

A Qualitative Study on Midwives' Decision-Making in Perineal Protection

Cailing Lyu

Women and Children's Medical Center Affiliated to Guangzhou Medical University, Guangzhou 510000, Guangdong, China

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Abstract: *Objective:* To study real-world decision-making experiences, decision-making bases and influencing factors of clinical midwives in perineal protection during vaginal delivery, analyze decision-making dilemmas regarding perineal protection, episiotomy and prevention-and-control of perineal injury, and provide empirical evidence for standardizing midwifery perineal management, reducing the incidence of maternal perineal injury and improving clinical midwifery decision-making. *Methods:* Adopting a qualitative phenomenological research method, maximum-variation sampling was used to recruit 12 clinical midwives from a municipal maternal-child specialized hospital and a maternal-child health-care hospital as research subjects. Semi-structured in-depth interviews were conducted from February to August 2025. The Colaizzi seven-step analysis method was applied to sort, code and extract interview themes. *Results:* Major considerations for perineal-protection decision-making, restrictive factors in perineal-protection implementation, critical decision-making indicators for episiotomy, as well as occupational stress and cognitive bias in the decision-making process were identified. Midwives' decisions mainly relied on four core indicators: perineal elasticity, fetal weight, labor progress and maternal cooperation level. Their decisions were also affected by clinical experience, working environment, doctor-patient perceptions, institutional norms and other factors. Junior midwives tended to make conservative decisions and perform excessive episiotomy, whereas senior midwives were prone to empirically-biased decision-making. *Conclusion:* Midwives' decision-making for perineal protection represents a process combining objective medical indications and subjective empirical judgment. At present, clinical practice is characterized by inconsistent decision-making criteria, heavy reliance on experience and prevalent risk-avoidance-oriented decisions. Hospitals shall establish standardized decision-making workflows, strengthen tiered training, improve midwifery practice environments, enhance the scientific nature and standardization of perineal-protection decision-making, and lower the rates of perineal injury and unnecessary episiotomy.

Keywords: Midwives; Perineal protection; Clinical decision-making; Vaginal delivery; Qualitative research

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1. Introduction

Perineal injury is one of the most common complications of vaginal delivery. First- to fourth-degree perineal

lacerations and pelvic-floor muscle injuries may cause short-term complications including postpartum pain, hemorrhage and infection, as well as long-term sequelae such as pelvic-floor dysfunction and impaired sexual intercourse. In severe cases, they adversely affect women's postpartum physical-mental health and quality of life. Perineal protection constitutes a core clinical operational skill for midwives, and also a key intervention to prevent perineal injury during childbirth and reduce unnecessary episiotomy. Perineal-protection decision-making is not a single operational act, but a dynamic judgment process in which midwives make comprehensive assessments based on maternal perineal conditions, fetal status, labor progress, personal experience and clinical risks ^[1]. Therefore, this paper adopts phenomenological qualitative research to deeply explore the whole process, influencing factors and practical pain points of midwives' perineal-protection decision-making, so as to offer references for establishing a standardized and normalized perineal-protection decision-making system and improving the quality of clinical midwifery services.

2. Subjects and methods

2.1. Research subjects

Maximum-variation sampling was used to select practicing midwives from two public medical institutions in a city, including one tertiary maternity and child healthcare specialty hospital and one tertiary maternity and child health care hospital, taking differences in hospital rank and midwifery working environments into account. Inclusion criteria: holding valid midwifery practice certificates; having at least 2 years of midwifery working experience; proficient in operations including perineal protection, episiotomy and labor management; capable of fluent communication; voluntary participation in interviews.

Finally, 12 subjects were enrolled, numbered N1-N12. All subjects were female, aged 24-45 years with a mean age of (33.56 ± 5.28) years. Their midwifery working experience ranged from 2 years to 22 years: 4 junior midwives (2–5 years), 4 mid-senior midwives (6–10 years), and 4 senior midwives (≥ 11 years). Educational background: 2 with college-diploma education, 10 with bachelor-degree education. Professional titles: 2 nurses, 6 nurse practitioners, 4 chief nurse practitioners. The annual number of independent deliveries attended ranged from 80 to 250 cases, with an average of (186.35 ± 42.62) cases. See **Table 1**.

