

# Planning your research project

Dr Sarah Collins

Cystic Fibrosis Specialist Dietitian/ NIHR Senior Clinical & Practitioner Research Fellow

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## Learning objectives

Have a greater understanding of the steps & processes for organising your research project

Be able to create a timeline for a research project using a Gantt chart

# Steps & processes for organising research project

- What is a research project?
  - Systematic investigation to establish facts/  
develop or test theory
  - Question for analysis/ evaluation
  - Own ideas alongside existing  
theory/knowledge

# Steps & processes for organising research project

Conceptual  
phase

Design and  
planning

Empirical

Analytical

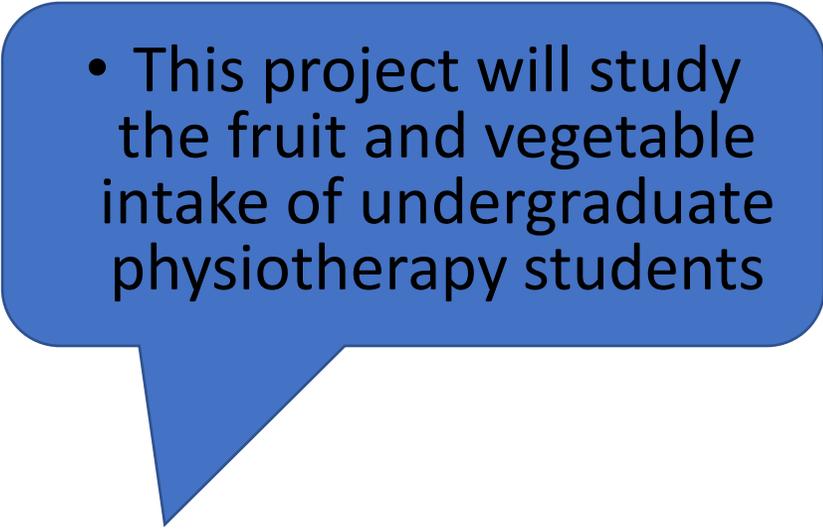
Dissemination

# Conceptual Phase

*Formulating the problem, reviewing the literature and determining the research purpose and research question*

## Formulating the problem

- Identifying and developing your topic
- This project will study ...
- Interest to you (and others)

- 
- This project will study the fruit and vegetable intake of undergraduate physiotherapy students

# Conceptual Phase

- Reviewing the literature
  - Identify background information
  - Find peer-reviewed journal articles (library/ online data bases)
  - Search online library catalogues for books and other media
  - Locate and relevant internet sources
  - Evaluate information found
  - Store located references/files appropriately



# Conceptual Phase

- Research Purpose

- Why?
- What has the literature shown
- Where are the gaps/ relevant theory?

To identify if physiotherapy students are meeting government recommendations for fruit and vegetable

- Research question and if appropriate research hypothesis

- Develop a research question

- the issue that you are going to be investigating
- what you want to prove, disprove, or explore
- Significance
- PICO (**P**atient or problem; **I**ntervention, cause, or prognosis; **C**omparison or control; and **O**utcome)

Do undergraduate physiotherapy students achieve the UK government recommendation of having five portions of fruit and vegetables per day ?

# Design and Planning Phase

*Choosing research design, developing study processes and procedures, establishing the sampling and data collection plan- 'research proposal'*

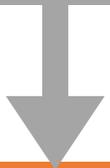
- **Research Design**

- Overall plan for conducting study
- Depend upon research problem and study purpose
- Quantitative
  - Descriptive, correlations, experimental, quasi-experimental
- Qualitative
  - Philosophical underpinnings- grounded theory, phenomenology, ethnography
- Mixed-methods

# Design and Planning Phase

Develop study processes and procedures

Ethical considerations  
Collection, storage and recording of data  
Research team



Establish the sampling and data collection plan

Identify study population  
Inclusion/exclusion criteria  
Sample size  
How will data be collected  
How will data be analysed

