Support for Women in the UK

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Outline

- Background: Women doctors in the UK
- Barriers to career progression
- Support available
  - Schemes and initiatives to support women
- Potential solutions

Background: Women in medicine in the UK

Female doctors in the UK will outnumber men in the future

- Women have made up the majority of entrants to medical school since the early 1990s (54% 2012).

- The number and proportion of female doctors is growing.

.
- Number of female doctors is expected to exceed that of male doctors between 2017 and 2022.

Proportion:
- Currently up to 48% of registered doctors are female. (GMC, 2012)

Career progression of doctors

Taylor et al. (2009)

- More men are promoted to senior positions than women.
- Those working full time progress more than those working part time.

Women doctors are under represented in (Newman, 2011)**:**

- Academia
- British Medical Association
- Royal Colleges
- Clinical and medical director roles
- Medical school dean positions
- Senior leadership positions at board level

Barriers to career progression

Barriers to career progression

Direct discrimination is illegal since 1975 (Sex Discrimination Act)

Organisational Barriers:

Organisational culture e.g. careers structures, male prejudice, environment, opportunities available, working practices, 'unconscious bias' (Newman, 2011; Pololi et al, 2012), lack of role models and mentors

Individual Barriers: Women tend to under estimate ability

e.g. lack of self belief, confidence in ability to do the job, relatively low aspiration, low expectations (Newman et al, 2011)

Lifestyle barriers
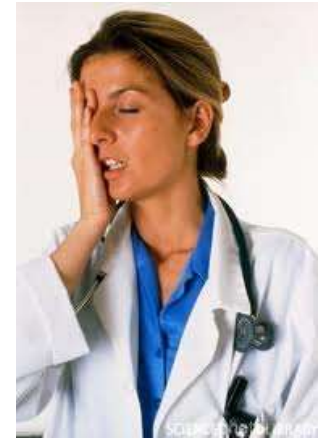
Difficulties in achieving a desired work-life balance

Women are still the main carers (e.g. children, parents)

Career breaks, childcare, difficulty combining professional and family demands

Lack of flexible working opportunities

Women do more part time work

- 5% of male hospital consultants work part-time
- 38% of female hospital consultants work part-time

Pay Gap

British Medical Association (BMA) report (2009) on the Pay Gap for women in medicine and academic medicine

Women earn 18% less than male doctors

- May be explained by grade, hours worked, experience, administrative roles, specialty (but only in part)

- Gender gaps lower for doctors starting their careers
- When controlling for similar characteristics still a gender gap amongst consultants of 5.6% (£5500 per year) and amongst trainees 4.1% (£2000 per year)

Free text comments

Issues cited: caring roles, hostile culture, geographical limitations

http://www.medicalwomensfederation.org.uk/images/Daonload_Pay_Gap_Report.pdf

Issues for Women

- Cultural expectations and stereotypes
- Often have primary responsibility for children
- Maternity leave
- If take a career break, how get back into medical practice?
- Fewer female role models in senior leadership positions
- Pay Gap

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Do women doctors in Japan face similar issues?

Are there any additional issues faced by women doctors in Japan?

Evidence of lower clinical confidence among women and gender disparity in medicine in Japan (Nomura, Yano & Fukui, 2010; Nomura & Gohchi, 2012)

Support Available

- Less than full-time training (LTFT)
- GP return to practice scheme
- GP Induction and Refresher scheme
- GP Retainer scheme
- Mentoring
- Buddying
- Sponsorship
- Support networks
- Supportive organisations for women (Women in Surgery Medical Women's Federation)
- Athena SWAN
- Practical support (e.g. childcare vouchers)

'Less than full-time training' (LTFT)

- Opportunity for flexible, part-time working and job-sharing (two doctors sharing one full-time post)

- Open to all medical trainees in the UK
  - All specialties, men and women

- Used for raising children, caring for family members (e.g. elderly parents), personal health problems

- Minimum commitment of 60% of full-time

Advantages of LTFT

- Opportunity to spend more time with children

- Better work/life balance

- Greater ability to manage and prioritise workload

- Better control over rotations and more flexibility in taking annual leave if you are supernumerary (and so extra to the team). Although there are very few places now that are supernumerary

http://www.medicalcareers.nhs.uk/career_options/less_than_full_time_training.aspx

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Disadvantages of LTFT

- Training takes longer to complete
- Less overall pay (paid pro rata)
- May take longer to integrate with the team
- Contact with the consultants can be constrained
- Less access to out of hours experience
- Less continuity with patients/handover issues
- Pro rata access to leave, study leave, study leave funding
- If you are supernumerary you may feel a bit like an extra member that no one misses when you are not there.

http://www.medicalcareers.nhs.uk/career_options/less_than_full_time_training.aspx

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General Practitioners (GPs)

- Primary care providers

- First point of contact for most patients

- Assess needs and provide referrals to secondary care (hospital or community-based care)

- Most suited to part-time and flexible working
  - Several schemes to support women

- Recent changes in how healthcare is commissioned means GPs run Clinical Commissioning Groups (CCGs)
  - Positive discrimination to ensure women represented at board level on CCGs

Return to Practice Scheme: Background

- Shortage of GPs in England.

- GPs who have taken a break from work (e.g. due to childcare), UK GPs who have worked overseas or GPs trained overseas are regarded as an important resource, given the cost of training new doctors.

- In England, doctors are removed from medical register (not allowed to practise) if had a break from medicine of more than 2 years

Return to Practice Scheme

Return to practise scheme offers a supervised, supported method to return to work as a GP

Aim: Competent, confident, up-to-date doctors
- – Entry test (Induction and refresher scheme) requires active study
- – Supervised placement in GP practice
- – OSCEs and assessment
- – Graduated return to practice

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Induction and Refresher Scheme (I&R)

- **Application process**: clinical knowledge exam, simulated patient test

- **I&R scheme**:
  - 3-6 months under supervision in a GP practice that trains new GPs
  - Paid induction programme
  - Regular educational and peer-support session available
  - Access to training (communication skills, coaching, mentoring)

- **Exit scheme** by completing induction logbook and passing an exam

London I&R Scheme – Evaluation
(Bhatti, 2015)

- Between 2009-2014, 56 GPs completed the I&R in London
    - Half were UK-trained GPs returning after a break
    - Others were trained outside the UK or had performance concerns

- Majority reported that they had **learned a lot and felt more confident** after I&R: *"I found it very useful. I was very nervous coming back…the programme gave me confidence and helped me get back on my feet"*

