Writing for Journal Publication

Professor Low Wah Yun, PhD
Editor-in-Chief
Asia-Pacific Journal of Public Health

Head, Research Management Center
Faculty of Medicine, Univ of Malaya

(lowwy@um.edu.my)
Why Write?

- Writing ➔ a means of communication
- Published article in well-respected, peer reviewed journal
  ➔ an important goal for any researcher
  ➔ a marker of research success
- A well-written paper ➔ easy to read, tells an interesting story, has information under correct headings & is visually appealing
  ➔ Scan paper quickly to find relevant information where they expect it to be
Why Write?

- Want paper to be read & be used → present in an organized and accessible format
- Publications → career development & advancement
- Successful publications → measure of research productivity
- Publications → fundamental marker of accountability
Reasons to Publish Research Findings

- Unethical to conduct a study and not report the findings
- Some results that are worth reporting
- Want to progress scientific thought or improve health outcomes
- Want to give credibility to your research team
**Reasons to Publish Research Findings**

- Want to reach a broad audience
- Improve one’s tract record
- Add credibility to your reputation
- Improve chance of promotion
- More likely to obtain research grants, or extension of research fundings
Why Write?

- Professional & Academic Gains
  - Invitation to reviewer or editorial boards, consultancies, societies
  - Develop professional standing → invitation on expert and advisory panels
  - Expand professional contacts → locally and internationally
  - Recognition at national & international levels
Why Write?

- Institutional/Organizational Gains
  - Academic prestige and standing ➔ eg. Universities ranking
  - Measure of academic productivity
  - May be linked to university funding
Motives to Publish or Write

- Varies from one researcher to another
  - Pleasure of writing
  - Wanting to share information or discovery with others
  - Driving force to contribute to scientific knowledge
  - Improvements of wellbeing
  - Benefits humankind
Motives to Publish or Write

- “Publish or Perish”
- Chore
- Means to fulfill certain organizational/institutional requirements ➡ eg. job promotion, job application, renewal or job confirmation ➡ career gains
Excuses, excuses, excuses

- I don’t have time for writing
- I can’t write in my office
- I’m not ambitious
- My teaching or my practice comes first
- I don’t want to play the publication game
- I am too tired when I get back home to do any writing
- No one will read it anyway
- I don’t write well
3 aspects of Scientific Writing

- Scientific writing is well-defined technique and not a creative art
  - *Thought ➔* having some worthwhile results & ideas to publish. You need some new results to publish & you need to be able to interpret them correctly
  - *Structure ➔* getting the right things in the right place
  - *Style ➔* choosing the fewest and most appropriate words and using the rules of good grammar
Categories of Papers

- Original article
- Case report
- Technical note
- Review
- Commentary
- Letter to Editor
- Others
- Non-scientific material
Original Article

- Most important type of paper
- Provides new information based on original research
- Usually prospective
- Supported by in-depth statistics
Format – Original Articles

- Structured/Unstructured abstract
- Introduction
- Materials and Methods
- Results
- Discussion
- Conclusion
TITLE PAGE

- Article Title
- Author’s name, degree(s) and institutional affiliations
- Name of the department(s) or institution(s) to which the work should be attributed
- Disclaimers, if any
- Corresponding author ➔ name, address, email, telephone & fax numbers
- Sources of support ➔ grants, equipment, drugs, etc
- Running head/title
- Word counts
THE TITLE

- Readers decide whether to read your paper or not depending on whether the title interests them.
- Should be informative but not too long.
- Should be interesting but not gimmicky.
THE TITLE

- May describe the subject of the article
  “Pattern of breast feeding in Kuala Lumpur”

- May describe the focus in a field of study
  “The relationship between socio-economic factors and breast feeding”

- May describe the outcome of the study
  “Low birth weight babies benefited from breast feeding”
Upper cervical spine injuries: age-specific clinical features ➔ **UPPER CERVICAL SPINE INJURIES**

Effect of smoking on blood oxygenation level ➔ **SMOKING AND BLOOD OXYGENATION**

Isolation of high-CO2-dependent bacteria: Implication of their potential diversity ➔ **HIGH-CO2-DEPENDENT BACTERIA**

