

Writing of Abstract

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Chapters

- INTRODUCTION
- LITERATURE REVIEW
- METHODOLOGY 1
- METHODOLOGY 2
- METHODOLOGY 3
- RESULTS AND DISCUSSION
- CONCLUSION

Project Report / Dissertation / Thesis

- Title Page
- Student's Declaration
- Dedication and Acknowledgement (optional)
- **Abstract (in Malay and English)**
- **Table of Contents**
- **List of Tables**
- **List of Figures and Plates**
- **List of Symbols and Abbreviations**
- **List of Appendices**
- **Chapters (main texts)**
- References and Bibliography (optional)
- Appendices

Work flow of your thesis submission for graduation process

- 1) Submission of final manuscript to supervisor
- 2) Submission of abstract for examiners
- 3) Nomination of internal and external examiner
- 4) SPS approval of the nomination (once a month meeting)
- 5) Submission of thesis manuscript to faculty/SPS
- 6) SPS submit the thesis to the examiners
- 7) Examiners read the thesis (3 weeks)

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- 9) Date of viva set by SPS
- 10) Viva , and result of viva
- 11) Correction (0, 1, 3, 6, 12 months)
- 12) Submit the corrected, to be checked by examiners.
- 13) Binding + ABSTRACT
- 14) Filling the form application for graduation
- 15) Abstract to be checked by 2 panels in the faculty.

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- 16) Abstract to be doubled checked by Deputy Dean
- 17) PG Office submit to SPS for Senate meeting
- 18) ABSTRACT commented by Senate members
- 19) If not satisfied, abstract to be corrected and bind again.
- 20) Submit again to SPS for the approval of Graduation.
- 21) Convocation ..

Types of abstract :

Abstract is required **summary** of :

- **publications and research** studies.
- presentations,
- posters,
- general audience
- Abstract for review articles
- Abstract for case reports

The focus of all abstracts is not the same, but the goal of literally abstracting the structured highlights of the overall study are fairly universal.

Abstract for submission to journal / conference prior to the full paper

- Is a **shortened version** of the first draft of a paper.
- It provides the first chance for you to **announce** and cite the preliminary findings of your study;
 - It allows you to communicate your findings to your colleagues and get their **feedback**;
 - It is the **starting point** for achieving the ultimate aim of a research project, the writing and publishing of a full paper in peer-reviewed literature.
 - The abstract provides a glimpse of the author's work and attention to detail.

The optimal structure of an abstract

TITLE

- The title should be an **accurate** promise of the **abstract's contents**. It should explain as much as possible about the context and the aims of the study.
- Ideally, the title should be about 10–12 words long, and should include the **scope** of the investigation, the study design and the goal.
- In general, it is preferable to make the title a description of **what was investigated** rather than a statement of the results or conclusions.
- The abstract's title should be easy for the reader to **understand** and should not include jargon or unfamiliar acronyms or abbreviations.

Structure of abstract

Introduction /Background

Purpose

Method

Results

Discussion / Conclusion

A good abstract should address the five following questions :

1. "Why did you start?" – Introduction or background
2. "What did you try to do?" – Aims and objectives
3. "What did you do?" – Methods
4. "What did you find?" – Results
5. "What does it mean?" – Conclusions

1. "Why did you start?" – Introduction or background

- You should summarise, preferably in one sentence, the **current knowledge**, or state-of-the-art, specifically in relation to the work you are presenting.
- Research problem.
- Gap of research in the field

Background

- No more than 5 sentences here, explaining **why this study is important**, what it will add to the science, or why your project matters. You may cite a critical reference here if crucial to substantiating the significance of this work.
- Content in this section should relate directly to the purpose/aims/question.

2. "What did you try to do?" – Aims and objectives

- Here, you should state the **aim of the study**, and ideally include a short statement of the study's hypothesis.
- A legitimate scientific study is not done "to prove that something is true" but rather "**to find out whether it is true.**"
- The difference may seem small, but it makes a huge difference. A formal hypothesis shows that **you were objective.**

Purpose/aims/research question:

Begin like this:

- “The **purpose** / **aim** of this (study/project/investigation) is to...” or
- “The question guiding this study/ project/ investigation) is...” or,
- You get the picture. Three sentences *at most* should cover this.