# Plan the research

1. Develop the research proposal – detailed description of the project you are going to carry out

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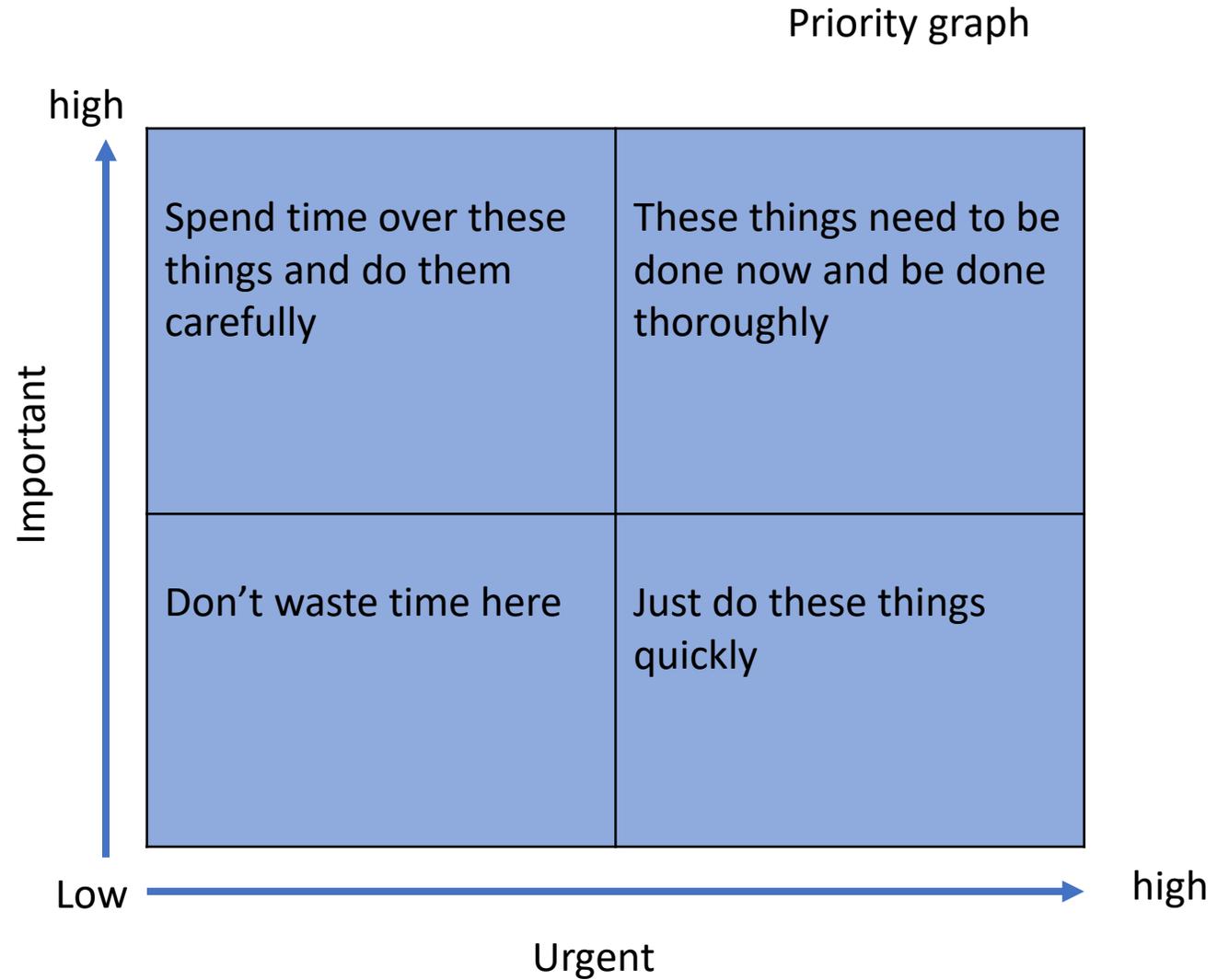
	fruit and vegetable intake in undergraduate physiotherapy students
<b>Question</b>	Do undergraduate physiotherapy students achieve the UK government recommendation of having five portions of fruit and vegetables per day?
<b>Significance</b>	Many health benefits associated with meeting government recommendations for fruit and vegetable intakes. This study will find out more about the consumption of fruit and vegetable in undergraduate physiotherapy students.
<b>Primary resources</b>	The main data will be food intake diaries and food frequency questionnaires
<b>Secondary resources</b>	Qualitative interviews with a subset of undergraduate physiotherapy students
<b>Methods</b>	The research will be carried out using mixed methods. Firstly a completion of food intake diary and food frequency questionnaires. The second method will involve qualitative interview with as subset of students to identify barriers and facilitators to fruit and vegetable intake.
<b>Justifications</b>	These methods are the most appropriate because 1. target a wide number of individuals with questionnaires and diaries. 2. qualitative studies will give a greater understanding of individual experiences
<b>limitations</b>	Identify once study completed

# Design and Planning Phase

## Design a research plan

- Realistic
  - Time you have
  - Time tasks will take- ethics, collecting and analysing data
  - Allocate time for planning and revising
  - Include time for other activities e.g. holidays, personal commitments
  - Pay attention to one thing at a time
  - Allocate time for amendments and editing
- Be kind to yourself
  - Reward completed objectives
  - If fall behind spend time modifying plans

