

論文計畫與研究方法

課程介紹

論文研究過程及研究主題的擬定

南華大學自然醫學研究所 102年度第1學期

教學目標

- 藉課堂討論及講授，瞭解學術寫作、研究計畫與論文的架構及撰寫重點
- 培養解讀及評析研究報告及論文的能力
- 學習如何撰寫研究計畫書並準備口頭報告
- 奠定撰寫碩士論文的基礎

Bottom Line

- ■ 了解論文的要求
- ■ 規劃研究進度
- ■ 在兩年期間順利完成碩士學位

能力

- 資料檢索的能力
- 資料篩選的能力
- 期刊論文的閱讀能力
- 期刊論文的分析能力
- 創新的能力

碩士畢業生和大學畢業生最大的差別

- 學士只學習過吸收系統知識的能力
(被整理、組織好的知識，如課本)
(假定是課本是對的，不用批判)
- 碩士學習從無組織的知識中檢索、篩選、組織知識的能力，並有批判的能力

課程綱要

- 第一週 (9/09) 課程介紹
- 第二週 (9/16) 論文研究過程及研究主題的擬定
- 第三週 (9/23) 文獻回顧：搜尋學術文獻資源
- 第四週 (9/30) EndNote 使用介紹
- 第五週 (10/07) 論文寫作編輯格式 圖表製作
- 第六週 (10/14) 學術期刊及論文研讀與分析
- 第七週 (10/21) 口頭發表、PowerPoint製作
- 第八週 (10/28) 學生報告與討論
- 第九週 (11/04) 學生報告與討論

課程綱要

- 第十週 (11/11) 研究計畫撰寫
- 第十一週 (11/18) 資料分析
- 第十二週 (11/25) 研究方法概述
- 第十三週 (12/02) 資料分析概述
- 第十四週 (12/09) 抽樣理論與設計
- 第十五週 (12/16) 問卷編制
- 第十六週 (12/23) 學術期刊統計圖表解析
- 第十七週 (12/30) 期末學生報告
- 第十八週 (1/06) 綜合討論

主要參考書籍

- 自編講義及期刊讀物，可於本課之教學網頁下載。
- 傅祖慧（2005）。*科學論文寫作*（四版）。台北市：藝軒。
- 張保隆、謝寶煖（2006）。*學術論文寫作：APA規範*。台北市：華泰。

