

## Risk factor of urinary incontinence among menopausal women at Babylon city

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### المستخلص:

الهدف: للتعرف على عوامل خطورة الإصابة بسلس البول في سن ما بعد الإنجاب.

المنهجية: أجريت دراسة وصفية تحليلية للتعرف على عوامل خطورة الإصابة بسلس البول في سن ما بعد الإنجاب في محافظة بابل. تم اختيار عينة عمدية لمتن امرأة في سن ما بعد الإنجاب من عمر (45-65) سنة والمصابات بسلس البول والمرافقات لمرضاهن في مستشفى الحلة الجراحي من خلال مليء الاستمارة الاستبائية التي تم تحديد الصدق والثبات من خلال الدراسة الاستطلاعية.

النتائج: أشارت نتائج الدراسة إن 74% من مجتمع العينة متزوجات و 43,5% لا تقرأ ولا تكتب و 19% يعانن من السلس الإلحاحي و 16,5% السلس التوتري و 38% يعانن من السلس المختلط بينما 10,5% يعانن من الدرجة المتوسطة و 38,5% من الدرجة الشديدة. وكذلك أظهرت نتائج الدراسة وجود علاقة ذات دلالة إحصائية بين نوع السلس والعمر عند الزواج والعمر عند أول حمل وعدد الولادات. أظهرت الدراسة أيضا وجود علاقة ذات دلالة إحصائية بين شدة السلس والعمر (بالسنين) والعمر عند الزواج والعمر عند أول حمل وزيادة كتلة الجسم. أظهرت الدراسة أيضا وجود علاقة ذات دلالة إحصائية بين الفترة الزمنية للسلس والحالة المهنية والحالة الاقتصادية والعمر (بالسنين) عدد الولادات وعدد مرات الإسقاط. كشفت الدراسة أيضا أن عوامل خطورة تتضمن التدخين وعدد الولادات ونوع الولادات وإجراء عمليات جرف الرحم السابقة وعملية رفع الرحم السابقة والإصابة بداء السكر وضغط الدم والتهابات المجاري البولية والسعال المزمن والإمساك وهطول جدار الرحم والمهبول والولادة العسرة.

### Abstract:

**Purpose:** To identify the risk factors of urinary incontinency for menopausal women.

**Methodology:** A descriptive analytic study was conducted to identify the risk factor for urinary incontinency and selected non-probability sample (purposive sample) from (200) menopausal women (45-65) who have urinary incontinence as visitors and caregiver women who attend at Hila surgical teaching hospital during the period 1/11/2010-30/3/2011. Questionnaire format used for data collection was designed and constructed after reviewing related literatures and previous studies and consists of the following variables: Demographic and reproductive characteristics of menopausal women who suffers from urinary incontinence

**Results:** The study found that the highest percentage was (33.5%, 32%) of study sample their age group (50-54, 45-49) years, (74%) they are married and (43.5%) was illiterate. Women in this study had (19%) urge incontinence, (16.5%) stress incontinence with (38%) having mixed incontinence while (10.5%) mild incontinence with 38.5% having sever incontinence. And the results show that there was statistical significant correlation coefficient between type of urinary incontinence and Age at marriage (years), Age at first pregnancy (years) and parity. There was statistical significant correlation coefficient between degree of urinary incontinence and age (years), age at marriage, age at first pregnancy (years) and body mass index. There was statistical significant correlation coefficient between duration of urinary incontinence with occupation and economical status age (years), parity, and number of abortion. The other risk factors include smoking, parity, types of deliveries, previous curettage, previous hysterectomy, Diabetic Mellitus, hypertension disorder, urinary tract infection, coughing, constipation, genital prolapsed and obstructed delivery.