- Have clear and attainable objectives for each week
- Don't over burden your day
- Keep your plan active- e.g. tick off completed tasks
- Set priorities





To Day List – 01 March 2019		
	What will be done	
9:00 – 10:00		
10:00 – 11:00		
11:00 – 12:00		
12:00 – 1:00		
1:00 – 2:00		
2:00 – 3:00		
3:00 – 4:00		
4:00 – 5:00		
5:00 – 6:00		
6:00 – 7:00		
7:00 – 8:00		
8:00 – 9:00		
9:00 – 10:00		
The most important thing to get done today is: •		

Day

|

This Week		
01 Jan 2014		07 Jan 2014
	What will be done	When
1.		
2.		
3.		
4.		
5.		
6.		
7.		
Key dates: <ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li></ul>		

Week

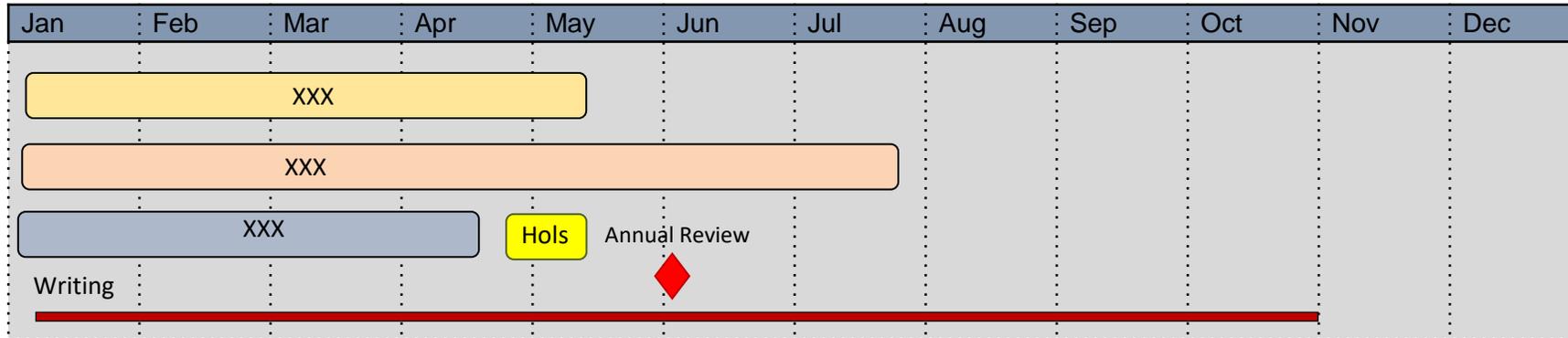
This Six Months			
01 Jan 2014		30 Jun 2014	
	What will be done	How Long	Due date
1.			
2.			
3.			
4.			
5.			
6.			
Key dates: • • • •			

Six months

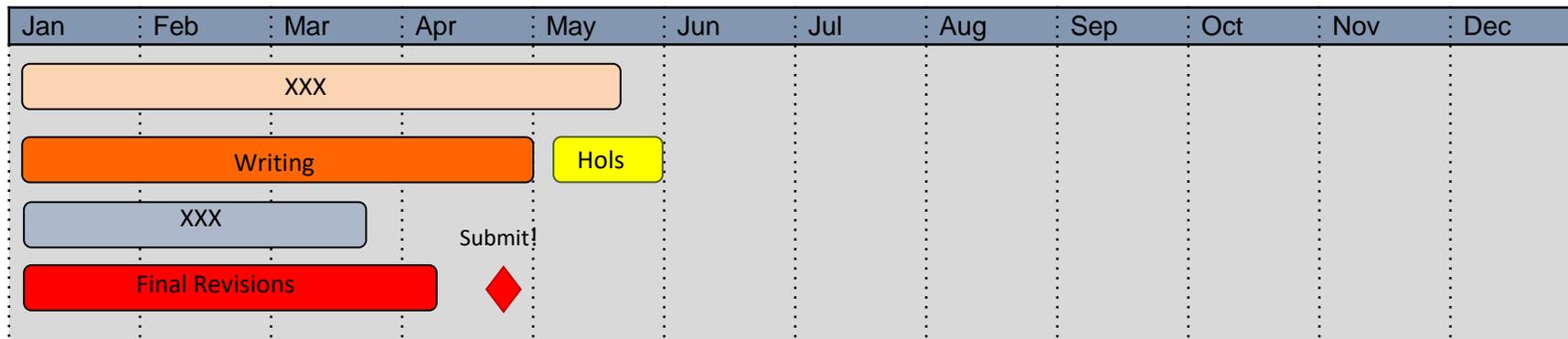
### Year 1



### Year 2



### Year 3



# Carry out the research- Empirical Phase

## *Collecting data and preparing data for analysis*

- Research activities
  - Recruitment
  - Data collection
  - Preparing data for analysis

