

Research methods

Tips and tricks for those interested

(and maybe never have considered that research is fun)

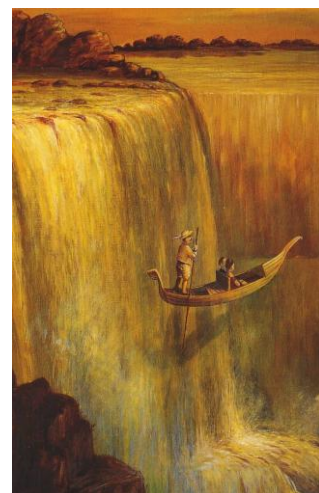
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The Netherlands

Project manager training program Royal Life Dutch Life Boat Institution
Consulting governor Maatschappij tot Redding van Drenkelingen
Reddingsbrigades Nederland



Topics in this presentation

- current situation in drowning research
- typical aspects of drowning research
- consequences for research design
- some tips and tricks



Why research

- to describe
- to understand
- to replace impressions by data
- to improve quality of performance
- to obtain political or financial support
- to demonstrate professionalism
- to give the best care to the drowning victim

Current situation drowning research

- few clinical studies published in peer reviewed high impact journals
- most of all related to
 - epidemiology
 - prevention
 - investigations of lethal drowning
- lack of research data on drowning resuscitation has resulted in (probably) suboptimal drowning resuscitation guidelines

Problems with drowning research

- no available and reliable data
 - routine datasets useless for research
 - no uniformity in definitions
- no organisation at
 - strategic level (international) research program
 - tactical level research institutes
 - operational level supervision and coaching

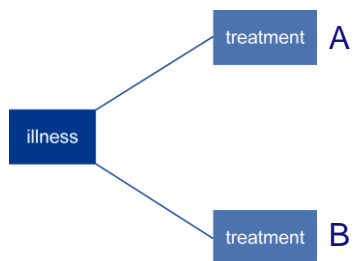
Problems with drowning research

- time and place are unknown
- no controlled research setting
- low incident rate
- fear for political or legal consequences
- (double blinded) controlled randomised trials very difficult, at this moment

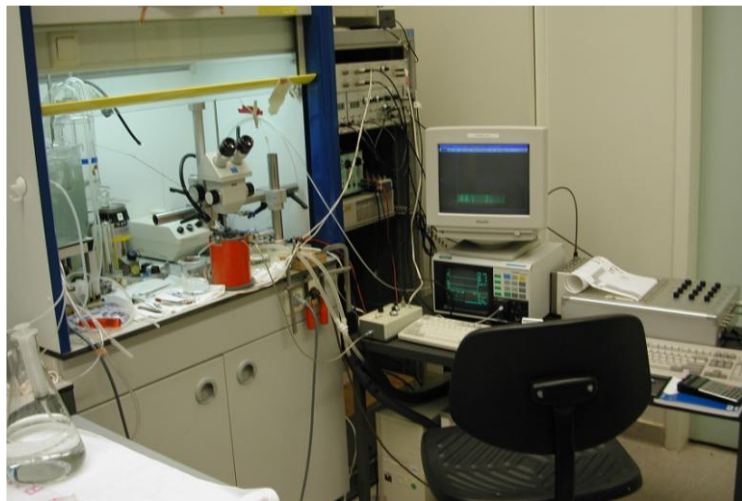
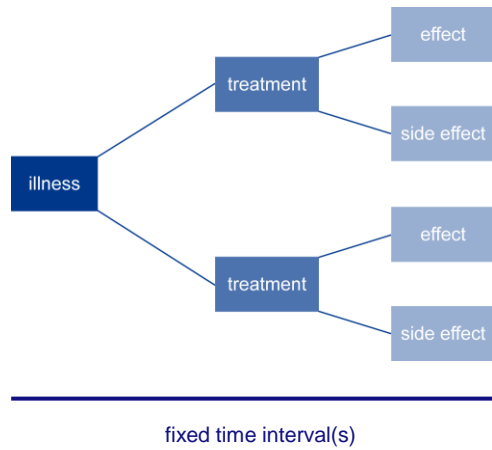
Double-blinded randomised controlled trials

illness

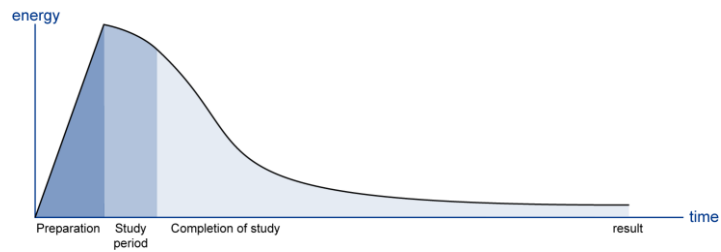
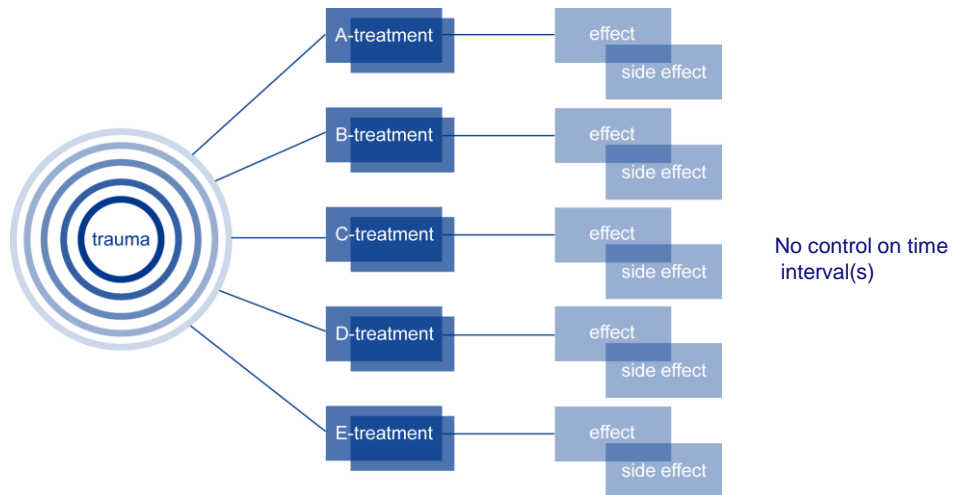
Double-blinded randomised controlled trials