科學研究工作的程序

Formulate Research Objectives 計劃研究目標

Research Design 研究設計

Data Gathering 數據收集

Data Analysis & Interpretation 數據分析及詮釋

科學研究工作的程序

Formulate Research Objectives 計劃研究目標

Identify a problem



Translate to research problem

Research Design 研究設計

Key variables;
Research design



Data sources;
Sampling design



Develop instrument;
Pre-test



Research protocol;
Ethics approval

Data Gathering 數據收集

Obtain sample



Mode of administration
Setup database

Data Analysis & Interpretation 數據分析及詮釋

Edit data;
Code data



Preliminary &
descriptive analysis



Statistical
analysis



Presentations;
Publications;
Recommendations

怎麼找問題？

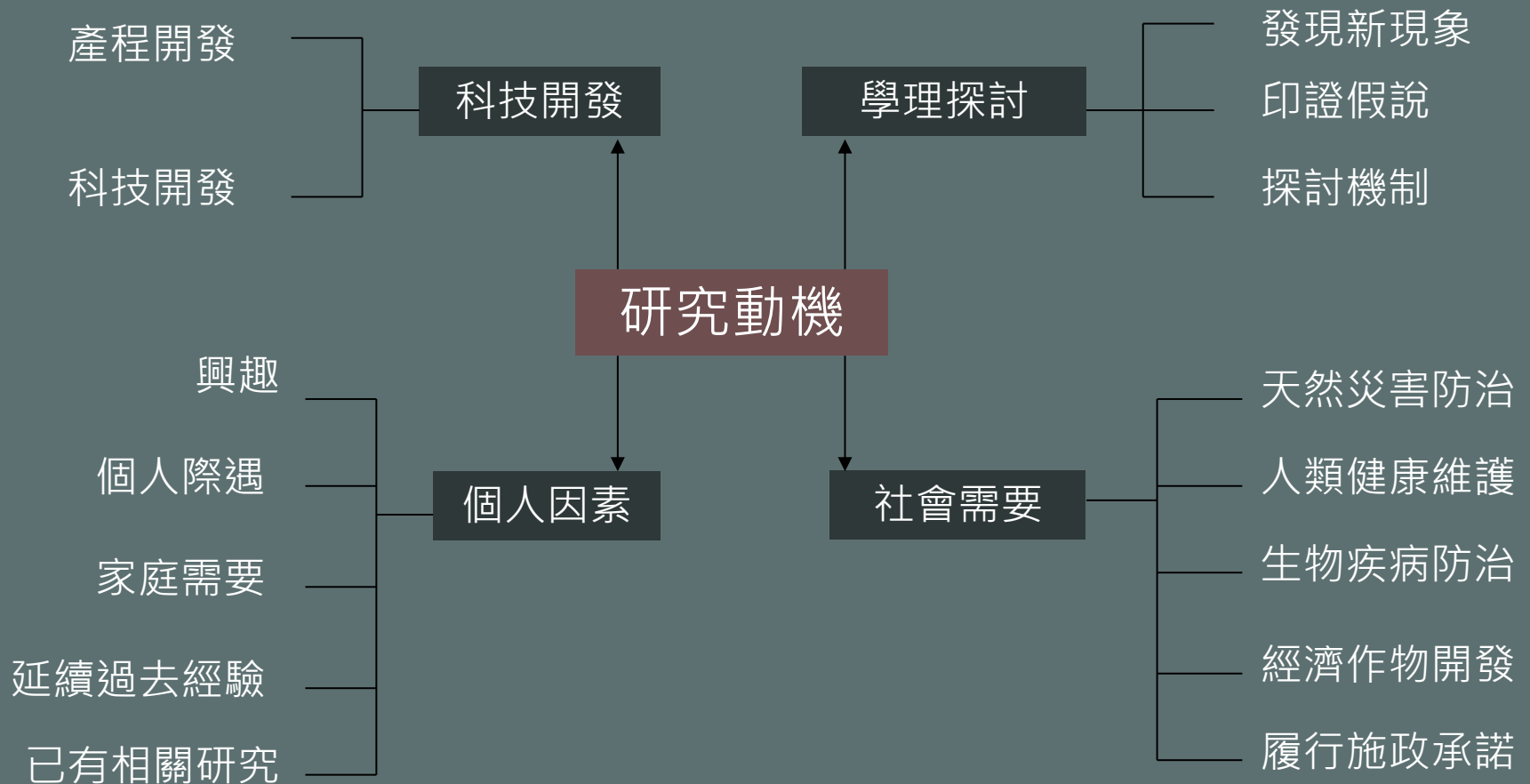
題目的選擇—— 研究動機

- 通常在學術性的論文、研究報告裡，研究者會指出一些尚未解決的問題或方向。
- 其次，可先從自己有興趣的領域中去尋找一些相關的期刊，瀏覽其各期刊之報告或目錄，在其中挑選自己有興趣的相關報告或論文，詳細了解其內容，再找尋有無缺失，如果發現問題或缺失，則可以以解決此問題之理論或方法為題材。

- 題目的界定

- 看權威性的文章，可使我們對所研究的問題，獲得背景性的認識，同時也會引發靈感，幫助設定所要研究的範圍，並可衍生一些基本構想，甚至可能發現可繼續追蹤研究的論點。

研究動機



@

選擇研究題目

- 避免選擇一些自己也覺得沉悶的主題

- 避免選擇一些牽涉敏感因素

(商業秘密，個人私隱等)

例如：音樂療法能否舒緩愛滋病患者的壓力？

選擇研究題目

- 不要把題目定得太空泛，難以實踐。
應要注意題目是否具體可行。

例如：針灸是否有效？

是健康的人或是病患？

是那一種病？

是那一個穴道？

療程多久？

選擇研究题目的技巧：收窄範圍

■ 收窄 → 時間、人物、地點

■ 時間 (例如：九十年代、全民健保之後)

■ 人物 (例如：大學生)

■ 地點 (例如：某醫療中心)

選擇研究題目的技巧

但亦不可收窄至太瑣碎，太私人的問題

例如：我的速食麵習慣我的體重關係

改為：現今大學生速食文化與營養之關係

選擇研究題目的技巧



選擇研究題目的考慮因素

■ 文獻閱讀

- Helps with methodologies (who & how)
- Online bibliographic database
- Scans the reference section of retrieved articles
- Hand search key journals in the field

■ 可行性

- Time line
- Subjects & support personnel
- Budget
- Expertise
- Ethical (priorities? & cost-effective)

Operationalizing the Research Question

「運作化」(使詳盡、清楚、明確)

Identifying the
Concepts



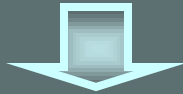
Operational
Definitions



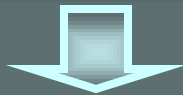
Measurable
Indicators

Operationalizing the Research Question

Identifying the
Concepts

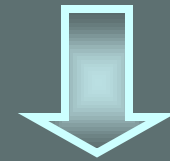


Operational
Definitions



Measurable
Indicators

睡眠與健康



什麼是「好」的睡眠



問卷

匹茲堡睡眠質量指數
Pittsburgh Sleep
Quality Index, PQSI

「自然醫學」的定義與範圍

Air quality
Water quality
Dietary habits
Physical activity level
Radiation protection
Noise control
Housing quality
Workplace safety
Sleeping quality
Recreational activity
Social/medical support
?????????

