

## **Review Article:**

### **Situation Analysis of Episiotomy in the Gulf: A Scoping Review**

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#### **Abstract:**

**Objective:** To assess episiotomy rates and indications in Gulf Council Countries (GCC). **Materials and Methods:** Two databases (PubMed, Google Scholar) were searched for relevant papers published from January 2014 to December 2019. Only 9 articles (3 in Saudi Arabia, 2 in Iraq and 1 in Oman, 1 in Qatar, 2 in UAE) were eligible. All articles reported episiotomy rates and indications as a primary or secondary outcome. **Results:** The cumulative rate of episiotomy in GCC was 52%, while this was 45% in Saudi Arabia. The Perineal tear reported rate in GCC was 29%, however, the cases accompanied with episiotomy was 65%. The most frequent indication was rigid perineum in both 16.9% in Saudi Arabia and 65.5% in Iraq. **Conclusion:** Episiotomy rates were reported to be high in GCC and Saudi Arabia. Only few articles reported episiotomy from the GCC. The commonly reported indications were both subjective for the doctor or the patient. We recommend that episiotomy rates with clear indications should be investigated in future research.

**Keywords:** Episiotomy rates, Episiotomy indications, Episiotomy outcomes, Episiotomy in Gulf Council Countries, Episiotomy in Saudi Arabia.

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#### **Introduction:**

Episiotomy is an obstetric surgical procedure that is performed in the perineal area with a small incision in order to enlarge the vaginal orifice, hence facilitate delivery. The most common type of episiotomy is medio-lateral; however, a midline approach is also common.<sup>1,2</sup> Early episiotomy procedures can be traced to the 1740s Scottish midwives, but it is not until the 1960's when episiotomy was routinely implemented. In spite of the claim to decrease labor duration and to prevent perineal injury, evidence in 2017 suggested that routine episiotomy had no benefits rather was associated with variant risks such as perineal laceration, excessive bleeding, wound infection, pain during sitting and decreased sexual pleasure.<sup>3</sup> The most common indications in the Gulf Cooperation Council (GCC) countries for

episiotomy were perineal rigidity, maternal exhaustion, high fetal weight, vaginal breech, and concern of fetal heart rate.<sup>4,5</sup> The short-term complications were perineal laceration, excessive bleeding, wound infection, wound edema, pain, anal sphincter or bladder injury, and episiotomy dehiscence. where long-term complications include chronic infection, pelvic organ prolapse (POL), fecal or urinary incontinence, sexual dysfunction, and chronic pain.<sup>6</sup> Anxiety and depression were the most common psychological effects of episiotomy.<sup>7</sup>

The new recommendation by the American College of Obstetricians and Gynecologists, 2013 recommended that episiotomy should be restricted in clinical practice.<sup>8</sup> This study aims to estimate the episiotomy rates, indications, and complications of episiotomy in GCC.

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## Materials and Methods

We based our scoping review on the framework described by Arksey and O'Malley (2005) and adhered to enhancement proposed by Levac, Colquhoun, and O'Brien (2010). A search plan was formulated and proceeded with a broad research question, search terms identification and database selection. Our review included the following six key stages: first, identifying the research question; second, identifying relevant studies; third, study selection; fourth, charting the data; fifth, collating, summarizing, and reporting the results; and finally, sixth, consultation of the framework.

### Research question

We wanted to find answer to the question on the rates, indications and complications of episiotomy in GCC countries. We developed the review question using the Cochrane PICOS (population, intervention/exposure, comparison, outcomes, and study design) framework. The populations of interest were nulliparous and multiparous pregnant women. The interventions/exposures were any women who went for an episiotomy procedure. The comparison was the different rates of episiotomy between the GCC countries. The outcomes were the benefits, risks, complications, and doctors' current belief on the indications of the episiotomy procedure.

### Data sources and search strategy

Two reviewers started an initial and comprehensive search on October 24, 2019, in two electronic databases: PubMed and Google Scholar. A further search was conducted on November 13, 2019, to add ResearchGate. We selected the databases to be universal and to cover a wide range of disciplines. The search consisted of the following terms: "episiotomy AND rates", "episiotomy AND indications", "episiotomy AND outcomes", "episiotomy AND Gulf Council Countries", "episiotomy AND complication", "episiotomy AND Saudi", "episiotomy AND Oman", "episiotomy AND Yemen", "episiotomy AND Iraq", "episiotomy AND Qatar", "episiotomy AND UAE", "episiotomy AND Bahrain", "episiotomy AND Kuwait". We didn't limit our search on any language, date, subject or type.

