

REVIEWER'S REPORT ON THE MASTER'S THESIS

Candidate: Đặng Hà Lê

Thesis title:

- *In Vietnamese:* Thực trạng đái tháo đường thai kỳ và một số yếu tố liên quan ở sản phụ tại Bệnh viện Phụ sản Trung ương

- *In English:* Current status of gestational diabetes and some related factors in pregnant women at National Hospital of Obstetrics and Gynecology

Code: 24075039.

Reviewer: Dr. Lê Thị Tươi

University: Hanoi National University of Education.

CONTENT

I. COMMENT:

1. The necessity, scientific significance and practicality of the thesis:

- **Necessity:** Gestational diabetes mellitus (GDM) is increasing rapidly in Vietnam, causing numerous adverse complications for both mothers and fetuses. Researching to update new data is highly necessary.
- **Scientific significance:** The thesis contributes further epidemiological and clinical evidence regarding the prevalence as well as factors associated with GDM.
- **Practicality:** The research results at a frontline medical facility like the National Hospital of Obstetrics and Gynecology bring high practical value, providing a basis for healthcare managers and clinicians to optimize screening processes and high-risk pregnancy management.

2. Reliability and relevance of the thesis (*which clearly states the non-duplication of the thesis, the relevance of thesis title to thesis content – of content to training major; reliability and modernity of research methodology, etc.*)

- **Relevance:** The thesis title is fully consistent with the research content, the stated objectives, and the training major code of Master in Biomedical Engineering Technology. The content does not duplicate previously published works.
- **Reliability of methodology:** The cross-sectional descriptive study design is appropriate for the objective of describing the current reality.

- **Reliability of sample size:** The actual collected sample size is very large (1,033 medical records), far exceeding the minimum required sample size (646), ensuring strong statistical power for the tests. Selection and exclusion criteria were strictly established to well control confounding factors related to congenital endocrine disorders or medication use.

3. Advantages and disadvantages of the thesis's content, structure, and format

3.1. Advantages

- **Structure and format:** The thesis structure is balanced, logical, and includes all necessary chapters and sections.
- **Clear research results:** The GDM prevalence was determined to be 18.3%. Crude associated factors (univariate analysis) with statistical significance were identified, including maternal age of 35 or older (OR = 2.188), pre-pregnancy BMI indicating obesity > 25 (OR = 2.199), first-degree family history of diabetes (OR = 4.296), and history of stillbirth (OR = 1.740).
- **Multivariate analysis:** Multivariate analysis of factors associated with GDM was performed using logistic regression analysis, identifying 3 independent risk factors: age over 35; first-degree family history of type 2 diabetes; and obesity.

3.2. Disadvantages

- Consider using the Vietnamese term "sản phụ" (parturient/puerperal woman) versus the English term "pregnant women". In the Vietnamese abstract, the term "thai phụ" is used. Terminology needs to be unified to clearly reflect the research subjects.
- The collection of secondary data from paper medical records was confined to a single month (March 2025) using a convenient sampling method, which may reduce the broad representativeness of the sample.
- The reference formatting is still inconsistent and does not follow a format where full author names are written out in the bibliography.
- The discussion and remarks need to cite more specific evidence to clarify the issues, the novelty, and the contributions of the thesis.
- Table 4.2 and Table 4.3 need clear titles for each column and appropriate units included.

II. QUESTIONING (Optional)

1. The study utilizes retrospective data via paper medical records of parturients coming to give birth at the hospital. For the critical variable "pre-pregnancy BMI", how did you

- handle cases with missing data or data based on the pregnant women's self-recollection/self-reporting at admission to avoid recall bias?
2. When analyzing the association between the place of residence and GDM (Table 4.6), what criteria were used to classify urban and rural areas?
 3. Please state the most prominent contribution of the thesis when evaluating factors associated with GDM compared to general existing knowledge on this phenomenon.

III. CONCLUSION *(which clearly confirms the extent of satisfying requirements for a master thesis; whether the thesis can be submitted to the master thesis examination committee)*

The Master's thesis of candidate Dang Ha Le is a serious research work with high scientific and practical value. The thesis fully satisfies the scientific content requirements for a Master's degree in Biomedical Engineering Technology. The thesis is entirely qualified to be submitted for defense before the Master's Thesis Examination Committee.

