

MD/MS/DNB - THESIS / DISSERTATION WRITING GUIDELINES:

Compiled by: www.thesiskart.com

❖ INTRODUCTION:

- Include definition of the disease / Intervention
- Mention incidence – World / India
- State why your research is needed? Is it because not many such studies in your geographical area? Or is there a lacuna in previous research that you are trying to address?

❖ AIMS & OBJECTIVES: As mentioned in your synopsis

❖ REVIEW OF LITERATURE:

- Brief applied anatomy and Physiology
Attach relevant pictures (2-3)
- Epidemiology:
Description of the disease world over in 1-2 paragraphs followed by Indian context in 1-2 paragraphs
- Etiology
- Pathophysiology

❖ REVIEW OF STUDIES

- Recent studies, preferably of last 5 years
- Quote both International & Indian studies
- If feasible, group the studies in to “for” and “against” the hypothesis that will provide the logical direction to your Thesis. If there are multiple perspectives of the studies, better to mention the studies under respective subheadings.
- Mention sample year of the study and place, sample size of study, characteristic of the study subjects and conclusion.
- Also mention recommendation of the study
- Recent studies to be quoted first. Older studies later in sequential format.
- Where to get the relevant studies? - National Center for Biotechnology Information (NCBI) provides rich repositories of research studies of International standard. Indian studies are available at society journals of respective specialty. Explore in to archives of journals to get older studies.

❖ MATERIAL AND METHODS:

This section is most important from research perspective. National Board of Examination emphasizes most on this part.

Study design:

- ✓ **Prospective / Retrospective:** MD and NBE Evaluators give weightage to prospective studies than retrospective studies.

National Board of Examination mentions against retrospective studies.

✓ **Descriptive / Analytic study**

✓ **Randomized or Non-randomized study**

Place of the Study:

Mention the OPD/Ward, Department, Hospital name and name of the city.

Duration of the study:

Mention exact start & end date

Study population:

The target population of the study should be defined and recruitment of the patients should be from target population.

Target population is that section of population for which results of study can be applied and extrapolated.

Inclusion and Exclusion of the study:

Examples -

- Age entry / limit
- Comorbidities
- Critical illness
- Any other entity

Sample size estimation:

Sample size calculation is the cornerstone of any good Thesis / Dissertation. Various formulae are available for calculations of sample size. However, selection of proper formula for a particular study is the science of Bio statistics.

Commonly applied formula;

$$n = \frac{(\sigma_1^2 + \sigma_2^2) \cdot [Z_{1-\alpha/2} + Z_{1-\beta}]^2}{(M_1 - M_2)^2}$$

(Where $Z_{\alpha/2}$ is the critical value of the Normal distribution at $\alpha/2$ (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), Z_{β} is the critical value of the Normal distribution at β (e.g. for a power of 90%, β is 0.2 and its critical value is 1.282) and σ_1 and σ_2 are the Standard deviations of the two groups and M_1 and M_2 are the means of two groups)

However, it's important to provide right input to the formula. Inputs for the formula can be taken from landmark studies or recent study. In case thesis is de novo (without previous study to quote), data can be taken from Hospital registry where research is planning to be conducted. It's a must in any Medical Thesis to quote the study.

Method of measurement of outcome of interest:

The outcome variable (primary and secondary) and its measurement must be defined.

Example of outcome in a Thesis of General Surgery:

1. Operative time,
2. Recovery time/hospital stay
3. Intra operative blood loss,
4. Duration of abdominal drain kept in situ
5. Duration of Foley's catheter kept in situ,
6. Antibiotic requirement,
7. Analgesic requirement,
8. Immediate surgical complications,
9. Post op recurrence,
10. Cosmesis and improvement in renal function

Units of measurement of outcome also must be mentioned. Example in "Analgesic requirement" – mention Tab / Injection Diclofenac and dosage in mg.

Methodology

Briefly describe the overall view how this study is conducted. It should be in 'story telling' format. Think of all the steps you have taken while collecting the data and make a script.

Statistical methods

Type of data	Which test to use
Comparison no. of patients having surgical complications after surgery	Chi-squared test / Fisher's exact test (use it for frequencies)
Comparison of renal function after Open & lap surgery (Creatinine)	t test / wilcoxon signed rank test

Statistical testing will be conducted with the statistical package for the social science system version SPSS 17.0. Continuous variables will be presented as mean \pm SD or median if the data is unevenly distributed. Categorical variables will be expressed as frequencies and percentages. The comparison of normally distributed continuous variables between the groups will be performed using Student's t test. Nominal categorical data between the groups will be compared using Chi-squared test or Fisher's exact test as appropriate. Non-normal distribution continuous variables will be compared using Mann Whitney U test. For within the group comparisons, paired t test or wilcoxon signed rank test will be done. For all statistical tests, a p value less than 0.05 will be taken to indicate a significant difference.