- **What was useful?**
    - Access to peer support and education sessions, supportive supervisor, clinical experience in supportive environment, getting familiar with healthcare systems/referrals/etc
- **Criticisms**: lack of recognition of experience, variable pay

GP Retainer Scheme

In the UK publicly-funded national health service (NHS), GPs run like small businesses

– Hold a contract with the Department of Health

Problems:

- Shortage of GPs
- Peak age for women to leave GP is 35 years, for men it is 57 years (Harris et al., 2014)
- Expensive to train doctors
- Reluctance to give jobs to women due to the cost of maternity leave

Solutions

- Department of Health reimburses GP practices for maternity leave costs
- GP doctors can apply to go part-time (can do between 1 and 4 half-day sessions per week) for a maximum of 5 years
  - Eligibility: young children under 5, personal health problems

- GP practices are paid to provide educational support and supervision, and are expected to offer manageable working hours

GPs on the retainer scheme:
- Have set working hours (so can arrange childcare in advance)
- Do not have on-call/out-of-hours duties
- Do not have business/administrative responsibility at the GP practice
- Have paid, protected time for continuing professional development

GP Retainer Scheme: Research
(Lockyer at al., 2014)

- Majority of GPs using the scheme were women with childcare responsibilities

- Positive feedback on the value of the scheme, particularly to keep them in a career in medicine

- Most reported that the scheme helped them to maintain skills and knowledge, although they lacked confidence in management skills

- At the end of the retainer scheme, 86% were working as GPs and most planned to continue working as a GP

- The five-year limit was seen as problematic for some women who had multiple children and for GPs with chronic health problems

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Mentoring

Definition: traditional mentoring
'a relationship between an older, more experienced mentor and a younger, less experienced protégé for the purpose of helping and developing the protégé's career' (Ragins & Kram, 2007)

Benefits of mentoring:
- **Mentoring may challenge the mind-set**
  e.g. of lower confidence, low aspirations, waiting to be asked

- **Mentoring can facilitate networking**

- **Provides support with:** career development; job related well-being; reduction in work-family conflict (Taylor et al, 2009; Dutta et al, 2011)

- **Evidence mentoring leads to more time on research and more publications** (Kaderli et al, 2011)

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Buddying Schemes
Example: Medical Women's Federation

Informal version of mentoring

Allows members to benefit from contact with other members for advice on a variety of issues, such as career choices, job applications, and worklife balance.

Benefits may include:

- Access to a more experienced person who will serve as a sounding board and resource for professional development.

- Improved career development and job searching skills

- Improved workplace skills and performance

- A clearer view of study and career goals

- Increased focus, enthusiasm and motivation

- Expanded networks

- Greater interpersonal and emotional intelligence competencies

Parent Buddying Scheme: Kings College London

Buddy scheme aims to:

Ensure staff receive support, advice and share tips about managing childcare issues and workloads (men and women)

http://www.kcl.ac.uk/aboutkings/governance/equality/parenting/buddying.aspx

Sponsorship

A **sponsor** is a senior individual who is willing to link his or her reputation to an individual: can provide support with promotions.

Examples of sponsorship:

- adding a junior name to an grant application
- inviting membership to a committee
- suggesting suitability for a new role or post
- suggesting promotion,
- recommendation to others

Sponsorships - a positive intervention,

need to make the process more transparent to ensure it is offered to all.

(De Vries, 2013)

Good support networks

Provide peer support (online or face to face) and informally share experiences.

- Are interactive, participative and non hierarchical
- Provide role models
- Challenge mind-set e.g. increase assertiveness and negotiation
- Signpost women to other sources of support
- Provide information on childcare and career breaks

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Medical Women's Federation

The Medical Women's Federation was founded in 1917 and is today the largest and most influential body of women doctors in the UK.

MWF aims to:

- Promote the personal and professional development of women in medicine

- Improve the health of women and their families in society

- Change discriminatory attitudes and practices

E.g. Buddying scheme

http://www.medicalwomensfederation.org.uk/index.php

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Specialty choices

- Preferred specialties for female trainee doctors: Obstetrics and gynaecology (women hold 79% of training places) and paediatrics (74% training places)

- More women are entering traditionally male-dominated medical specialties, the number of women entering surgery and emergency medicine is growing at a faster rate than men

- Women now make up a third of emergency medicine doctors following a 44% increase in numbers from 398 in 2010 to 572 in 2013

- However, only 7% of consultant surgeons are women

http://bma.org.uk/news-views-analysis/news/2014/october/more-women-entering-male-dominated-specialties-finds-gmc British Medical Association 8 October 2014
http://careers.bmj.com/careers/advice/view-article.html?id=20014723

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Women in Surgery

National initiative to encourage, enable and inspire women to fulfil their surgical ambitions

Aims include:

- To raise the profile of women in surgery
- To work towards an understanding of the issues facing women in surgery
- To encourage attitudinal change ensuring women are seen as an integral part of the profession
- To provide advice, guidance and pastoral support for those women already in surgery or considering entering it
- To support the Women in Surgery network

http://surgicalcareers.rcseng.ac.uk/wins

Women in Surgery: Aims achieved through…

- Working with other organisations to **highlight the issues** affecting women in surgery and to **facilitate change in attitudes and practices**.

- Providing **information and advice** on all topics affecting women in surgery or considering a surgical career.

- Supporting women in, or considering entering, surgery, through **events** (e.g. national conferences and workshops, workshops for school age aspiring surgeons).

- Providing opportunities for women at all levels with knowledge and practical skills with the **opportunity to meet other women pursuing a surgical career**.

- Pilot **mentoring** scheme (currently seeking further funding)

http://surgicalcareers.rcseng.ac.uk/wins

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Athena SWAN Charter for women in science

- Aims to advance women's careers in STEMM academia (Science, Technology, Engineering, Mathematics and Medicine)
- Organisations apply for an award and must demonstrate they are working to reduce gender inequality

Potential catalyst for change

The Chief Medical Officer announced (2011) that the National Institute for Health Research (NIHR) would only expect to shortlist medical schools for biomedical research centre and unit funding if the school holds a Silver Athena SWAN award.

Six principles of Athena SWAN:

1. To **address gender inequalities** requires commitment and action from everyone, at all levels of the organisation

2. To tackle the **unequal representation of women** in science requires changing cultures and attitudes across the organisation

3. The **absence of diversity at management and policy-making levels** has broad implications which the organisation will examine

4. The **high loss rate of women** in science is an urgent concern which the organisation will address

5. The system of **short-term contracts** has particularly negative consequences for the retention and progression of women in science, which the organisation recognises

6. There are both personal and structural **obstacles to women making the transition from PhD into a sustainable academic career** in science, which require the active consideration of the organisation.

