

## The Associations between Episiotomy and Urinary Incontinence among Postpartum Women

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**Abstract:** Recent evidence proved declined episiotomy rate worldwide while it remains high in many countries such as Kingdom of Saudi Arabia. The role of episiotomy in the emergent of pelvic floor dysfunction remains relatively vague. Postpartum urinary incontinence is one of the common women health concerns issue. Approximately one in three women report postpartum urinary incontinence. It affects women's quality of life and their self-esteem.

**Research Question:** is there any association between episiotomy and urinary incontinence?

**Study Aim:** To identify the association between episiotomy and urinary incontinence among postpartum women.

**Study Design:** Quantitative correlational design.

**Setting:** Medina Maternity and Children's Hospital.

**Sampling:** Convenience sample including 192 postpartum women, who fulfill the inclusion criteria.

**Study period:** Data was collected over five months from May until October 2018.

**Tools:** Self-administered questionnaire consisted of three parts, part I: women's socio-demographic data, part II: women's medical and obstetrical history, part III: revised urinary incontinence scale.

**Result:** The prevalence of urinary incontinence among episiotomy women was 16.7%. The presence of stress urinary incontinence was higher than urge urinary incontinence among study participants (the rate is 19.3% and 9.4% respectively). Episiotomy was not correlated to the occurrence of postpartum urinary incontinence. Age, level of education and period from one to three months postpartum was the most correlated to presence of urinary incontinence.

**Conclusion:** Urinary incontinence is moderately prevalent in postpartum women and episiotomy was not correlated to the presence of postpartum urinary incontinence.

**Recommendations:** Further study on the effect of urinary incontinence on daily women's life and the methods to overcome this issue is recommended. Episiotomy practice protocol must be evaluated and modified.

**Keywords:** Episiotomy, urinary incontinence, postpartum, vaginal delivery

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Date of Submission: 27-08-2019

Date of Acceptance: 11-09-2019

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### I. Introduction

The postpartum period is a time of joy and intimacy, but it can also generate challenges due to childbirth and interventions during the second stage of labor [1]. Perineal damage during childbirth can have major long-term consequences for women, including persistent postpartum perineal pain, urinary and fecal incontinence, reduced quality of the birthing experience, disturbance of initial neonatal bonding, and weakness of the pelvic floor muscles [2]. It is estimated that approximately 70% of women who have vaginal birth sustain perineal trauma [3]. Episiotomy is an intentional perineal trauma. It is a surgical, planned incision on the perineum and posterior vaginal wall performed during the second stage of labor to help delivery of the baby [4].

Episiotomy was first described in 1741[5]. The practice of episiotomy spread widely throughout the world, with a steady increase in rates in the first half of the 20<sup>th</sup> century [6]. However, research claiming that episiotomy has no benefits has been published, and many studies have stressed that routine use of episiotomy should be avoided [5].

Urinary incontinence (UI) is a significant health problem that restricts women's daily activities, although some women consider it to be a petty health problem or a natural consequence of childbirth [5]. It has multifactorial causes. Obesity, aging, chronic coughing, constipation, and obstetric trauma are known to be the most significant risk factors [7]. Urinary incontinence is defined as the involuntary loss of urine and manifests as a social and hygienic problem [8]. It can lead to significant emotional and physical distress, including depression, decreased self-esteem and social isolation as it limits patients' daily activities [9].

Urinary incontinence can be categorized into three main types: stress, urge, and mixed type [8]. Approximately 1 in 3 women reports postpartum urinary incontinence [12]. The urinary incontinence rate has not been estimated for the whole Kingdom of Saudi Arabia, but in three studies conducted in Riyadh, Jeddah, and Jazan, it was 29%, 41.4%, and 44.25% respectively [13, 14, 15]. Nurses and Midwives play a crucial role in the care of women throughout all childbirth phases. Midwives advocate and protect women from harmful and inessential interventions that may result in negative birth experiences [16].

To prevent and manage postpartum urinary incontinence, women should be instructed to perform proper pelvic floor muscle training (PFMT) during pregnancy and postpartum period [17].