### Eligibility criteria

The screening process was done on two-screening stages to assess the relevance of studies identified in the search. Studies were eligible for inclusion if they broadly described any of the following:

episiotomy indications, rates, and complications in any of the GCC.

The primary screening began with reviewing the title and abstract of citations based on a pre-formed designed agreement consisting of two questions: whether the citation described primary research on episiotomy and whether it had relevance to one or more aspects of the research question.

The primary screening of each citation was independently screened by two reviewers. None of the reviewers were blinded to the author or journal name. In case of conflicts, reviewers met together to discuss and resolve any uncertainties related to article selection.

### Data characterization

All potentially relevant citations were obtained for secondary screening and subsequent review of the full-text articles. A form was developed and implemented by the authors to confirm the relevance and to extract study characteristics such as publication year, publication design, country, sample size, sample age, sample source, outcome, measuring tools. Any citation that didn't meet the eligibility criteria were eliminated at this phase.

### Data summary and synthesis

Two reviewers independently completed all steps of the scoping review and compiled the data in a single spreadsheet (Microsoft Excel) for validation and coding. Descriptive statistics were calculated to summarize the data. Frequencies and rates were used to describe nominal data and to facilitate categorization and charting. The flow chart of the literature search is given in Figure 1.

### Results

The PUBMED search yielded a total of 22 full articles, through reading the abstract of the articles, they were narrowed down to 14 that had relevant information and after further reading of full text only 5 papers had matched the inclusion criteria, an additional search through google scholar yielded an additional 4 articles. In the end, 9 articles were selected in total, the data were extracted in a separate excel sheet to be identified and further subdivided following a template containing the following: (Gravidity, Age, history of episiotomy, history of perineal tear, history of caesarean section, Instrumental delivery, Comorbid Illnesses, term, type of Labour, birth weight, number of babies, Indications of the procedure).

The cumulative rate of total episiotomy in GCC was 52%, of which around 54% occurred in