3. "What did you do?" – Methods

- In an abstract, the description of the **methods** has to be **concise**, and much of the details of what was done must be omitted.
- However, in a few short sentences, you can give the reader a good idea of the **design of the study**, the context in which it was done, and the types of **measurements** that were included.

Methods

- **For a research study**, it should include the **design**, the **setting**, the **sample**, the **measurement** tools, and the **analysis approach**.
- For a project, should include the setting, the composition of your team, the participants you worked with, your project intervention, and your evaluation strategy.
- These should be appropriate to the purpose /aims/questions.

4. "What did you find?" – Results

- Give the main results of the study, **not just in subjective terms** ("We found device X to be superior to device Y") but also in the form of some **real data**.
- You will need to choose which findings to report here: it should be the **most important data** in your study, and the findings on which your conclusions will be based.
- **Do not** include a table or figure unless you need it to show your results.

Results

- Here you state just the **facts**.
- If a research study, include simplified demographics, **primary results**.
- If a project, what was done and what did the evaluation show.
- This should flow directly from the methods and be consistent with the purpose/ aims/questions.

Discussion:

- *Relate your results directly back to your purpose/aims /research question.* This is critical.
- **Did you achieve** your purpose, either in your research or project? If not, why not? How was your question answered?
- Is the **answer** is what you **expected**? Why or why not? What were the major limitations of the study or project (every study/project has them, so don't leave this out).

5. "What does it mean?" – Conclusions

- Here, space limitations generally limit you to a **single sentence** of why you think your findings are important, and their potential implications.
- Keep your **conclusions reasonable** and **supportable** by the findings of your study.
- Remember that if your study was restricted to certain case or a specific device, its results may not extend beyond these restrictions.
- Recommendation / implication

Advice for a good abstract writing

- Use simple sentences
- Ask your colleagues
- Good abstracts are easy to read, clear and concise.

Use simple sentences

- Unless they are basic, universally accepted abbreviations, like E, RM10, acronyms and abbreviations **should be spelled out the first time** they are used in the abstract.
- Similarly, **local expressions** and jargon should be kept out of the abstract.

Ask your colleagues

- Before the abstract is submitted, it should be **double-checked for accuracy**, not only of the data reported but of the description of the methods and all other details.
- Having one or more **colleagues (who were not involved in the study)** read the abstract and offer constructive criticism can be extremely helpful.
- **PROOF READ YOUR WORK!** Avoid **grammatical** errors and typos. Ask someone you trust and respect to read it and give you feedback.

Check Yourself

- Because your thinking may have evolved as you wrote the abstract take time to be sure the entire abstract evolves from your stated purpose/aim/question.
- The background discussion should be narrowly focused; the methods have to be right for the purpose/aim/question; and the discussion should use the same words as found in the statement of purpose, etc.

Example of abstract

- **EMS Treatment of CHF: How Well Do We Do?**
-
- **Background:** Reported error rates in out-of-hospital (OOH) diagnosis of CHF range from 12-40%, using ALS provider diagnosis.
- **Objectives:** To determine the error rates in OOH diagnosis for CHF based on choices of ALS treatment.
- **Methods:** Retrospective case series; convenience sample of OOH and emergency department (ED) records on patients 50 and older who received OOH care for respiratory distress. Dates: January 1, 2001 through June 30, 2002. Field intubated patients were excluded. OOH treatment for CHF defined as treatment of older patients (≥ 50) with complaint of respiratory distress with furosemide, nitroglycerine (NTG), or morphine sulfate (MS). ED diagnosis was defined as one of the first three ED diagnoses as CHF or pulmonary edema.
- **Results:** 310 matching charts with complete data. 70 patients were treated with one or more of the target treatments: 5 patients received MS, 46 received furosemide, and 53 received NTG. 98 patients received an ED diagnosis of CHF or pulmonary edema. Sensitivity=0.357 (35/98); Specificity= 0.835 (177/212); Treated for CHF but did not have (false positive rate)= 0.165 (35/212); Not treated for CHF but had it (false negative rate) = 0.642(63/98); agreement = 0.684 (kappa= 0.21, $p < .001$).
- **Conclusions:** Both over and under-treatment of CHF in older patients with respiratory distress remains a problem, even when field diagnosis is not required. Clinical decision rules may be helpful in this regard. Until the treatment accuracy can be improved, limit treatment to those in severe distress (benefits outweigh risks of erroneous treatment), or long transport times. Limitations include: retrospective cases series analysis limits generalizability; convenience sample and exclusion of patients intubated in the field may bias results; no outcome data to evaluate any benefits or risks associated with unnecessary or missed ALS treatments; relying on ED diagnosis as gold standard for presence of CHF.