身、心、靈
的照顧



強化自癒力?

健康 = ?

預防疾病

養生 = ?

量? 質?

文獻回顧之目的

📖 開始去了解一個問題或進入一個研究的領域之
第一步

📖 初步的整體了解

📖 已知道什麼？

📖 已接受的觀點是什麼？

📖 有什麼還需要進行研究？

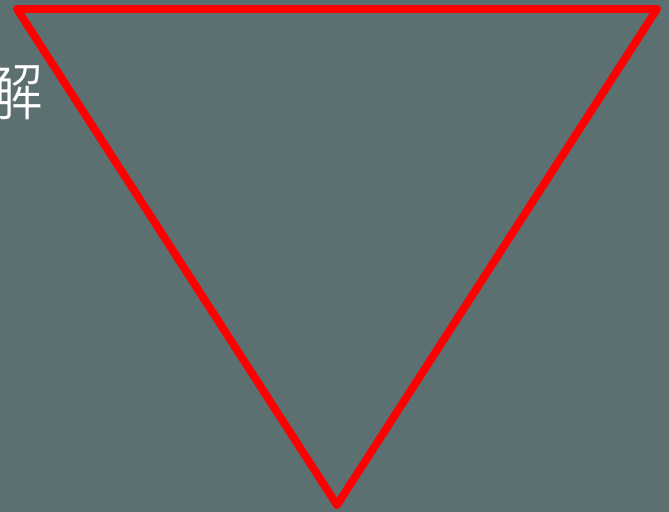
📖 有什麼還未知？

📖 有什麼地方是有爭議性

📖 為一個特定的問題尋找答案

期刊論文閱讀技巧

- 必須學會選擇性的閱讀
- 必須鍛鍊出選擇時的準確度以及選擇的速度
- 不要浪費時間在學用不著的細節知識
- 開始的時候，不需要逐行讀懂
- 不可能第一次就讀懂
- 要逐漸由粗而細地一層一層去瞭解



文獻的來源

- 誰寫的？ 內容由誰來負責？

- 第一手來源 (primary source)

- The originator of the raw material

- Authors held accountable for methods & data

- 第二手來源 (secondary source)

- Reference made to the original data, usually in combination with other original data, to create a new whole

主要的文獻類別

- 教科書 Textbooks
- 專家評論 Expert reviews (articles, chapters, books)
- 組織刊物 Organization publications
- 原著 Original studies (peer-reviewed [具審稿制度] journal articles)

“Books”

- 親身到圖書館瀏覽書目，但是書本是屬於比較舊的資料
- 瀏覽書局，但是要分辨高素質的學術性圖書與一般商業性圖書

Organization Publications 組織刊物

- Government agencies
- *Ad hoc* (特別) groups (report on SARS)
- Non-Government Organizations
 - Charitable groups (e.g., Cancer Society)
 - Independent research agencies
- Think outside the box (and country)
 - World Health Organization; US National Institutes of Health

文獻探討程序

指導教授或專家

提供 key articles 及 key journals

資料庫

學術書本

期刊論文

碩博士論文

筆記、分類

建立個人文獻資料庫

Organization Publications 組織刊物



Centre for Addiction
and Mental Health

Français | Contact us | Support CAMH: Donate online

[Getting Help >](#)

[About Mental Health
& Addictions >](#)

[Education and
Courses >](#)

[Research >](#)

[Influencing Policy >](#)

Publications

[Main Page](#)

[CAMH Publications](#)

[CrossCurrents Journal](#)

You are here: [Home](#) > [Publications](#) > **Organization publications**

CAMH Newsletters

CAMH has a number of corporate publications, including newsletters that come out regularly, [organizational brochures](#), an [annual report](#), [strategic plan](#) and other [organizational publications](#) that meet specialized needs. All are online for your reference.

- **CAMH Connexions** (external newsletter -- 4 times per year)
- **Breakthrough** (newsletter for clients and families -- 4 times per year)
- **CAMH Corporate Brochure** (overview of CAMH)

Organizational Publications



**Canadian
Cancer
Society** **Société
canadienne
du cancer**

We are a national, community-based organization of volunteers, whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer.