Differential onset patterns & causes of carpal tunnel syndrome after distal radius fracture: a retrospective study of 105 wrists ➔ **CARPAL TUNNEL SYNDROME AFTER DISTAL RADIUS FRACTURE**
- Kids make nutritious snacks
- Diarrhoeal disease among European travelers broken down by sex
- Hospitals are sued by 7 foot doctors
- Crash forces on adult unrestrained four wheeled motor vehicle occupants
- Juvenile court to try shooting defendant
- Man kills self before shooting wife and daughter
- Pilot living with cancer education program for cancer patients and their families in the Greek community
- Red tape holds up new bridges
- Local high school dropouts cut in half
An ABSTRACT

- A summary (200-300 words)
- An abbreviated, accurate representation of the contents of a document/paper
  - Complete in itself
- Most important part of article
  - More often read than the text
  - Available in on-line database
- Most difficult to write
- Written after the text is done
An abstract

- State the principal objectives and scope of study
- Describe study design & methods employed
- Summarize the results
- State the principal conclusions

Written in past tense

Should not give any information or conclusion that is not stated in the paper
Example of a **STRUCTURED ABSTRACT**

- Objective
- Design
- Setting
- Participants
- Interventions
- Main outcome measures
- Results
- Conclusion
Structured Abstract

FULL-LENGTH ORIGINAL RESEARCH

The impact of maternal depressive symptoms on health-related quality of life in children with epilepsy: A prospective study of family environment as mediators and moderators

*†Mark A. Ferro, *†‡§William R. Avison, *†‡¶M. Karen Campbell, and *†‡¶Kathy N. Speechley

*Department of Epidemiology and Biostatistics, The University of Western Ontario, London, Ontario, Canada; †Children’s Health Research Institute, London, Ontario, Canada; Departments of ‡Paediatrics, §Sociology and ¶Obstetrics and Gynaecology, The University of Western Ontario, London, Ontario, Canada

SUMMARY

Purpose: To examine the impact of maternal depressive symptoms (DS) on health-related quality of life (HRQL) in children with new-onset epilepsy and to identify family factors that moderate and mediate this relationship during the first 24 months after epilepsy diagnosis.

Methods: A sample of 339 mother–child dyads recruited from pediatric neurologists across Canada in the Health-related Quality of Life in Children with Epilepsy Study. Mothers’ and neurologists’ reports were collected at four times during the 24-month follow-up. Mothers’ DS were measured using the Center for Epidemiological Studies Depression Scale (CES-D) and children’s HRQL using the Quality of Life in Childhood Epilepsy (QOLCE). Data were modeled using individual growth curve modeling.

Key Findings: Maternal DS were observed to have a negative impact on QOLCE scores at 24 months (β = −0.47, p < 0.0001) and the rate of change in QOLCE scores during follow-up (β = −0.04, p = 0.0250). This relationship was moderated by family resources (β = 0.25, p = 0.0243), and the magnitude of moderation varied over time (β = 0.09, p = 0.0212). Family functioning and demands partially mediated the impact of maternal DS on child HRQL (β = −0.07, p = 0.0007; β = −0.12, p = 0.0006).

Significance: Maternal DS negatively impact child HRQL in new-onset epilepsy during the first 24 months after diagnosis. This relationship is moderated by family resources and mediated by family functioning and demands. By adopting family centered approaches, healthcare professionals may be able to intervene at the maternal or family level to promote more positive outcomes in children.

