How to write and submit a research manuscript

Workshop
23 July 2014
Who we are?

- Peer-reviewed
- Open access
- Multidisciplinary
- Indexed

Mission and Vision: Platform for relevant HIV research accessible to all stakeholders. We encourage submissions from resource-limited settings.
Your facilitators

- JIAS editorial board members
  - Mark Wainberg, Editor-in-Chief
  - Susan Kippax, Editor-in-Chief
  - Marlène Bras, Managing Editor
Agenda

Session outline

14h30-16h00    How to write a research manuscript
16h00-16h20    Choosing a journal and submitting a manuscript
16h20-16h35    Editorial decision making and common reasons for rejection
16h35-16h50    Responding to reviewers and revising a manuscript
16h50-17h10    Publication ethics
17h10-17h30    Question-answer time with editors’ panel
From a scientific point of view –

Results that are not published mean the research did not take place
Disciplines in HIV Research

- Biomedical, and Clinical sciences
- Epidemiology and Human Geography
- Psychology and Behavioural Sciences
- Sociology, Anthropology and Political Science
- Economics
- Humanities
Types of research

• Quantitative ... experiment, cohort studies, surveys...

• Qualitative ... ethnography, observation, discourse analysis, content analysis, ...

• Mixed methods,..
Disciplines and Methods

- Biomedicine, clinical sciences and epidemiology: quantitative research
- Sociology, anthropology, political science and the humanities: ‘qualitative’ research
- Economics and Psychology in both types

But many sociologists (and some of the most famous sociologists, e.g. Durkheim (patterns of suicide)), are quantitative...
How to write a research manuscript
What makes a good manuscript?
It’s all about the question ...

- Design and implementation of research
- Analysis of the data
- Discussion of the findings

Question
Manuscript structure (IMRaD)

Title/title page
Abstract
Introduction
Methods and materials
Results
Tables and Figures
Discussion
References
Where to start

• Order your thoughts

– What problems did my study address?
– How did my study address these?
– What are my key findings?

• Methods – Results – Introduction – Discussion – (Abstract / Title)
What is the most important part of a manuscript?
The part most often read
Often the only part read

Short
Specific
Representative
Informative
What different types of information does this title contain?

Effect of multiple micronutrient supplementation on survival of HIV-infected children in Uganda: a randomised controlled trial
Effect of multiple micronutrient supplementation on survival of HIV-infected children in Uganda: a randomised controlled trial

Ndeezi et al, JIAS 2010
What information is missing in this title and what would be a better alternative?

Alcohol intake increases sexual risk behaviour
A survey on the effect of alcohol intake on sexual risk behaviour among German adolescents
Abstract

• Main problems encountered by editors:
  – Inconsistent 😞
  – Incomplete 😞

• Brief summary
• Complete
  – Background
  – Experimental design
  – Major findings
  – Conclusion
• Stand alone
• Consistent with the paper
Return on investment of HIV harm reduction programmes for injecting drug users in Malaysia (IAS 2013: WEAD0101)

H. Naning, C. Kerr, A. Kamarulzaman, M. Dahlui, N. Chiu Wan3 D. Wilson

**Background:** In an effort to prevent transmission of HIV amongst injecting drug users, Needle-syringe Exchange (NSEP) and Methadone Maintenance Therapy (MMT) programmes were introduced in Malaysia in stages from 2006. A controversial programme in the setting of Malaysia's prohibitive drug laws, on-going debate exists as to its effectiveness and appropriateness in Malaysia's setting. We conducted this study aimed at assessing the effectiveness and cost-effectiveness of the both programmes.

**Methods:** We conducted a systematic review to obtain data on HIV disease burden and their injecting behaviour among IDUs in Malaysia. We also conducted an analysis of the cost burden of HIV treatment from the perspective of the Government. These data combined with administrative data on programme costs were used in a mathematical model of HIV transmission to evaluate the programmes for the period 2010 to 2023. The main outcomes of interest were the incremental cost effectiveness ratio (ICER) and return on investment ratio. The ICER compared scenarios of a health system with and without harm reduction programmes.
**Results:** The preliminary results showed that approximately **14,695 HIV infections have been averted** with the implementation of the harm reductions programme with a reduction in HIV prevalence from **33% to 21%**. The total healthcare costs saved was estimated to be approximately RM 7.6 million with the incremental cost effectiveness ratio as **RM4,737 per QALY gained**. Financial investment analysis produce a modest return of **RM0.08 for every RM1 invested**.

