

**RISK FACTORS ASSOCIATING WITH BIRTH ASPHYXIA  
IN NEWBORN AT MAHARAJ NAKHON SI THAMMARAT  
HOSPITAL**

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for the Degree of Master of Public Health in Health Systems Development**

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Program : Health Systems Development

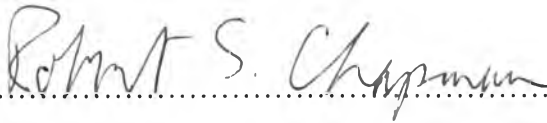
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This case-control study was conducted in an attempt to elucidate the risk factors associated with birth asphyxia in newborn infants at Maharaj Nakhon Si Thammarat hospital during 1<sup>st</sup> October 2002 to 30<sup>th</sup> June 2003. The study group was the group of 264 expectant mothers giving live births resulting in asphyxiated neonates compared to 528 expectant mothers giving live births resulting in non-asphyxiated neonates with the ratio of 1:2. The risk factors associated with birth asphyxia included maternal factor, fetal factor, intrapartum factor, maternity care service received factor and antenatal care service provided factor. Data had been collected through the survey and interview. The delivery records from the obstetrics room were also included to this study. The statistics used in this study are both descriptive and analytical. The descriptive statistics will be displayed in the form of frequency value and percentage where as the analytical statistics will be shown by chi square and logistics regressions to compute odds ratios. Based on the finding of the research study, it is clearly found that the expectant mother's education ( $P < .01$ ), mother's occupation ( $P < .01$ ), mother's age ( $P < .01$ ), gestational age ( $P < .01$ ), fetal presentation ( $P < .01$ ), route of delivery ( $P < .01$ ) and the second stage of delivery ( $P < .01$ ) are the risk factors which associated with the birth asphyxia in newborn. Further, the degree of association supports that the expectant mothers having education in secondary level primary level and uneducated their newborns will be high risk of birth asphyxia for 1.5 time of those with bachelor degree or higher diploma or equivalence. In term of gestational age, the expectant mothers with 28-36 gestation weeks and more than 42 weeks, their newborns will be put an increased risk for 2 times of those with 37-42 gestation weeks. The expectant mothers having the second stage of delivery greater than 1 hour, their newborns will have a greater risk of birth asphyxia for 2.3 fold of those having the second stage of delivery less than 1 hour. It also indicates that the expectant mothers with a below 2500 gram weight or above 4000 gram newborns, their newborns will have a greater risk of birth asphyxia 2.7 fold of the newborns with the weight between 2500 – 3999 grams. These risk factors can be treated or detected if an appropriate and timely treatment is implemented. Ultimately, the essential antenatal care and maternal care during delivery should be promoted as a norm in order to help reduce the incidence of birth asphyxia in new born.

Field of study Health Systems Development

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