KEY WORDS: Depression, Family demands, Family functioning, Family resources, Growth curve modeling, Patient-centered care.
Assessing the cognitive regulation of emotion in depressed stroke patients
Margaret A. Turner and David G. Andrewes

This study evaluated the psychometric properties of a simple scale for measuring positive interpersonal attitudes of depressed stroke patients, with regard to their cognitive limitations. Two versions of the Attitudes Towards Relationships Scale were developed and administered to depressed stroke (n=48) and control rheumatic/orthopaedic (n=45) patients during a study that investigated the relationship between mood state, interpersonal attitudes and psychological distress. Both versions produced homogeneous results and showed acceptable concurrent validity, test–retest reliability, internal consistency and measurement specificity. A principal component analysis produced a three-factor structure highlighting the importance of attitudes towards future interpersonal relationships. These results suggest that the Attitude Towards Relationships Scale may be a psychometrically sound measure that shows some potential as a therapeutic measure of progress in stroke and other comparable samples. International Journal of Rehabilitation Research 33:180–182 © 2010 Wolters Kluwer Health | Lippincott Williams & Wilkins.


Keywords: attitudes towards interpersonal relationships, factor structure, psychometric properties, scale development

Department of Psychology, University of Melbourne, Victoria, Australia

Correspondence to Associate Professor David G. Andrewes, Department of Psychology, University of Melbourne, Victoria 3010, Australia. Tel: +61 3 8344 5635; fax: +61 3 9347 6618; e-mail: andrewes@unimelb.edu.au

Received 19 February 2009 Accepted 21 April 2009
KEYWORDS

- Provided at end of abstract – 3 to 10 words
- Help in compilation of index & cross referencing
- Help future researchers in literature searches
- Inappropriate keywords – paper cannot be traced
Basic Structure: IMRAD

- **Introduction** → What questions was asked?
- **Methods** → How was it studied?
- **Results** → What was found?
- **Discussion** → What do the findings mean?
A bad beginning makes a bad ending

-----Euripides
INTRODUCTION

- Why did you start?
  - Place the work into a general context
    - Provide background information
    - Literature review
  - Define the particular question that will be addressed
    - Objective of the research
    - Why was study/experiment undertaken
  - No data or conclusions of the study
6 functions of INTRODUCTION

- Make clear the subject of the paper & stress its importance
- State the research problem
- Give reasons for investigating the problem
- Scope of investigation
- Record most significant findings
- Refer to pertinent literature only
Template for Introduction

Paragraph 1: *What we know*

Paragraph 2: *What we don’t know*

Paragraph 3: *Why we did this study*
Example of an INTRODUCTION

People who are overweight or obese are at increased risk of developing many illnesses including hypertension, cardiovascular disease, and non-insulin dependant diabetes. However, many adults continue to be overweight. In 1995, results from the National Nutrition Survey in Australia suggested that 63% of men and 47% of women were either overweight or obese (ref).

Despite the impact of excess body weight on health, self-perception of body mass in the general population has not been properly investigated. The only information comes from small, unrepresentative samples of women, particularly younger women, or from national studies in which self-reported weights may be unreliable. Until reliable information of self-perceptions of body mass is collected, it is difficult to design effective weight loss intervention strategies.

In 2012, we conducted a cross-sectional survey of adults in which we accurately measured height and weight. In this paper, we report information about adults’ perceptions of their own body mass.
Summary: INTRODUCTION

- Rough guide: Introduction (200 words; Literature review 500-800 words) — Succinct and focused
- Provide sufficient background information supported by evidence
- Clearly state the purpose for writing the paper and how it relates to previous work
Concluding an Introduction

- Conclude the Introduction with **aim, objective or research question**. Tell your audience exactly what they can expect from this paper.

- **One good objective is best**

- No more than 2 objectives for a typical paper
A rocket is an experiment; a star is an observation

Jose Bergamin

The greatest invention of the nineteenth century was the invention of the method of invention

A.N. Whitehead
MATERIALS & METHODS

- What did you do? Where was the study conducted?
- Describe the experiment/study – how you obtained the results
- Describe how you analyzed the data
- Every measurement reported in the Results section must have a description of the Method used to obtain it
- Should be clear & detailed enough for the experiment/study to be reproduced
- Headings ➔ participants, study design, specific methods, data analysis, etc
Study Design

- This should be clearly identified before study even began
- Types of study designs commonly used in research
  - Systematic review, qualitative study, experimental, observational study, cohort study, case-control study, cross-sectional study, ecological study, case reports, etc
- Each study designs has its own strengths & weaknesses in terms of controlling for bias & confounding
Participants

“Research is a formalized curiosity. It is poking and prying with a reason”

Zora Neal Hurston
1891-1960
How participants in the study were recruited?