**Keywords:** Risk factors, urinary incontinence and menopausal women

### Introduction:

Urinary Incontinence is the involuntary loss or leakage of urine. The proportion of stress incontinence increased from (51% to 77%) and the mixed type decreased from (11% to 30%), while proportion of the urge type remained similar (10% to 12%)<sup>(1)</sup>. Urinary incontinence have negative effects on women's quality of life, especially on the medical, physical, social, psychological, economical and sexual aspects<sup>(2,3)</sup>. Women affected by urinary incontinence more prevalent than men; one in 10 women under age (65) years suffers from

urinary incontinence. A study published in late 2002 found that between 21% and 29% of adult women in the workforce reported at least one episode of urinary incontinence each month and older Americans are more prone to urinary incontinence. In general, the condition is still under recognized and under treated<sup>(4)</sup>. UI is one of the most unpleasant and distressing problems among women and they suffer both psychologically and socially. Urinary Incontinence starts gradually over time and increases, often to the point of causing women to stop doing many of their normal activities

and may also increase the risk of falls in elderly persons. Urinary incontinence cause wetness, odor, discomfort, and skin irritation, it can also damage self-esteem as a result of shame and embarrassment. Women report that incontinence has affected sexual relationships with their partners because of the fear of urine leakage during sexual activity. Women who are suffering from urge incontinence often limited social interaction and excursion as a consequence of their condition<sup>(5)</sup>.

UI is more common among older women, one third of women with this problem develop it before age 35. In addition there are multi-factorial risk factors associated with urinary incontinence include race, pregnancy, birth, menopause, hysterectomy, obesity, heavy lifting at work, chronic cough, depression and family history. Urinary incontinence have negative effects on women's quality of life, especially on the medical, physical, social, psychological, economical and sexual aspects<sup>(2,3)</sup>. Urinary incontinence is one of the most distressing and debilitating conditions among women population. It is not only psychological, social and hygienic problem but also has an effect on the quality of life<sup>(6)</sup>. Iraqi women have to spend approximately 24 years of their life in the menopausal period<sup>(7)</sup>. So in this period there are many physiologic changes occur as a process of aging. Some are the consequences of the decreased ovarian function, and the results estrogen deficiency such as vasomotor symptoms, bone changes,

#### **Methodology:**

A descriptive analytic study was conducted to identify the risk factor for urinary incontinency and was conducted from (200) visitors and caregiver women who attend at Hila surgical teaching hospital during the period 1/11/2010-30/3/2011. Non-probability sample (purposive sample) consisted of (200) menopausal women (45-65) who have urinary incontinence are selected from Hila surgical teaching hospital Babel. Questionnaire format

changes in the vascular system and genito-urinary system and also somatic changes in the vagina such as thinning of the urethral mucosa, loss of urethral closure pressure and alteration of the normal urethrovesical angle cause urinary incontinence in women<sup>(8)</sup>. Urinary incontinence is a common problem among menopausal women and can seriously affect their quality of life. Iraqi women do not seek medical advice and treatment for a urinary incontinence problem and still this problem is underestimated and neglected by nurses and health care providers so there is a need to analyze studies involve women with urinary incontinence is a priority and relevant to understand their experiences as well as the reactions associated to episodes of urinary loss in addition to identify the risks factors associated with UI, so the problem was identify risk factors which contributed with urinary incontinence among menopausal women at Babylon city.

#### **Objectives of the study:**

1. To assess the risk factors of urinary incontinence among menopausal women.
2. To identify degree, duration and type of urinary incontinence among menopausal women.
3. To find out the relationship of urinary incontinence variables (type, severity and the duration) and socio demographic and reproductive variables as age, marital state, educational level, parity and body mass index among study sample.

used for data collection was designed and constructed after reviewing related literatures and previous studies and consists of the following variables: Demographic and reproductive characteristics of menopausal women who suffers from urinary incontinence such as: age, education level, occupation status, economic status age at marriage, number of abortion, number of curettage, smoking and residence. Urinary incontinence screening tool to assist in identify the type of

urinary incontinency according to Mello and Evelyn<sup>(9, 10)</sup>. The severity index scale to evaluate the degree for urinary incontinence<sup>(11)</sup>. Statistical procedure includes: Descriptive

Statistics (frequencies and percentage, Mean and Standard Deviation) and inferential Statistics (Chi-Square) was used for data analysis.