### **Significance of the Study:**

Urinary incontinence is a sensitive subject, so women may tend to underreport it, and consequently, studies may underestimate its prevalence [18]. From the researcher's perspective as a Muslim, urinary incontinence raises religious and spiritual issues, particularly the patients' inability to perform ablution, which can affect their daily prayers and other worship.

The impacts of childbirth on urinary incontinence among postpartum women in the Kingdom of Saudi Arabia have seldom been studied. This study is a trial to fill this information gap in the literature and highlight the occurrence of postpartum urinary incontinence. The study results can contribute to increasing maternal and health care providers' awareness of this issue.

### **Research Aim**

The aim of the present study is to identify the association between episiotomy and urinary incontinence among postpartum women.

### **Objectives of the Study**

To achieve the aim of the study, the following objectives are set:

- 1-Assess the episiotomy type, indications, and suturing among postpartum women
- 2- Determine the associations of urinary incontinence and selected demographic variables
- 3-Determine if there is association between episiotomy and urinary incontinence.

### **Research Questions**

Is there any association between episiotomy and urinary incontinence?

### **Operational Definition**

Postpartum period: in the current study it encompasses the period from one month following delivery to less than 24 months.

## **II. Subjects & Method:**

**Research design:** A quantitative, correlational, cross-sectional design.

**Research Setting:** the study was conducted at the main hospital in Medina, Saudi Arabia. The Medina Maternity and Children's Hospital (MMCH) is affiliated with the MOH and the major obstetrics and gynecology specialty center in the western region of the country. The MMCH provides free services for clients of all different socioeconomic and cultural backgrounds with bed capacity of 500.

**Sample size:** A convenience non-probability sample technique was used. The total sample size 192 postpartum women who attended at the previously mentioned settings during the period of six months started from May 2018 to October 2018, according the following inclusion criteria: all postpartum women who had delivered through SVD with episiotomy from 6 weeks to 2 years earlier. The women had no previous medical or urogynecology diseases and were free of past urological surgery. Sample size was calculated by using Stephen Thompson formula for sample size calculation, and with consultation of statistician [Confidence interval (CI) = 95.0%, confidence limit = 0.05]. The sample size was calculated using Thompson's formula for sample size calculation, with the consultation of statisticians (CI = 95.0%, confidence limit = 0.05). Using this formula, the sample size required for this study was calculated to be 166 women. However, the study had specific sampling inclusion criteria, and a convenient number of women were considered to be the sample size, so extra participants were recruited to account for the non-response rate (dropouts).

### **Tools of data collection:**

The questionnaire consisted of three parts:

**Part I:** Socio-demographic data and clinical data assessment: This part included 11 questions about age, marital status, nationality, educational level, monthly income, BMI, smoking habits, performance of pelvic floor muscle exercises, and women's current and past medical and surgical history.

**Part II: Obstetric History:** This part included 14 questions about women's current and previous obstetric information, such as gravidity, parity, previous obstetric complications, history of previous delivery, and number of abortions. It also captured information about most recent delivery, epidural anesthesia, intrapartum and immediate postpartum complications, and episiotomy type, indication, and repair method.

**Part III: Self-structured questionnaire assessing urinary incontinence:** It was adopted from the Australian Centre for Health Service Development. The revised Urinary Incontinence Scale (RUIS) is a short, reliable, valid, 5-item scale for assessing urinary incontinence, supported by the Australian Government Department of Health and Ageing. It consists of five Likert questions regarding physical activity, coughing, sneezing, and urgency, frequency, and amounts of urine leakage. The RUIS total score is calculated by adding a person's scores for all five questions, resulting in a possible score range of 0–16. Scores of less than 4 are not considered to indicate urinary incontinence, while scores of 4–8 indicate mild urinary incontinence, scores of 9–12 moderate urinary incontinence, and scores of 13 or more severe urinary incontinence.

**Validity and Reliability:** To evaluate the face and content validity and reliability of the instrument in this study, the content of the tool was revised by three scholars in maternity and women's health nursing. In this study, the result of the reliability test was 0.954. This value was considered to be excellent and indicated the reliability of the questionnaire to accomplish the objectives of the study.

**Ethical considerations:** The research proposal for this study was first approved by the ethical committee of the nursing faculty at King Abdulaziz University in Jeddah. The researcher also obtained approval from both MOH and MMCH committees to facilitate access to the participants and gather the necessary data. Also, before the participants voluntarily took part, the researcher obtained their written informed consent at the commencement of data collection and ensured that they had a clear understanding of the purpose of the study.