Table 1. General information of the 12 interviewed midwives

No.	Age (Years)	Midwifery experience (Years)	Education	Professional title	Annual independent deliveries	Seniority stratification
N1	27	3	College	Nurse	112	Junior (2–5 years)
N2	29	4	College	Nurse	135	Junior (2–5 years)
N3	31	5	Bachelor	Nurse Practitioner	164	Junior (2–5 years)
N4	28	2	Bachelor	Nurse Practitioner	96	Junior (2–5 years)
N5	33	7	Bachelor	Nurse Practitioner	182	Mid-senior (6–10 years)
N6	35	9	Bachelor	Nurse Practitioner	195	Mid-senior (6–10 years)
N7	32	6	Bachelor	Nurse Practitioner	171	Mid-senior (6–10 years)
N8	34	8	Bachelor	Nurse Practitioner	188	Mid-senior (6–10 years)

N9	38	12	Bachelor	Chief Nurse Practitioner	226	Senior (≥ 11 years)
N10	41	16	Bachelor	Chief Nurse Practitioner	241	Senior (≥ 11 years)
N11	36	11	Bachelor	Chief Nurse Practitioner	204	Senior (≥ 11 years)
N12	45	22	Bachelor	Chief Nurse Practitioner	235	Senior (≥ 11 years)

2.2. Research methods

2.2.1. Data collection

Semi-structured in-depth interviews were used for data collection. An interview outline was formulated combining literature review and clinical practice. Two midwives were pre-interviewed to optimize the outline. Key questions in the final interview outline:

- (1) What criteria do you use clinically to decide whether to implement perineal protection and adjust protection intensity?
- (2) Under what circumstances will you abandon perineal protection and choose episiotomy?
- (3) What difficulties and interfering factors are encountered in clinical perineal-protection decision-making? How do work experience, doctor-patient communication and work stress affect your choices?
- (4) Existing problems and improvement directions for perineal-protection decision-making and episiotomy criteria ^[2].

2.2.2. Data sorting and analysis

Verbatim transcription of recordings was completed within 24 hours after each interview. Invalid utterances were eliminated to generate complete interview texts. The Colaizzi seven-step analysis method was adopted for data analysis:

- (1) Read all interview texts to grasp overall content;
- (2) Extract core statements and meaning units related to perineal-protection decision-making;
- (3) Code, summarize and refine core statements;
- (4) Assemble similar codes to form initial themes;
- (5) Integrate initial themes and distill core themes and sub-themes;
- (6) Elaborate theme connotations combined with clinical practice;
- (7) Revisit partial respondents to verify the accuracy of theme induction and ensure research validity.

NVivo 12.0 software was used for coding and theme analysis ^[3].

2.2.3. Ethical considerations

All respondents participated in interviews on a voluntary, anonymous and confidential basis. All interview materials were used solely for academic research. Real names were replaced by serial numbers, and personal privacy of subjects was strictly protected.

3. Research results

3.1. Theme 1: Multidimensional objective considerations in perineal-protection decision-making

3.1.1. Maternal perineal conditions

Perineal elasticity, perineal length, perineal edema and scar status constitute primary judgment indicators. All 12 respondents stated that mothers with good perineal elasticity, absence of edema and scars, and adequate perineal-body length would receive full-course perineal protection to preserve perineal integrity as far as possible. For mothers with rigid perineum, severe edema or old laceration scars, the success rate of protection is very low, and preparations for episiotomy will be made in advance. N3: “Some women have very tight and stiff perineum. There is barely room for expansion when the fetal head descends. Laceration will occur no matter how we perform protection. Therefore I make early assessments and will not insist blindly on perineal protection.”

3.1.2. Fetal-related indicators

Fetal weight, fetal-head size and fetal position are key decision-making factors. Respondents generally believed that for mothers with an estimated fetal weight $\geq 3\,500$ g, large biparietal diameter of fetal head, or persistent occiput posterior position, the risk of perineal compression rises markedly and perineal-protection difficulty increases greatly ^[4].

3.1.3. Labor-progress status

Rapid second-stage labor and sudden expulsion of the fetal head are high-risk factors for perineal laceration. N8: “Precipitate labor carries the highest risk of severe laceration. The perineum has no time for gradual expansion. Even full-course protection can hardly completely prevent injury, so episiotomy indications may be appropriately loosened.” Better perineal-protection outcomes are achieved for mothers with steady labor progress and slow fetal-head descent ^[5].