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Practical Support

Childcare

- Affordable and flexible childcare

Working hours

- Flexible working hours to support carer responsibilities

Meetings

- Within working hours, not in family time

Practical Support: Childcare Vouchers

- By 'sacrificing' some of their taxable income in exchange for Childcare Vouchers, staff save money on their income tax

- Staff can choose to sacrifice up to £55 per week (£243 per month)

- Both parents can use this scheme

- Can be used for nursery, child-minder, breakfast clubs, after school clubs, or holiday camps

- Children up to the age of 15

Examples of Schemes in the UK:

- Fideliti - https://www.fideliti.co.uk/default.aspx

- Kiddivouchers - http://www.kiddivouchers.com/

Additional practical support

Keeping in Touch Days (KIT)

On maternity or adoption leave you are entitled to do paid work up to 10 days without losing maternity pay

https://www.gov.uk/employee-rights-when-on-leave

Time off for Dependents

You are entitled to unpaid leave (some employers will pay carers days) for emergencies to look after dependents who live in your household or family members or a neighbour who is dependent upon you

Unpaid parental leave

You are able to take up to 18 weeks of unpaid leave (4 weeks in a year) for children under 5. Age 18 (April 2015)

http://www.nhs.uk/Conditions/social-care-and-support-guide/Pages/employment-rights-for-carers-flexible-working-unpaid-leave.aspx

Potential solutions targeted at the organisation

Organisational inclusivity:

How are part-timers, women on maternity leave, and women on career breaks included in the life of the organisation?

Departmental roles and responsibilities:

- Review committees for gender balance
- Ensure female representation on selection panels
- Ensure women are at all levels of the organisation
- Ensure women are visible both internally and externally
- Encourage leadership development for all
- Keeping in Touch Days (up to 10 full days) during Maternity leave

Conclusions

Women are still under represented in senior and leadership positions

- Women's roles as carers and part-time workers disadvantage them
- Some evidence that women's productivity increases later in career (Reed et al. 2011)

Solutions need to be targeted at:

- Women e.g. return to work support, mentoring, sponsorship and support networks
- Organisation e.g. flexible working, board membership, selection panels
- Consider setting up a catalyst to change e.g. Athena SWAN

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Conclusions

- Support schemes and initiatives in place in UK

However…

- Still need supportive partners/families
  - Part-time doctors still need to do on-call, etc
- Culture in healthcare
- Still fewer women in competitive specialties
- More work to be done!
- Culture change needed

References

Bhatti, O'Keefe, Whiteman & Ali (2013). Return to practice schemes: needed now more than ever. BMJ Careers. http://careers.bmj.com/careers/advice/view-article.html?id=20015683

Bhatti (2015). What do UK returners and doctors trained overseas think of the London GP Induction and Refresher Scheme. Draft manuscript (personal communication).

Dutta R, Hawkes SL, Kuipers E, et al. One year outcome of a mentoring scheme for female academics: A pilot study at the Institute of Psychiatry, King's College London. *BMC Med Ed* 2011;11:13.

GMC. The state of medical education and practice in the UK. 2012 http://www.gmc-uk.org/The_state_of_medical_education_and_practice_in_the_UK_2012_0912.pdf_49843330.pdf

Harris M, Morison J, Main P (2014). GP induction and refresher and retainer schemes: Are they cost-effective? British Journal of General Practice, 47, DOI: 10.3399/bjgp14.X676582

Kaderli R, Muff B, Stefenelli U, Businger A. Female surgeons' mentoring experiences and success in an academic career in Switzerland. *Swiss Medical Weekly* 2011;141:w13233.

Lockyer L, Young P, Main P, Morison J. (2014). The GP retainer scheme: report of a national survey. Education for Primary Care, 25, 338-46.

Medical Schools Council .*A Survey of Staffing Levels of Medical Clinical Academics in UK Medical Schools as at 31 July 2012*, 2013. Medical Schools Council, London.

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References

Newman P. *Releasing potential: Women doctors and clinical leadership.* NHS Leadership Academy and NHS Midlands and East. October 2011

https://www.fmlm.ac.uk/sites/default/files/uploads/docs/resources/Women%20Doctors%20Report.pdf

Nomura K & Gohchi K. (2012). Impact of gender-based career obstacles on the working status of women physicians in Japan. Social Science & Medicine, 75, 1612-1616.

Nomura K, Yano E & Fukui T. (2010). Gender differences in clinical confidence: A nationwide survey of physician residents in Japan. Academic Medicine, 85(4), 647-653.

Pololi LH, Civian JT, Brennan RT, et al. Experiencing the culture of academic medicine: Gender matter, a national study. *J Gen Intern Med* 2012;28:201-7.

Ragins BR, Kram KE. 'The Roots and Meaning of Mentoring', in *The handbook of Mentoring at Work: Theory, Research and Practice,* eds BR Ragins & KE Kram, SAGE Publications, Los Angeles, pp.3-15.

Reed DA, Enders F, Lindor R, et al. Gender differences in academic productivity and leadership appointments of physicians throughout academic careers. *Acad Med* 2011;86:43-47.

Taylor KS, Lambert TW, Goldacre MJ. Career progress and destinations, comparing men and women on the NHS: postal questionnaire surveys. *BMJ* 2009;338:b1735

Further reading

https://www.rcplondon.ac.uk/sites/default/files/2012_full_text_census_of_consultant_physicians_and_medical_registrars.pdf

http://www.gmc-uk.org/Specialties_subspecialties_and_progression_through_training___the_international_perspective.pdf_45500662.pdf

Websites

Medical Women's Federation (UK)

http://www.medicalwomensfederation.org.uk/

Medical Women's International Association

http://www.medicalwomensfederation.org.uk/about-us/medical-women-s-international-association

Athena SWAN Charter for women in science

http://www.athenaswan.org.uk/

Dr Jennifer de Vries, Organisation and Development Consultant

http://jendevries.com/

http://www.rcpsych.ac.uk/college/specialinterestgroups/womeninpsychiatry.aspx
http://surgicalcareers.rcseng.ac.uk/

Thank you!

Any questions?

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https://www.dur.ac.uk/school.health/cmer/

How to write a paper for a good scientific journal BMJ?