Sampling technique should be clearly described

Inclusion and exclusion criteria should be spelt out in detail

In describing participants, their privacy must always be respected

Do not include any identifying information in the text, tables or photographs

If a photograph is used, written consent must be obtained from the patient or their parent or guardian
Sample Size

- Size of the study is of paramount importance for testing of hypothesis or fulfilling the study aims.
- The number of participants in any study should be large enough to provide precise estimates of effect.
- Providing a reliable answer to a research question usually means recruiting larger number of participants.
- Provide details of sample size calculations (Epi Info, StatCalc, G power, etc, etc).
Questionnaires

- Give precise details of the questionnaires used & how they were developed, validated & tested for repeatability.
- Mode of administration must be spelt out ➔ self-administered, interviewer-administered, telephone interview
- Good design questionnaire ➔ good face, content & construct or criterion validity, test-retest reliability
- If questionnaire has been validated, always give a reference to the work
Interventions

- In experimental studies, details of the interventions & how they were administered need to be fully described.

- Must described the method of randomization, allocation concealment & blinding of the research staff & the participants to study group allocation.

- Describe any procedures used to maximize or measure compliance with the interventions.
Statistical methods

- Describe how you analyzed the data
- Statistical tests and statistical computer packages used (eg. SPSS, STATA, StatCalc, EpiInfo, R, Minitab, etc.)
- Always give a P value that you used as the critical value to determine statistical significance.
Ethical Approval

- Give details of the institutional ethics review boards who approved your study/experiment. Readers will want to be assured that participants in your study were placed above those of the investigators.

- Ethical approval ➔ fundamental to good research practice

- Many journals now decline to publish results from studies that do not include details of prior ethical approval
Informed consent from participants

Because the protection of participants is one of the highest priorities in any research, every paper must contain a statement about the protection of the participants.
Summary: METHODS

- What was done
- How it was done
- How data was collected, and
- How the data was analyzed
Example:

“Blood samples were taken from 48 informed and consenting patients…. The subjects ranged in age from 6 months to 22 years” (Pediatr. Res. 6:26, 1972)

“During the 6-month follow up, 3 patients kicked the bucket”
Introduction

- I
- M
- Results (What was found)
- A
- D
RESULTS

- What did you find?
- “meat” of the paper
- Provide answers to questions posed
- Present key results of your research without interpreting their meaning
- Cannot be combined with Discussion
- Should be presented in an orderly sequence
- Every result must be a method in the Methods section
- Results should be presented in past tense
Present representative data rather than endlessly repetitive data

“The compulsion to include everything, leaving nothing out, does not prove that one has unlimited information; it proves that one lacks discrimination”

(Aaronson, 1977)

“The fool collects facts; the wise man selects them”

(JW Powell, 1888)
Determine which results to present by deciding which are relevant to the question(s) presented in the Introduction irrespective of whether or not the results support the hypothesis(es)

Does not need to include every result you obtained or observed
Determine which results to present by deciding which are relevant to the question(s) presented in the Introduction irrespective of whether or not the results support the hypothesis(es)

Does not need to include every result you obtained or observed
Organized the data in either chronological order according to the Methods or in order of most to least important.

Within each paragraph, the order of most to least important results should be followed.
Contents

- Presentation of data ➔ text, tables or graphs
- Summarize the findings and point the reader to the relevant data in the text, tables or graphs.
- Text should complement the tables or graphs, not repeat the same information
Contents

- Readers should follow author’s thoughts in a logical manner → how they arrived at their answers
- Data described in enough detail → let reader decide for themselves what is normal and abnormal data
Contents

- Compared group of subjects in a valid manner
  - Magnitude/size of differences
  - Statistical differences
- Summarize the statistical analysis & report actual $P$ values for all analyses
Contents

- Results should be presented in past tense
- Write with accuracy, brevity and clarity ➔ short & sweet without verbiage
**Paragraph 1**
Describe study sample
Who did your study

