**Table 1. Socio- Demographic Factors of Study Participant*s***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Case, n=116/%** | **Control, n=232/%** | **Crude odds ratio (COR)** | **95%CI** | **P-value** |
| **Age** |  |  |  |  |  |
| <20 | 11(9.5) | 27(11.6) |  |  |  |
| 20-30 | 92(79.3) | 144(62.1) | 1.00 |  |  |
| >30 | 13(11.2) | 61(26.3) | 1.57 | 0.74-3.31 | **0.239** |
| **Education** |  |  |  |  |  |
| None | 8(7.0) | 14(6.0) | 1.00 |  |  |
| Primary | 41(35.6) | 70(30.2) | 1.03 | 0.40-2.65 | 0.959 |
| secondary | 50(43.5) | 130(56.0) | 0.67 | 0.27-1.70 | 0.403 |
| Tertiary | 16(13.9) | 18(7.8) | 1.56 | 0.52-4.67 | 0.431 |
| **Residence** |  |  |  |  |  |
| Rural | 16(13.8) | 38(16.4) | 1.00 |  |  |
| Urban | 100(86.2) | 194(83.6) | 1.22 | 0.65-2.30 | 0.530 |
| **Marital status** |  |  |  |  |  |
| Married | 92(79.3) | 226 (97.4) | 1.00 |  |  |
| Single | 24 (20.7) | 6 (2.6) | 9.42 | 3.71-23.88 | **<0.001** |
| **Religion** |  |  |  |  |  |
| Catholic | 25(21.6) | 60(25.9) | 1.00 |  |  |
| Pentecostal | 38(32.8) | 51(22.0) | 1.79 | 0.95-3.35 | **0.070** |
| Muslim | 30(25.9) | 59(25.4) | 1.22 | 0.64-2.32 | 0.543 |
| Others | 23(19.8) | 62(26.7) | 0.89 | 0.46-1.74 | 0.733 |
| **Occupation** |  |  |  |  |  |
| Employed | 15(12.9) | 21(9.1) | 1.00 |  |  |
| Business | 47(40.5) | 85(36.6) | 0.77 | 0.36-1.64 | 0.505 |
| Housewife | 46(39.7) | 111(47.8) | 0.58 | 0.28-1.22 | **0.153** |
| Others | 8(6.9) | 15(6.4%) | 0.99 | 0.29-2.59 | 0.89 |

**Table 2. Bivariate Results of Antenatal Factors for Perineal tears**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variables** | **Case, n=116/%** | **Control n=232/%** | **Crude Odds ratio( COR)** | **95% CI** | **P-value** |
| **Number of pregnancy** |  |  |  |  |  |
| 3 | 66(56.9) | 39(16.8) | 1.00 |  |  |
| 2-3 | 36(31.0) | 111(47.9) | 1.90 | 0.96-3.75 | **<0.064** |
| >1 | 66(56.9) | 39(16.8) | 9.91 | 4.97-19.79 | **<0.001** |
| **Parity** |  |  |  |  |  |
| 1 | 69(59.5) | 39(16.8) | 13.45 | 6.24-28.96 | **<0.001** |
| 2-3 | 37(31.9) | 117(50.4) | 2.40 | 1.13-5.12 | 0.380 |
| >3 | 10(8.6) | 76(32.8) | 1.00 |  |  |
| **History of Perineal tear** |  |  |  |  |  |
| No | 77(67.5) | 194(83.6) | 1.00 |  |  |
| Yes | 37(32.5) | 38(16.4) | 0.63 | 0.34-1.15 | **0.131** |
| **Antenatal ANC** |  |  |  |  |  |
| Yes | 115 (99.1) | 222(96.1) | 0.19 | 0.11-0.33 | **<0.001** |
| No | 1 (0.9) | 1 (3.9) | 0.10 | 0.05-0.20 |  |
| **Number of ANC visits** |  |  |  |  |  |
| <4 visits | 50(43.1) | 124(53.5) | 1.00 |  |  |
| ≥4 visits | 25(21.6) | 29(12.5) | 0.18 | 0.10-0.31 | **<0.001** |
| **Pregnancy intervals** |  |  |  |  |  |
| <2 year | 23(39.0) | 56(28.6) | 1.000 |  |  |
| ≥2 years | 36(61.0) | 140(71.43) | 0.382 | 0.240 | 0.609 |
| **Herbal medicine use** |  |  |  |  |  |
| Yes | 110(94.8) | 219(94.8) | 1.00 |  |  |
| No | 6(5.2) | 12(5.2) | 0.99 | 0.36-2.72 | 0.993 |
| **BMI** |  |  |  |  |  |
| <18.5 | 1(0.9) | 1(0.4) | 1.00 |  |  |
| 18.5-24.9 | 35(30.2) | 68(29.3) | 1.94 | 0.12-32.00 | 0.642 |
| 25-29.9 | 51(44.0) | 106(45.7) | 0.93 | 0.56-1.58 | 0.802 |
| 30.0-39.9 | 29(25.0) | 57(24.6) | 0.99 | 0.54-1.81 | 0.97 |