**Conclusion:** An assessment of the NSEP and methadone programmes in Malaysia shows that many **HIV infections have been averted** as a result of the introduction of these programmes and was **modestly cost-effective**.
Introduction: What was your question

- **Background** – what is the topic
- **Context** – what is known, what previous research has been done
- **Challenge** – nature and importance of knowledge gap
- **Question** – what was the aim of the study

🤔 Problem: the reason for the study is not clear

Funnel-shaped, from general to specific
In which order would you place these sentences in your introduction?

- **A** Although a more strategic monitoring for ART efficacy is now also recommended, virological monitoring is still not feasible for the majority of patients
- **B** Here we describe virological outcome and emergence of drug resistance in a cross-sectional study
- **C** Implementation of ART is recognized as a public health priority in resource-limited countries
- **D** It is thus important to evaluate the outcome and effectiveness of ART programmes in routine care settings

... And why?
Implementation of antiretroviral therapy (ART) is recognized as a public health priority in resource-limited countries. In order to allow a rapid roll out of ART, countries use the World Health Organization (WHO) public health approach, which proposes standard first-line therapy, together with treatment initiation and switch guided by clinical disease progression and, where possible, with monitoring of CD4 cell counts [1]. The standard therapy consists of two nucleoside reverse transcriptase inhibitors (NRTIs) (3TC+AZT/d4T) and one non-nucleoside reverse transcriptase inhibitor (NNRTI) (EFV/NVP).

In 2010, these guidelines were revised and recommended less toxic drugs in first-line therapy by replacing stavudine (d4T) with tenofovir (TDF) [2]. Although a more strategic monitoring for ART efficacy is now also recommended, virological monitoring is still not feasible for the majority of patients on ART in sub-Saharan Africa due to the absence of adequate laboratory facilities and insufficient financial means. In addition, deficiencies in health systems and resources, such as unreliable supply systems, storage and the lack of qualified personnel to prescribe and monitor patients on ART, could also create conditions for accelerated development of HIV resistance to antiretroviral (ARV) drugs. It is thus important to evaluate the outcome and effectiveness of ART programmes in routine care settings in resource-limited countries to evaluate whether the empirical second-line treatment recommended by WHO would still be effective.

Togo is a small country of 5.5 million inhabitants, located in west Africa, with an estimated HIV prevalence of around 3% in the general population [3]. Scaling up of ART started in 2007, and approximately 7000 HIV-1-infected individuals were receiving ART by the end of 2007. Treatment became free of charge by the end of 2008 and, today, more than 17,000 people are receiving ART, which corresponds to coverage of 33%. Here we describe virological outcome and emergence of drug resistance in a cross-sectional study among HIV-1-infected patients treated according to the national guidelines in hospitals in Lomé, the capital city of Togo.

**C** Implementation of ART is recognized as a public health priority in resource-limited countries

**BACKGROUND**

**A** Although a more strategic monitoring for ART efficacy is now also recommended, virological monitoring is still not feasible for the majority of patients

**CONTEXT**

**D** It is thus important to evaluate the outcome and effectiveness of ART programmes in routine care settings

**CHALLENGE**

**B** Here we describe virological outcome and emergence of drug resistance in a cross-sectional study

**AIM**
Methods and Materials:
How did you study your question?

• Validates your study
• Use subheadings to organize this section if needed
• Details on ethical approval and patient consent
• Detailed enough to allow replication
  – Procedures, materials used, data collected, data analysis and statistical methods
• Past tense
• **No results yet!**
Methods

• Who? ...was the study population?
• What? ...was the primary outcome?
• How? ...was the outcome measured?
• Where? ...did the study take place?
• When? ...was the data collected?
Results: What findings did your question generate?

• What is the best way to present your data: table, figure or text?
  – Avoid repetition
  – Be specific
• Present only the results relevant to your question
• Relate results to methods, but do not describe them again

• **Do not discuss yet! And be precise!**

Careful with the word ‘significant’ and vagues terms (some - many - few)
Results: Gender analysis

- Study participants
  - Sex/Gender numbers
  - Single-sex study, ...why?

- Sex-disaggregated data
  - Reporting results of sub-populations

- Gender analysis
  - Effect of..., associated with...?
Figures and Tables

- Only when helpful to convey information
- Should be understandable without text
- Choose type based on the kind of data you have
- Avoid overlap with text
- Informative titles and additional details in legend
- Label all axes, columns and rows
- Careful with colours (colour blindness and black/white printing)
Figures – Vote Exercise

Which of these graphs is better to show change over time?