❖ **STATISTICS (OBSERVATION & RESULT)**

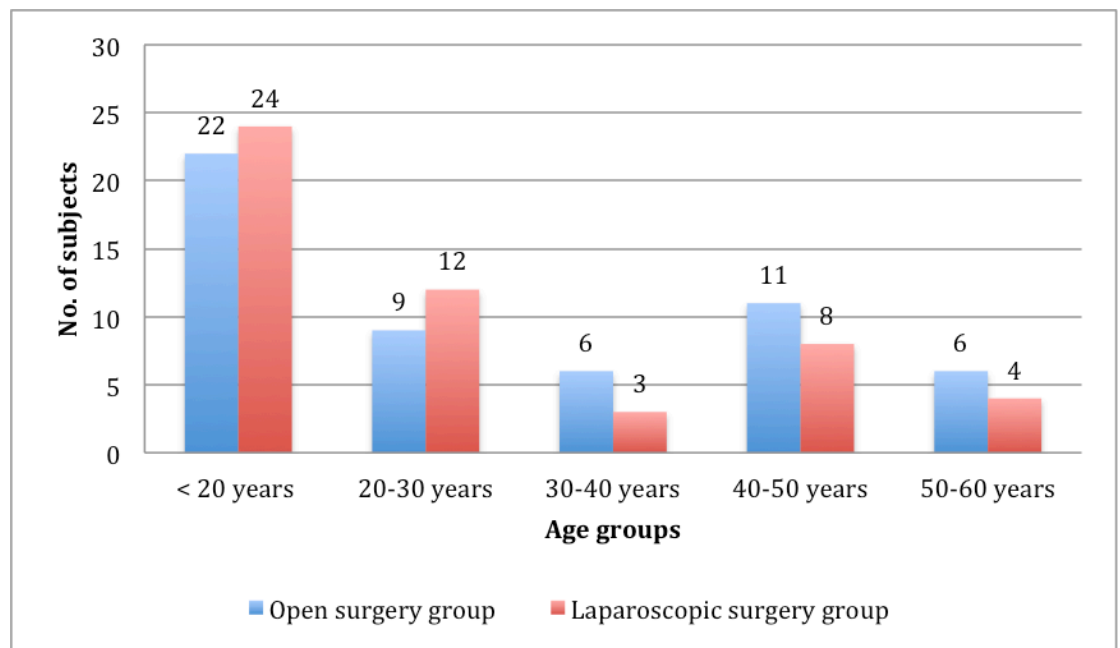
It should have 3 sections:

- Table
- Diagram
- Description of Table & Statistical significance

Table .1 Age profile

Age groups	Open surgery group	Laparoscopic surgery group	Total	Chi square value	P value
< 20 years	22	24	46	2.305	0.68
20-30 years	09	12	21		
30-40 years	06	03	09		
40-50 years	11	08	19		
50-60 years	06	04	10		
Total	54	51	105		

Diagram. 1 [Age profile](#)



Points to be noted in a diagram:

- Title of the diagram: Age profile
- Axis titles: Y-axis – No. of Subjects
X axis – Age groups
- Legend: (Color labeling)
Open surgery group- Blue
Lap surgery group – Red
- Data labeling: Mention reading of each bars, preferably above the bar for better visibility
- Abbreviation: Mention full form of abbreviations below the diagram in small fonts

Description (write up):

[Mention p value and if significance or not](#)

❖ [DISCUSSION](#)

- **Compare Demographics of 2 groups of the study:**
Age & Gender – State why both groups are comparable in terms of age and gender distribution.

Example: In above table, when p value is >0.05 , there is no statistical difference between the groups and hence they are comparable.

- Make subheadings based on your objectives of the study. All objectives of must be covered in the discussion.
- Under each subheading, quote results of your study followed by reference studies. Better make a table of studies for presentation.
- If your results are deviating from reference studies, that's ok. But give logical / evidence based reasons for the deviation.

"There is no better Thesis than one which explains the local factors / contexts in explanation ".

Example – You are writing a Thesis on Metabolic syndrome and your results of incidence of metabolic syndrome are less than reference study. Why ?..... Think, is it because your study groups is from Govt Hospital and reference study is from private hospital?...If so, mention it ! Or any other reason? May be your area has more of young migrant blue collar population in whom incidence of metabolic syndrome is less.

❖ **CONCLUSION**

- Don't give one liner conclusion.
- Write 2 -3 paragraphs covering conclusion of your objectives.

❖ **RECCOMDATIONS:**

- Should be precise

❖ **PROFORMA:**

- With only relevant details

❖ **REFERENCES:**

- Should be Vancouver pattern as per guidelines of most universities and National Board of Examination.
- Referencing to be done in this way:

Right way of referencing	..(1)
Wrong way	... ¹

❖ **ATTACHMENTS:**

- Patient information sheet
- Informed consent
- Key to master chart
- Master chart