**Paragraph 2**
Univariate analyses
How many participants had what?

**Paragraph 3 to n**
Bivariate analyses
Relationships between variables

**Paragraph/s**
Multivariate analyses
What is the results when confounders or modifiers have been taken into account
Summary: **RESULTS**

- Summarizes what was found in the study
- Provide answers to questions raised in the Introduction and Methodology
- Tables and figures to compliment text in the Results section
DISCUSSION

- What does it mean? So What?
  - Highlight new & important findings
  - Compare findings with previous similar studies
  - Discuss strengths & limitations of study
  - Explain your findings (interpretation)
  - Hypotheses
  - Discuss implications & significance
  - Conclusions
  - Recommendations ➔ future research
Paragraph 1
What did this study show?

Paragraph 2
Strengths & Weaknesses of methods

Paragraph 3 to n
Discuss how results support the current literature or refute current knowledge

Paragraph/s
Future directions
“So What?” & “Where next?”
Impact on current thinking or practice
Discussion: Components

- Emphasize new & important aspects of study ➔ do not repeat information in Introduction or Results section
- Explore possible mechanisms or explanations for new findings
- Relate findings to previous work ➔ do a thorough literature search ➔ quote only those relevant and important references (be focused and brief)
Discussion: Components

- Present the pattern, principles, relationships & generalizations shown by the Results & put them in perspective.

Sequence..................

- First state the answer
- Then the relevant results
- Cite the work of others

- Point out any negatives or lack of significance or unexpected findings
Discussion: Components

- Defend your answers. Explain why your answer is satisfactory and why others are not. Only by giving both sides of the argument, can you make your explanation convincing.

- Compare & contrast with previous published work ➔ sign of good discussion.
Discussion: Components

- Implications of findings
  - Scientific impact
  - Changes in the existing practice or teaching
  - Contribution to progress & understanding

- State methodological limitations of study (e.g., sample, methods, materials) objectively stated
Summary: *DISCUSSION*

- Author’s own interpretation of findings
- Implications of findings
- Suggestions for future research
- Highlight study weaknesses
- In writing Discussion ➔ discuss everything but be concise, brief & specific
Final Checklist

- Submission letter, signed by all authors
- Original and copies of article
  - Title page
  - Abstract
  - Article
  - References
  - Tables & Legends
- Sets of illustrations, properly labeled
- Consent letters or permission to reproduce previously published material
- Copyright agreement
Most biomedical journals adopt the Uniform Requirements for Manuscripts

Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals

Updated December 2016

International Committee of Medical Journal Editors

Also called the Vancouver Group

http://www.icmje.org
What the Editor expects from you

- Conform to “Instructions to authors
  - Typed; double-spacing; delivered in good condition; electronic submission
  - Authorship & copyright
- Topic relevant to scope of Journal
- State type of article
- Supply correspondence information
Is it publishable?

- Have I asked the right question?
  - You should be able to write the introduction before you even start the study!
- Have I attempted to answer the question properly?
  - Study design, power calculations, statistical analysis
- Is the answer of interest?
- Have I interpreted, presented and discussed the answer
Categories of Editorial Decision

- Accept
- Accept with minor revision
- Accept with major revision
- Reject
“If they have misunderstood your message, it is almost certain your fault for not making things clear”

David A, BMJ 1990
"DEAR CONTRIBUTOR"

"THANK YOU FOR SUBMITTING YOUR STORY TO OUR MAGAZINE"

"TO SAVE TIME, WE ARE ENCLOSING TWO REJECTION SLIPS..."

"...ONE FOR THIS STORY AND ONE FOR THE NEXT STORY YOU SEND US!"

© 1974 United Feature Syndicate, Inc.
Publication is endpoint of research
Research misconduct relevant to publication ethics
PUBLICATION ETHICS

- Plagiarism
- Authorship
- Copyright
- Duplicate Publication
- Simultaneous Submissions
- Fraud & Forgery
- Acknowledgement
- Wrong Credentials
ISBN: 978-983-100-483-8
http://umpress.um.edu.my
References