- Sample Abstract #2
- **Unit Level Nurse Workload Impacts on Patient Safety Study**
- **Nancy E. Donaldson RN, DNSc., Principal Investigator**
- **Director, Center for Research & Innovation in Patient Care;**
- **Associate Clinical Professor**
- **Diane S. Brown RN, PhD., Co-Investigator; Assistant Clinical Professor**
- **Linda Burnes Bolton RN, Dr.PH, FAAN, Co-Investigator; Assistant Clinical Professor**
- **Carolyn Aydin PhD., Co-Investigator; Assistant Clinical Professor**
- **Steven Paul PhD., Co-Investigator; Senior Statistician**

Research-In-Progress Abstract

The aims of this 2-year descriptive correlational study build on the established integrity and capacity of the California Nursing Outcomes Coalition (CalNOC) to engage California acute care hospitals in voluntarily using ANA nursing quality indicators for reporting standardized nurse staffing, patient safety and quality indicators in a collaborative research, repository development and benchmarking project. For the purposes of this study, it is posited that the daily unit level configuration of nurse staffing and workload may buffer patients from the effects of error and resulting injury or compromise patient safety when variance in these factors exceeds a staffs' adaptive capacity and breaches a unit level margin of safety. The aims of this study are grounded in the knowledge that the potential to compromise patient safety through human error is inherent in nursing practice and medical care (IOM, 1999; QUIC, 2000; Reason, 1990). In collaboration with CalNOC's statewide voluntary convenience sample of medical-surgical acute care units from 77 hospitals, this study will break new ground in tracing daily unit-level direct care nurse staffing, in 100 patient care units over a two (2) month period, to examine associations between the structure of hospital nurse staffing and patient safety and outcome indicators such as—falls, pressure ulcers, restraint prevalence and significant clinical events. In addition the effect of patient activity (turnover) and nurse staffing will be examined. The staff measures to be studied include hours of direct nursing care per patient day, nursing skill mix, percent of contracted or agency nursing staff, ratio of required to actual hours of care, and RN years of post-licensure experience. This study recognizes and quantifies the impact of patient turnover, a key factor in nurse staffing workload, and integrates it into multiple regression analyses examining associations between nurse staffing and patient care outcomes.

This project is supported by grant number RO1 HS11954 from the Agency for Healthcare Research and Quality 9/30/01-9/29/03.

- Sample Abstract #3
- **Unit Level Nurse Workload Impacts on Patient Safety**
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- **Nancy E. Donaldson RN, DNSc., FAAN Principal Investigator**
- **Diane S. Brown RN, PhD, FAHCQ, Co-Investigator**
- **Linda Burnes Bolton RN, Dr. PH, FAAN, Co-Investigator**
- **Carolyn Aydin PhD, Consultant Co-Investigator Steven Paul PhD, Co-Investigator,**
- **Senior Statistician**
- **Bruce A. Cooper PhD, Senior Statistician**
- **Kathleen Yule RN, MS, Project Coordinator**
-
- **Abstract—Final Report (limited to 250 words)**
-
- **Purpose**
- Study aims were to test associations between daily nurse staffing in adult medical-surgical units and hospital acquired pressure ulcers, patient falls and other significant events. This study integrated a measure of workload, admissions, discharges and transfers to explore how the “pace” of patient care impacted patient safety.
-
- **Scope**
- This 2-year AHRQ Working Conditions and Patient Safety study built on the work of the California Nursing Outcomes Coalition (CalNOC) to engage acute care hospitals in using ANA nursing indicators for reporting staffing, patient safety and quality indicators in a research, repository development and benchmarking project. In 25 acute care, not-for-profit California hospitals participating in CalNOC, the sample included urban and rural sites with an average daily census from 100 to 400 plus. Most patients’ principal diagnosis was medical (66%).
-
- **Methods**
- A prospective, descriptive correlational design tested associations between daily unit level nurse staffing, skill mix, hours of care, contract hours of care, workload and patient outcome measures. Falls were “unplanned descents to the floor”.
-
- **Results**
- Registered Nurse (RN) Hours of Care was significantly associated with outcomes. In addition, percent RNs with BSN or higher was associated with fewer falls. Unit activity index and hospital complexity (measured by bed size) were also significant predictors of falls. Percent of patients with hospital acquired pressure ulcers was significantly associated with mean staffing ratio and with percent days with the staffing under 100% for week PRIOR to the prevalence study. Greater percent certified RNs was associated with lower percent of restrained patients.
-
- **Key Words**