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Overview of the lecture

- Structure of a paper

- Reasons for rejection

- Problems to avoid from the start

- Focus on a good journal!

A good journal?

- Look at journals that publish your type of research.
- Where is the best place to publish? consider the journal impact factor, online access, a general or specialist journal?
- Check the information for authors, e.g. words limit, reference style and structure required
- Find a good paper that is close to yours

Where to start?

Writing a good paper starts with the planning of the study

It continues during the study, as each is decision made about how to do the research

What do editors want?

Richard Smith said:

- Excitement a "wow!"
- Importance
- Originality
- Relevance to the audience
- True
- Clearly written
- Engagingly written

former BMJ editor

The title

- The title should describe the contents of the paper succinctly.
- Include the design
- Generally, a title is about 10–12 words.
- Some journals, also accept sub-titles
- Look at other titles in the journal, check journal instructions

- **Do not** include unnecessary words e.g. 'A study about…'
- **Do not** use abbreviations e.g. general practitioner not GP.

The Abstract

- The abstract should to stand alone (first review)
- It must be structured
- State the aim of the study
- Methods, study design, selection of subjects or laboratory equipment, observational and analytical methods
- Results including main findings with any statistical significance
- State the main conclusions
- Highlight the new or important aspects of the study.

The important of structure

Getting the right structure, to tell the story is everything
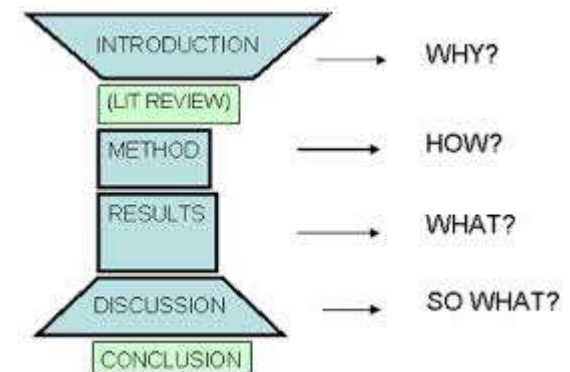Start, middle and end.
IMRaD (Hill 1965)

Introduction: Why did the authors start?
Methods: What did they do?
Results: What did they find? **a**nd
Discussion: What do the results mean?

Structure

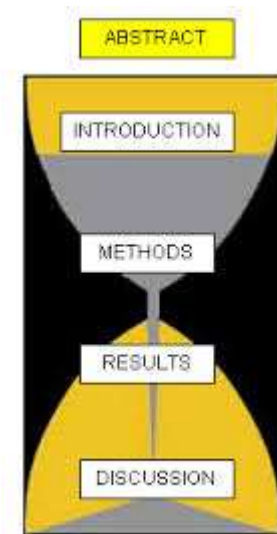**Introduction** – where are we, what's the problem,

- Where do we need to get to?
- Ends with the research question.

Methods –how did we do it?

Results –what did we find, the evidence

Discussion -What does it mean?

- strengths and weaknesses of the study,
- questions for policy makers and clinicians
- and what next?

Introduction 1

- What is the problem/issue?
- What research has been done before?
- Why was your study needed?
- Be brief focused and succinct –you are not expected to cover everything 3-4 paragraphs
- Cover the research that is related to your topic
- State the research question in the last paragraph,
- State why its important

Introduction 2

Do

- raise the interest of the reader. The first few lines in the paper may attract or put off the reader.
- convey enthusiasm but do not to exaggerate.
- use pertinent references only

Do not

- explain what can be found in any textbook in the field
- include data or conclusions from the work being reported.

Method:
like following a recipe!

RECIPE BOOK
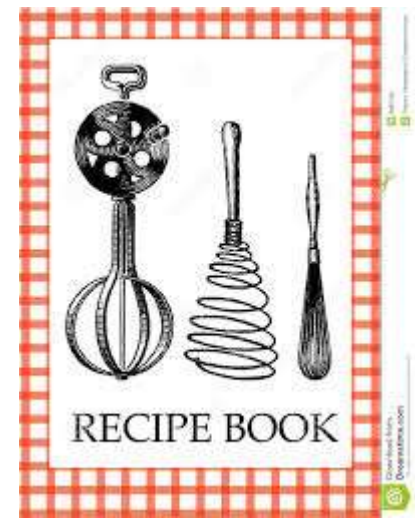
- Replication is at the heart of methods
- For the informed reader, this is the most important section
- Describes how subjects were selected and excluded
- Use references to describe standards methods
- Provide statistics
- Provide information about ethical review
- Remember you can put more detailed methods on the web- e.g. a questionnaire
- May need sub-headings e.g. conceptual framework

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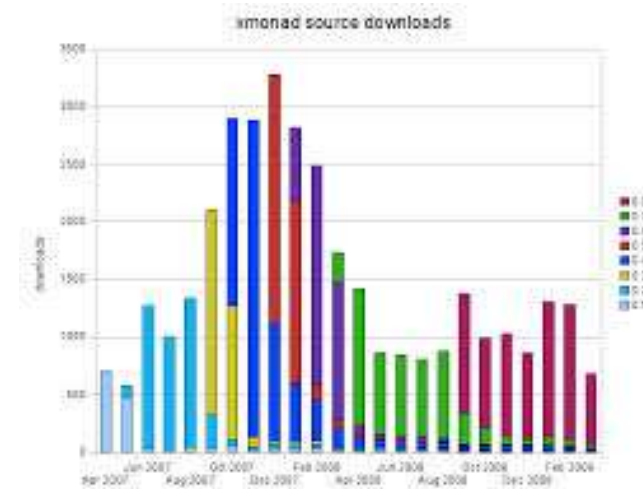
Statistics 1

- Statistical methods should be reported in sufficient detail to enable a reader with access to the original data to repeat the analysis

- Use the standard references for statistics, when possible.

- Computer programs used should be identified and referenced.

- Statistical terms, abbreviations, and symbols should be defined.

Statistics 2

- Randomisation, if used, details should be given, as well as any concealment of allocation to treatment groups, and the method of blinding.

- Losses to observation (such as dropouts from a clinical trial) should be reported.

