

Working up ideas for a Dissertation

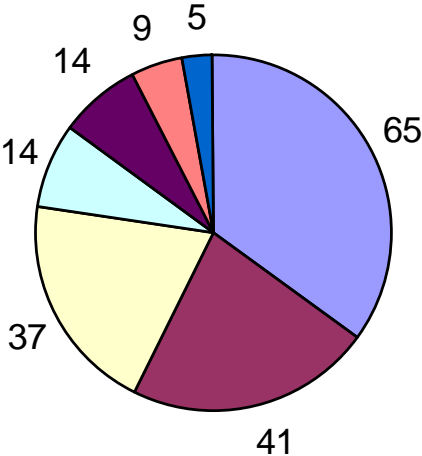
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Royal College of Physicians 18 January 2010

How do you do it?

- By having an analytical, innovative way of thinking and an enjoyment of medical research
- Reflect on what areas of practice interest you?
- What interests my boss/employer? How could I match our interests?
- What can reasonably be done in the time allowed?
- Beware of relying on others for data
- Look at dissertation abstracts in Faculty's website library to see what other trainees have done (359 in 25 years)

MFOM Dissertations (1984 - to date) by Disease

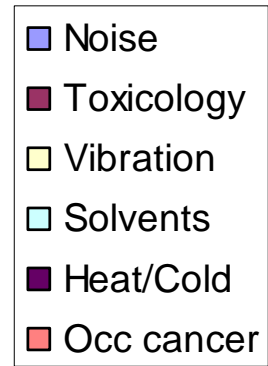
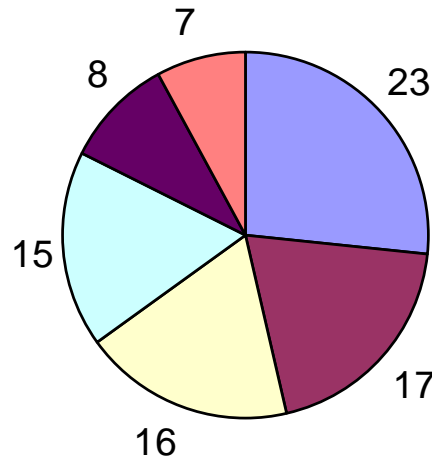


- Respiratory
- Musculoskeletal
- Mental
- Diabetes
- Cardiovascular
- Dermatology
- Gastrointestinal

Respiratory	65
Musculoskeletal	41
Mental	37
Diabetes	14
Cardiovascular	14
Dermatology	9
Gastrointestinal	5

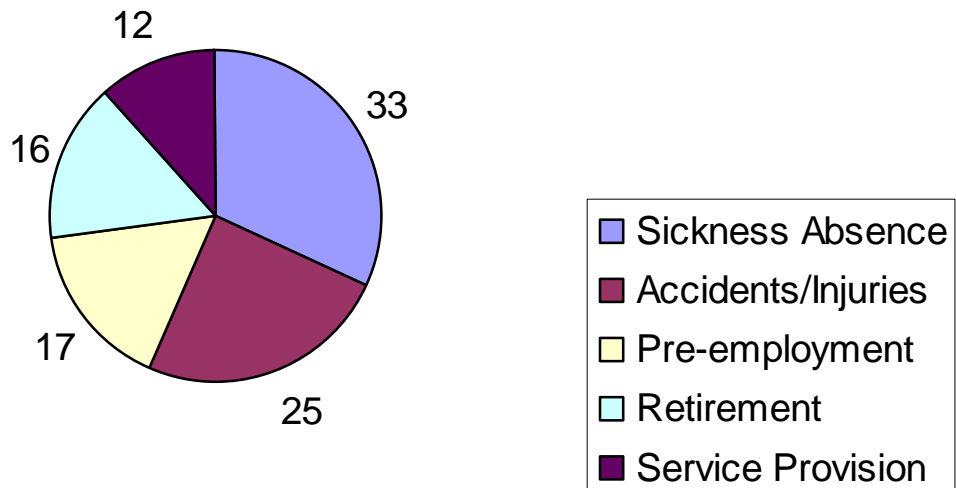
Noise	23
Toxicology	17
Vibration	16
Solvents	15
Heat/Cold	8
Occ cancer	7

