Research Based Education

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Angels in white?
Researcher challenges the notion of nurses as angels in white.

Find a course
Find courses or programmes taught in English.

Admission
Requirements and how to apply.

Research
Focus areas and projects within research and development.

NEWS

NEWS

EVENTS
Outline

1. WHAT is research based education?
2. WHY research based education?
3. EXAMPLES of integrating students into research
• Mali, 1995: I am doing field work for my Master thesis in nutrition
• My study was part of a large research programme where Norwegian and Malian researchers collaborated
Food variety—a good indicator of nutritional adequacy of the diet? A case study from an urban area in Mali, West Africa

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Objective: This study assesses whether a simple count of food items and food groups can predict the nutritional adequacy of the diet in an economically poor country.

Design: A three-day weighed record of children.

Setting: Koutiala town, in Southeastern Mali.

Subjects: Seventy-seven children, 13–58 months of age. One child was excluded owing to an extraordinarily low food variety.

Intervention: The study was conducted in April–August 1995. Data from this study were used to create two different indices: Food Variety Score (FVS), a simple count of food items, and Dietary Diversity Score (DDS), a count of food groups. Mean Adequacy Ratio (MAR) was calculated as an indicator for nutrient adequacy, and used to validate FVS and DDS.

Results: Mean (s.d.) FVS was 20.5 (3.8) and mean (s.d.) DDS was 5.8 (1.1). A positive correlation was found both between FVS and MAR (Pearson 0.33, P < 0.001) and DDS and MAR (Pearson 0.39, P < 0.001). With cut-off points for FVS at 23 and for DDS at 6, the indices have high ability to identify those with a nutritionally inadequate diet. MAR increased with increasing FVS and DDS. FVS needs to be at least 15 or DDS at least 5 to give a satisfactory MAR.

Conclusion: Although a simple count of food items or food groups cannot give a full picture of the adequacy of the nutrient intake, the results from this study show that the food scores can give a fairly good assessment of the nutritional adequacy of the diet, particularly if combined. Such indicators are important for identification of vulnerable groups in areas where people normally eat from a shared bowl, which makes detailed dietary intake studies difficult, time consuming and expensive.

Sponsorship: The Norwegian Universities’ Committee for Development Research (NUFU), the Norwegian Research Council and the Nordic Africa Institute funded the project.

Descriptors: Africa; dietary assessment methods; dietary diversity; food variety; Mali; mean adequacy ratio
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Public health nutrition, food security, global health, survey, Africa
Verified email at hioa.no
My profile is public

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Food variety—a good indicator of nutritional adequacy of the diet? A case study from an urban area in Mali, West Africa.
A Halloy, LE Torheim, A Oshaug
European Journal of Clinical Nutrition 52 (12), 891-898

Nutrient adequacy and dietary diversity in rural Mali: association and determinants
LE Torheim, F Ouattara, MM Diarra, FD Thiam, I Barikmo, A Halloy, ...
European Journal of Clinical Nutrition 58 (4), 594-604

Simple food group diversity indicators predict micronutrient adequacy of women's diets in 5 diverse, resource-poor settings
M Armond, D Wiesmann, E Becquye, A Carriquiry, MC Daniels, ...
The Journal of nutrition 140 (11), 2056S-2069S
1. What is research based education?
Research based education can imply...

1. Teaching where the content is based on updated research findings
2. Teaching which focuses on research process and scientific and critical thinking
3. Learning where the students are actively engaged in discussions of research based findings
4. Learning were the students are active participants in the research process
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Why research based education?
EU’s Knowledge Triangle

- Research and technology
- Business
- Higher education
Integration of research in higher education

• Receiving increased emphasis in Europe and the US

→ Students should become active participants in knowledge creating instead of passive recipients of knowledge
Why research based education in health sciences?

Evidence-based practice/medicine/policy..
Why research based education in health sciences?

- A requirement for health personnel to work evidence based
  - We live in a knowledge society
  - Research is increasingly the foundation for all decision making
  - Patients/consumers/people in general are seeking information from various sources

*Our students need to be equipped with the necessary knowledge, skills and competencies to be able to work evidence based*
What skills are needed for ensuring evidence-based care in nursing?

Practitioners of evidence based care

Not all clinicians need to appraise evidence from scratch but all need some skills (Guyatt et al BMJ 2000)

→ Enable the student/the nurse to continuously update themselves
  ✓ Be critical
  ✓ Be able to understand limitations of the research
  ✓ Be able to apply new knowledge
What research skills are needed for nutrition students?
A definition of nutrition science

Nutrition science is the study of food system, foods and drinks and their nutrients and other constituents, and of their interactions within and between all relevant biological, social and environmental systems

The Giessen Declaration, 2005
What is a healthy diet?
Advanced medical research
In total about 2 mill. scientific publications about diet, nutrition and health.