A.

B.

Figures: different figures for different messages

A line graph is better to show data over time or trends

Figures: different figures for different messages

A bar graph would work better for a different type of data for example ratios.

Source: UNAIDS/WHO, 2006
Discussion: How did the findings answer your question?

- Do not repeat results, but should be based on the results!
- Discuss the importance and implications of your findings
- Use separate paragraphs for different points you are making
- Use key references to place your study within context

- Did the results answer your question?
Discussion

In our study, more than 35% of patients attending the Themba Lethu Clinic in Johannesburg, South Africa, failed to attend at least one clinic visit on time in the first six months of treatment. This finding is consistent with previous reports, from industrialized countries, documenting 25%-44% of recently diagnosed HIV-infected individuals failing to adhere to scheduled visits early on in their care or treatment [28-32].

Documenting the amount of missed visits early on in treatment is critical because of its potential implications for poorer treatment outcomes. Previous studies have shown that patients who miss visits soon after initiating ART are at increased risk of early mortality and loss [16,17].

Our data are not able to elucidate the specific mechanisms by which missing visits lead to poorer outcomes, but it is likely that this is a marker for poor adherence.

Our results also support previous research showing that older patients mount poorer CD4 cell count responses [33],

Surprisingly, we did not detect a relationship between CD4 count and missed visits in our population. Distrust in the healthcare system, stigmatization of those infected by their communities and patient financial constraints could also play a major role in how adherent patients are to visit schedules in a resource-limited setting [39].

Brennan et al, JIAS 2010, 13:49
Limitations and Conclusions

Limitations

• Last paragraph before conclusion
• You can mention the strengths of the study
• Discuss any limitations including
  – how do they affect your data
  – if applicable how you addressed them
  – any further implications
  – mention all relevant ones

Conclusions

• Main take-home messages
• More general, but not overgeneralize!
• Wider implications, recommendations and future research
1. Biomarker testing was completed for 1108 participants out of the total sample of 1127 IDUs.
2. Five cross-sectional surveys of IDUs were conducted in Georgia in 2009.
3. Comparison with our study findings demonstrates increases in HIV prevalence in both locations.
4. The study protocols and questionnaires were approved by the Ethics Review Committee.
5. HIV prevention in this sub-population, therefore, may lie in strengthening harm-reduction programmes.
6. Major characteristics of the sample were median age 35 years, male 98.7% and married 49.7%.
7. Injection drug use remains a major risk factor for HIV transmission.
8. More research is required to analyze the determinants of HIV risk in Georgian IDUs.
Biomarker testing was completed for 1108 participants out of the total sample of 1127 IDUs. **Results**

Five cross-sectional surveys of IDUs were conducted in Georgia in 2009. **Methods**

Comparison with our study findings demonstrates increases in HIV prevalence in both locations. **Discussion**

The study protocols and questionnaires were approved by the Ethics Review Committee. **Methods**

HIV prevention in this sub-population, therefore, may lie in strengthening harm-reduction programmes. **Discussion**

Major characteristics of the sample were median age 35 years, male 98.7% and married 49.7%. **Table!**

Injection drug use remains a major risk factor for HIV transmission. **Introduction**

More research is required to analyze the determinants of HIV risk in Georgian IDUs. **Discussion**

Adapted from Chikovani et al, JIAS 2011
Some differences regarding qualitative research...
It’s still about the question ...

- Design and implementation of research
- Analysis of the data
- Discussion of the findings
- Question
Examples of Questions

• How do people in X (region/place) understand risk of HIV transmission

• Why do people in X (place/region) not get tested? What are the barriers to testing?

• Why do gay men in X (place/region) discard condoms? Under what conditions do they do so?
Qualitative research

• Qualitative research typically comprises observation, case studies, oral histories, interviews / focussed group discussions with key informants, or analyses of narrative accounts already collected in some form (e.g. media reports).