### Mixed methods

1. Food intake diaries and food frequency questionnaires
2. Qualitative interviews

# Analytical Phase

## *Analysing the data and interpreting the results*

- *Qualitative*
  - *themes, meaning, making conclusions*
- *Quantitative*
  - *Statistical analysis*
- *Determine the meaning and importance of findings*

# Dissemination Phase

*Communication of results to an appropriate audience*

- Who is the target audience?
- Dissemination Plan
  - Written report- thesis
  - Publications- journals
  - Local level- Trust/ University
  - Wider dissemination- conferences, workshops, social media
  - PPIE & Stakeholders

# What is a Gantt chart?



A simple Gantt chart

- A type of bar chart used in project management
- Shows tasks (activities or events) displayed against time
- The left hand of the chart lists
- Activities and the timescale listed along the top
- Each task is represented by a bar
- The position and length of the bar reflects the start date, duration and end date of the activity

Stages of research	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Selection of topic	█						
Data collection from secondary sources	█						
Literature review		█	█	█			
Research methodology plan			█	█			
Selection of the Appropriate Research Techniques				█	█		
Analysis & Interpretation of Data					█	█	
Findings and recommendations						█	█
Final research project						█	█

Figure 8: Gantt chart

# Gantt Charts

- Looking at a Gantt chart you can see:
  - What the different tasks are
  - When each task starts and finishes
  - How long each task is planned to last
  - Where tasks overlap with other task, and by how much
  - The start and finish date of the whole project

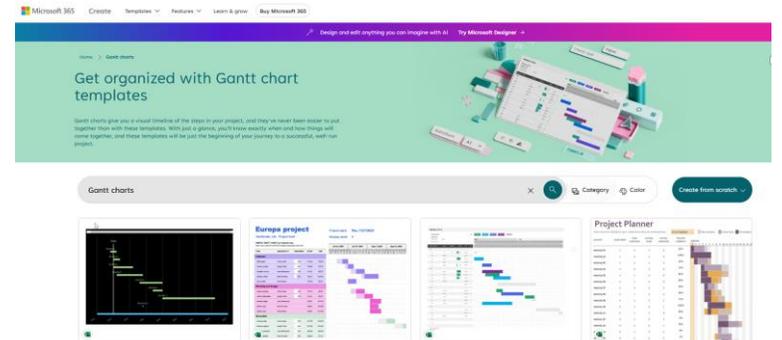


# What are project management tasks?

- Planning
- Training and development
- Research
- Design
- Implementation
- Follow up dissemination
- PPI activities/ meetings
- Milestones
- Stakeholder activities

# How to make a Gantt chart

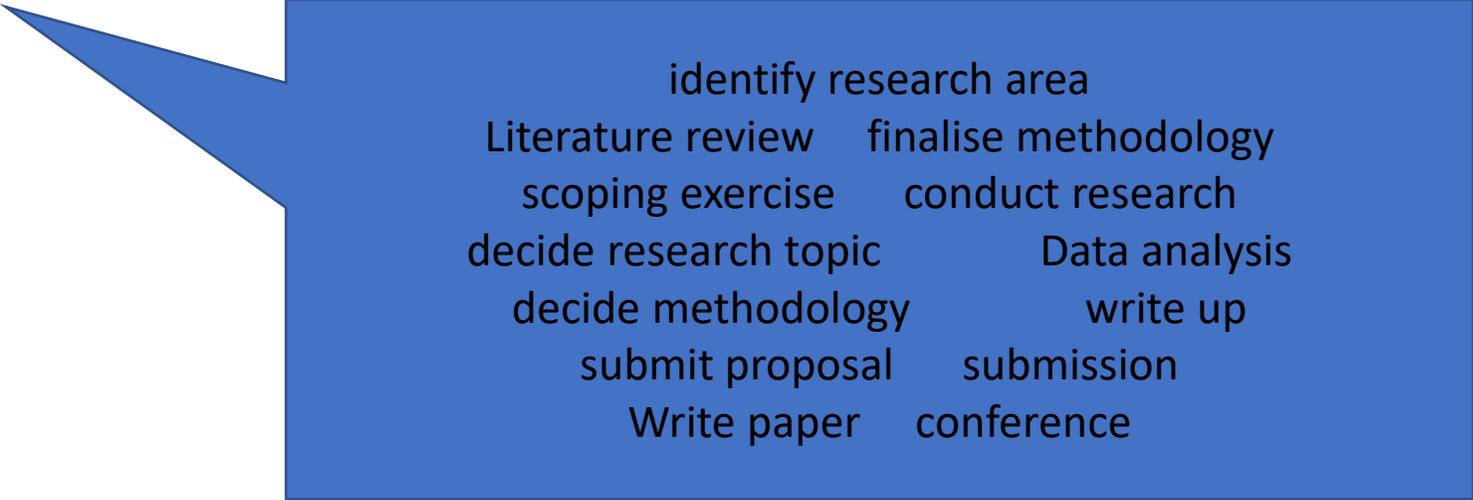
- List your tasks/ activities
- Estimate the time required
- Put tasks in order
- Build blocks
- Illustrate



