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Constructing a Research Project

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Acknowledgement of Country

I would like to acknowledge the Ngunnawal people who are the traditional custodians of this land on which we are meeting today and pay respects to Elders past and present

Overview

- Research and Evidence
- Constructing a project/proposal

Research proposals are written with two main aims;

1. To clarify your own thoughts
2. Persuade others to either fund you or permit you to carry out the research

Research is collecting evidence

Provides empirical data to:

- Identify need
- Understand a phenomenon/issue
- Check that a program/initiative/treatment is addressing
  - Goals and objectives
  - Outcomes
  - Identified need
- Measure performance
  - Clinical indicators
  - Quality and safety/risk management
  - Organisational goals, KPIs, business plan

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Why?

- Curiosity
- Service improvement
- Policy and Strategy
- Audit
- Response to a complaint/complaints
- Response to consumer demand
- Workforce gaps, recruitment and retention
- Opportunity arises
- Funding requirement
  - Establishing a service/program
  - Payment based on outcomes
  - Extension of funding

Collecting evidence is a process

- Begins with a question

- Review what is known/unknown

What evidence are you collecting?

The research question determines the research Methodology you will use:

- How many?
- Defining characteristics
- Number of occasions or occurrences
- Trends
- Causal relationships
- Quantifiable outcomes

QUANTITATIVE

Example

Anaesth Intensive Care 2003; **31:** 294-299

Special Reports

Critical Illness and its Impact on the Aboriginal People of the Top End of the Northern Territory, Australia

D. STEPHENS*

Intensive Care Unit, Royal Darwin Hospital, Darwin, Northern Territory

"The Royal Darwin Hospital (RDH) services a relatively large and geographically remote Aboriginal population who account for 45% of ICU admissions.

Despite the increased severity of illness and complexity RDH achieves the same survival rates for Aboriginal and non-Aboriginal patients "

- Perspectives
- What is known/not known
- Making sense of the numbers
- Looking for patterns

QUALITATIVE

Example

ORIGINAL RESEARCH

Extrinsic and intrinsic factors impacting on the retention of older rural healthcare workers in the north Victorian public sector: a qualitative study

J Warburton, ML Moore, SJ Clune, SP Hodgkin

La Trobe University Albury-Wodonga Campus, Wodonga, Victoria, Australia

"Workforce shortages in Australia's healthcare system, particularly across rural areas are well documented…Data were categorised into extrinsic and intrinsic factors that influenced their decisions to remain in their roles or leave employment…"

MIXED METHODS

Rural and Remote Health
MEDLINE listed
Impact factor .820
ISSN 1445-6354
The International Electronic Journal of Rural and Remote Health Research, Education, Practice and Policy

ORIGINAL RESEARCH

Promoting resilience and wellbeing through an outdoor intervention designed for Aboriginal adolescents

SD Ritchie[1], M-J Wabano[2], K Russell[3], L Enosse[4], NL Young[1]

"The main outcome assessed was resilience using the 14 item resilience scale (RS-14)…Open ended questions were [also] *used to identify intervening factors"*

When

- Retrospective
- Prospective
- Series – pre and post tests

What/who is the source?

- Documents/film/recordings/newspapers/literature
- Data sets
- Surveys
- Interviews
- Observation
- Case Studies
- Narratives

What if?

Ethics and research/evaluation

- Research is not neutral
- Participants need to be protected from harm
- Freedom from exploitation
- Risk, benefit, consent
- Recruitment and Information required
- Vulnerable groups
  - Aboriginal and Torres Strait Islander people
  - Power relationships
  - Pregnant women, children and young people
  - Cognitive impairment, mental illness, disability

Sample size

Ensuring the evidence is meaningful

Information that can be generalised, or applied to a **total** group

An adequate sample is:

- Large enough to provide fairly accurate estimates of the parameters of interest; and
- Representative of the population—that is, not biased in any way. A sampling method which has selection bias may yield results with a high level of accuracy that are not representative!
- Larger sample size means smaller sampling error
- www.qualtrics.com/blog/determining-sample-size

