

**UNIVERSITI TEKNOLOGI MARA**

**VALIDATION OF FETAL MOVEMENT BELT  
(FEMOB) IN PRIMIGRAVIDA WOMEN**

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**Project submitted in fulfillment of the requirements for the degree  
of**

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**Faculty of Health Sciences**

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## DECLARATION

We declare that we are the one and only author of this research dissertation, which was carried out according the standard referencing practices and regulation for undergraduate student of Universiti Teknologi MARA (UiTM) Kampus Puncak Alam. We certify that there is no part of this research dissertation has been published for academic and non-academic institution. We definitely acknowledge that this is our own research dissertation and does not interfere with others copyright.

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## ABSTRACT

**Objectives:** This study aims to determine the level of knowledge of primigravida women in counting fetal movement and to investigate the sensitivity and specificity of Fetal Movement Belt (FEMOB) in detecting the fetal movement.

**Methods:** In a cross sectional study, 10 participants were selected using convenience sampling method from an open invitation to all UiTM Puncak Alam staff. They were asked to answer Questionnaire 1 about their knowledge on the fetal movement chart before using the FEMOB. After that, they had to wear the FEMOB for 30 minutes and at the same time, they also needed to count the fetal movements manually. Comparisons between the FEMOB counting and the mother counting were assessed after 30 minutes. Their satisfaction using the FEMOB was investigated in Questionnaire 2. Data were analyzed in SPSS -21 using descriptive and inferential statistical tests.

**Results:** Five out of ten participant who scores more than  $\geq 7.5$  have good knowledge while the other five participant,  $<7.5$  had poor knowledge about the fetal movement. The good knowledge level was determined based on median cut-off point of the total score ( $\geq 7.5$ ). While, for the sensitivity and specificity of FEMOB in detecting fetal movements, results show the ICC = 0.989, with 95% CI (0.955, 0.997). There is evidence for the repeatability of measurements between the FEMOB and mother counting. The Bland and Altman plot for this data shows good agreement for most cases (nine are nearer to zero). The closer these values are to zero, the better the agreement in measurements.

**Conclusion:** FEMOB is sensitive and specific in detecting fetal movements among primigravida women.

**Keywords:** Fetal Movement Belt, fetal movement chart, stillbirth, primigravida, FEMOB