Andrews GR, Cheok F. The Australian longitudinal study of aging: key findings of a multidimensional pilot survey study [Internet] Adelaide: Centre for aging studies; [cited 2010 May 17]; 1990:1–25.
46. Bani-Issa, W., Fakhry, R. and AlMomani, F. (2013) Urinary Incontinence in EmiratiWomen with Diabetes Mellitus Type 2: Prevalence, Risk Factors and Impact on Life. Journal of Clinical Nursing, 22, 3084-3094 .
47. Sinclair, A.J. and Ramsay, I.N. (2011) The Psychosocial Impact of Urinary Inconti-nence in Women. The Obstetrician & Gynaecologist, 13, 143-148.
48. Al-Sayegh, N.A., Al-Batool, L., Al-Qallaf, A., Al-Fadhli, H. and Al-Sharrah, S. (2014) Urinary Incontinence in Kuwait: Prevalence and Risk Factors of Men and Women. International Journal of Health Sciences .
49. Lobchuk MM, Rosenberg F. A qualitative analysis of individual and family caregiver responses to the impact of urinary incontinence on quality of life. *J Wound Ostomy Continence Nurs* 2014;41(6):589–96.
50. Branch LG, Walker LA, Wetle TT, DuBeau CE, Resnick NM. Urinary incontinence knowledge among community-dwelling people 65 years of age and older. J Am Geriatr Soc. 1994;42(12):1257–1262.

Appendix 1

The questionnaire

Urinary Incontinence Questionnaire A questionnaire to measure the extent to which people are aware of the disease
Urinary Incontinence Questionnaire

Dear respondent:
The information in this questionnaire is for education and research purpose only, and responses will be treated with all confidentiality. Please answer sincerely by ticking where appropriate or giving information as the case may be .

Please, note that this does not take you more than 10 minutes.

Thanks for your cooperation.

Researcher: Dr..... .
Family Medicine Resident

SECTION A: Socio demographics.

1. gender : □ Male □ female

2. Age in years :…….

3. Level of education :

primary intermediate
secondary High education
others

4. Occupation : ……

5. Economic level :

Low Average

High Other .....

Please answer each question by checking the best response. While answering these questions, please consider your symptoms over . We realize that you may not be having problems in some of these areas, but please fill out this form as completely

1.How often do you get up at night to urinate?.....
2.How often do you urinate during the day?.....

Urinary Incontinence Assessment

	Urinary Incontinence Assessment	Not at all	Rarely	Moderately	All of the time
1	Do you experience, and if so, how much are you bothered by…				
2	Frequency of urine leak				
3	Repeated the Leakage				
4	Small amounts of leakage (drops)				
5	Difficulty emptying bladder				
6	Do you have to rush to the bathroom because you get a sudden, strong need to urinate?				
7	Leakage related to physical activity				
8	Leakage related to physical activity, coughing, or sneezing				
9	Pain or discomfort in lower abdominal or genital area				

Urinary Incontinence Questionnaire

	Urinary Incontinence Questionnaire	Yes	No
1	Do you usually have a strong sense of urgency to urinate?		
2	Are there times when you don't make it to the bathroom and leak urine?		
3	Does the sight, sound, or feel of running water cause you to lose urine?		
4	Do you ever lose urine when lying down?		
5	When urinating, can you usually stop your stream?		
6	Do you ever accidentally wet the bed while sleeping?		
7	Do you dribble urine after voiding?		
8	Were you ever catheterized because you were unable to void?		
9	Do you ever pass blood in your urine?		
10	Have you ever passed sand, gravel, or stones?		
11	for female Did your urinary difficulty beginDuring a pregnancy?		
	Following a delivery?		
	Following an abdominal or vaginal operation?		
	After menopause?		

Some people find that accidental urine loss may affect their activities, relationships, and feelings. The questions below refer to areas in your life that may have been influenced or changed by your problem. For each question, circle the response that best describes.

	Has urine leakage affected your	not at all	slightly	moderately	greatly
1	Ability to do household chores (cooking, Housecleaning, laundry)?				
2	Physical recreation such as walking, Swimming, or other exercise?				
3	Ability to travel by car or bus more than 30 minutes from home?				
4	Participation in social activities outside Your home?				
5	Emotional health (nervousness, Depression, etc.)?				

Thank you for undertaking the time in responding to this study.

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