Hanoi, 06/06, 2026

REVIEWER

(full name, sign)

Lê Thị Tuyết



REVIEWER'S REPORT ON THE MASTER'S THESIS

Candidate: Dang Ha Le

Thesis title: Current Status of Gestational Diabetes and Some Related Factors in Pregnant Women at National Hospital of Obstetrics and Gynecology

Major: Biomedical Engineering Technology

Code: 84290.01QTD

Reviewer: Dr. Nguyen Le Khanh

University: Vietnam National University, International School

CONTENT

I. COMMENT:

1. The necessity, scientific significance and practicality of the thesis:

Gestational diabetes mellitus (GDM) is one of the most common metabolic disorders during pregnancy and has become an increasingly important public health concern worldwide, including in Vietnam. The thesis addresses a highly relevant topic and provides updated epidemiological evidence for the year 2025 and contributes valuable information to support screening programs and preventive healthcare strategies.

Although many of the identified risk factors are well established in the literature, the study has considerable practical significance because it confirms their relevance in a large Vietnamese population and provides evidence that can support risk-based screening and clinical management at a national referral hospital.

2. Reliability and relevance of the thesis (*which clearly states the non-duplication of the thesis, the relevance of thesis title to thesis content – of content to training major; reliability and modernity of research methodology, etc.*)

The thesis topic is highly relevant to the Biomedical Engineering Technology program, particularly in the fields of public health, epidemiology, and healthcare data analysis.

The research objectives are clearly defined and consistent with the thesis title. The study does not duplicate previous research but instead updates the epidemiological profile of gestational diabetes in a contemporary Vietnamese population.

The author employed a cross-sectional descriptive study design with a relatively large sample size of 1,033 participants. The diagnosis of gestational diabetes was based on internationally



recognized and currently recommended diagnostic criteria. The study design is appropriate for estimating prevalence and investigating associated factors.

The statistical analyses were performed appropriately. The use of multivariable logistic regression to identify independent risk factors and calculate adjusted odds ratios is suitable for the study objectives and helps control for potential confounding variables.

3. Advantages and disadvantages of the thesis's content, structure, and format

3.1. Advantages

One of the major strengths of the thesis is the extensive comparison of study findings with both domestic and international literature. The thesis goes beyond simply reporting statistical associations and provides detailed explanations of the biological mechanisms underlying the observed risk factors.

In addition to traditional risk factors, the author explored several less frequently studied variables in the Vietnamese context, including assisted reproductive technology (ART), fetal sex, and a history of stillbirth. Although not all of these variables remained significant in the final model, their inclusion contributes to a more comprehensive epidemiological assessment.

The inclusion of more than one thousand participants increases the robustness of the prevalence estimate and improves the reliability of the statistical analyses.

3.2. Disadvantages

Several typographical and spelling errors were identified throughout the thesis. Examples include incorrect spellings such as "martenal" instead of "maternal," "gluose" instead of "glucose," "poteintial" instead of "potential," "ophtalmic" instead of "ophthalmic," and "offsprings" instead of "offspring." These errors should be carefully corrected to improve the overall quality of the manuscript.

There are inconsistencies in table and figure numbering. For example, Table 2.1 is used for more than one item, and several references in the text do not correspond correctly to the numbered figures or tables. In addition, formulas should be numbered and appropriately referenced to improve clarity and facilitate citation.

The thesis contains inconsistent formatting, particularly in the use of decimal separators, where commas and periods are mixed within English-language tables and text. There are also inconsistencies in capitalization and punctuation that should be standardized according to the university's thesis guidelines.

II. QUESTIONING (Optional)

Based on the prevalence and risk factors identified in your study, what specific recommendations would you propose to improve the current screening and management strategy for gestational diabetes at the National Hospital of Obstetrics and Gynecology?

III. CONCLUSION *(which clearly confirms the extent of satisfying requirements for a master thesis; whether the thesis can be submitted to the master thesis examination committee)*

The thesis entitled “Current Status of Gestational Diabetes and Some Related Factors in Pregnant Women at National Hospital of Obstetrics and Gynecology” addresses an important public health issue and provides updated epidemiological evidence regarding gestational diabetes in Vietnam.