## Results:

**Table 1.** Participants' socio-demographic characteristics (n=200)

Demographic variables	Frequency	Percent
Age group (years)		
45-49	64	32
50-54	67	33.5
55-59	39	19.5
60-64	22	11
65> more	8	4
$\bar{X}=52.39 \pm 5.65$		
Social Status		
Married	148	74
Divorced& Separated	4	2
Widow	48	24
Educational Level		
Illiterate	87	43.5
Read& write	18	9
Primary school graduate	42	21
Intermediate school graduate	11	5.5
Secondary school graduate	16	8
Institution graduate	4	2
University graduate & Higher education	22	11
Occupation		
Formal employment	34	17.1
Private employment	2	1
Retired	10	5
Housewife	154	77
Economical status		
Enough	20	10
Just enough	44	22
Not enough	136	68
Body Mass Index:		
Underweight= (<18.5) Kg/m <sup>2</sup>	1	0.5
Normal range= (18.5-24.99) Kg/m <sup>2</sup>	29	14.5
Overweight= (pre obese)(25-29.99) Kg/m <sup>2</sup>	60	30
Obese class1=(30-34.99) Kg/m <sup>2</sup>	56	28
Obese class2=(35-39.99) Kg/m <sup>2</sup>	35	17.5
Obese class3 >40 Kg/m <sup>2</sup>	19	9.5
$\bar{X}=30.51 \pm 6.54$		
Smoking:		
Not smoker	53	26.5
Negative smoker	119	59.5
Positive smoker	28	14

Age group (years): Table(1) shows that the highest percentage was (33.5%,32%) of study sample their age group (50-54,45-49) years respectively, while the lowest percentage (4%)of them, their age was 65 years and more and the mean age with SD. was  $52.39 \pm 2.65$  years. Social Status: The highest percentage (74%) was married women and live with their husbands while the lowest percentage (2%) of them, were divorced and separated. Educational Level: (43.5%) of study sample was illiterate, while the lowest percentage (2%) of them was institution graduate. Occupation: (77%) of study sample was housewife, while the lowest percentage

(1%) of them was private employment. Economic status: (68%) of study sample did not have enough income from their point of view, while the lowest percentage (10%) of them had enough economical status. Body Mass Index: The highest percentage was (85%) of study at overweight while the lowest percentage (14.5%) of them, their body mass index was within normal range (18.5-24.99) and (0.5%) was underweight and the mean with SD. was  $30.51 \pm 6.54$ . Smoking: (14%) of study sample are positive smoker while (59.5%) of study sample are negative smoker while (26.5%) of them aren't smoker.

**Table 2.** Participants' reproductive characteristics

Reproductive variables		Frequency	Percent
Age at marriage:	10-14	44	22
	15-19	66	33
	20-24	58	29
	25-29	24	12
	30& more	8	4
$\bar{X} = 18.87 \pm 4.96$			
Age at first pregnancy:	11-15	18	21.5
	16-20	69	34.5
	21-25	64	32
	26-30	18	9
	31& more	6	3
$\bar{X} = 20.15 \pm 5.1$			
Parity	1-4	48	24
	5-8	102	51
	9-12	47	23.5
	13-16	3	1.5
$\bar{X} = 6.625 \pm 2.69$			
*Types of delivery	1- Normal delivery.	193	96.5
	2-Forceps delivery	4	2
	3-Normal vaginal delivery With episiotomy.	14	7
	4-Cesarean section delivery.	47	23.5
Abortion	None	83	41.5
	1-3	98	49
	4-6	17	8.5
	7-8	2	1
Previous curettage	Yes	95	47.5
	No	105	52.5
Number of curettage	1	52	54.7
	2	17	17.9
	3 and more	26	27.4

