

Framing up research for nurses and midwives who view research as a 'frameup'



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Basic Hurdles

- Nurses and midwives practice in terms of process rather than outcomes
- little experience in dealing with the full range of research methods
- often uncomfortable with the idea of evidence hierarchies

Hurdles in relation to statistics

- most are at ease with descriptive and interpretive approaches to understanding the world
- uneasy with statistical notions such as probability and significance

A teaching concept that works

- We use established process for teaching EBHC
- needed to develop something to support learning in relation to quantitative research concepts

Developed a framework to deliver message in a one hour session

- Discusses issues of qualitative & quantitative paradigms under 3 headings
- Describing
- Determining Significance
- Answering the ‘So What’ question

The framework

| Data | Describing | Determining significance | So What? |
|----------------------------|-------------------|-------------------------------------|-----------------|
| Qualitative | | | |
| Categorical | | | |
| Continuous | | | |
| Interval /Ratio | | | |

Describing

| Data | Central tendency | Dispersion |
|------------------------------------|-------------------------|----------------------------|
| Qualitative | Major themes | Discuss variations |
| Categorical | Mode | Percentages or frequencies |
| Continuous - ordinal | Median | % or frequencies |
| Continuous – interval/ratio | Mean | Standard deviation |

Determining Significance

| Data | Relationships | Group diffs |
|----------------------------------|---|---|
| Qualitative | Patterns explored | Patterns explored |
| Categorical | Fishers exact Logistic regression | Chi square Logistic regression |
| Continuous ordinal | Spearman's correlation Logistic regression | Mann Whitney U Wilcoxon Sign test Logistic regression |
| Continuous interval/ratio | Pearson's r Linear regression Factor analysis | T-test Anova/Manova Ancova/Mancova |

Answering the 'So What'?

| Data | Effect | Application |
|----------------|---------------------------------------|---------------------|
| Qualitative | Increased | understanding |
| Categorical | Absolute Risk Relative Risk | Confidence interval |
| Continuous | Odds ratio NNT | |
| Interval/Ratio | Mean differences Beta coefficients | |



Student understanding has increased !

Where to next?

- This is a work in progress...
- Continue to refine the tool and the teaching
- Need to undertake research to determine effectiveness

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