The study was conducted using an appropriate methodology, a large sample size, and reliable statistical analyses. The discussion is comprehensive and demonstrates a good understanding of both clinical and biological aspects of gestational diabetes.

In my opinion, the thesis satisfies the academic and scientific requirements for a Master’s degree in Biomedical Engineering Technology. I recommend that the thesis be accepted and submitted to the Master Thesis Examination Committee for defense after minor revisions addressing the formatting mentioned above.

Hanoi, 04 June, 2026

REVIEWER



Nguyễn Lê Khanh

Hanoi, 06/06/2026



MINUTES OF MASTER THESIS DEFENSE

The master thesis defense session of student: Dang Ha Le (date of birth: 16/10/1997) was conducted at 09:30 (hour/minute), on 06/06/2026 at VNU - International School.

Thesis title:

- *In Vietnamese*: Thực trạng đái tháo đường thai kỳ và một số yếu tố liên quan ở thai phụ tại Bệnh viện Phụ sản Trung ương

- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: 84.290.01 (Q.T.D).....

Members of the Master thesis examination committee are present: 5/5

No	Full name	University/ Organizations	Role in Committee	Note
1	TS. Nguyễn Quang Thuận	Trường Quốc tế, ĐHQGHN	Chairman	
2	TS. Nguyễn Lê Khanh	Trường Đại học Công nghệ, ĐHQGHN	Reviewer	
3	TS. Lê Thị Tươi	Trường Đại học sư phạm Hà Nội	Reviewer	
4	GS.TS. Nguyễn Đức Thuận	Trường Quốc tế, ĐHQGHN	Secretary	
5	TS. Thân Văn Thái	Trường Quốc tế, ĐHQGHN	Committee member	

PART I: INTRODUCTION

1. Representatives of VNU - International School made welcoming remarks including:

- Introduction of the master thesis defense and participants;

- Announcement about Decision of the President of Vietnam National University, Hanoi on establishing the Master thesis examination committee (Decision No. 1862/QĐ-ĐHQGHN issued on 13/05/2026).

PART II: THESIS DEFENSE SESSION

1. TS. Nguyễn Quang Thuận – The Chair led the Master thesis examination committee.

2. GS. TS. Nguyễn Đức Thuận – The Secretary of the Committee announced the scientific background and conditions for master thesis defense of the candidate (candidate's scientific background file and academic results are attached).

3. The candidate Đặng Hà Lê made a presentation on the thesis.

4. TS. Nguyễn Lê Khanh and TS. Lê Thị Tươi – Reviewers commented on the thesis (with attached documents).

5. Questioning period from members of the Committee:

+ Question 1: For the clinical variable "pre-pregnancy BMI", how did you handle cases with missing data or data based on the pregnant women's self-recollection / self-reporting at admission to avoid recall bias?

+ Question 2: What recommendation would you propose to improve the current screening for gestational diabetes at the NHOA?

6. Candidate's answers

+ Answer for question 1: Thank you for reviewer question. This is also the limitation of this study. The author try our best to collect the clinical database as much as we can and support to the reviewer version of the data.

+ Answer to question 2: Along with the early screening, the greater attention should be given to health education for women of reproductive age to improve their understanding of GDM.

7. The Secretary of the Committee commented on the thesis conducting progress of the candidate (with attached document).

8. Committee's Deliberations:

- Election of Vote counting committee:

1. Chair: TS. Nguyễn Quang Thuận.

2. Member: GS. TS. Nguyễn Đức Thuận.

- The examination committee voted by secret ballot.

- The vote counting committee:

+ The Chair reported the vote counting result (with attached vote counting record).

- The Examination committee deliberated and came to a conclusion on the thesis examination by reaching a consensus on the assessment resolution on the thesis. The resolution concluded:

The thesis satisfies the requirements of the master degree.

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PART III: OUTCOME OF THE EXAMINATION PROCESS

1. The Chair of the Vote Counting committee announced the result of the ballot on the thesis examination.
2. The Chair of the Examination Committee announced the resolution on the thesis examination.
3. The Chair of the Examination Committee made statements and gave controls to the organizer.