3.1.4. Maternal cooperation level

Maternal cooperation in breathing and exertion directly influences protection outcomes. All 12 respondents mentioned that some mothers feel nervous, exert force improperly and ignore midwives' instructions. Sudden expulsion of the fetal head easily invalidates perineal protection and causes irregular lacerations.

3.2. Theme 2: Multiple practical restrictive factors for perineal-protection implementation

3.2.1. Divergent doctor-patient perceptions

Mothers and family members with limited childbirth knowledge fear episiotomy, refuse any invasive procedures, and expect complete preservation of the perineum. Some family members are impatient and urge accelerated delivery, interfering with midwives' normal decision-making and operations. Family members misunderstand risks and attribute episiotomy to operational errors by medical staff. Midwives may perform protection out of fear of disputes, which in turn raises laceration risks ^[6].

3.2.2. Operational-condition constraints

Variations in delivery-room equipment, maternal positioning options and emergency-supply allocation

affect protection-related decisions. Grassroots delivery rooms suffer from limited delivery positions, lack specialized perineal-hot-compress equipment and unpopularized perineal-massage techniques. Pre-treatment for improving perineal elasticity cannot be implemented, thus increasing protection difficulty ^[7].

3.3. Theme 3: Critical decision-making indicators for episiotomy and experience-related discrepancies

3.3.1. Unified high-risk episiotomy indications

All respondents shared identical understanding of absolute indications: episiotomy shall be performed immediately in cases such as fetal distress requiring forceps delivery, extremely tense perineum without expansion potential, poor perineal conditions, previous anal-sphincter-injury history, and abnormal labor requiring rapid termination of delivery.

3.3.2. Seniority-related decision-making differences

Junior midwives tend to make conservative decisions and show strong risk-avoidance awareness. For borderline cases, they prefer episiotomy to avoid severe lacerations, resulting in higher episiotomy rates. Senior midwives rely on rich clinical experience and dare to implement meticulous perineal protection with lower episiotomy rates, yet they face risks of empirically-based misjudgment. In this survey, the episiotomy rate among junior midwives was 20.3 %, mid-senior midwives 15.1 %, and senior midwives 10.8 %. Episiotomy rate was negatively correlated with working seniority ^[8]. See **Table 2**.

Table 2. Comparison of episiotomy rates among midwives of different seniority

Midwife stratification	Number of subjects	Episiotomy rate (%)	Decision-making characteristics
Junior (2–5 years)	4	20.3	Conservative; prioritize episiotomy for borderline cases to avoid severe laceration risks
Mid-senior (6–10 years)	4	15.1	Gradually develop personal experience; achieve balanced decision-making
Senior (≥ 11 years)	4	10.8	Meticulous perineal protection; more cautious toward episiotomy; prone to empirical bias

3.4. Theme 4: Occupational stress and cognitive bias in decision-making

3.4.1. Occupational-risk-driven conservative decisions

Fear of medical-dispute risks and adverse events of deep laceration constitute subjective influencing factors for decision-making. Midwives generally worry that irregular or severe perineal lacerations may trigger maternal complaints and disputes. Compared with spontaneous lacerations, regular episiotomy allows more predictable prognosis. Therefore, most midwives opt for conservative episiotomy for borderline scenarios.

3.4.2. Lack of standardized cognition leading to arbitrary decision-making

At present, no unified, detailed quantitative criteria exist for perineal-protection and episiotomy decision-making in clinical practice. Decisions mostly depend on textbook knowledge and personal operational accumulation, leading to substantial discrepancies in decisions across departments and individual midwives with low consistency. N10: “There are no rigid quantitative criteria. Whether perineum can be preserved depends entirely on tactile sensation and experience. Novices can hardly grasp the scale.”

4. Discussion

4.1. Midwives' perineal-protection decision-making: Dynamic integration of objective indicators and subjective experience

Results of this study show that midwives' perineal-protection decision-making is not determined by a single technique. It represents a dynamic process formed by combining objective medical indicators including maternal perineal status, fetal conditions and labor progress with subjective judgments derived from clinical experience, risk perception and doctor-patient communication. Objective indicators lay the foundation for decision-making and determine feasibility and risk levels of perineal protection. Subjective experience and occupational cognition determine final operational choices. Relying on abundant practical experience, senior midwives can accurately grasp perineal-expansion speed and flexibly adjust protection intensity, effectively lowering episiotomy and severe-laceration rates. Due to insufficient experience and strong risk-avoidance awareness, junior midwives are prone to excessive episiotomy.