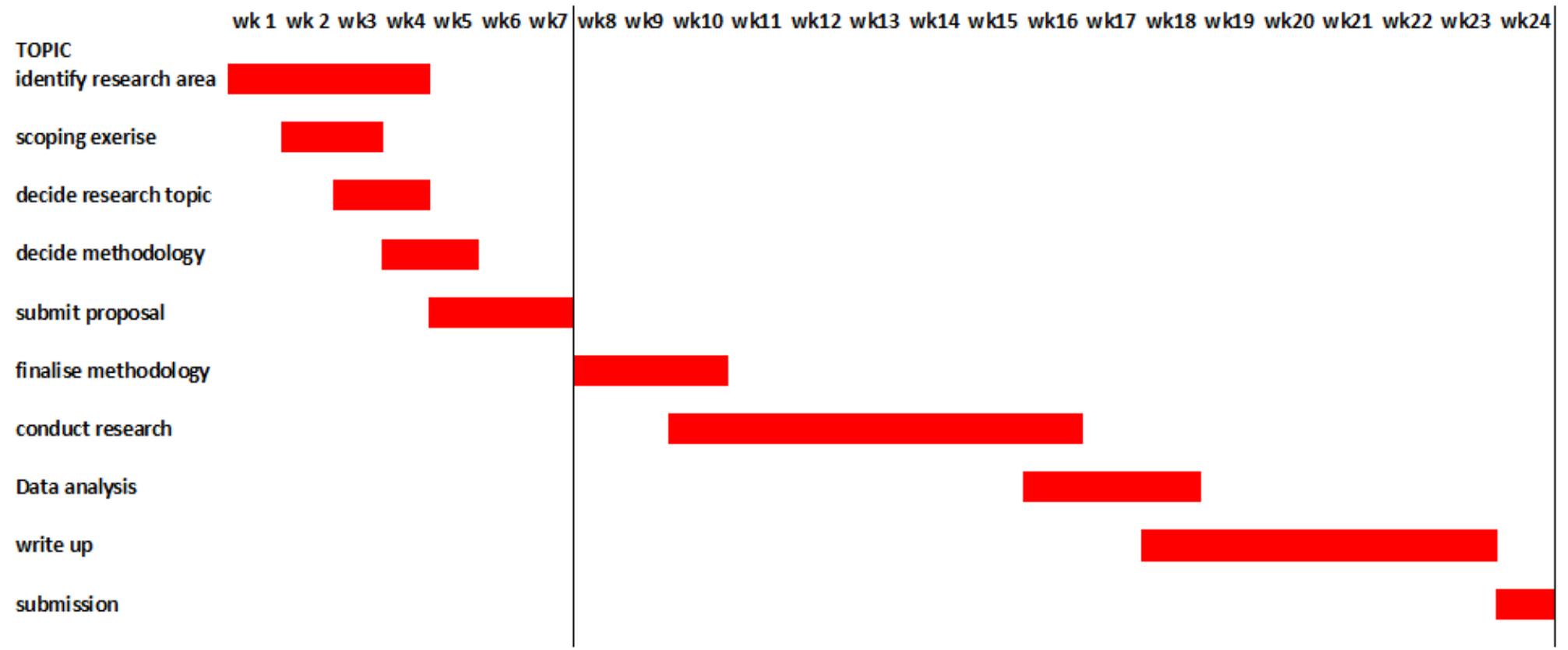
# How to make a Gantt chart

Example 1- completing a MSc dissertation 24 weeks to complete

- List your tasks/ activities
- Estimate the time required
- Put tasks in order
- Build blocks
- Illustrate



identify research area  
Literature review    finalise methodology  
scoping exercise    conduct research  
decide research topic    Data analysis  
decide methodology    write up  
submit proposal    submission  
Write paper    conference