SOME SILLY MISTAKE ..

- What can be easier than writing a thesis abstract?!
- Actually, thesis abstract writing can become a real problem. Here is a list of mistakes while writing **thesis abstracts**:
- Mistake number 1: this piece of writing did not present good [thesis ideas](#).

Mistake No. 1 : Not representative

- This piece of writing did not present good [thesis ideas](#). Students, being involved in thesis abstract writing, did not realize that short does not mean meaningless.
- They simply reflected general thesis ideas with no real value, so they had to rewrite theses abstracts a lot of times.

Mistake No.2: Too long

- This work was way **too long**. “Keep it short!”- many students forget this easy rule, failing to meet **thesis abstract** format and length requirements.

Mistake No.3 : Thesis statement

- Thesis abstracts were not based on a [thesis statement](#). Your thesis abstract is a longer version of your thesis statement, basically. So, you need to focus on your thesis idea, adding some relevant and informative details about it.

Mistake number 4 : Terminology

- Students have used some complicated terminology in their papers. This piece is so short that you should not include any specific terms, complicated sentences. “Keep it simple”- one more rule for you to remember.

The language of abstract Writing

1. Often uses the third person
2. Often uses passive voice verbs to describe the researchers' own actions
3. Negative results and conclusions not included
4. Avoid abbreviation, jargon, other language shortcuts that may lead to confusion
5. Avoid repetition
6. Avoids meaningless expressions
7. Avoid adjective and descriptive details
8. Avoid illustration
9. Avoid footnotes
10. Avoid preliminaries
11. Avoid superlatives

1. Often uses the third person

eg: he/she/it/they, NOT I,we/you

2. Often uses passive voice verbs to describe the researchers' own actions

eg: "It was found that..." NOT "We found that..."

However : Active voice is used to describe phenomena in the study.

*e.g : "The mice grew ...", "Patients reponded ...",
"Water evaporated"*

3. Negative results and conclusions not included.

e.g: “Z was not found ...”

“It was not possible to test Y ..”

4. Avoid abbreviation, jargon, other language shortcuts that may lead to confusion.

If you use abbreviation, write out the meaning, inless if you absolutely certain that readers will understand.

5. Avoid repetition

It becomes more difficult to read.

6. Avoids meaningless expressions

e.g: "Results are provided..."

"Discussion follows...."

7. Avoid adjective and descriptive details

8. Avoid preliminaries

It includes both literal pictures as well as examples.

9. Avoid footnotes

10. Avoid preliminaries

e.g: “This paper discusses three issues..”

11. Avoid superlatives

e.g: Instead of using words like “very” and “extremely”, try to choose stronger nouns and verbs.

Terima Kasih

TIPS FOR WRITING A GOOD ABSTRACT

[Barry W. Hamilton, Ph.D. Northeastern Seminary](#)

- Take the task of writing the abstract seriously. The abstract will determine whether future researchers will read your thesis or dissertation. The abstract needs to bring out the significance of the entire document. When writing the abstract, the author should model the tone and vocabulary of the document's conclusion. The abstract should accurately and succinctly describe the content and scope of the entire document.