The thesis defense session ended at 10:15 (hour/minute), on 06/06/2026

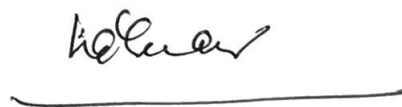
The thesis evaluation committee approved the student's thesis with the result (score scale): 8.8 point (In word: Eight point Eight).
Students are required to revise some content as requested by the Council and submit the completed project to the Information and Library Center, Vietnam National University, Hanoi, as per regulations.

**SECRETARY OF THE THESIS
EXAMINATION COMMITTEE**



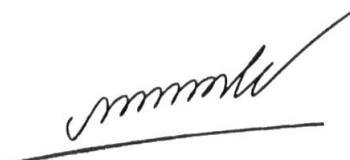
GS. TS. Nguyễn Đức Thuận

**CHAIR OF THE THESIS
EXAMINATION COMMITTEE**



TS. Nguyễn Quang Thuận

**CERTIFICATION BY VNU - INTERNATIONAL SCHOOL
P.P. RECTOR
OFFICE OF ACADEMIC AFFAIRS**



Hoàng Tuyết Minh



Hanoi, ..06../...06/2026

**MINUTES OF VOTE COUNTING COMMITTEE
OF THE MASTER THESIS EXAMINATION COMMITTEE**

Pursuant to the Decision No. 1862/QĐ-DHQQHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee, the committee conducted a meeting at ..9:30... (hour/minute), on 06/06/2026 at VNU - International School to examine the master thesis of the candidate Đặng Hà Lê.

Thesis title:

- *In Vietnamese*: Thực trạng đái tháo đường thai kỳ và một số yếu tố liên quan ở thai phụ tại Bệnh viện Phụ sản Trung ương

- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Major: Master in Biomedical Engineering Technology

Code: ..84290..01..QTD.....

The vote counting committee was voted:

1. Chair: GS.TS...Nguyễn Đức Thuận..
2. Member: ..TS...Lê Thị Tươi.....

The number of members presenting is ..5../...5., the members who are opponents are ..2../...5..

Number of votes distributed to members: ...65....

Number of unused remaining votes:0.....

Number of valid votes: ...05....

Number of invalid votes: ..0.....

Number of votes for the score ..8.5. is: ...0|.....

Number of votes for the score 8.9. is: 03....

Number of votes for the score 9.0. is: 01....

Number of votes for the score is:

Number of votes for the score is:

Average score: 8.8 / 10....

(In text: Eight point Eight)

Note: The thesis score is the average of scores marked by the examination committee's members presenting in the thesis defenses session, taken to one decimal place and not rounded.

**MEMBER OF THE VOTE
COUNTING COMMITTEE**



TS. Lê Thị Tươi

**CHAIR OF THE VOTE
COUNTING COMMITTEE**



GS.TS. Nguyễn Đức Thuận

CERTIFICATION BY VNU - INTERNATIONAL SCHOOL

P.P. RECTOR

OFFICE OF ACADEMIC AFFAIRS



Hoàng Tuyết Minh



DEFENSE SCORE SHEET FOR MASTER THESIS

Pursuant to the Decision 1862/QĐ-ĐHQGHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee to examine the master thesis of the student Đặng Hà Lê (date of birth: 16/10/1997).

Thesis title:

- *In Vietnamese*: Thực trạng đái tháo đường thai kỳ và một số yếu tố liên quan ở thai phụ tại Bệnh viện Phụ sản Trung ương

- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: 84240.01 QTD.....

Comments:

1. Topic is necessary and the results are significant.
2. The thesis title is consistent with the research contents, objectives.
3. Methods is appropriate.
4. Thesis structure is balanced, logical.
5. The research results are clear.
6. Terminology need to be unified to clearly reflect the research subjects.
7. Reference format.

- In number: 8,9 marks
- In text: Eight point nine marks

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DEFENSE SCORE SHEET FOR MASTER THESIS

Pursuant to the Decision 1862/QĐ-DHQGHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee to examine the master thesis of the student Đặng Hà Lê (date of birth: 16/10/1997).