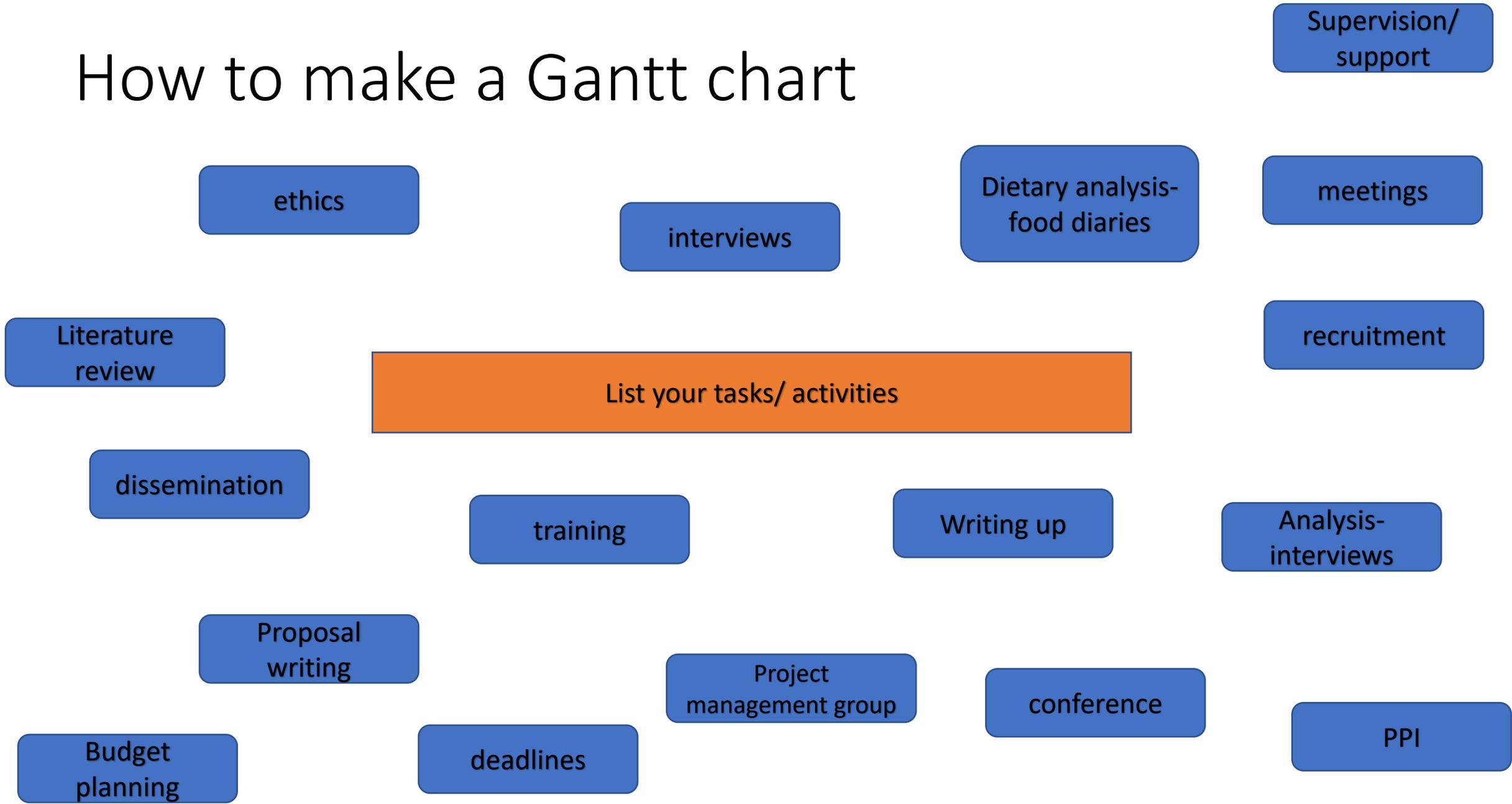


# How to make a Gantt chart

- Example 2- Our fruit and vegetable project

Do undergraduate physiotherapy students achieve the UK government recommendation of having five portions of fruit and vegetables per day ?

# How to make a Gantt chart



# How to make a Gantt chart

- Estimate the time required

How long for each?

May have to adapt project to time available- what can you achieve in that time?

