



## The Effects of Delivery Mode and Sociodemographic Factors on Postpartum Stress Urinary Incontinency in Primipara Women; A Prospective Cohort Study

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**Background & Objective:** This study was performed to determine the frequency of postpartum Stress Urinary Incontinency (SUI) in those undergoing vaginal delivery or elective cesarean section and also to investigate the sociodemographic determinants of SUI in a sample of Iranian patients.

**Materials & Methods:** This prospective cohort study was performed during a one-year period from 2014 to 2015 including 286 healthy nulliparous women in the third trimester of pregnancy without pre-pregnancy urinary incontinency. Patients were categorized based on the mode of delivery which was vaginal delivery (n=148) and elective cesarean section (n=138). The SUI was evaluated in all the participants before delivery and 1, 6, and 12 months after that by using a previously validated Persian questionnaire. The frequency of postpartum SUI was recorded in both study groups and was compared between them. We also determined the sociodemographic determinants of SUI.

**Results:** Baseline characteristics were comparable. The frequency of postpartum SUI was significantly higher in vaginal delivery compared to cesarean section after 1- ( $p<0.001$ ), 6- ( $p<0.001$ ), and 12-month ( $p<0.001$ ) period. Age was found to be associated with increased frequency of postpartum SUI in both vaginal delivery ( $p=0.021$ ,  $r=0.286$ ) and cesarean section groups ( $p=0.043$ ,  $r=0.125$ ). SUI was associated with tool assisted vaginal delivery ( $p<0.001$ ) and episiotomy ( $p<0.001$ ). The birth weight was positively correlated with increased frequency of postpartum SUI in both vaginal delivery ( $p=0.011$ ,  $r=0.546$ ) and cesarean section ( $p=0.034$ ,  $r=0.311$ ). Patients with SUI had significantly higher BMI when compared to normal individuals ( $p=0.038$ ). The SUI was associated with lower income ( $p=0.028$ ) and lower neighborhood residence ( $p=0.033$ ).

**Conclusion:** Vaginal delivery is associated with two-fold increased risk of postpartum SUI in primipara women compared to elective cesarean section. Age and birth weight are the main risk factors of postpartum SUI in both modes of delivery. Tool assisted delivery and episiotomy were determined as the risk factors of postpartum SUI in vaginal delivery.

**Keywords:** Vaginal Delivery, Cesarean Section, Stress Urinary Incontinence (SUI), Frequency, Sociodemographic determinants