**Pilot study:** it was performed with 20 women who met the inclusion criteria. These participants were not involved in the main study sample. The study tool was revised based on the results of the pilot study. Some items (urinary incontinence questions) were simplified to ensure the validity of the study instrument.

**Data Collection Process:** data collection was started after ethical approval to conduct the study was obtained from the ethical committee of the MMCH faculty of nursing and the MOH research committee. The sample selection procedure consisted of two phases.

**Phase I: Distribution of the Tool:** Early in the morning, the researcher visited the maternity and pediatric outpatient clinics. Individual interviews were conducted with each client in the clinics' waiting areas. Before approaching the women, the researcher introduced herself, maintained the privacy of the women, and briefly explained the study purpose and procedures and who could participate in the study.

Women who met the inclusion criteria and agreed to participate in the study were selected. After obtaining their verbal agreement to voluntarily participate, the researcher also gained their written informed consent. The questionnaire was then distributed to the women, who answered it while the researcher was nearby to answer any question and provide clarification.

**Phase II: Collection of the Data:** The women finished answering the sheet in 10–15 minutes. The researcher collected the answered sheets and thanked the participants for their participation in the study.

**Data analysis:** Statistical Package for Social Sciences (SPSS) version 22.0 was used for data entry and analysis. Descriptive statistics, percentages, ANOVA and tests of significance were performed. Statistical significance was considered at  $p\text{-value} < 0.05$ .

### **III. Result**

**Table 1:** More than half (59.9%) of the study participants are less than 30 years and have university degree and/or more.

**Table 2:** more than half of the study participants have past history of one pregnancy (55.8 %), more than one quarter have history of two pregnancies (27.6%), while the rest of them have history of three pregnancy and more, more than three quarter of study participant were primipara (77.1%), and about one fifth of them have history of two deliveries (19.8%). On the other hand, more than two

third of the study participant did not experienced abortion before (68.3%), while more than one quarter of them have history of one abortion (26.0%).

**Table 3:** More than two third of study participants have had episiotomy due to delivery at first time “being a primipara” (69.3%), more than one tenth of them have episiotomy due to maternal exhaustion (11.4%). While the rest of them have episiotomy due to a big baby (2.1%), and other indications (14.6%).

**Figure 1 :** illustrate that one third of study participants did not experience urge urinary incontinence (32.3%) while more than half of them have slightly urge urinary incontinence (58.3%), and only 9.4% of them had moderate urgency. Also, more than one quarter of the women in study participants they did not experience stress incontinence (28.1%), whereas more than half of them have slightly stress incontinence (51.0%) and about one fifth had moderate stress incontinence (19.3% ).only 1.6% have had severe stress incontinence.

**Figure 2:** The figure shows that about one third of study participant did not have urinary incontinence (30.2%), more than half of them (51.0%) have mild urinary incontinence and less than one fifth of them (16.7%) have moderate urinary incontinence while only 2.1% have sever urinary incontinence.

**Table 4:** shows that there is no significant difference in the mean score of urinary incontinence among women regarding to their different perineum status ( $p>0.05$ ). Meaning that women with previous intact perineum, the women with repeated episiotomy, and women who have episiotomy for first time; all do not have effect on the occurrence of urinary incontinence.

**Table 5:** shows that there is a significant difference in the mean score of urinary incontinence among women between their different age groups ( $p<0.05$ ). Post hoc analysis was done using Scheffe test and shows that the difference is between women aged  $<20 - 29$  years old and women aged  $30 - 39$  years in favor of the women aged  $<20 - 29$  years old. Also, there is a significant difference in the mean score of urinary incontinence among women between their different educational qualifications ( $p<0.05$ ). Post hoc analysis shows that university degree was more significance. On the other hand, there is no significant difference in the mean score of urinary incontinence among women between their different levels of monthly income.

**Table 6:** demonstrate that there is no significant difference in the mean score of urinary incontinence among women between their different gravidity, parity and abortions ( $p>0.05$ ). On the other hand, there is a significant difference in the mean score of UI among women between their different period of last delivery ( $p<0.05$ ). Post hoc analysis shows that the difference is between the women who gave birth since  $1 - 3$  months and those who gave births since  $6 - 12$  months, those who gave births since  $1 - 3$  months was most complain of urinary incontinence.