• The practice of observation coupled with asking questions and allowing respondents to answer in the ways / manner that they find easiest, i.e. encouraging talk.
Qualitative Methods

As with quantitative studies, qualitative data collection and analysis have to be rigorous, guided by theory and use of valid methods, e.g. Grounded Theory.
Sample

- Sampling is typically purposive and participants selected
- Usually participants are chosen to provide some heterogeneity – male and female, young and old, ...
- Continue to recruit respondents into the study until you have achieved saturation, i.e. no new themes/categories emerge
Qualitative Analysis

• Qualitative analysis requires interpretation on the basis of existing social or other theories and/or the grounding of new theory in the data collected

• Examine the data for what is said as well as what is NOT said and look for metaphors and other figures of speech

• Development of themes/analytical categories grounded in the data
Qualitative Analysis

• The data provide a descriptive record of the research

• They do not in and of themselves provide explanations

• The researcher has to make sense of the data by interpreting them with reference to what is already known/theory
What to do and **NOT** do

- DO look for THICK (rich) description (not just surface understandings) (Clifford Geertz)

- Do NOT summarise what research participants have said - this is simply journalism – NOT analysis
Qualitative Write-Up

• Same rules apply as with the writing up of quantitative analyses

• The big difference is that you have to give your reader confidence in your interpretation of the data (it may not be the only interpretation but it must be seen as feasible)

• To do that you quote from your respondents AND develop major themes and understandings with reference to what is already known and to theory
An Example: How do Sydney gay men understand HIV transmission

• Interviewed men who had recently seroconverted and asked them to tell the story of the event on which they believe they became infected (interviews typically lasted about 90 minutes)
• A number of themes emerged from analysis of interview transcripts
• These themes could be classified under transmission within regular/committed relationships and transmissions associated with casual sexual encounters
Themes

Committed Relationships
• Love/Intimacy
• Trust/Misled about partner’s serostatus

Casual Encounters
• Pleasure/lust
• Drugs/alcohol
• Trust/distrust
• Unverified assumptions about serostatus/viral load
Example: Discarding Condoms

• Quantitative data revealed that SOME gay men were consistently discarding condoms within their regular relationships:

• These gay men were better educated and more likely to be professionals than those who were not doing so.

• WHY?

• Interviewed a number of gay men about their sexual practice and the conditions under which they discarded (or would discard) condoms.
Summary Points

• Qualitative research produces large amounts of data
• Systematic preparation and analysis is extremely time-consuming
• Analysis often occurs at the same time as analysis so that questions can be refined
• Textual data are typically explored inductively
• High quality analysis depends on the expertise and vision of a skilled researcher
Some Guidelines

• Check journals that publish qualitative research, e.g. Social Science & Medicine, or Culture Health & Sexuality, and JIAS

• Work with a social researcher who has expertise in qualitative research methods

• Read some of the classic texts on Qualitative Data Analysis (such as Glaser & Strauss; Strauss & Corbin).
Which section of a manuscript usually contains the most errors?
References

• Credibility
  – Knowledge and awareness of the field
  – Validate your claims and arguments

• Format your references according to the journal’s guidelines

• Read your sources!!
Other sections

• Acknowledgements and funding source
  – You are responsible for getting written permission for people mentioned here. Comply with your funder’s regulations about acknowledging their support.

• Authors’ contributions
  – Who has done what?

• Conflicts of interests statement
  – Includes potential CoI, not up to you to decide
How to choose a journal and submit a manuscript
What influences your choice of journal?
Choosing a journal

- Coverage by indexing
- Open access
- Cost
- Journal’s prestige (e.g., impact factor)
- Speed of editorial decision
- Readership
- Colleague’s recommendation
Manuscript submission

To do and not to do in manuscript submission

Adapted slides courtesy of Elise Langdon-Neuner, Thomas Babor and Kerstin Stenius
Where are the instructions?

- Instructions for authors: journal webpage
- Examine a recent issue of the journal
- Uniform Requirements for Manuscripts submitted to Biomedical Journals (ICMJE) [www.icmje.org]
- EQUATOR network [http://www.equator-network.org/] for example CONSORT (Consolidated Standards of Reporting Trials) [www.consort-statement.org]
Most often ignored instructions

• **Word counts**

• **Reference formats**: in-text citations or referencing incorrect

• **Tables/figures**: inserting in the text rather than at the end of the manuscript or as separate files

• **Poor quality**: figures/photos or non-standard formats

• **Abbreviations**: failure to write out the first time they are written in the manuscript
Cover letter

• Statements of manuscript submitted to one journal only and not previously published.

• Your chance...
  – to highlight the importance of your study
  – to explain why manuscript of interest to journal
Dear Sir/Madam

Greetings!

Please find attached an original manuscript for consideration of publication in your esteem journal. It will be an honor bestowed upon us that International journal of repute would accept our publication and with this philosophy we are submitting the same. Hopefully it qualifies the strict editorial review and provides us with an encouraging feedback to work still better.