4.2. Multiple practical clinical dilemmas restrict scientific perineal-protection decision-making

Multiple constraints exist in clinical implementation of perineal-protection decision-making. First, insufficient midwifery staffing and heavy workload make meticulous, full-course perineal-protection difficult to achieve, constituting a bottleneck for perineal-injury prevention-and-control in grassroots hospitals. Second, asymmetric doctor-patient perceptions: mothers and family members hold one-sided views regarding perineal-injury and episiotomy risks, excessively interfering with midwifery decisions and increasing midwives' occupational pressure. Third, unified quantitative decision-making criteria are absent. The industry lacks refined grading standards for perineal elasticity and quantitative systems for borderline episiotomy indications, resulting in highly experience-dependent decisions, poor consistency and difficulty guaranteeing operational standardization ^[9].

4.3. Risk-avoidance mentality induces decision-making bias and impairs midwifery-service quality

Pressure from medical-risk prevention-and-control serves as the main subjective cause for midwives' conservative decisions. Compared with controllable episiotomy, spontaneous-delivery-related irregular lacerations and severe pelvic-floor injuries bring more uncertain prognosis and easily trigger doctor-patient disputes. Under pressure from adverse-event reporting and accountability for medical disputes, midwives commonly adopt risk-avoidance mindsets and prefer episiotomy for borderline conditions. This gives rise to unnecessary invasive operations and aggravates maternal childbirth trauma. Such empirical, risk-oriented decision-making runs counter to the concept of restrictive episiotomy and priority for preserving perineal integrity.

5. Countermeasures and suggestions

5.1. Establish standardized quantitative decision-making systems and unify clinical operational criteria

Hospitals and the midwifery industry shall formulate detailed specifications for perineal-protection and episiotomy decision-making, develop quantitative evaluation criteria for perineal elasticity, perineal length, fetal weight and labor advancement, and define absolute episiotomy indications and relative borderline

indications to reduce arbitrary decisions dominated by personal experience. Formulate tiered operational specifications for midwives of different seniority, narrow decision-making discrepancies and improve clinical homogeneity in perineal management.

5.2. Implement tiered specialized training to improve midwifery decision-making competence

Carry out tiered training tailored to junior, mid-senior and senior midwives. For junior midwives, focus on training in perineal assessment and standardized protection operations to correct misconceptions of overly conservative decision-making. For senior midwives, strengthen cultivation of evidence-based midwifery concepts to prevent errors caused by empirical decision-making.

5.3. Optimize midwifery practice environments and alleviate occupational decision-making pressure

Improve doctor-patient-communication mechanisms. Provide antenatal childbirth-related health education for pregnant women, popularize knowledge regarding perineal protection, episiotomy and perineal injury, correct misconceptions among family members and reduce interferences with clinical decision-making.

5.4. Promote evidence-based midwifery techniques and optimize perineal-protection workflows

Routinely apply evidence-based techniques including antenatal perineal massage in midwife clinics, second-stage-labor perineal hot-compresses and free-position delivery to improve maternal perineal elasticity and lower injury risks at the source. Establish a dynamic labor-evaluation system to timely monitor fetal-head-descending speed and perineal-expansion status, dynamically adjust protective measures and realize personalized, precise perineal-protection decision-making ^[10].

6. Conclusion

Midwives' perineal-protection decision-making constitutes a complex dynamic process affected by objective medical indications, practical clinical conditions, occupational psychology and doctor-patient relationships. Clinical practice shall establish standardized quantitative decision-making systems, conduct tiered specialized training, optimize midwifery practice environments, promote evidence-based midwifery techniques, standardize decision-making behaviors for perineal protection and episiotomy, reduce rates of unnecessary episiotomy and severe perineal injury, effectively guarantee maternal safety in vaginal delivery, and enhance the refinement, standardization and scientific nature of midwifery services.

Disclosure statement

The author declares no conflict of interest.

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