Table (2) shows that the highest percentage (33%) of study sample, their age at marriage was at age group (15-19) years, while the lowest percentage (4%) of them, their age was (30 and more) years and the mean with SD. of age was  $18.87 \pm 4.96$  years. Age at first pregnancy: The highest percentage (34.5%, 32%) of study sample their age at first pregnancy was (19-20, 21-25) years respectively, while the lowest percentage (3%) of them, their age was (31 and more) years and the mean with SD. of age was  $20.15 \pm 5.1$  years. Parity: The highest percentage (51%) of study sample their parity was (5-8) deliveries, while the lowest percentage (1.5%) of them,

their parity had (12-13) deliveries. Types of deliveries: (96.5%) of study sample have normal vaginal deliveries while (2%) of study sample have Forceps delivery and (7%) of study sample have normal vaginal deliveries with episiotomy, and (23.5%) have Cesarean section delivery. Abortion: The highest percentage (49%) of study sample had (1-3) abortion, while the lowest percentage (1%) of them, had (7-8) abortions. Previous curettage: (54.7%) of menopausal women who have previous curettage, they have one curettage while (27.4%) of them have three and more curettage.

**Table 3.** Distribution of the study sample accords to previous history for surgical and medical disorders (n=200).

Surgical and medical disorders.	Frequency	Percent
1- Hysterectomy	18	3
2- Myomectomy	6	3
3- Diabetic Mellitus.	27	13.5
4- Hypertension disorder.	91	54.5
5-Reccurant Urinary tract infection.	111	55.5
6-Chronic Cough	95	47.5
7- Chronic constipation.	101	50.5
8- Genital prolapse.	84	42
9- Prolonged delivery.	4	2
10- Obstructed delivery.	2	1

Table (3) shows that there was 3% of study sample had previous Hysterectomy. 3% of study sample had previous Myomectomy. (13.5%) of study sample had Diabetic Mellitus. (54.5%) of study sample had hypertension disorder. The majority of study sample (55.5%) had recurrent

urinary tract infection. (47.5%) of study sample had coughing. (50.5%) of study sample had the risk factor of constipation. (42%) of study sample had genital prolapse. (2%) of study sample had prolonged deliveries. (1%) of study sample had obstructed deliveries.

**Table 4.** Distribution of the study Sample according to Types, degree and duration of urinary incontinence. (n=200).

Variables	Frequency	Percent
Types of urinary incontinence		
Urge incontinence	31	15.5
Stress incontinence	38	19
Mixed incontinence	131	65.5
Degree of urinary incontinence		
Mild	21	10.5
Moderate	77	38.5
Severe	102	51
Duration of incontinence(years)		
>1	21	10.5
1-2	46	23
3-4	36	18
5-6	23	11.5
7-8	13	6.5
9-10	61	30.5
$\bar{X} = 5.0452 \pm 3.466$		

N=number, F. = frequency, %=percentage

Table (4): shows that the higher percentage was 65.5% of the study Sample had mixed incontinence, 19% stress incontinence and 15.5% of them had urge incontinence. The highest percentage 51% had severe incontinence, 38.5% have moderate degree and the lowest percentage 10.5% had mild degree. The highest percentage 30.5% had UI for the duration (9-10) years while the lowest percentage 6.5% had urinary incontinence for the duration (7-8) years.

**Table 5.** shows the nonparametric correlation coefficient between demographic & urinary incontinence variables (n=200).

Variables	Type of urinary incontinence		Degree of urinary incontinence		Duration of urinary incontinence	
	R	Sig. (2-tailed)	R	Sig. (2-tailed)	R	Sig. (2-tailed)
Social Status	0.088	0.215	0.143*	0.043	0.043	0.546
Educational Level	-0.355**	0.000	-0.297**	0.000	-0.343**	0.000
Occupation	0.251**	0.000	0.213**	0.002	0.224**	0.001
Economical status	0.297**	0.000	0.266**	0.000	0.271**	0.000
Current smoker	-0.151*	0.033	-0.068	0.341	-0.031	0.659
Negative smoker	0.097	0.173	0.146*	0.039	-0.087	0.218

R=relative, Sig=Significant

\*\*Spearman's Correlation is significant at the 0.01 level (2-tailed).