- As the point of statistical significance is a choice, say "*a P value of less than 0.05 was considered statistically significant*",

- **Do not** use technical statistical terms, such as "random" "significant", "correlation" and "sample" in other non-statistical contexts.
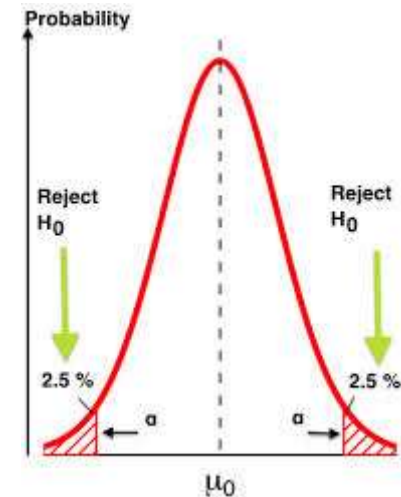
Results 1

Do

- focus on findings to answer the research question
- include the basic descriptive data
- use text to tell the story
- use tables to provide the evidence
- use figures to illustrate points
- used confidence intervals,
- not just percentages or p values
- Think about absolute risk, numbers needed to treat, etc.

Do not

- start discussion

95% confidence interval for f=0
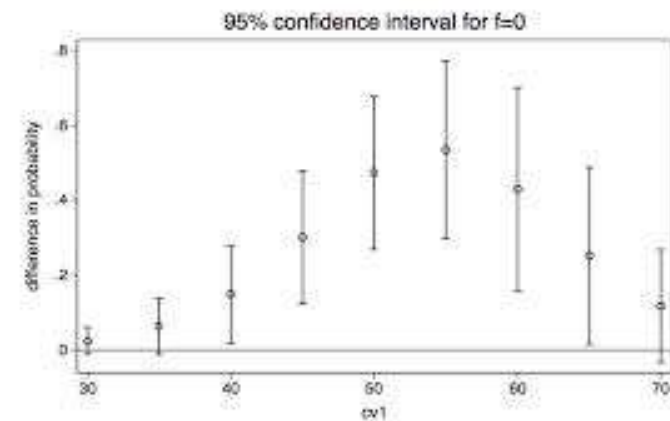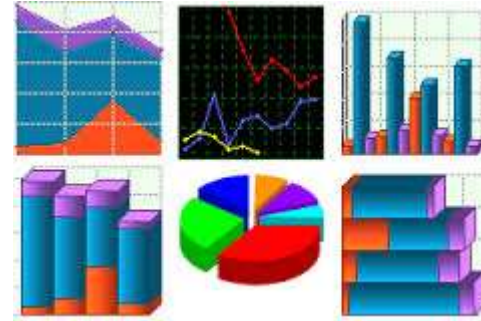
Results 2

Do

- include sufficient detail to allow other readers to assess the validity and accuracy of the results.
- present results in a logical sequence in the text,
- use tables and graphs to help summarise large amounts of data

Do not

- Allow the statistics take over the paper, but balanced and adequately described.

Tables

- A table should be understood without any text
- Tables have a title, number and sometimes footnotes
- Tables should be logical, ordered and abbreviations should be explained in the footnote

Do

- Do cite tables in the text
- Limit the number of tables to those needed to explain the argument
- Use tables to show the exact values of more data than can be summarized in a few sentences

Car Colour	Nbr of Cars
Red	8
Silver	15
Black	24
White	18
Blue	6

Do not

- use tables when the data can be easily said.

Strengths and weaknesses of the study

- Discuss both the strengths and weaknesses of the study

- Editors/ Reviewers want to see that the author is aware of the weaknesses.

- Weaknesses not mentioned by the author, reduce the readers trust in the findings

- **Do** include a subheading "limitations of the study".

- **Do not** include findings that have not been reported in the results

Illustrations (figures)

Do

- use figures to support the explanation of an argument e.g. a flow chart might be clearer than text.

- Use graphs to illustrate trends in a relationship, but use a table if exact values are important

- Explain symbols, numbers, or letters used to identify parts of the illustrations, each one should be explained clearly in the legend.

Discussion

Docherty and Smith,1999 suggested including:

1. statement of main findings
2. strengths and weaknesses of the study
3. strengths and weaknesses in relation to other studies
4. meaning of the study, possible mechanisms and implications for clinicians and policymakers
5. unanswered questions and future research
6. conclusion.

Do not

Cover details from in the Introduction or Results.
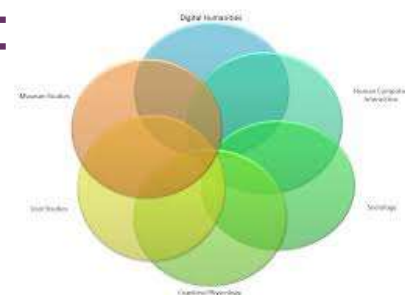
1.statement of principal findings

- Start with a few sentences answering the research question, or main findings

- Include a sentence stating clearly what this paper adds to the topic

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2. Strengths and weaknesses of the study

- Discuss both the strengths and weaknesses of the study.
- A reader will have more confidence in the paper if weaknesses are considered.
- Include a subheading "limitations of the study".
- Results that have not been reported in the result
- should not be discussed.

3.Strengths and weaknesses of other studies

- Discuss the evidence from other studies that have bearing on your findings.
- Discuss the evidence opposing and supporting your results.
- Critically evaluate the methods used, particularly those that do not agree with your results.
- Where possible, suggest why the findings are different e.g. differences in methods or sample.
- If differences cannot be explained, say so.

4. Meaning of the study and implications for policy and practice

- The meaning of the findings for policy and practice should be written carefully.
- Do not go beyond the limits of your data.
- It can be helpful to state what the results mean, and what they do not mean.
- State conclusions from the data and avoid going beyond the study findings.

5. Unanswered questions and future research

- Good research should generate further research ideas.

- Consider where the research should go next to answer questions that are still unanswered.

- State what research is needed next, and suggest new research questions or studies.

6. Conclusions

- End with clear strong conclusions.
- Conclusions should be linked to the aims of the study, keep within of the boundaries of the study.
- Keep to conclusions that are supported by the data.
- A negative finding could be as important as a positive finding.

Peer review process

BMJ (93% are rejected)

rejected for being:

- unoriginal,
- too specialist,
- "so what,"
- invalid,
- incomprehensible (standard rejection list)

7% Accepted but mainly following revision

If rejected: appeal

- BMJ willing to consider one appeal per paper. Write explaining or challenging any misunderstanding, but must revise the paper later.

- Refute criticisms, not just say the subject is important

- Perhaps 20% accepted on appeal

- No second appeals

Authorship: International Committee of Medical Journal Editors

Authorship should be based only
on a substantial contribution to:

1. Conception and design **or** analysis and interpretation of data **and**
2. Drafting the article or revising it critically for important intellectual content **and**
3. Final approval of the version to be published.