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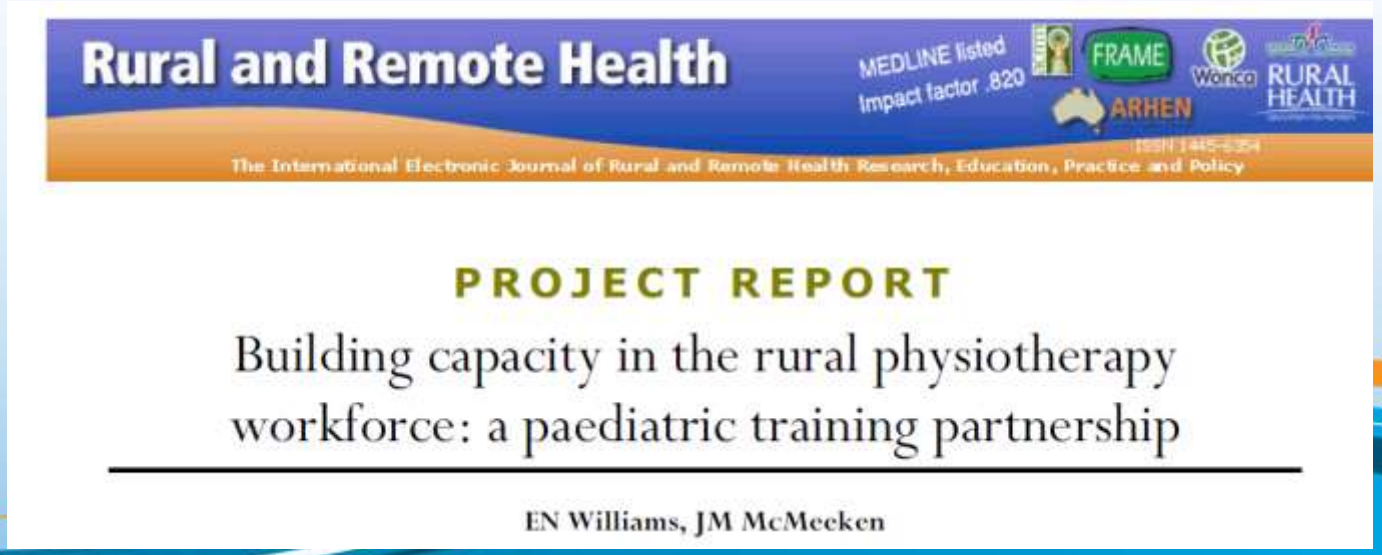
Type of sample

- Random allocation
- Convenience/incidental/accidental sampling
- Proportional sample
- Purposive or judgemental sampling
- Stratified sampling
- Cluster sampling
- Snowball sampling

- Inclusions/exclusions

Constructing the tools to gather evidence

- Remember, the purpose is to answer the question
- Ensure there is a clear reason for including data and that you are going to use it in the final analysis
- For an evaluation, the evidence must relate to the objective of the program
- Multiple perspectives are ideal
- Engage with stakeholders and pilot to refine



Analysis

- Thinking of analysis when formulating the methodology is critical
- Analysis must answer the question

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- Descriptions of frequency and Percentage Details of measures of central tendency (means, medians and modes)
- Details of measures of spread (maximum and minimum values, range, quartiles, standard deviations)
- Details of the shape of the distribution (whether it is normal or skewed)
- Statistical inferences and inter-relationships

Analysis

QUALITATIVE

- Thematic Analysis
- Theoretical analysis

RIGOR

- theoretical rigour—consistency between theory, concepts and research goals
- methodological rigour—careful documentation of the processes by which conclusions are reached
- interpretive rigour—accurate representation of the topic from the perspective of informants

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QUALITATIVE ANALYSIS

- triangulation—the use of data from multiple sources to build a complex picture of social reality
- evaluative rigour—the use of an ethically sanctioned approach to the study and adequate consultation with the community in which the research was conducted
- reflexive rigour—attention by the researcher to the influence of his or her presence or actions on the results of the research

- Remember: what is not said may be more meaningful than what is said

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DISSEMINATION OF RESULTS

- Plan your communication strategy at the beginning
- May be specific reporting requirements for funding
- Report against objectives
- Answer your research question

FUNDING

- Only apply for funding if your project is consistent with
  - The criteria
  - The goals and objectives of the funding
  - Timeframe for funding
- Formulate a realistic budget

Consider

- FTE/Human resources
- Travel and accommodation
- Participant payment/catering
- Communications
- Transcribing
- Data analysis

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THANKYOU
AND
GOOD LUCK

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References

Ritchie SD, Wabano M-J, Russell K, Enosse L, Young NL. 2014. 'Promoting resilience and wellbeing through an outdoor intervention designed for Aboriginal adolescents' *Rural and Remote Health* 14: 2523 (Online)

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Further reading:

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Paliadelis PS. 2005. Rural nursing unit managers: education and support for the role. Rural and Remote Health 4: 325 (online)