\* Spearman's Correlation is significant at the 0.05 level (2-tailed).

Table (5) shows that there was a significant correlation coefficient between type of urinary incontinence with educational

Level, occupation and economic status. There was a significant correlation coefficient between degrees of urinary incontinence and

educational level, occupation and economic status. There was a significant correlation between duration of urinary incontinence and occupation and economic status.

coefficient between duration of urinary

**Table 6.** Person correlation coefficient between degrees of urinary incontinence duration of urinary incontinence with menopausal women characteristics.

Variables	Type of urinary incontinence		Degree of urinary incontinence		Duration of urinary incontinence	
	Correlation	Sig. (2-tailed)	Correlation	Sig. (2-tailed)	Correlation	Sig. (2-tailed)
Age(years)	0.020	0.777	0.150*	0.034	0.212**	0.003
Age at marriage(years)	-0.247**	0.000	-0.289**	0.000	0.019	0.791
Age at first pregnancy(years)	-0.255**	0.000	-0.276**	0.000	-0.014	0.849
Parity	0.309**	0.000	0.300**	0.000	0.158*	0.026
BMI	-0.015	0.837	0.156*	0.027	-0.085	0.233
Number of abortion	-0.048	0.496	0.130	0.067	0.240**	0.001
Number of curettage	0.052	0.463	0.130	0.066	0.086	0.224

**Sig=Significant**

**\*\*Person's Correlation is significant at the 0.01 level (2-tailed).**

**\* Person's Correlation is significant at the 0.05 level (2-tailed).**

Table (6) shows that there was a significant correlation coefficient between type of urinary incontinence and Age at marriage (years), Age at first pregnancy (years) and parity. There was a significant correlation coefficient between degree of urinary incontinence and age (years), age at marriage, age at first pregnancy (years) and BMI. There was a significant correlation coefficient between duration of urinary incontinence and age (years), parity, and number of abortion.

## Discussion:

The present study reveals that the highest percentage (33.5%, 32%) of study sample at age group (50-54, 45-49) years respectively, with the mean age and SD. of study sample is  $52.39 \pm 2.65$  as shown in table (1). The findings of the present study indicate that there are statistical significant correlation between age (years) and duration of leakage of urine ( $P = 0.003$ ) and degree ( $P = 0.034$ ) and duration of urinary incontinence as shown in table (4). It is showed that there was a correlation between the risk of urinary

incontinence and age, with the development of menopause, the frequency of lower urinary tract symptoms, such as urgency, hesitancy and frequency increased. And they noted a high incidence of incontinence in the elderly population, the study finding a 30% higher prevalence for each 5-year increase in age<sup>(12)</sup>.

**Social Status:** The highest percentage (74%) of the study sample was married women and 24% was widow (3%) of them were divorced and separated. The finding of the study revealed significant correlation coefficient between

Social Status and degree of urinary incontinence ( $P=0.043$ ) as shown in table (5). The result is consisted with it is showed that the prevalence of urinary incontinence among marriage women which is similar to the results of international research<sup>(12)</sup>.

**Educational Level:** (43.5%) of study sample was illiterate, while the lowest percentage (5.5%) of them Intermediate school. The study revealed a significant correlation coefficient between educational level with degree of leakage of urine ( $P= 0.000$ ) and with duration of urinary incontinence ( $p = 0.000$ ) and types of urinary incontinence ( $p = 0.000$ ) as shown in (table 6). It is stated that the study shows that educational level is correlated with the occurrence of urinary incontinence, increased education helps to avoid the occurrence of urinary incontinence may be a higher education level women are more concerned about their health and prevention<sup>(12)</sup>.