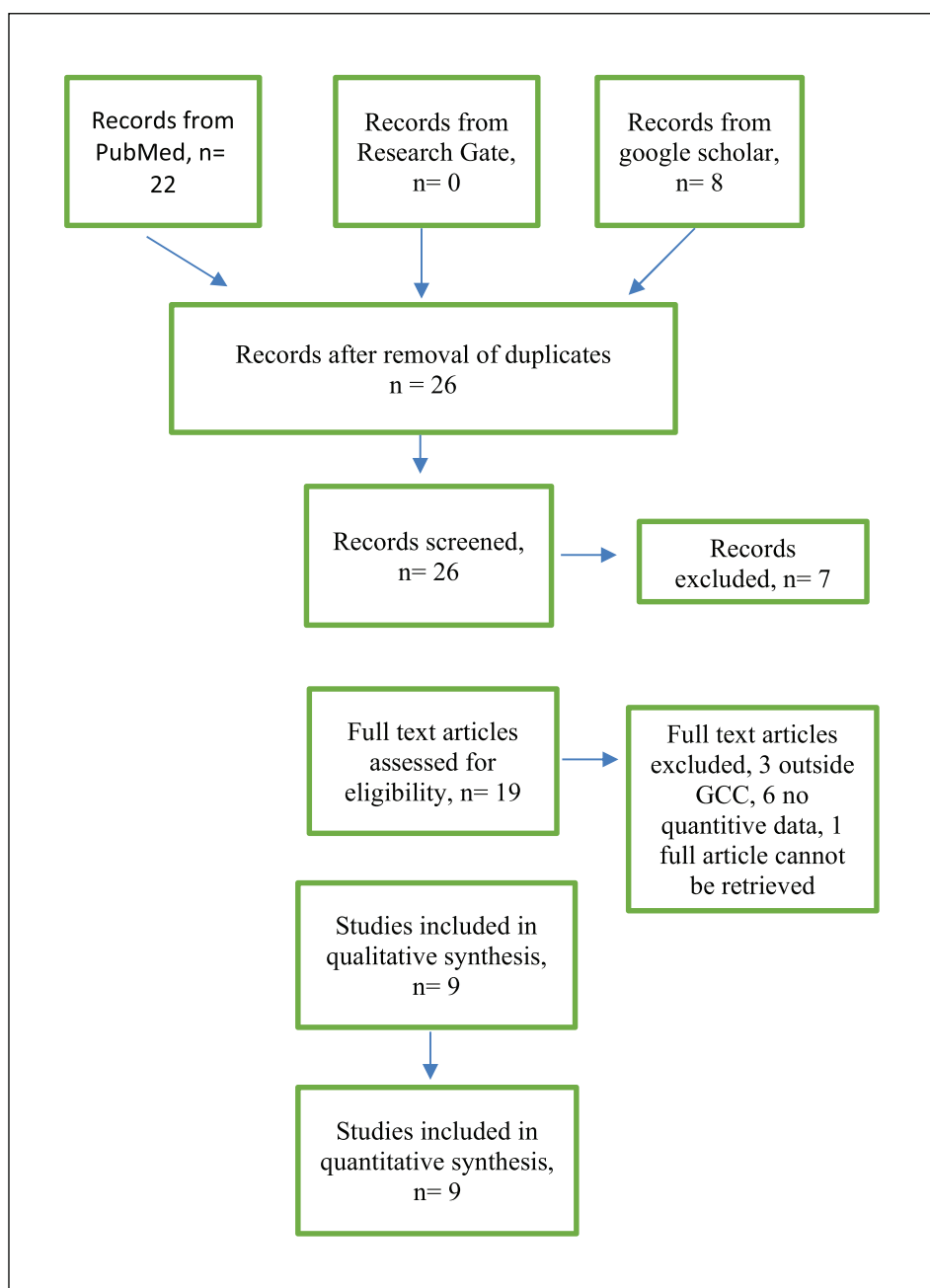


Figure 1: Flowchart of the data collection

nulliparous women as depicted in Table 1. The overall episiotomy rate was 45% in Saudi Arabia, with nearly 72% of them being nulliparous. The rate of nulliparous who had an episiotomy in Saudi Arabia was 92%; that of multiparous who had an episiotomy in Saudi Arabia was 19%. The overall perineal tear reported rate in GCC was 26.3%, however, the cases who have had episiotomy had more tear rates (65%). The most frequent indication was rigid perineum in both Saudi Arabia (16.9%) and Iraq (65.5%). The country wise description is given below.

### Saudi Arabia

Only 3 research works met the eligibility criteria from Saudi Arabia studies. Zaheera Saadia from the Qassim region worked with 291 patients in 2014 and found 149 (51.2%) underwent episiotomy.<sup>5</sup> The paper showed two classifications according to the gravity and the use of instruments during the delivery.<sup>5</sup> In 2016, Ayman Oraif from Jeddah assessed 1000 patients, where 357 (36%) underwent episiotomy. The patients were classified according to gravity and nothing further.<sup>9</sup> In 2017, an article was written by Rola Turki and her colleagues, Jeddah, a sample

**Table 1. Frequency distribution of all included studies on episiotomy (n=9)**

Author	Nation	Study Design	N	Overall women underwent episiotomy %	Nulliparous Underwent episiotomy %	Multiparous underwent episiotomy %	Overall Laceration %
Zaheera Saadia	Saudi Arabia	Descriptive Cross Sectional Study.	291	149 (51.2%)	142(100%)	7 (4.9%)	-
Ayman Oraif		Retrospective Chart Review	1,000	357 (36%)	240 (87.6%)	117 (16.1%)	-
Rola Turki		Retrospective Population-based Register Study	705	334 (54.6%)	255 (92.7%)	129 (30.1%)	29.6%
E. Rizk	UAE	Observational Study	212	145 (76.3%)	-	-	15.3%
E. Rizk		Prospective Observational Study	114	74 (34.6%)	27 (73%)	47 (28.6%)	35.1%
Huda Juma'a Ali	Iraq	Cross-sectional	500	221 (44.2%)	119 (85.6%)	102 (28.3%)	18.4%
Hamdia Mirkhan		Cross Sectional Study	1,500	1109 (73.9%)	451 (93.2%)	658 (64.8%)	33.3%
Amila Husic	Qatar	Observational Study	263	157 (60%)	90 (95%)	67 (39.4 %)	-
Khadija Al-ghammari	Oman	Cross-sectional Study	1,068	426 (39.9%)	-	-	-
<b>Summation (GCC)</b>			5,653	52.3%	89.6%	30.3%	26.3%

consisted of 705 patients; 54.6% (384) underwent episiotomy. The data were classified according to different variables (Gravidity, instrumental usage, term, spontaneous vs. induced). Also, the paper discussed the correlation with perineal laceration as its intended primary goal for the paper.<sup>10</sup>