Nous sommes un organisme bénévole national, à caractère communautaire, dont la mission est l'éradication du cancer et l'amélioration de la qualité de vie des personnes touchées par le cancer.

Choose your province/territory

- ▶ Canada-wide
- ▶ Alberta/N.W.T
- ▶ British Columbia/Yukon
- ▶ Manitoba
- ▶ New Brunswick
- ▶ Newfoundland/Labrador
- ▶ Nova Scotia
- ▶ Nunavut
- ▶ Ontario
- ▶ Prince Edward Island
- ▶ Quebec
- ▶ Saskatchewan



Let's Make Cancer History
Le cancer : une lutte à finir

Choisir une province/un territoire

- ▶ Partout au Canada
- ▶ Alberta/T.N.-O.
- ▶ Colombie-Britannique/Yukon
- ▶ Île du Prince Édouard
- ▶ Manitoba
- ▶ Nouveau-Brunswick
- ▶ Nouvelle-Écosse
- ▶ Nunavut
- ▶ Ontario
- ▶ Québec
- ▶ Saskatchewan
- ▶ Terre-Neuve et Labrador

Organizational Publications

The screenshot shows the Canadian Cancer Society website. At the top left is the logo, which consists of a yellow flower with a white center. To the right of the logo, the text reads "Canadian Cancer Society" and "Soci t  canadienne du cancer". In the top right corner, it says "You are visiting Ontario" and there is a dropdown menu labeled "Choose province/territory". Below this is a yellow navigation bar with links for "Home", "About us", "Contact us", and "Franais", a search bar with a "GO" button, and a "DONATE ONLINE" button. A secondary navigation bar contains links for "ABOUT CANCER", "PREVENTION", "CANCER RESEARCH", "SUPPORT/ SERVICES", "HOW YOU CAN HELP", and "PUBLICATIONS". The main content area features a large blue banner with the text "Cancer research" and a yellow flower logo. Below the banner are links for "Font size", "E-mail page", and "Printer friendly". On the left side, there is a vertical menu with links: "Current research", "Progress we've made", "Funding cancer research", "Clinical trials", "Research news", "Meet our researchers", "Future directions", and "Cancer statistics" (which is highlighted in orange and circled in red). The main content area has a section titled "Cancer statistics" with a red circle around the link. Below this are two columns of content: "Canadian Cancer Statistics" (with a red circle around the link and text) and "Cancer in young adults". On the right side, there is a "QUESTIONS ABOUT CANCER? Ask us" section with contact information: "1 888 939-3333" and "info@cis.cancer.ca".

Canadian Cancer Society Soci t  canadienne du cancer

You are visiting Ontario
Choose province/territory

Home • About us • Contact us • Franais Search... GO DONATE ONLINE

ABOUT CANCER PREVENTION CANCER RESEARCH SUPPORT/ SERVICES HOW YOU CAN HELP PUBLICATIONS

Cancer research

Font size + - E-mail page Printer friendly

- ▶ Current research
- ▶ Progress we've made
- ▶ Funding cancer research
- ▶ Clinical trials
- ▶ Research news
- ▶ Meet our researchers
- ▶ Future directions
- ▶ **Cancer statistics**

Cancer statistics

[Canadian Cancer Statistics](#)
Find out more about this annual statistics publication.

[Cancer in young adults](#)
Find out more about this comprehensive study about cancer in Canadians aged 20-44.

[Stats at a glance](#)
Key stats for breast, colorectal, lung and prostate cancers.

[Media release](#)

QUESTIONS ABOUT CANCER?
Ask us
1 888 939-3333
info@cis.cancer.ca

Review articles 回顧性的論文

- Check if review was conducted using a **formalized** (形式化) research protocol
- Ask experts and librarians
- Reviews in high quality journals

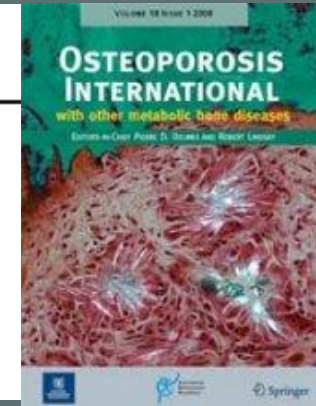
e.g., Tai Chi & Osteoporosis (骨質疏鬆)

Osteoporos Int (2008) 19:139–146
DOI 10.1007/s00198-007-0486-x

REVIEW

Tai chi for osteoporosis: a systematic review

M. S. Lee • M. H. Pittler • B.-C. Shin • E. Ernst



The purpose of this systematic review was to evaluate evidence from controlled clinical trials testing the effectiveness of tai chi for osteoporosis.