**Occupation:** (77%) of study sample was housewife, while the lowest percentage (1%) of them private employment. The study revealed a significant correlation coefficient between occupation level with degree of urinary incontinence ( $p= 0.002$ ) and duration of leakage of urine ( $P= 0.001$ ) as shown in table (6). It is stated that self-reported negative impact of incontinence on aspects of work increased with the increasing severity of symptoms<sup>(13)</sup>. **Economical status:** (68%) of study sample was not enough income from point of view, while the lowest percentage (10%) of them enough economical status. The study revealed a significant correlation coefficient between economical status with degree of urinary incontinence ( $p = 0.000$ ) and duration of leakage of urine ( $P= 0.000$ ) as shown in table (6). It is mentioned that in the United States it may affect 13 million people with an economic cost of more than 20 billion dollars and with the aging population the number of people with urinary inconstancy and

funds spent on managing incontinence will expected continue to grow<sup>(10)</sup>.

**Body Mass Index:** The highest percentage for body mass index women was (30%) of study sample at level Over weight (pre obese) (25-29.99 kg/m<sup>2</sup>) while the lowest percentage (15%) of them; the Body Mass Index was within normal range (18.5-24.99 kg/m<sup>2</sup>). The study revealed a significant correlation coefficient between Body Mass Index with degree of urinary incontinence ( $p =0.027$ ) as shown in table (6). Danforth et al. (2006) stated that the Body mass index was strongly associated with incontinence in comparing with obese women (BMI  $\geq 30$  kg/m<sup>2</sup>) women to those with BMI 22-24 kg/m<sup>2</sup>. Women with BMI's less than 22 kg/m<sup>2</sup> had significantly reduced odds of incontinence compared to those with BMI's of 22-24 kg/m<sup>2</sup><sup>(14)</sup>.

**Smoking: Current smoker:** (14%) of study sample was positive smoker. The study revealed a significant correlation coefficient between Current smoking with types of urinary incontinence ( $p =0.0.33$ ). (As shown in table 6). Negative smoking: (59.5%) of study sample was negative smoker and (26.5%) of study sample are not smoking. The study revealed a significant correlation coefficient between negative smoking with degree of urinary incontinence ( $p =0.039$ ) as shown in table (6). It is mentioned that cigarettes do severe damage to reproductive organs. Smoking is responsible for respiratory diseases and many longtime smokers suffer from chronic cough and excessive phlegm<sup>(15)</sup>.

#### **Reproductive characteristic:**

**Age at marriage:** One third of study sample their age at marriage was (15-19) years, while the lowest percentage (4%) of them, their age was (30 years and more) and the mean with SD. of age was  $18.87 \pm 4.96$  years. The study revealed a significant correlation coefficient between age at marriage with degree of urinary incontinence ( $p = 0.000$ ) as shown in table (6). More than one third of study sample

their age at first pregnancy ranged between (19-20) years, while the lowest percentage (3%) of them, their age was (31& more) years and the mean with SD. of age was  $20.15 \pm 5.1$  years. The study revealed there was a significant correlation coefficient between age at first pregnancy and types urinary incontinence ( $p = 0.000$ ) and degree of urinary incontinence ( $p = 0.000$ ) as shown in table (6). Hijaz (2009) stated that age was a significant influence on incontinence, with women who had their first child before the age of 20 being 50 % more likely to have problems with incontinence <sup>(17)</sup>. It is stated that the Immaturity of the reproductive system and child bearing below the age of 18 years may predispose a woman for incontinence. Further, in India, marriage and childbearing are traditionally at younger ages, so the present study finding revealed that 62% of the incontinent women had their first childbirth at an age less than 18 years <sup>(18)</sup>.

**Parity:** Table (2) shows more than half of study sample at party group (5-8), while the lowest percentage (1.5%) of them, their parity group was (13-16) deliveries. The study revealed a significant correlation coefficient between Parity with types of incontinence ( $P=0.001$ ) (as shown in table 6). The finding consisted with it is stated that Parity was positively associated with incontinence. Childbearing is a risk factor for urinary incontinence; the labor and delivery process may cause pelvic floor dysfunction as a result of nerve damage, muscular damage, and direct tissue stretching and disruption. 51% of the incontinent women had born more than 5-8 children in their obstetrical career. Pregnancy and Child birth, when stress begins during the first pregnancy and especially the first delivery, the risk of episode of urinary incontinence, 12 years later is significantly increased <sup>(14)</sup>.