Kind regards
Dear Editor

We are pleased to submit our manuscript for consideration for publication in Journal of Excellent Research.

This article describes the first study on HIV testing behaviour among people who use drugs and their intimate partners in Thailand. The results of this study are important for the development of targeted testing strategies for this key affected population.

We believe that our article is of interest to the Journal of Excellent Research as it falls within the scope of the journal on publishing psychological studies of vulnerable populations. In addition its open access would ensure a wide distribution of our results.

The manuscript is original research and is not under review with another journal. There are no conflicts of interest in the conduct and the reporting of the research. All authors have read and approved the manuscript.

With best wishes
Editorial decision making and common reasons for rejection
Editorial black box

Online submission → Initial decision by Editors

Reviewed by at least 2 selected experts → Revision

Revision → Accept

Revision reviewed → Published in JIAS - open access

Revisions / Mentoring → Reject
Editor’s checklist upon submission

- Does the manuscript fit within the **scope**
- Is the **objective** of the study clear
- Are the results **important**
- Does the study contribute something **novel**
- Is the study design and methodology **valid**
- Is the presentation of good **quality**
Common reasons for instant rejection

*Journals have a duty to avoid wasting reviewer time and undue delays in responding to authors*

- Not within journal’s scope
- Manuscript type unacceptable
- Ignores instructions to authors
- Major methodological weakness
- Clear ethical problems
- No clear hypotheses / objective
- Incorrect analysis & conclusion
- Nothing new
Responding to peer reviewers and revising your manuscript
Peer reviewer comments - categorising

• Difference of opinion irresolvable
• Request impossible
• Request possible, but impractical
• Difference of interpretation
• Request acceptable
Replying to reviewers’ comments

• Point-by-point reply

• Comply with as many reviewer requests as possible

• Disagree or explain reasons for non-compliance politely and well-argued

• Keep your reply short and to the point

• Revise your manuscript carefully in light of the reviewers’ comments. If they did not understand something, chances are your readers won’t either.
Practical hints to make editors happy

• Copy-paste reviewers’ comments in the order provided, number them if necessary

• Distinguish the reviewers’ comments from your responses for example by using bold font.

• Detail exactly what has been changed. Do not just say “This has been corrected”.

• Use track changes or if too extensive, highlight sections that have been changed in the manuscript.
After rejection

• Reasons?
• Peer reviewer comments?
• Journal choice
• Appeal
After publication

• Don’t forget to disseminate your publications
  – Social media
  – Email signature
  – Conferences
  – Institution
Publication ethics
Publication ethics

1. Carelessness

Includes: Citation bias, understatement, negligence

Examples: Faulty statistical analyses, research methods incomplete, selective citation, unread references

Consequences: Request for correction, letter to editor
2. Plagiarism

Includes: Undisclosed sources

Examples: Copying of text without references, unattributed data

Consequences: Rejection or retraction of article, notification of institution
3. Redundancy

**Includes**: Salami publications, self-plagiarism

**Examples**: Publish several papers with minimal data from one study

**Consequences**: Rejection of manuscript, copyright infringement

Prior publication: Key is whether prior publication was work in progress or completed work; conference abstracts, posters = work in progress
4. Unfair authorship (ghost and guest authors)

**Includes**: Failure to include eligible authors, honorary authors

**Examples**: Head of department

**Consequences**: Angry colleagues, complaints to editor or institution
Publication ethics

5. Undeclared competing interest

Includes: Personal, professional and financial

Examples: Stock or share ownership, payment for lectures or travel, board membership

Consequences: Notification in the journal, possibly retraction of the article, mistrust among readers
Publication ethics

6. Subject violations

Includes: Human and animal

Examples: No ethical review board approval for study

Consequences: Rejection of manuscript, notification of institution, legal case
Publication ethics

7. Fraud

Includes: Fabrication and falsification

Examples: Selective reporting, altering or fabricating data

Consequences: Retraction of manuscript, notification of institution, funding ban
Question & Answer time
YOUR questions ...

that you always wanted to ask an editor

What editors want?

What are the reasons for immediate rejection?

How are peer-reviewers chosen?
Thank you
How did we do?

• Please take a minute to fill out our evaluation form.
• Slides will be available at www.jiasociety.org
• See www.healthefoundation.net for e-course on how to write a conference abstract
• Many thanks for your participation and good luck with your manuscripts.