MFOM Dissertations (1984 - to date) by Exposure



Sickness Absence	33
Accidents/Injuries	25
Pre-employment	17
Retirement	16
Service Provision	12

MFOM Dissertations (1984 - to date) by Activity

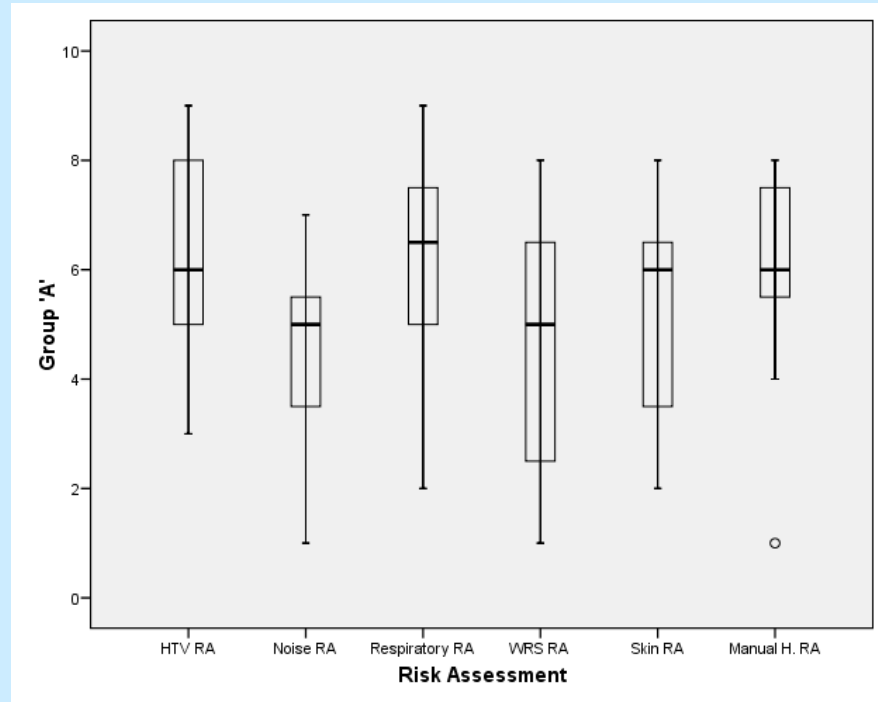


How do you do it?