Double-blinded randomised controlled trials



More complex in drowning



Why do YOU want to do research

- curiosity
- ambition
- compensation
- compulsory



The importance of the research question

- a simple question provides a clear answer
- the “so what” reflection
- Null-hypothesis
- focus for data, analysis and reporting

The importance of the research question

- practical aspects: feasibility
- understanding the complexity while building relationships in your research domain
- “pre-mortem analysis”

Understanding the prehospital physician controversy. Step 1: comparing competencies of ambulance nurses and prehospital physicians

Hans van Schuppen^a and Joost Bierens^b

Objective In many European countries prehospital care by emergency medical services (EMS) is supplemented by physician-staffed services. There is ongoing controversy on the benefits of a prehospital physician. Possible advantages are additional competencies of the physician. Similarities and differences in competencies of EMS providers and physicians have however never been studied. This study aims to compare competencies of ambulance nurses and helicopter EMS physicians in the Netherlands to gain better insight into the controversy of the prehospital physician.

Methods In this descriptive study, a quantitative inventory was made of the diagnostic, therapeutic, and clinical judgment competencies of the ambulance nurse and physician, based on analysis of protocols, registration, equipment, and personal interviews.

Results We identified 438 mutual competencies of the ambulance nurse and physician and 62 physician-specific competencies. The ambulance nurse masters 278 diagnostic, 131 therapeutic, and 29 clinical judgment competencies. The physician masters 285 diagnostic, 175 therapeutic, and 40 clinical judgment competencies. Seventy-one percent of the physician-specific

competencies are therapeutic and related to advanced life support.

Conclusion The ambulance nurse and physician have various mutual competencies. In addition, the physician can provide specific competencies on the scene. Knowing the exact overlap and differences in competencies is the first step to understand the prehospital physician controversy. Our results can be used as a tool for the next step in research on prehospital care by EMS providers and physicians and to improve prehospital care. *European Journal of Emergency Medicine* 00:000-000 © 2011 Wolters Kluwer Health | Lippincott Williams & Wilkins.

European Journal of Emergency Medicine 2011, 00:000-000

Keywords: advanced life support, air ambulances, ambulances, clinical competence, emergency medical services, emergency medical technicians, helicopter, nurses, physicians, prehospital care

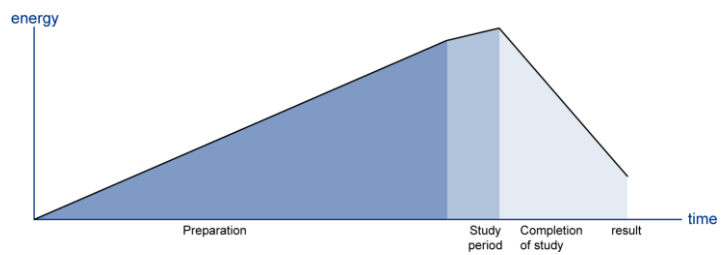
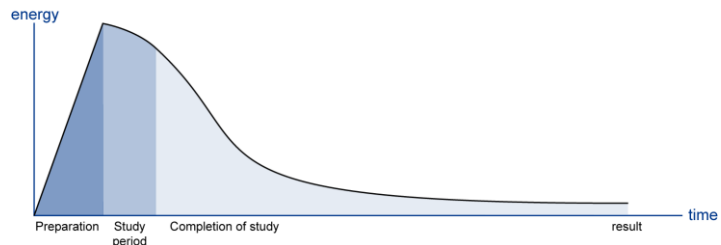
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A good preparations allows a better balance between research activities and your private life



When you want to do one study, keep in mind that you may want to end with a series of studies



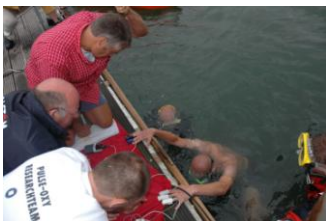
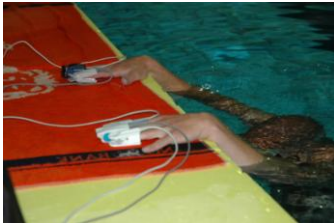
- pilot research
- intervention research
- process research
- development of research instruments

Opportunities

- empty research field
- Utstein style for drowning
- several journals are suitable for publication
- lifesaving community has a large unexplored potential in manpower
 - student assistants
 - supervisors
- multifaceted area
 - money from different sources
- this is the time to start !



Pulseoximetry in drowning situations



Dear Joost
many thanks
I have accepted this version and sent
the paper to be processed
best wishes

Conclusion

- research is needed to develop our understanding, our efficacy and efficiency
- concepts and environment are unlike traditional research
- the research question is essential
- a good and long preparation saves time
- small steps in single issues