### Iraq

Two articles were qualified after filtering according to eligibility criteria, both of them were conducted in Erbil, Kurdistan Iraq. In 2016, Huda Juma'a Ali studied 500 patients, and found 44.2% (221) underwent episiotomy. The data are subdivided

by (gravity, age, past history of episiotomy or perineal tear, history of CS, instrumental usage, comorbidity). The paper highlighted the presence of perineal laceration as well.<sup>4</sup> The other article was published in 2019 by Hamdia Mirkhan Ahmed, she studied 1500 patients; 73.9% (1109) of them underwent episiotomy. The data further classified according to gravity and other variables. Perineal laceration and its association also had been mentioned.<sup>11</sup>

### **Qatar**

A paper by Amila Husic in 2008, discussed briefly the rates and indication of episiotomy. They reported an overall rate of 60% and a nulliparous rate of up to 95%. The author reported that the results weren't statistically significant as the sample size was small (n= 263).<sup>12</sup>

### **United Arab Emirates**

Two articles were conducted by the same doctors E. Rizk and L. Thomas, Al-Ain hospital, published in 2000 and 2005 respectively. Both of them reported rates of episiotomy and perineal lacerations. The overall rate of episiotomy in 2000 was 76.3% while the rate of laceration was 15.3%.<sup>13</sup> In 2005, the overall rate dropped to 34.6% and the laceration rate was 35.1%. In the same paper further subdivisions mentioned, the nulliparous' episiotomy rate was 73% while the multiparous' 28.6%.<sup>14</sup>

### **Oman**

One article was included from Oman in 2015, by Khadija Al-Ghammari and her colleagues. The sample size was 1,068 patients; 39.9% (426) underwent episiotomy.<sup>15</sup> No further classification or subdividing were mentioned.

### **Discussion**

The World Health Organization (WHO) stated in 2018 that there was no supporting evidence of liberal use of episiotomy. Specification of each indication should be addressed and evaluated, so being a nullipara is not an indication. Reduced chances of having laceration used to be one of the anticipated gains of episiotomy, despite that no change in overall rates of perineal laceration was reported with or without episiotomy; but severe

laceration was correlated to episiotomy and such finding was reported by Rola Turki.<sup>10,16</sup> Although WHO preferred mediolateral technique for use, we didn't find the technique was used by any clinicians from our review papers.<sup>16</sup>

The one single burden we encountered during the data collection was the scarcity of the publication on this topic. There are few publications regarding episiotomy in Saudi Arabia, Iraq, UAE, Qatar and Oman and no publication at all in Kuwait, Bahrain or Yemen. Only 2 out of the 9 papers mentioned the exact indication, leaving a blank space for lack of indications.<sup>4,5</sup> Also, the technique of episiotomy was not reported as we can't really tell whether the complication (i.e. lacerations) was due to episiotomy in general or one type of the procedures.

### **Conclusion:**

Episiotomy rates were reported to be high in GCC and Saudi Arabia. A few articles reported episiotomy from across the GCC, which necessitates more research to be conducted in this topic. The commonly reported indications were both subjective for the doctor or the patient. Episiotomy rates, it's clear indications, type of incision and outcomes to be investigated in future research. A clear list of indications should be determined beforehand by each institution and go under periodic auditing for efficacy assessment. We can also follow the records whether the frequency and rates of episiotomy followed any declining pattern over time or not.

**Ethical Approval:** This is a scoping review assessing published articles, hence there is no need for ethical approval.

**Conflict of interest:** The authors declare no conflict of interest among themselves.

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**Individual Authors Contribution:** MA designed the study, FZ and ME collected data, FZ, ME and MM entered data, FZ analyzed data, MA, SB, FZ, ME and MM all contributed to the manuscript, reviewed and finalized the draft.

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