-

- It is extremely important to stay within the limits defined by the institution/department. Do not exceed the stated limits, or else someone will use a chainsaw to disembowel your abstract to make it fit.
-
- Put your best writing into the abstract, just as you did into the conclusion. Strive for clarity with all that is within you! Make the abstract transparent for researchers in your subject field.
-

- Within the stated limits, **make every word count!** Reach for the knife—cut out the unnecessary. Prefer the active voice, and use action verbs when don't contribute to the abstract's substance. Avoid unnecessary, unusual .
- Mine the document for important keywords and phrases that directly relate to the major concepts in the paper. These terms will be related to your thesis statement and will describe concepts at the level of the whole document. Take into consideration the vocabulary of abstracts from other theses in your field (but don't merely imitate other abstracts—use these vocabulary terms only if used in your own thesis.

- Have a colleague read the abstract and offer criticism. Print out a hard copy and ask the colleague to mark it up. Take another hard copy with you on the bus or on the plane. Sometimes it helps if you take it on an out-of-town trip and read it in a motel room in a strange city. The new surroundings might help you read the abstract in a new light (seriously).

The tenses in scientific reporting

Section / Context in a report	Appropriate tense
Abstract	Past tense
Introduction	Mostly present tense
Methodology	Past tense
Methods, materials used	Past tense
Results	Past tense
Discussion	Mix of past and present tense, some times future tense
Description of tables and figures	Present tense
Attribution	Past tense

The optimal structure of an abstract

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Avoiding Ambiguity in Concise Writing

- *Concise: expressing much with few words, clear*
- *Ambiguity: more than one way of understanding is possible*
- Word limits encourage concise writing. Concise writing is good. The problem is, when we try to be brief, we don't always express ideas clearly. There may be more than one way to interpret the same sentence.
- However, in science writing, it is critical to avoid ambiguity as much as possible.

- Here are some examples of ambiguity and suggested corrections. Note that there are no grammar errors in any of the original texts quoted below. Nevertheless, there is more than one way to interpret them.

- **Original:** Interleukin (IL)-21 is a member of type I cytokine family, which is produced by activated CD4⁺ T cells and regulates growth, differentiation and maturation of lymphoid lineage cells.
- **Problem:** It seems that the family, not (IL)-21, is produced.

Possible solution:

- Interleukin (IL)-2 I, which is produced by activated CD4 T cells and regulates growth, differentiation and maturation of lymphoid lineage cells, is a member of type I cytokine family.
- **Problem:** The emphasis is on the type I cytokine family, but this doesn't seem most important.

- **Suggested solution:**
- Interleukin (IL)-21, ~~is~~ a member of type I cytokine family, is ~~which~~ produced by activated CD4 T cells and regulates growth, differentiation and maturation of lymphoid lineage cells.
- (delete “is”, and delete “which”)

- **Original:** Most importantly, joint-draining lymph nodes from IL-2I R-Ig-injected mice contained significantly fewer CD4⁺CD25⁻ cells expressing PD- I and B7.1, B220⁺[gG,' cells, **and** B220⁻Syndecan- I' cells than those from control IgG1- administered mice.
- **Problem :** It is unclear how the text after the highlighted "and" connects to the first part of the text.

- **Possible solution:** Most importantly, joint-draining lymph nodes from IL-2 IR-Ig-injected mice contained significantly fewer CD4⁺CD25⁺ cells expressing PD-1 and B7.1, *B220⁺IgG⁻ cells, and 21 B220⁻Syndecan-1⁺ cells than those from control IgG1-administered mice.*

- **Problem** : The structure is clear, but numbering should be avoided when unnecessary. Also, the distance between "fewer" and "than" means the comparison is still hard to read. The last part looks like "B220-Syndecan-1 + cells than those from control . . ."
- **Suggestion** : Most importantly, joint-draining lymph nodes from IL-21 R-Ig-injected mice contained significantly **fewer** CD4⁺CD25⁺ cells expressing **both** PD-1 and B7.1, fewer B220⁺IgG, * cells, and fewer B220⁺Syndecan-1⁺ cells than those from control IgG-administered mice.