- Write proposal
- Ethics
- Stage 1 – diaries
- Stage 2- qualitative
- Data analysis
- Results and conclusions
- Dissemination

Total- 3 years

# Deadlines

First estimate      x 2

Computer involved      x 3

Other people involved      X 10

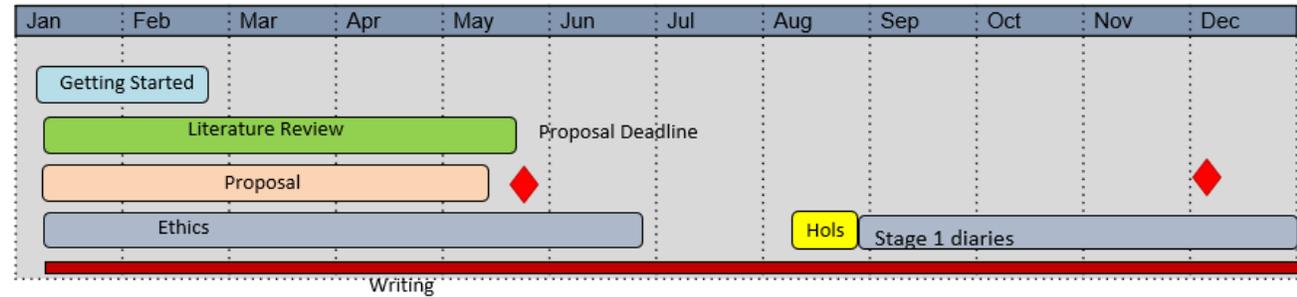
# How to make a Gantt chart

- Put the tasks in order
  - Writing the proposal to disseminating the results
  - Clear and logical order
- Build blocks
  - Administration – proposal and ethics
  - Data collection
  - Data analysis
  - Results and recommendations
  - Dissemination
  - Training
  - PPI