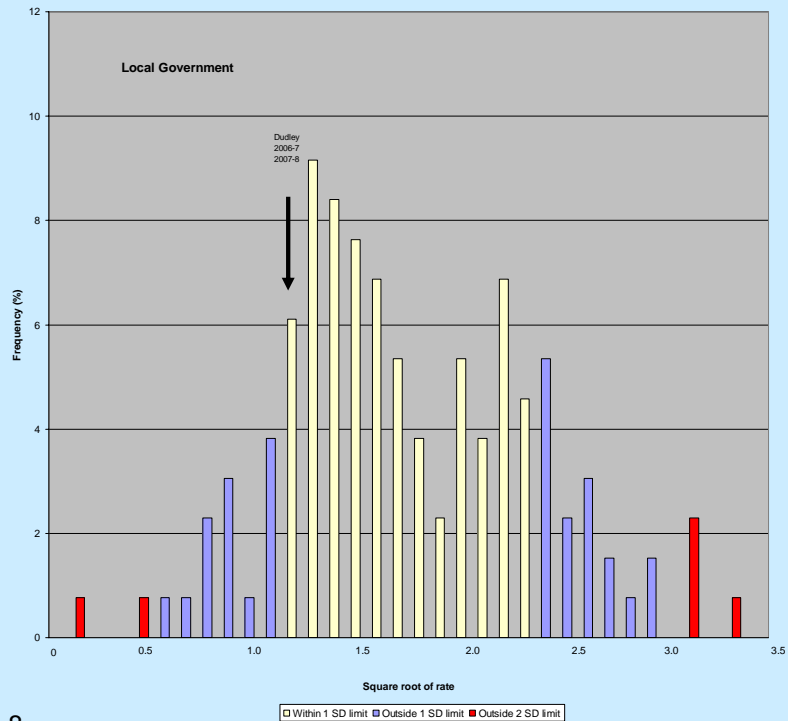
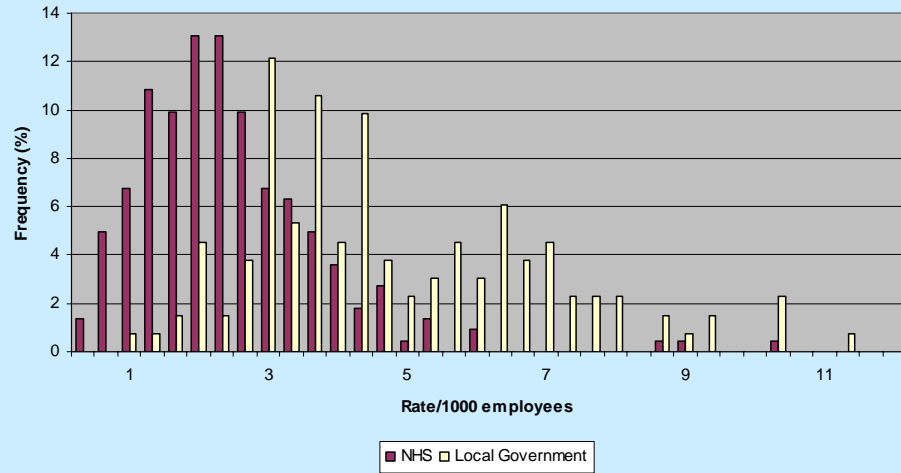
- Discuss ideas with an experienced trainer, supervisor, manager, academic, statistician, hygienist ...
- Time off from service commitments – 1 day per week during term time
- Access to electronic data bases (Medline, Cochrane, PsycInfo, Embase...) and a library
- Ask how to do a literature search and to use an Excel spread sheet
- Critically appraise what other researchers have done and the methods they used

How do you do it?

- Focus your research question/ hypothesis
- Submit proposal to Faculty 18 months after starting full-time training (ST4) and expect some constructive and timely feedback from assessors
- Do I need ethical approval? COPE checklist. Local Ethics Research Committee: many forms that focus on scientific merit; safety of subjects; patient confidentiality; informed consent; subject information sheet; financial inducements and experience of researcher/ supervisor. Ethical consent cannot be obtained retrospectively!
- Execute study – two or more groups – questionnaire, clinical examination/ test results, medical or other records
- Collect data, keep safe and back up
- Critically appraise data to include descriptive and inferential statistics. Is the data normally distributed and is it a continuous variable? Ask how to use SPSS software



Distribution of rates of IHR (2000-3)



Q: Should sewage workers be vaccinated against hepatitis A?

	HAV IgG	
	present	absent
sewage workers	23 *	17
carers of learning disabled	19	34
controls (road & office workers)	13	25

* OR 2.60 (95% CI 1.04 to 6.51)

Q: Is diabetic control compromised by working shifts?

	n	Blood glucose (mmol/l) Mean (SD)	Serum fructosamine (umol/l) Mean (SD)	HbA _{1c} (%) Mean (SD)
Shifts on insulin	16	9.9 (4.2)	388 (70)	10.1 (1.9)
Days only on insulin	8	11.6 (3.7)	422 (66)	10.5 (1.8)
Oral hypoglycaemic drugs	9	10.5 (6.3)	365 (85)	10.0 (2.3)

Student's t test - no difference between groups but should ANOVA have been used?

How do you do it?

- Write up, spell check & ask a colleague to read it
- Introduction and Method first. Abstract last
- Present project at SOM/ ANHOPS/ departmental meeting (a communication skill competency)
- Submit completed dissertation to Faculty before sitting exit exam *and* before entering final year of training! Is this reasonable?
- Expect to be asked to make improvements/ modifications by assessors before binding manuscript
- Try also to write a paper and submit it to a peer reviewed journal
- Recommended reading - Clinical Research by Smith FG and Smith JE. Published by Taylor Francis. London 2003. ISBN 1859960286.