

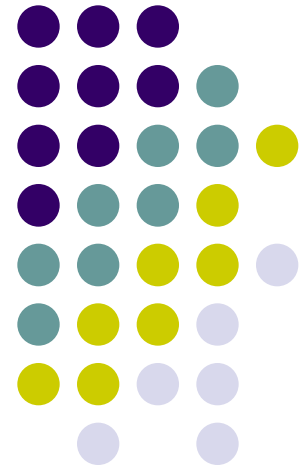
Surveys - Planning and Preparing; Processing and Presenting.

A beginner's guide to using
questionnaires as a useful
research tool.

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Surveys Report Behaviour



Questionnaires assume that:

1. Respondents can read and understand questions or survey items.
2. Respondent possesses information to answer questions or survey items.
3. Respondent is willing to give time to answer questions or survey items honestly.

Questionnaires Explore Variables



Data may be gathered to explore variables which focus on:

- Factual matters:
 - Demographics, length of time in hospital, previous illnesses, prior medication, prior education & experience, etc.
- Attitudes, opinions, beliefs:
 - Views on inoculations, attitudes towards homework, etc.
- Past, present, and intended behaviours;
 - What the policy was, what it is now, what it will be for e.g. giving respite to carers, enrolment at a school, planning proposals, etc.



Survey Planning and Preparation

On Variables and Samples



IDENTIFY VARIABLES

- Identify & justify each of the variables (items of data) to be gathered;
- Determine most effective procedure/s for gathering each data item;
- **NB: Pre-determine, RIGHT AT THE VERY OUTSET**, how you intend to analyse each and every single item of data you will gather.

DETERMINE THE SAMPLE

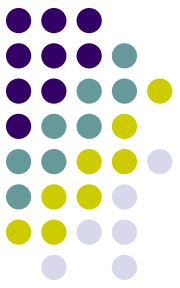
- Your target population will be a function of your research question - viz. - you're unlikely to survey age concern consumers in a study about health in an early childhood setting;
- Think realistically rather than in a grandiose manner;
- Remember your budget - surveys are never cheap.

Translate each variable into one or more questions



- Consider each variable and devise questions that will get the desired information (e.g. demographics as a variable means questions about gender, age, status, etc.);
- Early on in the design process, leave questions relatively unstructured - i.e. devise response categories later;
- Organise the sequence and layout into a reasonable order – perhaps deal with easy matters first;
- Develop response categories bearing in mind how you intend to process the data – **THIS IS CRUCIAL**;
- Trial the survey on a few close colleagues or friends and adjust the instrument by adding and/or deleting questions.

Focusing your survey increases response rates and makes a good sample more likely ...



CONTENT FOCI

- Concentrate only on primary interests/issues (i.e. leave out peripheral matters);
- Address only research questions/hypotheses (i.e. leave other interesting possibilities out);
- Make questions easily answerable (i.e. short & to the point beats long & time consuming).

ETHICS FOCI

- Avoid probing for personal disclosures;
- Ensure confidentiality;
- Avoid controversial issues & don't probe the integrity of others or their organisations;
- Avoid *taking* too much respondents' time - their time is being *gifted* to you (15 minutes usually OK – 30 minutes should be an absolute maximum).

The Ideal Questionnaire....



- is ethical, well organised and has clear instructions with unambiguous questions;
- has response options that are well drawn & exhaustive;
- has a natural order and flow that keeps respondents moving towards the conclusion;
- thanks respondents for their time and tells them what to do with the completed survey form.

**ACHIEVING THE IDEAL QUESTIONNAIRE
TAKES CONSIDERABLE TIME AND EFFORT!!!**

Planning & Developing the ideal questionnaire involves a clear sequence of procedures



1. Identify all of variables you intend to study and the target population which is called *the sample*;
2. Translate each variable into one or more questions remembering key points of *validity* and *reliability*;
 - **validity** = are we gathering data about the issue being researched?
 - **reliability** = how accurate are the data we have gathered?
3. Trial questionnaire through a Pilot Study (i.e. a dummy run);
4. Refine the research instrument as needed;
5. Administer it to the predefined sample;
6. Prepare a coding scheme &/or a database for storing results;
7. Analyse data and report findings acknowledging bias (i.e. detail both *omissions* and *commissions*).

Trial your questionnaire through a Pilot Study



- Use a small section of your target population to test:
 - the introductory statement & instructions;
 - the instrument questions & categories;
 - whether or not to present the survey as sections;
 - whether or not your intended data analysis procedures are going to work.
- You may choose to trial separate sections with each alternate trial respondent:
 - viz - Respondent One trials first half, Respondent Two trials second half of instrument; Respondent Three trials entire survey.
- Refine your instrument (again) for conducting field work.