**Table 7:** Indicates that there is no significant difference in the mean score of urinary incontinence among women with regard to their different indications of episiotomy ( $p>0.05$ ). Meaning that the causes of episiotomy did not affect the status of urinary incontinence.

**Table 1:** Frequency and percentages of study participants according to their Socio-demographic characteristics (n=192)

Socio-demographic Characteristics	Frequency (n=192)	Percentage (%)
Age(years)		
▪ 20 - ≤ 30 years	115	59.9
▪ 30 ≤ 40 years	73	38.0
▪ ≥40	4	2.1
Educational level		
▪ Primary	12	6.2
▪ Secondary	65	33.9
▪ University or higher	115	59.9

**Table 2:** Frequency and percentages of participants according to their obstetric history

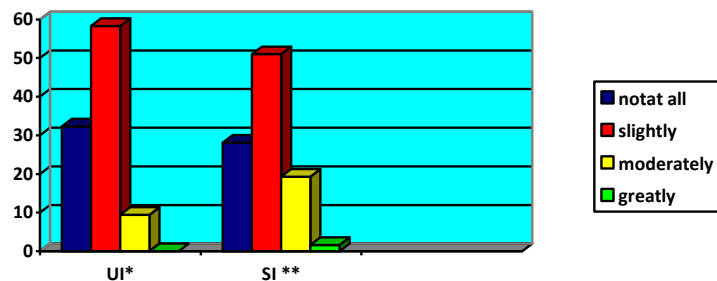
Obstetric history	Frequency (n=192)	Percentage (%)
<b>Gravida</b>		
▪ Once	107	55.8
▪ Twice	53	27.6
▪ Triple	25	13.0
▪ ≥ 4 pregnancies	7	3.6
<b>Para</b>		
▪ Once	148	77.1
▪ Twice	38	19.8
▪ > 2	6	3.1
<b>Abortion</b>		
▪ Never	131	68.3
▪ Once	50	26.0
▪ ≥ Twice	11	5.7

**Table 3:** Distribution of study participants according to episiotomy indications (n=192)

Episiotomy indications	Frequency (n=192)	Percentage (%)
<b>I Indications of episiotomy</b>		
▪ Primi	133	69.3
▪ Maternal exhaustion	22	11.4
▪ Previous cosmetic perineal repair	3	1.6
▪ Big baby	4	2.1
▪ Abnormal fetal presentation	2	1.0
▪ Others*	28	14.6

\*Others indication answered from participants as: "doctor preference", "maternal order" and "don't know".

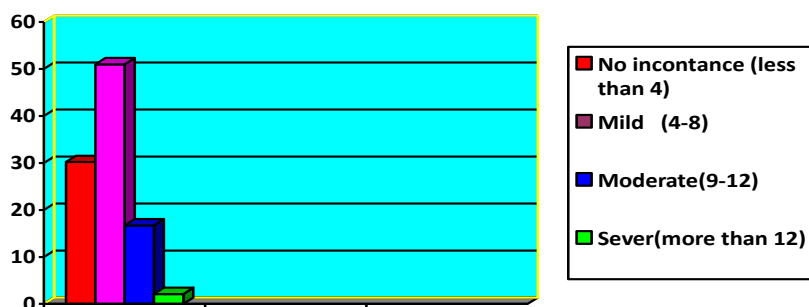
**Figure (1):** Distribution of study participants according to types/grades of urinary incontinence (n=192)



\*Urge incontinence: urine leakage related to the feeling of urgency.

\*\* Stress incontinence: urine leakage due to physical activity

**Figure 2:** Distribution of study participants according to their classification of urinary incontinence score



\* According to RUIS classification of urinary incontinence scores among women; a score range of 0 – 16.

**Table 4:** Relationship between urinary incontinence and episiotomy among study participants (n=192)

Episiotomy	Urinary incontinence			
	N	Mean (SD)	F (df)	P value
▪ Previous episiotomy experience*	30	5.33 (3.89)	0.552 (2, 189)	0.577
▪ First episiotomy experience**	162	10.2 (6.52)		

\* Represent multipara participants with repeated episiotomy.