Problems can occur with credit and accountability

Conflict of interest: competing interest

Sources of conflict of interest: Financial, Professional, Personal, Prejudicial

- A person has a conflict of interest when he or she has an attribute that is invisible to the reader or editor but which may affect his or her judgement.

- Always declare a conflict of interest, particularly one that would embarrass you if it came out afterwards (Richard Smith, former editor BMJ)

Common reasons why papers are rejected

- The research was inadequate
- The literature review was inadequate
- The research had methodogical problems
- The sample was problematic (e.g. sample size, self selected)
- The statistics were inadequate
- The data were interpreted poorly
- The analysis was weak
- The paper duplicates other work, does not add anything new (Siobhan Bowler)

The right journal?

- Articles reporting original, robust research that can improve decision making in medical practice, policy, education, or future research and will be important to general medical readers internationally.

- Particularly interested in evaluations of the comparative effectiveness of interventions.

- Will consider a wide range of study types, as long as the right design has been used to answer a relevant, important, and sufficiently original research question.

BMJ: will publish

- Randomised controlled trials of the effectiveness and safety of treatments.
- Clinical or healthcare interventions for patients with common diseases.
- Studies on diagnostic tests.
- Clinical and epidemiological observational studies.
- Evaluations of educational and quality improvement initiatives.
- Qualitative studies that help to explain why and how doctors and patients do things.
- Systematic reviews of all of these study types.

Qualitative studies:
The BMJ will **not** publish

- There was **no** theoretical framework.
- The sampling strategy was **not** clearly described.
- The sampling was driven by convenience rather than theory.
- Procedures for data analysis were **not** clearly described and theoretically justified.
- The data analysis did **not** relate to the research question.
- The data were purely descriptive.

Surveys
The BMJ will **not** publish

- A low response rate (<65%)
  unless participants are hard to reach
  or the topic is sensitive.
- A survey with an important non-response bias.
- A survey without a valid analysis
  of non-response bias.
- Surveys of self-reported practice,
  rather than observed practice.

Design problems
The BMJ will **not** publish

- Case series with no (or inadequate) control group. This is descriptive study that follows a group of patients with e.g. same diagnosis over a period of time.

- Retrospective study using case notes, or other routinely collected data in only a few locations

- Intervention study with no control group.

- Non-randomised trial of a comparison or intervention.

Problems with internal validity/robustness

- Insufficient statistical power
- use of an unvalidated research instrument

A trial with any of these problems:

- Inappropriate control group
- Inadequate randomisation.
- Inadequate allocation concealment.
- Inadequate blinding.
- Important and deviations from the trial protocol
- No power calculation, lack of statistical power.
- Analyses that were not pre-planned.
- No analysis of harms

Problems with external validity: generalisability

- The inclusion/exclusion criteria were not clearly defined.
- The sampling method yielded participants who were not representative of the population/group.
- The trial of a treatment that compared a new intervention against placebo (rather than to best current treatment).
- The research question and findings are out of date.

RANDOMIZED CONTROLLED TRIALS

The Great Britain SASAKAWA FOUNDATION

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Systematic reviews
The BMJ will **not** publish

- Used terms that were insufficiently defined,
- Was inappropriately limited only to recent studies or to those published only in the English language
- The papers were assessed by only one researcher.

Research Ethics

- The study will be rejected if it does not comply fully with the World Medical Association's Declaration of Helsinki on Ethical Principles for Medical Research Involving Human Subjects.

- In particular: participants did not **give informed consent.**

- The study lacked necessary approval by, or a waiver from, a research ethics committee/institutional review board.

The manuscript

- Has a poorly written abstract, research question or the study design is not clear - this might prompt rapid rejection, as initial screen is by abstract.

- The research question is not sufficiently clear to understand why the study was conducted.

- Conclusions were not directly supported by the results.

- The journal advice about research articles was not followed

Finally
The good news!

YOUR ENGLISH IS BETTER THAN YOU THINK!

- The BMJ does not usually reject an article just because it is not well presented.

- It does not expect the grammar to be perfect when the authors do not have English as their first language.

- However, very poor presentation may result in rejection as editors are busy and the volume of articles is high.

- Consider using translator?

Thank you!

Questions?

Professor Jan Illing

Centre for Medical Education Research
School of Medicine, Pharmacy and Health
Durham University

Tips for writing a scientific paper

Hannah Hesselgreaves

Centre for Medical Education Research
School of Medicine, Pharmacy and Health
Durham University

This session covers…

1. Planning
2. Good abstracts and introductions
3. Reviewing and critiquing literature
4. Composing an argument
5. Methodology
6. Referencing
7. Writing style
8. Common reasons for rejection (and how to avoid rejection!)

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10 tips to becoming a better writer

1. Write.
2. Write more.
3. Write even more.
4. Write even more than that.
5. Write when you don't want to.
6. Write when you do.
7. Write when you have something to say.
8. Write when you don't.
9. Write every day.
10. Keep writing.

(Brian Clark, British playwright and television writer)

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Writing Your JOURNAL ARTICLE in 12 WEEKS
A Guide to Academic Publishing Success
Wendy Laura Belcher

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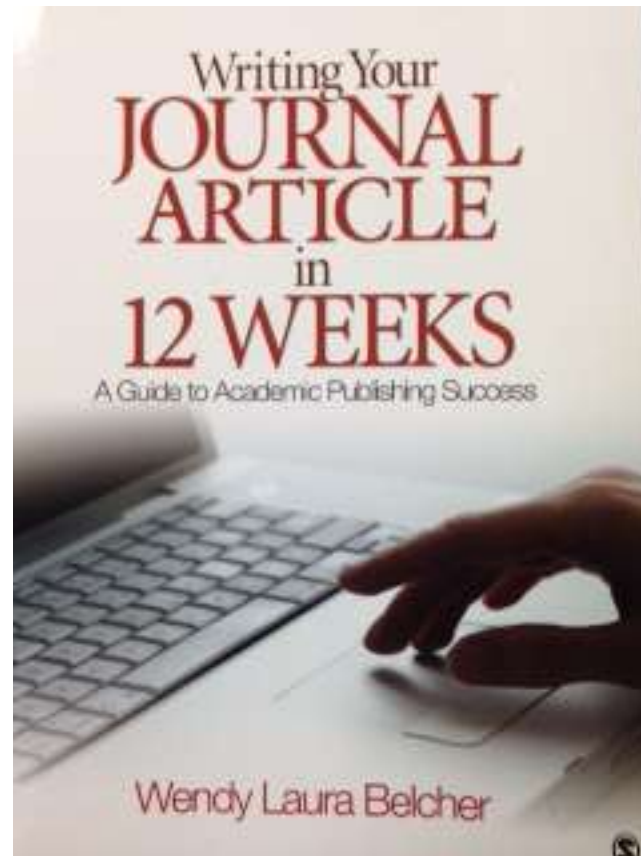
Plan writing