**Types of delivery:** Vaginal delivery: Table (2): shows that the majority (96.5%) of study sample have normal vaginal deliveries and (7%) of them have normal vaginal delivery with

episiotomy and (2%) of study sample have Forceps delivery vaginal delivery. Cesarean **section delivery:** (23.5%) of study sample they have Cesarean section deliveries while (76.5%) of them they haven't Cesarean section delivery. It is (2011) stated that the modes of delivery, the women who had undergone a caesarean section had a higher ratio of outcome of urinary incontinence, so the emergency caesarean section may not be protective for urinary incontinence. Cesarean delivery may avoid trauma to the muscles and connective tissue of the pelvic floor and damage to the pudendal and pelvic nerves that are associated with vaginal delivery <sup>(18)</sup>. Medical and surgical disorders: Table (3) shows the majority of study sample (3%) of them have previous hysterectomy and (3%) of them have myomectomy. It is stated that partial denervation of the detrusor appears to be the mechanism responsible for this post-junctional super sensitivity. During hysterectomy blunt dissection of the bladder from the uterus and cervix may damage a major part of the detrusor innervations, and division of the chief ligaments may also damage the main branches of the pelvic plexus. It is unlikely that hysterectomy causes direct damage to these structures <sup>(16)</sup>.

**Diabetic Mellitus:** (13.5%) of study sample have Diabetic Mellitus. Yerkes, (1998) mentioned that urinary incontinence for diabetic women called cystopathy, or neurogenic bladder is considered a form of autonomic neuropathy. It begins with selective damage to autonomic afferent nerves, leaving motor function intact but impairing the sensation of bladder fullness and, therefore, resulting in decreased urinary frequency. As this neuropathy progresses, autonomic efferent nerves become involved leading to incomplete bladder emptying, urinary dribbling, and urinary incontinence. Although less than 1% of all neuropathies are related to the neurogenic bladder, due to the prevalence

of diabetes, the prevalence of obesity (a risk factor for urinary incontinence) among patients with type two diabetes <sup>(19)</sup>. Urinary Tract infection: Table (3): shows the majority of study sample (55.5%) have Urinary tract infection while (44.5%) of them haven't urinary tract infection. Urinary incontinence predisposing factor for urinary tract infections and more common after menopause. Coughing: The majority of study sample (47.5%) have coughing while (52.5%) of them haven't coughing risk factor. It is stated that stress urinary incontinence affects 10% to 30% of the female population having interstitial lung disease; chronic cough may lead to development of urinary incontinence <sup>(20)</sup>. Constipation: (50.5%) of them having the risk factor of constipation while (49.5%) of them haven't. It is stated that Constipation (bowel frequency of less than twice a week), and increased straining at stool in early adult life, may be associated with an increased tendency to prolapse are associated with urinary incontinence and other lower urinary tract symptoms <sup>(21)</sup>. Uterine/or vaginal wall prolapse: The majority of study sample (42%) have Uterine/or vaginal wall prolapse while

(58%) of them they haven't Uterine/or vaginal wall prolapse risk factor. It is stated that Pelvic prolapse, women may present with a vaginal bulge or pressure while standing that may resolve when they are supine. Many women with symptomatic cystoceles also have associated lower urinary tract symptoms including stress incontinence, urgency with or without urge incontinence, and a sensation of incomplete bladder emptying <sup>(22)</sup>.

**Conclusion:** There were many risk factors that contribute in incidence urinary incontinence with the development of menopausal period, include age educational level, body mass index (obesity), smoking, age at marriage, parity, normal vaginal deliveries, medical and surgical disorders as Diabetic Mellitus, urinary tract infection, chronic coughing and uterine/or vaginal wall prolapsed.

**Recommendation:**

Constructing a strategy to identify menopausal women the risk factors of urinary incontinence to maintain their health by preventing, treating and coping. Media educational programs for women about the risk factors of urinary incontinence.

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