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Is the length of the perineal body associated with the extent of perineal injury among women undergoing vaginal delivery

Submission date
22/09/2026

Recruitment status
Not yet recruiting

Registration date
23/09/2026

Overall study status
Ongoing

Last Edited
30/10/2026

Condition category
Pregnancy and Childbirth

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English summary of protocol

Background and study aims
During vaginal childbirth, the perineum (the area of tissue between the vaginal opening and the anus) stretches to allow the baby to be delivered. This can sometimes result in perineal injury, including tears of varying degrees.
This study aims to determine whether the length of the perineal body is associated with the extent of perineal injury among women undergoing vaginal delivery. The study will also examine the occurrence of obstetric anal sphincter injury (OASI), which involves third- and fourth-degree perineal tears affecting the anal sphincter.

Who can participate?
Adult women who are admitted to the labour room and meet the study eligibility criteria may participate.

What does the study involve?
Participants who consent to the study will undergo measurement of their perineal body length during their first vaginal examination in the labour room, before full cervical dilatation and active pushing.
The measurement will be taken in centimetres, from the posterior fourchette (the back edge of the vaginal opening) to the anterior margin of the anus, using a clean, single-use wooden measuring tool.
The study team will record relevant labour and delivery information, including the extent of perineal injury following vaginal delivery.
No medication, procedure or intervention will be administered to alter the participant's labour or delivery as part of this study.
The expected number of participants is 1,600 women. (1600 women will be screened).

What are the possible benefits and risks of participating?
Possible benefits:
Participants may not receive any direct personal benefit from taking part. However, the information collected may improve understanding of the relationship between perineal body

length and perineal injury during vaginal delivery, potentially contributing to future research and improvements in obstetric care.

Possible risks:
The study involves minimal additional risk. Perineal body measurement is non-invasive and performed as part of the vaginal examination process. Participants may experience temporary discomfort or embarrassment during the examination and may request that the measurement be stopped at any time.

Where is the study run from?
Hospital Tuanku Ja'afar, Seremban, Malaysia, under the Department of Obstetrics & Gynaecology.

When is the study starting and how long is it expected to run for?
November 2026 to October 2027.

Who is funding the study?
Investigator initiated and funded.

Who is the main contact?
Dr Sabeetha Segaran, Department of Obstetrics & Gynaecology, Hospital Tuanku Ja'afar, sabeethasegaran@moh.gov.my, sabeetha23@gmail.com

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Additional identifiers

Study information

Scientific Title
Impact of perineal body length on the extent of perineal injury during labour

Study objectives
Primary Objective
To determine the association between perineal body length and the extent of perineal injury among women undergoing vaginal delivery at Hospital Tuanku Ja’afar, Seremban

Secondary Objective
1. To determine the association between perineal body length and the occurrence of obstetric anal sphincter injury (OASI)
2. To determine the association between perineal body length and the degree of perineal tear
3. To determine the association between perineal body length and the occurrence of episiotomy
4. To determine the association between maternal, obstetric and neonatal factors and the extent of perineal injury
5. To determine the association between maternal, obstetric and neonatal factors and OASI
6. To explore whether a clinically relevant perineal body length threshold can be identified for predicting extensive perineal injury and/or OASI

Ethics approval required
Ethics approval required

Ethics approval(s)
Submitted 06/09/2026, Medical Research and Ethics Committee (MREC) of the Ministry of Health Malaysia (Level 2, Blok A1, National Institutes of Health (NIH) No 1 Jalan Setia Murni U13 /52, Seksyen U13 Bandar Setia Alam, Shah Alam, 40170, Malaysia; +603-3362 8398/8399/8404 /8408; mrecsec@moh.gov.my), ref: RSCH ID-26-06205-PP5

Primary study design
Observational

Secondary study design
Cohort study

Study type(s)

Health condition(s) or problem(s) studied

Eligible women in first stage of labour who are admitted to the labour room in Hospital Tuanku Ja'afar, Seremban

Interventions
Measurement Protocol of Perineal Body Length
Perineal body length is defined as the midline distance, measured in centimeters, between the posterior fourchette and the anterior margin of the anus.
Timing: Done during First stage of labour – before the very first vaginal examination in labour room prior to full cervical dilatation and active pushing.
Position: Participants will be placed in dorsal lithotomy position for the measurement
Anatomical Landmarks: midline distance, measured in centimeters, between the posterior fourchette and the anterior margin of the anus
Instruments: A single-use wooden tongue depressor, pre-marked with measurements from 0 to 6 cm at 0.1-cm intervals. The measurement will be recorded to the nearest 0.1 cm. A new tongue depressor will be used for each participant.
Units: Centimetres
Observer: The measurement will be performed by the medical doctor conducting the first vaginal examination upon the participant's admission to the labour room. All clinicians involved in data collection will undergo standardized training using the same anatomical landmarks and measurement technique before commencement of the study.

Intervention Type
Other

Primary outcome(s)
1. Extent of perineal injury, defined as the highest degree of perineal tissue disruption sustained during vaginal delivery and classified as intact perineum, first-degree, second-degree /episiotomy or obstetric anal sphincter injury (3A, 3B, 3C or fourth-degree tear), measured using an assessment and diagnosis by the certified midwives, nurses or medical doctor who conducts the women's delivery, at the time of delivery of the baby and placenta and before the commencement of perineal injury repair

Key secondary outcome(s)
1. Obstetric Anal Sphincter Injury (OASI) measured using an assessment by the medical doctor in-charge of post delivery and the findings will be confirmed by the consultant/ specialist obstetrics and gynaecology, at the operative theater by the consultant/ specialist obstetric gynaecology

Completion date
31/10/2027

Eligibility

Key inclusion criteria
1. Maternal age ≥18 years
2. Gestational age ≥37+0 weeks
3. Singleton pregnancy
4. Cephalic presentation
5. Admitted in labour and subsequently undergoing vaginal delivery

Healthy volunteers allowed

Yes

Age group
Adult

Lower age limit
18 Years

Upper age limit
50 Years

Sex
Female

Total final enrolment
0

Key exclusion criteria
1. Caesarean section
2. Non-cephalic presentation
3. Preterm delivery <37+0 weeks
4. Multifetal pregnancy

Date of first enrolment
16/11/2026

Date of final enrolment
30/04/2027

Locations

Countries of recruitment
Malaysia

Sponsor information

Organisation
Hospital Tuanku Ja’afar

ROR
https://ror.org/00jxnw682

Funder(s)

Funder type

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Other publications			22/09/2026	Yes	No
Participant information sheet	version 1.0	14/09/2026	22/09/2026	No	Yes
Participant information sheet			22/09/2026	No	Yes
Protocol file			22/09/2026	No	No