- Find and commit to a writing partner (make it social)
- Choose a writing site
- Design a writing schedule with a firm deadline (successful writers write!)
- Anticipate obstacles
    1. I have too much teaching
    2. I will write as soon as……(I've cleaned the house, walked the dog, submitted that report)
    3. I have to read just one more book
    4. I'm scared or embarrassed

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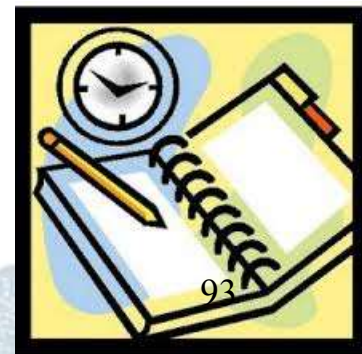
Plan writing

- Delay gratification – write first!
- Draw on past positive experiences of writing (successful writers write despite rejection)
  - Eureka moments
  - Positive feedback
  - Completion!
- Write about topics of genuine interest (successful writers pursue their passions)
- Refer to a model article

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Plan writing

- Create headings and subheadings and sub-subheadings and sub-sub-subheadings
    - Can even plan sentences!
    - Populate them (painting be numbers)
    - Can change them and delete (some of) them later
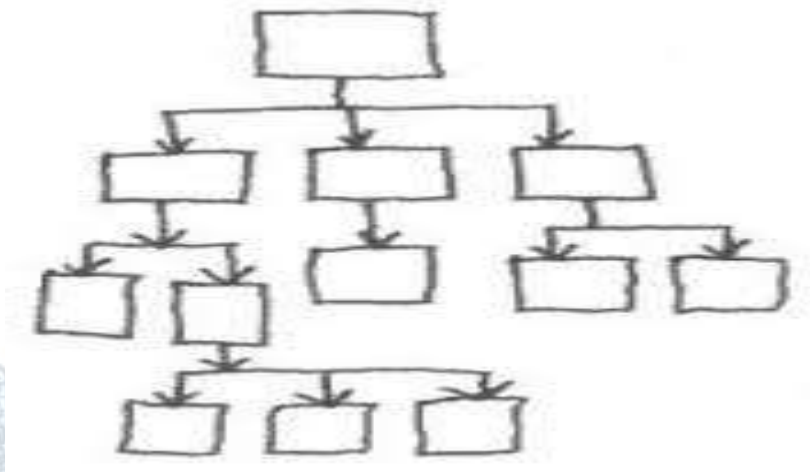
LEARN ABOUT GOOD FEEDBACK

What to publish: texts of particular challenge

Broad surveys

Purely theoretical

Dated research

Outside your discipline

Theses (too much cutting required)

Reports (need to create arguments)

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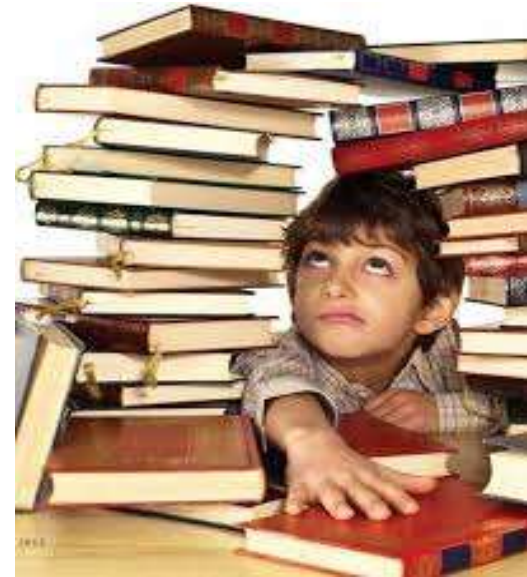
Bad abstracts – things to avoid

- Just an introduction
- Reads like a plan
- Outlines hopes – "we try to…" "this study seeks to…." (report what you DID do)
- Use of quotations, citations, abbreviations, acronyms

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Introduction

- Provide an overview of the context

- Identify the "problem"

- Readers of journals don't like suspense – relinquish your findings

- Signal structure

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Introduction/background/context

Example: "medical student burnout, shift working, and residency choice"

– "for more nearly two decades, research and practice in medical workforce planning has been dominated by descriptive data, with little theoretical underpinning, [name key proponents of dominant approaches]. These approaches…" (describe)

– "Hesselgreaves et al (2014) have questioned the continued value of this cross-sectional approach, as it contributes little explanatory power…" (explain why, what is wrong with them)

– "In the proposed research, I intend to…., by using a longitudinal research design. The data collected will be used to…"

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Research Questions

Therefore, this study proposes to….

Why we critique literature

- To reveal areas ripe for development
- To work out where our ideas come from
  - Identify between 3 and 6 key authors who have the most direct influence on our thinking
- Most of all – to provide context for your work, and create links
- Address gaps, extend, or correct previous research

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Being critical is NOT:

- Rubbishing others' work / demolishing the opposition
- Being in conflict with everyone else

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Literature review problems

- Rhyming off literature without **critiquing** it
- Start wide and zoom in
- Establish a theoretical framework
- To develop your **argument** / entry point into the literature

- Get to know the literature!

Critique

- A better design was used in a UK ethnography (reference)….

- The results showed a highly significant difference (p <0.001)…

- This research would have been more interesting if patient outcomes measures were included….