Thesis title:

- *In Vietnamese*: Thực trạng đái tháo đường thai kỳ và một số yếu tố liên quan ở thai phụ tại Bệnh viện Phụ sản Trung ương

- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: ...84.290.01.QTD.....

Comments:

- The study is Practical significance for Vietnamese population

- Student performed well in conducting the research, statistical analysis, demonstrated good understanding.

- Few of errors: figure number & decimal separators should be corrected.

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Result: *(The mark of each committee member is on point scale, possibly odd to one decimal place):*

- In number: 8.5 marks
- In text: ... Eight point five marks

Hanoi, 06 June, 2026

Marker


Nguyễn Lê Khanh



DEFENSE SCORE SHEET FOR MASTER THESIS

Pursuant to the Decision 1862/QĐ-DH-QGHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee to examine the master thesis of the student Đặng Hà Lê (date of birth: 16/10/1997).

Thesis title:

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- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: 84.290.01 QTD.....

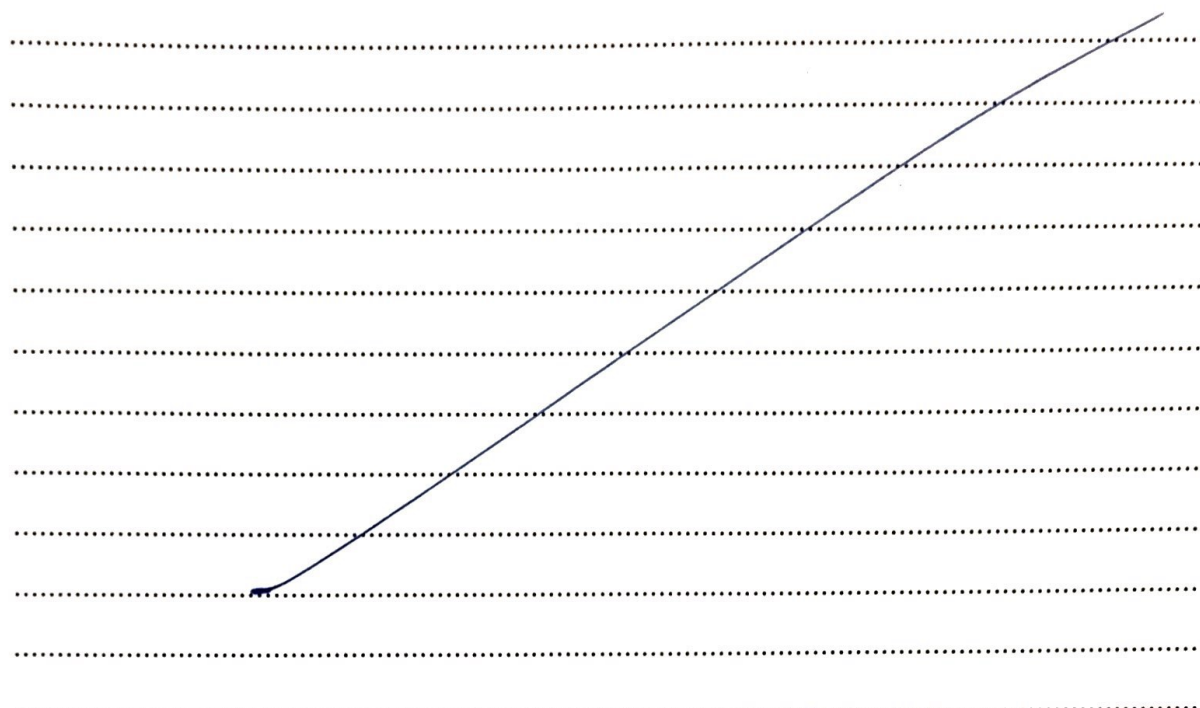
Comments:

+> The thesis has good rationale

> The structure of the report has not been suitable yet. Chapter 1 and Chapter 5 are very short

+ The way to present results is not logical

+> The results is not new however, the student showed hard work



Result: (The mark of each committee member is on point scale, possibly odd to one decimal place):

- In number: 8.9 marks
- In text: eight point nine marks

Hanoi, 06 June , 2026

Marker

Le Cuu

Nguyen Thanh Thuan



DEFENSE SCORE SHEET FOR MASTER THESIS

Pursuant to the Decision 1862/QĐ-DHQGHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee to examine the master thesis of the student Đặng Hà Lê (date of birth: 16/10/1997).