Dietary advice are based on systematic reviews of all relevant research.
Advantages of research based education for the students

• Learn how research based knowledge is produced
• Acquire a critical mindset and attitude to knowledge/information
• Able to critically assess information
• Able to continuously be updated about new research

→ Able to see the world with more objective and critical eyes
→ Become transformed into a person with more scientific worldview?
Princess Märtha Louise of Norway

The princess and her partner, Elisabeth Nordeng, met at a clairvoyance course and run what’s popularly known as an “angel school,” in which they teach clients how to communicate with their angels.

Source: Newsinenglish.no
Advantages of research based education for the lecturers

• Combine two important activities which enrich each other: teaching and research
• Give higher-quality teaching
• Competence-building for the teacher
• And: Students participating in research may contribute with important data!
Advantages of research based education for the institution

• Higher quality education AND research
• More publications

Advantages for the society

• Improved, evidence based advice and practices
  → Better health
  → More efficient
3. Examples of integrating students into research at Oslo and Akershus University College
Emphasis on increasing research production at HiOA

• Intensive work to improve the situation
  ↑ Number of staff with PhD
  ↑ Number of professors
Percentage staff with PhD of total scientific staff - HiOA and other Norwegian institutions (2013)
How is research organized at HiOA?
Forskningsgrupper

- Aldring, helse og velferd
- Anvendt og eksperimentell atferdsanalyse i klinisk praksis
- Disease and environmental exposures
- Empowerment
- Experimental Studies of Complex Human Behavior
- Humane kostforsk og helseeffekter
- Kliniske intervensjoner og medisinsk teknologi
- Legemidler og pasientsikkerhet
- Livskvalitet og smerte forskning
- (Re)habilitering - individ, tjenester og samfunn
- Reproduktiv helse hos menn
- Samfunnsøkonomi
- Verdi og etikk
- Tverrfaglige forskergrupper
- Barmekl. og profesjonstunøvelse

Ph.d.-program

- Ph.d.-program i atferdsanalyse
- Ph.d.-program i helsevitenskap

Ph.d.-prosjekter

- Ph.d.-prosjekter ved Fakultet for helsefag

Forskningsamarbeid

- EU-finansierte samarbeid
- NFR-finansierte samarbeid
- Internasjonale forskningsnettverk
Examples of involvement of bachelor students in research projects

• Nursing students
  • During home nursing practice: suspected new guidelines for treatment of stroke were not well known
  • 3 students developed a questionnaire: tested the knowledge level of nurses
    • They showed insufficient knowledge about the guidelines
    • They developed a training programme and taught the nurses about the guidelines
  • Others have collected nutrition status data during their practical period → used in a PhD project

• Nutrition students
  • Conducted a pre-study in asylum reception centers: assessed the food available
    → We are developing new studies on dietary intake/food security among asylum seekers

• Vocational teacher education students...
Example of students participating in research in vocational teacher education

• Baseline survey 2011*
  • Phone interviews with 99 out of 101 schools with vocational training in restaurant and food processing

• Recruitment strategies for vocational training programme in restaurant og food processing**
  • Meta analysis of 6 bachelor thesis

• Study of educational activities used in the teaching programmes in restaurant and food processing***
  • Systematic observational study


Advantages and challenges when involving BA-students as co-researchers

• Advantages
  • Motivation for the student
  • Possibility of adapting the bachelor thesis to research needs
  • Saving time and resources for the researcher
  • Can give practical and useful feedback to the place of internship

• Challenges
  • Quality of the data collected
    • Important to train the students in data collection and research methods
  • How to select work that can represent the university college?
    • Important to clarify in advance
  • Freedom to choose bachelorproject
Suggested model for involving bachelor students in research

• Develop a clear research plan identifying the data needs
  • What is the overall aim and the key research questions?
  • What data is needed to answer these?
  • Can the bachelor students collect these data as part of their BA project?

• Suggest for bachelor students to get involved and clarify their role
  • They collect the data “for” the project
  • They get access to the data for writing their own bachelor thesis

• Emphasis on training for ensuring high-quality data

• Monitoring the data collection for quality control

• More students – perhaps over several years → large set of data for interesting research (qualitative – quantitative)
Involvement of master students in research projects

Master students...
  • Have achieved a higher level of scientific understanding
  • Have more time to conduct the study
  • Work more independently

→ They can contribute tremendously in research projects
Validation of the second version of a quantitative food-frequency questionnaire for use in Western Mali

Christine L Parr\textsuperscript{1,*}, Ingrid Barikmo\textsuperscript{2}, Liv E Torheim\textsuperscript{2}, Fatimata Ouattara\textsuperscript{3}, Assitan Kaloga\textsuperscript{3} and Arne Oshaug\textsuperscript{2}

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Women’s iodine status and its determinants in an iodine-deficient area in the Kayes region, Mali

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Development and Pilot Testing of 24-Hour Multiple-Pass Recall to Assess Dietary Intake of Somali- and Iraqi-Born Mothers Living in Norway

Navnit Kaur Grewal 1,*; Annhild Mosdøl 2,3; Marte Bergsund Aunan 2; Carina Monsen 2; and Liv Elin Torheim 1,2
Thank you! Good luck with combining research and education!

http://www.fullhdpics.com/48405-norway-landscape-2-01082011
Questions?
Comments?