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ARGUMENT

The instant thesis (Posusta, 1996)

1. Although_____

   (general statement, opposite opinion)

2. Nevertheless_____

   (your idea)

3. Because_____

   (examples, evidence, #1, #2, #3, etc)

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Questions the review should answer

1. Why is this subject important? Who else thinks so?

2. Who has worked on this subject before?

3. What approaches/methods are commonly used?

4. What have been the outcomes of others' work?

5. What are the gaps in the research / areas contested / inadequately answered / incomplete areas of work?

6. Does it have any connection to my research question?

Common mistakes in citing literature

- Don't cite one source too much (suspect the idea is not your own)
- Don't over-cite definitions (redefinition is unlikely to be your contribution so don't focus heavily on this)
- Don't cite the citation
- Don't cite asides (focus on debates that your contribution engages in)

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Methodology

Know the requirements of your target journal

- CONSORT

- Dearth of equivalent articles for qualitative studies

    - BMJ COREQ

        - http://intqhc.oxfordjournals.org/content/19/6/349.long

    - BIOMED CENTRAL

        - http://www.biomedcentral.com/authors/rats

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Methodology

Overview

Setting

Participants and sampling

Recruitment

Data collection

Analysis

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Title

- Titles should provide information on sample, methods, and research question
    - *BMJ Open request that titles do NOT give away the finding!*

- Think about word choice: These are evaluative words that may not be possible to evidence

"impact"
"effective"
"success"
"improve"

References: Harvard system.

- The order of references at the end of the paper is strictly alphabetical, regardless of the chronology.

- In the paper, references are cited by giving in parentheses the name of the author and the year of publication. Eg (Illing, 2013)

- When the author's name is part of a sentence, only the year is put in parentheses - eg in a study about x Illing (2013) reported.

- When several references are given together, they should be listed in chronological order and separated by a semicolon eg (Brown, 2010; Illing 2013).

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References: Harvard system (cont.)

- When a paper written by two authors is quoted, both names are given (Brown and Harris 1997)

- If there are more than two authors, all the names may be given the first time the reference is cited. Otherwise, it is sufficient to give the name of the first author only, adding "et al" eg Illing et al. 2010.

- If you quote directly from a paper, you MUST provide the page number (eg Roberts, 1995, p.18)

References: Vancouver system

- The main "Uniform Requirements for Manuscripts Submitted to Biomedical Journals"

- References should be numbered consecutively in the order in which they are first mentioned in the text Illing [1]

- Use the Harvard system with drafts and convert to Vancouver if required. This avoids assigning numbers that are likely to change in subsequent drafts. In the final draft, the authors can switch to the Vancouver style.

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Writing Style

- Short words, avoid complex words
- Short paragraphs
- Avoid jargon
- No abbreviations
- No clichés

(Richard Smith, BMJ)

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Writing Style continued

- Avoid figures of speech and idioms
  - eg *Final straw* -the last problem in a series of problems
  - *In the heat of the moment -* overwhelmed by what is happening in the moment

- Prefer active to passive

Active ✓
  - The research team invited the patients

Passive ✗
  - Patients+ were invited + by the research team

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Writing style continued

- **Prefer the concrete to the abstract**

  Abstract – constructivists maintain that knowledge is co-created

  Concrete –the researcher considered what the patients said and identified that confidentiality was a concern

- Avoid negatives and double negatives e.g. *It was not uninteresting. She was not unattractiv*e

- Do not be too chatty, avoid slang (informal speech e.g. *naff* (uncool)

(Richard Smith, BMJ)

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Types of journals

Regional journals

- can be good for newcomers

Interdisciplinary journals

- for work that does not fit directly in one discipline
- Can be viewed as less prestigious

Field and disciplinary journals

- Keeps employers happy
- Tend to be larger so your submission has to appeal to large audience
- Large submission rate, hence large rejection rates

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Choosing wisely

- Is the journal peer reviewed?

- Is it online and open access?

- What is it's turn around time? Do they stick to the times stated?

- How many issues are published annually?
  - 1-4 issues are year can be very competitive!

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Choosing a journal

- Who is your audience?
  - Academic? Practitioner? Policy makers?
  - What is your contribution?

- Where do others publish related studies?

- Consult a **model** paper – where is it published?

- Contact the editor – but don't ask questions that are answerable on their website

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COMMON REJECTION REASONS

Too narrow

- Alienating readership – reviewers may say "too superficial", "too speculative", "too preliminary", "too technical"
  - Contextualise
  - Aim at a broad audience – don't assume readers are fully knowledgeable on subject

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Off topic

- Ensure it's relevant to the journal mandate
    - Not to do with article quality
    - Think about (inter)national scope

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Not scholarly

- Reviewers may say "rudimentary", " basic", "colloquial", "obvious"
- Be meticulous about documentation (bibiography, typos etc)
- Use recent and relevant (discipline-related) literature
- Reference debates in the field

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Not sufficiently original or important

- Focus on the new and use more space to articulate what is original

- Claim your ideas –

  - "I argue that…"

  - "the thesis of this paper is…"

  - "my term for this is…."

Poor structure and writing

- Try to address one point per paragraph
- Spelling and grammar
- Consult submission guidelines heavily

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Flawed

Inadequate theory

- Cite alternative views
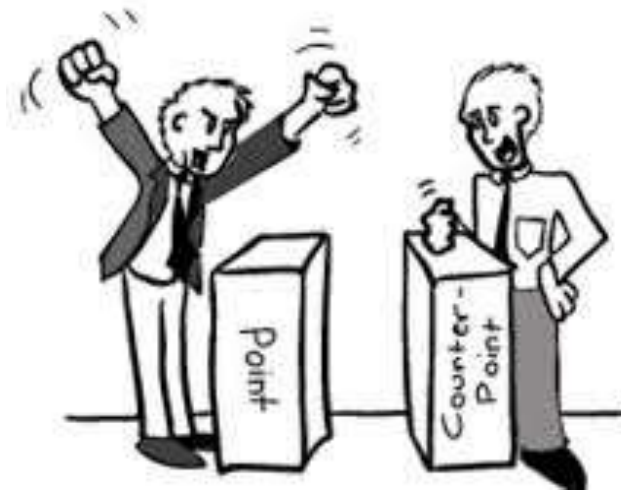- Get peer review prior to submission

Poor methodology

- Emphasise measures of rigour
- Discuss alternative approaches and reason for choice
- Cite studies that applied the same methodology

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No argument

Don't just report what you did and what you found

ADOPT A POSITION

Ask others to read it too

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A good writing resource

Belcher W. Writing your journal article in 12 weeks: a guide to academic publishing success. Sage. 2009

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Thank you!

Appraisal question	Quality indicator
Appropriate research design?	Convincing argument for different features of the research design?
Reliable data?	Recording methods? Field note or transcription conventions?
Clear theoretical assumptions?	Discussion of models employed?
Adequate documentation of research process?	Discussion of strengths and weaknesses of data and methods? Documentation of changes made to the research design?
How credible are the findings?	Are he findings supported by data? Clarity of links between data, interpretation and conclusions?
Can the findings be generalized?	Evidence for wider inference?

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