\*\* Represent multipara who has had previous intact perineum or previous CS and primipara participants.

**Table 5:** Association between urinary incontinence and socio-demographic characteristics among study participants (n=192)

Socio-demographic characteristics	Urinary incontinence			
	N	Mean (SD)	F (df)	P value*
<b>Age groups</b>				
<20 – 29 years	115	5.55 (3.80)	6.434 (2, 189)	0.002
30 – 39 years	73	3.83 (3.17)		
40 and more	4	2.00 (4.00)		
<b>Educational level</b>				
≤ Primary	12	5.50 (3.06)	6.870 (2, 189)	0.001
Secondary	65	3.49 (3.23)		
≥ University	115	5.51 (3.79)		
<b>level of income</b>				
<5000 SAR	56	5.30 (3.81)	0.714 (2, 189)	0.491
5000≤10000 SAR	117	4.67 (3.57)		
>10000 SAR	19	4.36 (3.97)		

\*\*\*Not applicable: refer to the primipara who has only one experience of SVD with episiotomy prior to this study.

**Table 6:** Association between gravidity, parity, abortions and urinary incontinence among study participants (n=192)

Variables	Urinary Incontinence				
	N=192	%	Mean (SD)	F (df)	P value*
<b>Gravida</b>					
▪ Once	107	55.8	4.71 (3.92)	0.168 (3, 188)	0.918
▪ Twice	53	27.6	5.13 (3.48)		
▪ Triple	25	13	4.72 (3.19)		
▪ ≥ 4 pregnancies	7	3.6	4.57 (3.40)		
<b>Para</b>					
▪ Once	148	77.1	4.74 (3.72)	0.326 (2, 189)	0.723
▪ Twice	38	19.8	5.23 (3.73)		
▪ > 2	6	3.1	4.33 (2.42)		
<b>Abortion</b>					
▪ Never	131	68.2	4.94 (3.93)	0.344 (2, 189)	0.710
▪ Once	50	26.1	4.46 (2.94)		
▪ ≥ Twice	11	5.7	5.09 (3.78)		
<b>Period of Last Delivery</b>					
▪ 1 – 3 months	22	11.5	7.63 (2.12)	39.485 (3, 188)	<0.001
▪ 3 – 6 months	55	28.6	7.54 (2.72)		
▪ 6 – 12 months	53	27.6	3.56 (3.10)		
▪ > 1 year	62	32.3	2.50 (3.11)		

**Table 7:** Association between different episiotomy indications and occurrence of urinary incontinence among study participants (n=192)

Indications of episiotomy	Urinary incontinence				
	N= 192	%	Mean (SD)	F (df)	P value*
▪ Primi	133	69.3	4.54 (3.75)	0.555 (5,186)	0.734
▪ Maternal exhaustion	22	11.5	5.50 (3.92)		
▪ Previous cosmetic perineal repair	3	1.6	5.66 (1.15)		
▪ Big baby	4	2	6.00 (1.41)		

▪ Abnormal fetal presentation	2	1	6.00 (1.41)		
▪ Others**	28	14.6	5.32 (3.62)		

Others \*\* indication of episiotomy answered by study participant as; “doctor preference”, “maternal order” and “don’t know”.

#### IV. Discussion:

This chapter reflects the main findings of the research address and illuminate the consequences of these findings, the strength, limitation of this study and implication for clinical practices and future study. In term of demographic data of the study sample, the majority of them were less than thirty years old, about half of them had a bachelor degree or highly educated. Regarding to obstetric history, more than two third of study participant were primipara while less than one third of them was para two. More than half of multipara participants had a history of spontaneous vaginal delivery and about one fourth of them had a history of caesarian delivery.

These obstetric variables can be count as a risk factor in occurrence of urinary incontinence. According to Torkestani et al., (2009) there were a significant associations between urinary incontinence and gravidity, parity, episiotomy, delivery mode [19].