METHODS: Systematic searches were conducted on 20 electronic databases.

RESULTS: Five randomized clinical trials (RCTs) and two controlled clinical trials (CCT) met all inclusion criteria.

CONCLUSION: The evidence for tai chi in the prevention or treatment of osteoporosis is not convincing. More rigorous research seems warranted.

Original Articles 原著論文

All “original contributions” include some literature review

- Usually too brief to satisfy (even if indexed as ‘review’)
- Only results from ONE study (not the big picture)

Original Contributions 原始論著

OXFORD JOURNALS CONTACT US MY BASKET MY ACCOUNT

American Journal of
EPIDEMIOLOGY


ABOUT THIS JOURNAL CONTACT THIS JOURNAL SUBSCRIPTIONS CURRENT ISSUE ARCHIVE SEARCH

[Oxford Journals](#) > [Medicine](#) > [American Journal of Epidemiology](#) > Volume 166, Number 8

epidemiologic reviews
Theme Issue: The Epidemiology of Mental Disorders
[click here for more information](#)

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Contents: Volume 166, Number 8, 15 October 2007 [\[Index by Author\]](#)



- ↓ [EDITORIAL](#)
- ↓ [META-ANALYSIS](#)
- ↓ [ORIGINAL CONTRIBUTIONS](#)
- ↓ [PRACTICE OF EPIDEMIOLOGY](#)
- ↓ [LETTERS TO THE EDITOR](#)

How does the material get there?

Books

- Anyone can publish, just make the business case
- Online publications

Quality indicators:

- Authoritative editorial board
- Peer review (同儕評審，審稿制度)
- Quality of evidence? You be the judge

How does material get there? Journals

- Anyone can launch a journal
- Can start your own online journal today
- Major academic publishers have editorial boards that bound by certain conventions and standards
- Oversee peer review process
- Acceptance rates vary a lot

學術資料庫

注意發行是否穩定

 **中文電子期刊服務**
Chinese Electronic Periodical Services

首頁 期刊瀏覽 進階查詢 我的期刊 使用說明 FAQ 電子學位

文章

瀏覽期刊指南

學科別 > [醫學與生命科學](#) > [醫學](#) > [中華民國口腔雷射醫學雜誌](#)



中華民國口腔雷射醫學雜誌
JOURNAL OF LASER IN DENTISTRY
The Chinese Academy of Laser in Dentistry
TALD
中華口腔雷射醫學雜誌
CHINESE ACADEMY OF LASER IN DENTISTRY
JOURNAL OF LASER IN DENTISTRY

- 投稿須知
- 版權頁
- 訂購資訊
- 期刊基本資料

中華民國口腔雷射醫學雜誌
最新卷期：[2卷1期\(2006/11\)](#)
各期目次連結：
■ [2卷1期 \(2006/11\)](#)

期刊基本資料

期刊編號	a0000311
刊名	中華民國口腔雷射醫學雜誌
並列刊名	Journal of Laser in Dentistry
刊名羅馬拼音	Zhong Hua Min Guo Kou Qiang Lei She Yi Xue Za Zhi
刊期別	季刊
創刊日期	2002/07
首刊卷期	第2卷第1期

Imperfections of peer review system

- Editorial boards and readership prone to their own biases & group-thinking
- Potential sources of publication bias
 - Readers want certain kinds of news
 - Positive or significant findings
- Reviewers are human (and busy...)

Organization publications?

May arise from public request, government request, or something the agency feels should be 'out there'

■ Can be great!

- Experts employed full time to focus on issue
- Staff chosen for **Knowledge Exchange** (i.e., often more readable)

Unpublished material?

- Abstracts only, talks, personal communication, working reports, limited circulations
- May be important to know what is **not** published (**publication bias**)
- Balance that against the fact that this stuff isn't peer reviewed (responsibilities of authorship)

Publication bias 出版偏差

- Positive results bias occurs when authors are more likely to submit, or editors accept, positive than null (negative or inconclusive) results
- the “file drawer problem” , refers to the tendency for those negative or inconclusive results to remain hidden and unpublished

Study registration to reduce publication bias

- In September 2004, editors of several prominent medical journals (including the *New England Journal of Medicine*, *The Lancet*, *Annals of Internal Medicine*, & *JAMA*) announced that they would no longer publish results of drug research sponsored by pharmaceutical companies unless that research was registered in a public database from the start
- In this way, negative results should no longer be able to disappear

Show your literature review process

- Describe search & evaluation methods to reader
- Consider summary tables to present multiple articles
- Logic used must be apparent and sound