

Title: Effect of Maternal Work Activity on Risk of

EFFECT OF MATERNAL WORK ACTIVITY

Author: Skulrat Ritsmitchai

ON RISK OF PRETERM BIRTH

Programme: Epidemiology

Supervising committee:

Examining committee:

Virasakdi Chongsuvivatwong *Virasakdi Chongsuvivatwong*

Associate Professor Virasakdi Chongsuvivatwong M.D., M.Med.Sc. Associate Professor Virasakdi Chongsuvivatwong M.D., M.Med.Sc.



A.P. Gaster

SKULRAT RITSMITCHAI

Alan Gaster Ph.D.

Alan Gaster Ph.D.

Somchai Akarawinake

Somchai Akarawinake

Somchai Akarawinake M.D.

Somchai Akarawinake M.D.

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The Graduate School, Prince of Songkla University, has approved the **Master of Science Thesis** requirements for the Master of Science Programme in Epidemiology.

in Epidemiology

Prince of Songkla University

1994

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ABSTRACT

Study objective - To determine whether prolonged standing and/or physical exertion during pregnancy are associated with preterm birth.

Study design - Matched case-control study.

Setting - Hat Yai Hospital, Songkhla province, between May 1st and November 30th, 1993.

Subjects -

Cases: 223 mothers of singleton preterm infant.

Controls: 223 mothers of singleton term infant giving birth following the case and matched with case on age (within 5 years age group) and parity.

Measurement variables - Indicators of work activity and other potential risk factors including socioeconomic status, maternal stress, medical complication, and obstetric problems were ascertained through the medical records and by questionnaire-based interview administered to each eligible subject.

immediately after delivery. Conditional logistic regression was employed for multivariate analysis.

Results - Univariate analysis revealed significant associations between preterm birth and maternal stress, previous abortion, previous preterm birth, receiving sufficient ANC, pregnancy complication, physical exertion, physical exercise, and prolonged standing. After adjustment for ANC, physical exercise, pregnancy complication and previous spontaneous abortion, significant association between prolonged standing longer than 3 hours per day throughout gestation and preterm birth was demonstrated with an odds ratio of 5.82 (95% CI 1.72, 19.73), when compared with those not undertaking any prolonged standing. Pregnancy complication, previous abortion, physical exercise and antenatal care visits more than 3 times were also associated with preterm birth. The adjusted odds ratio for pregnancy complication was 5.03 (95% CI 1.89, 13.36), previous abortion 2.03 (95% CI 1.07, 3.87), physical exercise 0.38 (95% CI 0.16, 0.88) and attending ANC more than 3 times compared with no attending 0.19 (95% CI 0.07, 0.48).

Conclusions - Standing longer than 3 hours per day throughout pregnancy was significantly associated with incidence of preterm birth. Pregnancy complication and previous abortion were also risk factors. Receiving antenatal care and physical exercise were preventive factors. These results are consistent with the findings of other studies.

Key words: preterm birth, work activity, prolonged standing, physical exertion, physical exercise.