Managing Data Entry

Prepare a coding scheme &/or a database



CODING YOUR DATA

- ID number for each survey
- Codes for Closed Data;
- Numbers or categories?
- Codes for Open ended data;
- Numbers or categories?
- Missing Values;
- A code book?

DATABASE - YES or NO?

- Will you generate a tally sheet or make a database?
- What would a tally sheet look like?
- What would a database look like?
- How do you check the reliability of data entries?

**ALWAYS, ALWAYS,
ALWAYS MAKE SURE YOU
HAVE A BACK-UP COPY OF
YOUR DATA!!!**

Data analysis by using the KISS principle



- Most data analysis will be descriptive which mainly means frequencies and percentages are detailed;
- Data can be *cross tabulated* which means it can be *split*, e.g. number of children with ADHD can be split by the variable of gender, or can be split by the variable of years since diagnosed, or age, etc.;
- Each data analysis procedure should inform your story by addressing hypotheses and/or research questions you posed;
- A useful strategy to follow is to talk your story and analysis procedure through – do it out loud if necessary;
- It is much easier to write up your results and prepare your tables, histograms, pie graphs, etc. as you analyse each separate questionnaire item. Avoid leaving reporting till later as you can lose sight of what you've already done.



Data Analysis Procedures

Mining Quantitative Data is an Iterative Process - *Data Entry Phase*



- Enter questionnaire results into an appropriate data base.
- It may be a good idea to use several smaller data bases which finally become amalgamated into a final (working) data base.
- Make notes as you work highlighting apparent patterns and noteworthy exceptions.

Mining Quantitative Data is an Iterative Process *1st Pass- Descriptive Statistics*



- Obtain, as appropriate, a full range of descriptive statistics about subjects (e.g. demographic details, SES factors, description of instances of specific behaviours being researched, etc.);
- Descriptive statistics tend to be on the left hand side of the database and are the variables that are most often split with other variables;
- Demographic data can be often be imported from other databases via Excel, SPSS, StatView, SAS, or even in tab-delimited format into NVivo.
- Many statistics are in the public domain, e.g. the ERO, MOE, Statistics NZ. What statistics, if any, are available for your research interests?

Mining Quantitative Data is an Iterative Process *2nd Pass - Detailed Statistical Analysis*



- Stemming from other sources of data (e.g. qualitative findings), determine which further statistical analyses to conduct in order to obtain corroborative quantitative results (e.g. monitoring roles of people and/or organisations);
- This is where you demonstrate your rigour as a researcher and where you show off the robustness of your data.

Mining Quantitative Data is an Iterative Process *3rd Pass - Mining Extra Data*



- Stemming from original research questions, conduct further quantitative data analysis as needed and seek to discover information about ‘other’ phenomena;
- These analyses may be sophisticated and may involve enlisting help from an outside expert;
- Remember that theory is central to your work.



Presenting and Reporting

Reporting Results



- Say it in words emphasising primary trends and exceptions;
- Augment this by detailing both frequencies and percentages;
- Or do it in reverse order ...
 - Either ... *A total of 35 respondents (66%) were first year nurses...*
 - or ... *two thirds of the sample (n= 35) were first year nurses.*
- Remember, use Graphs & Tables to reinforce findings.
- Remember Hansen's APT Principle (if you don't know what that is, ask!).

Remember To Report Bias and future directions



- Acknowledge what you did but shouldn't have done – i.e. – *Commissions*;
- Acknowledge also what you didn't do but that ought to have done – i.e. – *Omissions*;
- Refer to your original premises/issues/theories/hypotheses;
- Propose future directions for the next researcher to pick up on.
- Have fun and learn lots.

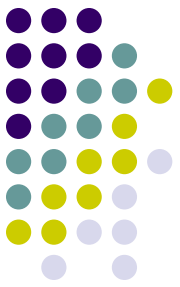


Have a play with some data

Why don't you now have a look at some of your own data?



- If you have some data, select only a small portion of your total database and 'play' with it;
- Your task is to make interim sense of it all;
- You should be able to do this quickly using a limited amount of time – more time consuming detailed work comes later;
- Statisticians you know should be used sparingly as consultants; avoid using them as providers of all solutions – otherwise you won't learn as much as you might from problem solving experiences;
- *So just what will you do to torture your data and what stories do you want those data to confess?*



More help needed?

- If you need help or further information, contact:
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