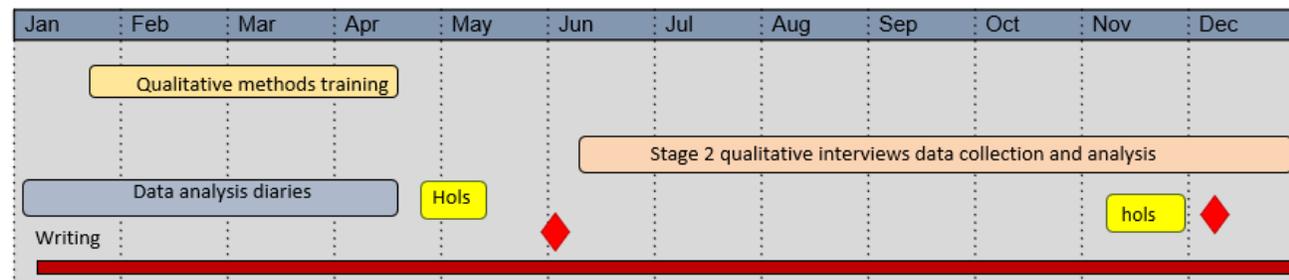
# How to make a Gantt chart

- Illustrate

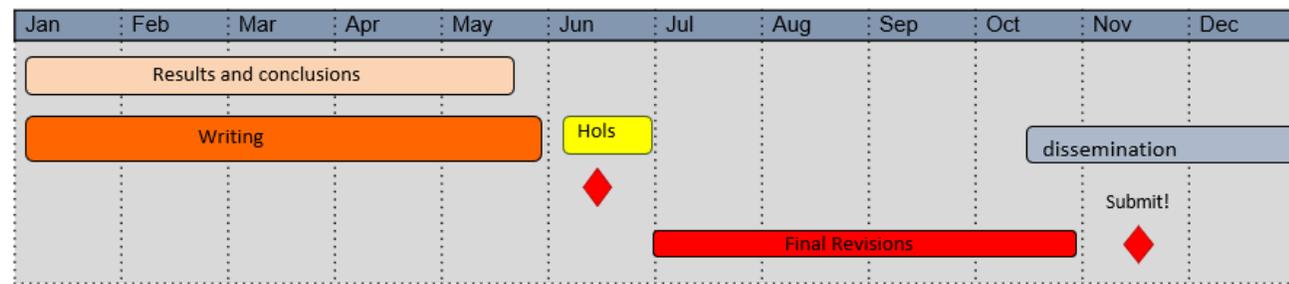
## Year 1



## Year 2

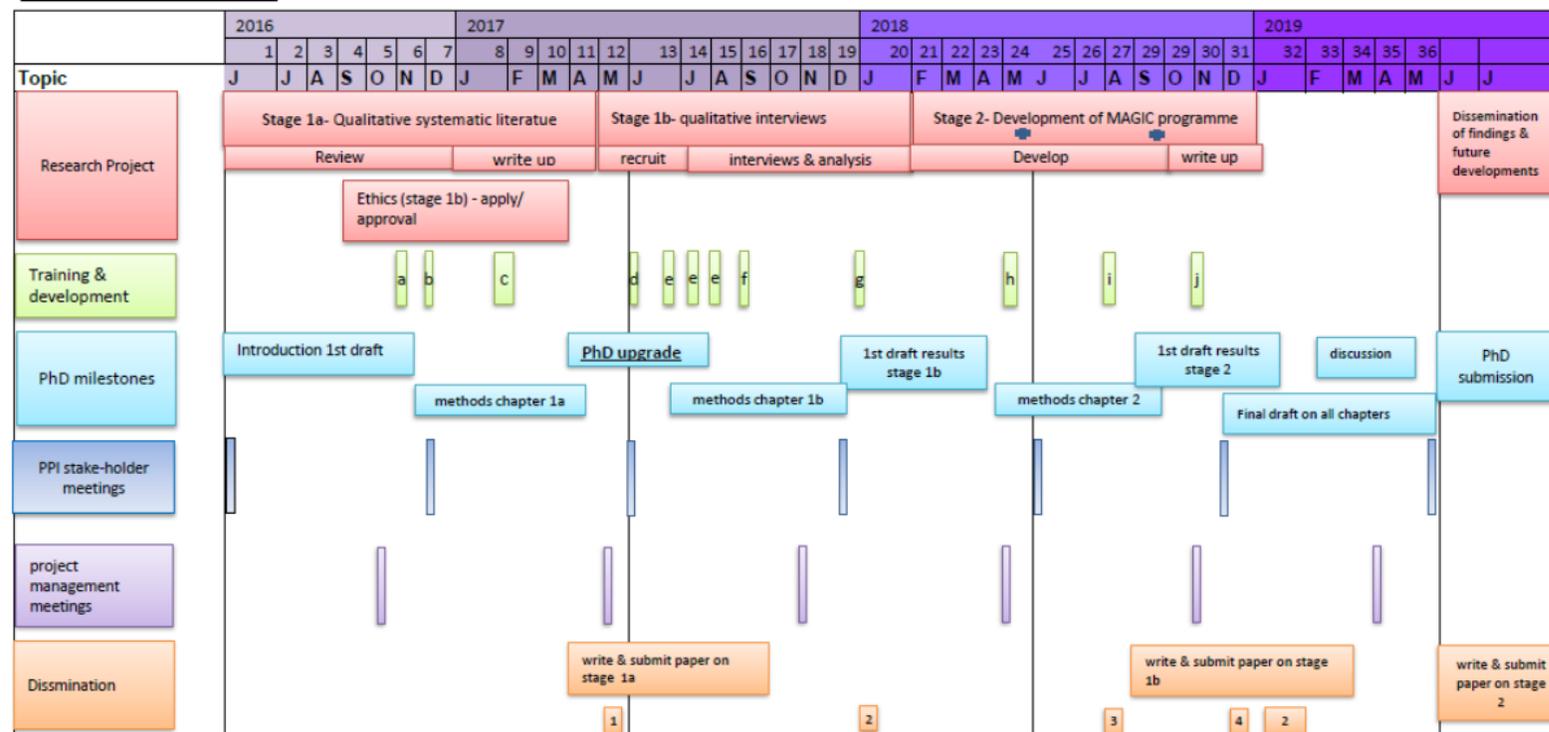


## Year 3



# My PhD Gantt chart

PHD project schedule



**Abbreviations**

**Research Project**

⊕ Patient evaluation

**Training & Development**

- a . Advance IPA- 1 day
- b. Insulin pump course -2 days
- c. USA CFRD Centre visit- 2 weeks
- d. IPA advanced data analysis course- 1 day

**Dissemination**

- 1. Diabetes UK Conference
- 2. RB&HFT AHP poster day
- 3. ECFS
- 4. NACFC

- e. York Medicines management course- 6 days (over 3 months)
- f. Creating mobile medical education course - 2 days
- g. Cognitive Interview course- 1 day
- h. USA CFRD Centre visit- 2 weeks
- i. Vitae leadership course- 4 days
- j. Springboard women's development - 4 days

# Conclusions

Don't underestimate how long it takes to complete tasks

Don't be over ambitious

Talk with others- what have they achieved in similar time frames?

Be prepared to review and make amendments as required

Make the project yours

Be organised with a well-written research plan

# References

- Booth W, Colomb G, Williams J, et al 2016. The craft of research, fourth edition. Chicago: The University of Chicago Press.
- <https://www.ithinkwell.com.au/resources>
- Polit, D. F., & Beck, C. T. (2004). Nursing research: Appraising evidence for nursing practice (7th Edition). Philadelphia: Wolters Klower/Lippincott Williams & Wilkins.