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- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: 84290-01 QTD.....

Comments:

Nội dung tốt, có ý nghĩa thực tế và có liên quan đến nghiên cứu của bệnh viện Phụ Sản Trung ương.
Tuy nhiên còn chưa có cơ sở lý luận.
Có thể bổ sung thêm tài liệu tham khảo.

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Result: *(The mark of each committee member is on point scale, possibly odd to one decimal place):*

- In number:9..... marks
- In text:nine..... marks

Hanoi,06.....June....., 2026

Marker



Nguyen Thi Thanh



DEFENSE SCORE SHEET FOR MASTER THESIS

Pursuant to the Decision 1862/QĐ-ĐHQGHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee to examine the master thesis of the student Đặng Hà Lê (date of birth: 16/10/1997).

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- *In English*: Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: ..84.290.01.QTD.....

Comments:

+, The topic of the thesis is interesting.

+, The Thesis contents possessed the scientific and practical significants in Vietnam healthcare situation.

+, The student performance was very good.

+, The study limitation: just collecting the data in a small area and time scales.

+, The student need to check again some typo errors and grammar error in the thesis.

- In number:8,9..... marks

- In text: ..Eight..pound..nine..... marks

Marker

Đu
Thân Văn Thái



Hanoi, 06/06/2026

**RESOLUTION OF THE MASTER THESIS
EXAMINATION COMMITTEE**

Pursuant to the Decision 1862/QĐ-DHQGHN issued on 13/05/2026 by President of Vietnam National University, Hanoi on establishing the Master thesis examination committee to examine the master thesis of the student Đặng Hà Lê (date of birth: 16/10/1997).

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- *In English:* Current status of gestational diabetes and some related factors in pregnant women at the National Hospital of Obstetrics and Gynecology (NHOG)

Code: 84290.01 . QTD

The thesis examination committee conducted a meeting at ... 69'30... (hour/minute), on 06/06/2026 at VNU - International School.

After the candidate's presentation on the thesis, opponents' review, committee members' comments, candidate's answers, the committee deliberated and came to a conclusion:

1. The necessity, scientific significance and practicality of the thesis topic

- The GDM is one of the most common metabolic disorders during pregnancy.

- Scientific significance: The study addressed the relevance in a large Vietnamese population.

2. Structure, research methodology, references, etc., of the thesis

- Structure of the thesis: Well organized and clear

- Research methodology: Appropriate and modern

- References of the thesis: well collected and up-to-date

3. Research outcomes:

- The study findings presented the extensive comparison between domestic and International literature.
- The study reported the frequently variables in Vietnamese context, including assisted reproductive technology, fetal sex, and a history of stillbirth.

4. Limitations and requests for thesis correction (if any):

- Check again the typographical, spelling error
- Check again the inconsistency in tables and figures.

5. Overall evaluation:

- The study addressed an importance public health issue and provide up-to-date information of epid.
- The thesis satisfies the requirements of the master degree.

Thesis marked: ...8.8.../...10...

Outcome of master thesis defense of candidate ..Đặng...Hải...Lê

Qualified: ☒

Unqualified: ☐

(The thesis is qualified if the average score marked by the Committee is 5.5 or higher).

This resolution is passed by ..5.../...5... members of the Committee.

**SECRETARY OF THE THESIS
EXAMINATION COMMITTEE**



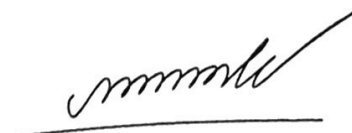
GS. TS. Nguyễn Đức Thuận

**CHAIR OF THE THESIS
EXAMINATION COMMITTEE**



TS. Nguyễn Quang Thuận

**CERTIFICATION BY VNU - INTERNATIONAL SCHOOL
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OFFICE OF ACADEMIC AFFAIRS**



Hoàng Tuyết Minh