All participants of current study were delivered vaginally with episiotomy. That may considered as a risk factors for developing urinary incontinence, based on Chang et al., (2014) prospective longitudinal study of 330 women in Taiwan, vaginal delivery was associated with higher urinary incontinence prevalence compared to cesarean d delivery groups and it persisted for 1 year postpartum, but there was no effect on daily life after 6 weeks postpartum [20]. The occurrence of urinary incontinence was found to be two-third higher after vaginal delivery compared to cesarean section in a population-based cohort study of singleton primipara [5].

Jundt et al. (2010) conducted a prospective observational cohort study on 112 primipara in Germany to evaluate the symptoms of urinary incontinence in nulliparous women at 32 and 37 gestational weeks and 6 months after childbirth [21]. The symptoms were correlated with functional changes in the pelvic floor based on careful gynecologic examination and perineal ultrasound. The study revealed significant changes in the pelvic floor after delivery, and the risk of stress incontinence was increased by spontaneous vaginal delivery [21].

Vaginal delivery is probable risk factors for the development of urinary incontinence after delivery and later in woman’s life. Vaginal delivery injuries resulting from prolonged abdominal pulling during fetal expulsion may lead to pudendal nerve injury, which affects pelvic floor integrity. Soft tissue damage during childbirth may deteriorate post-delivery bladder neck support and, as a result generate a weakness in paraurethral connective tissue and fascial structures, ultimately causing stress urinary incontinence [22].

Damage and fibrosis of the levator ani muscle during vaginal childbirth might also contribute to urinary continence. It has been documented that the prevalence of 3 months postpartum urinary incontinence is around 30% in women with previous spontaneous vaginal delivery and 15% for women with Cesarean section [5].

The current study found that being a primipara was the most frequent indication for episiotomy, found among two thirds of the study participants. The second most frequent indications for episiotomy were the “participants’ preferences and requests for episiotomy,” “doctors’ advice to expedite labor,” and “do not know why,” followed by maternal exhaustion. Similarly, in a descriptive cross-sectional study on 291 women in the city of Buraidah, Saudi Arabia, Saadia (2014) found that being primi was a significant indication for episiotomy for all primigravida, which meant the episiotomy rate among the primi participants was 100% [23]. Other episiotomy indications as previous perineal tears and breach delivery was reported in multipara women [23]. High episiotomy rate between primipara may be due to the health care providers’ (Physicians and Midwives) attitude, knowledge and their background.

Likewise, in a secondary analysis of two prospective cohort studies with a total of 3,404 participants in the Netherlands, Seijmonsbergen-Schermers et al. (2015) found that the most frequent indication for episiotomy among nulliparous women was prolonged second stage of labor [25]. History of episiotomy and the need to prevent major perineal trauma were the most common episiotomy indications in parous women [25].

In contrast, in an Omani study, the majority of the participants had episiotomy to reduce the risk of spontaneous perineal tears, minimize the complications of shoulder dystocia, and allow for easier suturing [26]. These contradictory findings may be due to health care centers’ different policies and procedures. In addition, health care providers’ (e.g., doctors’ and midwives’) perceptions and knowledge of episiotomy may play significant role in their practice.

Regarding the type of urinary incontinence, our study found that majority of the incontinent participants had only mild or moderate incontinence with almost similar rates of these types. However, contradictory findings were reported by Baydock et al. (2009) the stress urinary incontinence rate was twice as high as the urgency stress urinary incontinence rate [27]. These contradictory findings may be due to different study designs and the participants’ careers, lifestyles, habits in the postpartum period, and understanding of the differences between the two types of urinary incontinence.

Regarding the severity of urinary incontinence in the current study, about half of the study participants had mild urinary incontinence, while less than one fifth had moderate urinary incontinence, and only 2.1% had severe urinary incontinence. These findings are not supported by the findings reported by Brown et al. (2015) in a cohort study of 1507 participants in Australia [28]. It revealed almost equal rates of mild, moderate, and severe urinary incontinence among the study participants (24.8%, 23.3%, 20%, respectively). These inconsistent findings in these two studies may be due to the different study sample size and designs. The large number of Australian study participants and the nature of cohort design permitted follow up of the participants at different postpartum parts, which could contribute to this issue.