**Table 3. Bivariate Results of Obstetric Risk Factors for Perineal tear.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variables** | **Case, n=116/%** | **Control**  **n=232/%** | **Crude Odds ratio( COR)** | **95% CI** | **P-value** |
| **Duration of second stage** |  |  |  |  |  |
| <30 minutes | 55(47.1) | 196(84.5) | 1.00 |  |  |
| 30-60 minutes | 32(27.6) | 29(12.5) | 1.42 | 0.61-3.33 | 0.414 |
| >60 minutes | 29(25.0) | 7(3.0) | 10.21 | 3.32-31.41 | **<0.001** |
| **Precipitate Labour** |  |  |  |  |  |
| NO | 107(92.2) | 224(96.6) | 1.00 |  |  |
| Yes | 9 (7.8) | 8 (3.5) | 2.36 | 0.88-6.27 | **0.087** |
| **Oxytocin Use** |  |  |  |  |  |
| Yes | 67(51.0) | 110(47.4) | 1.00 |  |  |
| No | 48(42.0) | 122(52.6) | 0.07 | 0.02-0.25 | **<0.001** |
| **Assisted Vaginal Delivery** |  |  |  |  |  |
| No | 98(84.5) | 229(99.1) | 1.00 |  |  |
| Yes | 18(15.5) | 2( 0.9) | 14.02 | 4.04-48.69 | **<0.001** |
| **Episiotomy** |  |  |  |  |  |
| No | 82 (70.7) | 42(81.9) | 1.00 |  |  |
| Yes | 34(29.3) | 190(18.1) | 1.88 | 1.11-3.16 | **0.018** |
| **Birth weight of baby** |  |  |  |  |  |
| <3.5kg | 75(64.7) | 177(76.3) | 1.00 |  |  |
| ≥3.5 Kg | 41(35.3) | 55(23.7) | 1.76 | 1.08-2.86 | **0.023** |
| **Head circumference(cm)** |  |  |  |  |  |
| < 35.0 | 72(62.1) | 167(72.0) | 1.00 |  |  |
| ≥ 35.0 | 44(37.9) | 65(28.0) | 1.57 | 0.98-2.52 | **0.061** |
| **Birth attendant** |  |  |  |  |  |
| Enrolled midwives | 78(67.2) | 217(93.5) | 1.00 |  |  |
| Assistant Nursing Officer | 36(31.0) | 8(3.5) | 12.52 | 5.58-28.10 | **<0.001** |
| Student | 2(1.7) | 6(2.6) | 1.00 |  |  |
| **Labour onset** |  |  |  |  |  |
| Spontaneous | 112(96.6) | 228(98.3) | 1.00 |  |  |
| Induced | 4(3.4) | 4(1.7) | 2.04 | 0.50-8.29 | 0.31 |
| **Method of induction** |  |  |  |  |  |
| Oxytocin | 2(33.3) | 1(33.3) | 1.00 |  |  |
| Prostaglandins | 4(66.7) | 2(66.7) | 1.00 | 0.05-18.91 | 1.000 |
| **Active labour duration** |  |  |  |  |  |
| Less than 8hours | 55(47.4) | 209(90.1 | 1.00 |  |  |
| 8 hours or more | 61 (52.6) | 23(9.9) | 10.08 | 5.73-17.72 | **<0.001** |

**Table 4: Multivariate Analysis for Risk Factors of Risk Factors for Perineal tear**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Crude odd’s ratio (COR)** | **Adjusted odd’s ratio (AOR)** | **95% CI** | **P value** |
| **Age** |  |  |  |  |
| <20 | 1.00 | 1.00 |  |  |
| 20-30 years | 1.57 | 7.24 | 2.28-23.00 | **0.001** |
| More than 30 years |  | 7.83 | 1.63-37.54 | **0.001** |
| **Birth attendant** |  |  |  |  |
| Enrolled midwife | 1.00 | 1.00 |  |  |
| Assistant Nursing officer | 12.52 | 16.39 | 5.74-46.81 | **<0.001** |
| Students | 0.93 | 0.59 | 0.07-5.33 | 0.639 |
| **Parity** |  |  |  |  |
| >3 | 1.00 | 1.00 |  |  |
| 2—3 | 2.40 | 1.67 | 0.53-5.30 | <0.380 |
| 1 | 13.45 | 12.46 | 3.41-45.52 | **<0.001** |
| **Marital Status** |  |  |  |  |
| Married | 1.00 | 1.00 |  |  |
| Single | 9.42 | 14.39 | 4.28-48.39 | **<0.001** |
| **Precipitate Labour** |  |  |  |  |
| No | 1.00 | 1.00 |  |  |
| Yes | 2.36 | 7.80 | 2.21-27.55 | **<0.001** |
| **Assisted Vaginal delivery (AVD)** |  |  |  |  |
| No | 1.00 | 1.00 |  |  |
| Yes | 14.02 | 8.33 | 1.43-48.60 | **0.019** |
| **Birth Weight** |  |  |  |  |
| < 3.5 Kg | 1.00 | 1.00 |  |  |
| ≥3.5 Kg | 1.76 | 2.19 | 1.06-4.53 | **0.033** |
| **Duration of Active stage labour** |  |  |  |  |
| <8 hours | 1.00 | 1.00 |  |  |
| ≥8hours | 17.58 | 12.65 | 5.65-28.25 | **<0.001** |
| **Duration of second stage of labour** |  |  |  |  |
| <30 minutes | 1.00 | 1.00 |  |  |
| 30-60 | 3.93 | 1.42 | 0.61-3.33 | 0.414 |
| >60 | 14.76 | 10.21 | 3.32-31.41 | **<0.001** |