The present study found no significant differences in the mean scores for urinary incontinence among women with or without episiotomy. These findings supported by Fritel et al. (2008) stated that routine mediolateral episiotomy in a population of primipara did not prevent development of urinary incontinence during a 4-year period after vaginal delivery [30]. Langrová and Vrublova (2014) no differences in the prevalence of urinary incontinence among women with episiotomy, intact perineum, and spontaneous perineal tears [31]. Yohay et al. (2016) found that stress urinary incontinence only had a significant association with spontaneous perineal delivery tears [32]. Other obstetrical parameters, including birth weight and episiotomy, were not associated with any of the pelvic floor dysfunction items [32].

Some studies, however, have found that episiotomy may be connected to appearance of urinary incontinence. Chang et al. (2011) found that episiotomy increased the, rate of urinary incontinence at 3 months postpartum [34]. Wesnes et al. (2017) found that risk of urinary incontinence at 6 months postpartum might be increased by some combinations of factors among delivering women, including episiotomy with head circumference  $\geq 36$  cm and birthweight  $\geq 3540$  g [17].

The variations and conflicting findings were probably due to the occurrence of urinary incontinence caused by factors other than episiotomy. Pelvic floor dysfunction resulting from different causes may have given rise to this issue. Risk factors for urinary incontinence not assessed in the study could include physiological changes during pregnancy and delivery parameters, such as maternal position, neonatal birth weight and head circumference, shoulder dystocia, and prolonged second stage of labor. Factors could also include the behavior of some health care providers during delivery, such as giving fundal pressure and excessive and vigorous vaginal manipulation. All of these factors may contribute to weakening these muscles, thus leading to pelvic floor dysfunction and consequently urinary incontinence.

Although urinary incontinence increases with advancing age in the general population [13,14,15], postpartum urinary incontinence has not been consistently associated with advancing maternal age [14]. The present study showed significant differences in the mean scores for urinary incontinence among women across age groups, with women  $< 29$  years most likely to complain of urinary incontinence. These findings agree with those of Kokabi and Yazdanpanah's (2017), age and birth weight were the major risk factors for postpartum stress urinary incontinence. However, there was no association between postpartum stress urinary incontinence and educational level [32]. In contrast, several short-term studies, all with less than 1 year of follow-up, failed to prove a relationship between urinary incontinence and maternal age [33]. The link between age and occurrence of urinary incontinence remains unclear and debated.

the present study found that the period from  $>1$  to  $\leq 3$  months had significant links to the occurrence of urinary incontinence. Many studies concur with our results. In a prospective cohort study in Pakistan, Ali et al. (2013) reported that the urinary incontinence was predominant at 3 months postpartum [34]. Kokabi and Yazdanpanah (2017) documented a higher rate of urinary incontinence at 1 month postpartum then at 6 and 12 months [32].

Conversely, Gartland et al. (2012) reported from a cohort study in Australia that about half of the study sample (44%) developed urinary incontinence between 4 and 18 months [35].

## **V. Conclusion:**

The current study revealed that the urinary incontinence is moderately prevalent in postpartum women. Episiotomy not correlated to presence of postpartum UI. SUI was more than UUI. Age, education level, period 1-3months postpartum and immediate postnatal complication was correlated to presence of UI. While, kegel exercise, BMI, epidural anesthesia, multiparty and socioeconomic status was not significant risk factor for postpartum UI.

## **VI. Recommendations:**

The time has come for those qualified to take on the responsibility to establish and attain goals to reduce the practice of episiotomy. Much as surgical specialists have decreased use of procedures such as tonsillectomy in children and knee surgery for arthritis, clinicians must apply research evidence to episiotomy use.



It's recommended in future research to studying physician's' and midwives' performance and attitudes as factors behind the high rate of routine episiotomy practice in Saudi Arabia. Also, study the effects of urinary incontinence on Saudi women's daily life and ways to overcome this issue. Additionally, encourage the role of Nurses and Midwives during the antenatal period to increase the pregnant women's awareness of alternative natural methods for preserving the perineum intact without need for episiotomy. Also help and educate postnatal women about suitable care for the best recovery, encourage them to have postnatal visits, and teach proper performance of Kegel exercises.

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Umkalthom Almkhtar " The Associations between Episiotomy and Urinary Incontinence among Postpartum Women" .IOSR Journal of Nursing and Health Science (IOSR-JNHS), vol. 8, no.05 , 2019, pp. 41-50.