

# Evidence-based nursing in bachelor assignments - A mini review

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## Introduction

The mini-review is an update of the original article: *Do bachelor assignments in Danish midwifery- and nursing educations reflect evidence-based practice? A document study* [1]. We will summarize the findings from the original article, add an analysis of 140 recent bachelor assignments and present the result of a new search of literature to see recent developments in the field. Our aim is to see if the bachelor assignments present evidence-based nursing. While the original article is based on a comparison between assignments in midwifery education and nursing education, this mini-review focus exclusively on nursing education.

A search of the literature in 2019 at the time when writing the original article revealed only a few studies of bachelor assignments in nursing and none in midwifery. In a study from Sweden by Silén and Johansson the authors have analyzed bachelor assignments to see whether the assignments provided relevant basis to decide if students meet the qualifications required of newly educated nurses. They found that the assignments in general used a narrow selection of theories and that none of the assignments related to the employment of evidence-based care. The authors view this as a problem for the nursing profession and conclude that the bachelor assignment may be an insufficient representation of the academic skills required of the graduate nurse. The students were mostly interested in the experience or management of illness, which is well justified, while another large group of students were interested in the experience of caregiving leading to doing interviews with nurses [2,3]. The same conclusion was done by one of the authors of this mini review when looking at Danish nursing bachelor assignments – Danish students seemed to be even more interested in the experience of nurses and less interested in nursing interventions compared to the Swedish students [4]. This led us to look more closely into the bachelor assignments of nursing students in Copenhagen.

We did a document study based on 244 nursing bachelor assignments. In the analysis we looked at the aim of the assignment and the methodology applied. To identify the aim of the assignments we found the following categories: an experience perspective, a comprehensive perspective, an action perspective, and an evidence perspective. This was done applying abductive analytic practice.

The result of this analysis was that a large portion of nursing students choose to focus on an experience perspective and interview nurses about their experience of nursing practice (personal or clinical experience) or interpretation of patients' experience of being ill or receiving nursing care. Methodically the students in the 2018 sample have primarily chosen interview designs, with 70% choosing to interview nurses and 23% choosing to interview patients [1]. The conclusions of the students' bachelor assignments were thereby based on local and personal knowledge rather than on generalized knowledge.

We concluded that the students in general did not demonstrate ability to intervene based on evidence-based practice and that only few bachelors' assignments in nursing demonstrate an adequate level of competence at graduation regarding evidence-based practice. This means that even if the students have the qualification to base interventions on evidence this cannot be established by their bachelor assignments as could be expected since it is the conclusion of their 3½ year nursing education. This aligns with the results found by Silén and Johansson [2] and the problem they disclosed in Swedish nursing education could also be found in a Danish context.

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In our article [1], we discuss the consequence of the fact that having a bachelor' degree does not ensure that the graduates can work evidence based. Two problems arise. First and most important it causes a potential problem with the nursing care provided by the candidates if they do not meet the requirements. Care should be given based on best available knowledge and therefore it is crucial that the nursing graduates are able to do so. Secondly the potential lack of competence presents a problem on the organizational level if a large group of newly graduated nurses do not differ significantly from other care groups of shorter education of whom academic competences are not required.

This result corresponds with the results of Richards et al. [5,6] who found that European research in nursing is mainly descriptive. Reviews shows that nursing research in Europe mainly has the form of hermeneutic or phenomenological studies or cohort studies and only 13-18% are experimental studies [5-7]. This leads to a conclusion of nursing research to a lesser degree being able to provide evidence for improvement in nursing patient care. Other studies align with this conclusion [8]. This may present a reason why assignments of nursing students primarily are descriptive and to a low degree show evidence-based nursing as the nursing literature is mainly descriptive and indicate a trend in the nursing profession, which is not simply a local problem, but a European nursing problem.

### The Results from a New Literature Search

A search of the literature in April 2022 revealed a few new articles on bachelor assignments relevant for this review. An Australian review [9] points to a general lack of theories in nursing education where other theories than nursing theory could be employed. Especially is mentioned the strange fact that a profession claiming to value evidence-based practice does not include evidence in teaching practice very much. This aligns with an interview study conducted in a Turkish context [10]. Conclusion is that there is a potential for integrating far broader theoretical basis than is seen at the moment.

In a study from Spain [11] the researchers investigate the topics and methods employed by students in their bachelor assignments, which in this case has the form of a research proposal. This format was chosen to enhance the students' research competencies, an intention which the authors find to be successful. When focusing on topics and methods of the bachelor assignment the authors found that most students chose a qualitative design with the intention of understanding the experience of patients, relatives, or nurses. This result is consistent with the result of Silén and Johansson [2] and the result of our investigation [1]. Fernando-Cano et al. [11] points to the fact that most bachelor supervisors have knowledge and training within this research design thereby aligning with the point made by Richards [5,6] and the discussion in our article. The reason for the choice of topic is also investigated and here they found that the students chose a topic based on personal interest and own clinical clerkship experience which, the authors argue, could point towards a lack of leadership in both academic and clinical setting. They also found that the students themselves were satisfied with the competencies they have gained through their work with the bachelor assignment [11].

A few new articles are accounts of intervention studies in nursing education. An American study [12] argues that integrating evidence-based practice into undergraduate nursing education can enhance both competencies to perform it in practice and understanding of the

importance of evidence-based practice in general. A pilot assignment with the aim of measuring the effect of integrating use of evidence to solve clinical problems in the education of nursing students has been performed with a promising result. A Canadian study [13] using mentoring as a method to enhance nursing students' ability to use evidence-based practice shows a good result. These studies are small, but they can be seen as a result of a new awareness of how nursing education takes responsibility for whether next generation of nurses have the willingness and competences to provide evidence-based care.

### Analysis of Bachelor Assignments in the Nursing Study January 2022

An analysis of 140 bachelor assignments from one semester in 2021 shows that there has been a change since 2018 in the way the students collect data for their bachelor assignments. **Table 1** shows that fewer students do interviews and more do literature studies in 2021 compared to 2018. This may be influenced by the consequences of the COVID-19 pandemic in Denmark, where the students were forced to stay home, but during the autumn of 2021, the society was open again and interviews were possible. It can also be due to the fact that there may have been a greater focus on the value of literary studies among supervisors of bachelor assignments in 2021 than in 2018 thus guiding the students differently.

**Table 1:** Empirical data collection in 2018 and in 2021.

Nursing education 2018 (n= 244 assignments)	Nursing education 2021 (n= 140 assignments)
Interview (79% of all assignments)	Interview (31% of all assignments)
Literature search in databases (14.5% of all assignments)	Literature search in databases (66% of all assignments)
Survey (2% of all assignments)	Survey (1% of all assignments)
Observations studies (1.5% of all assignments)	
Mixed method (1.5% of all assignments)	
	Interventions studies (2% of all assignments)
Document studies (1.5% of all assignments)	

In the 2018 sample, the interviewees were primarily nurses (70%) and the students interviewed them about their experiences with patients and nursing. In the 2021 study, fewer interview studies are done, and those who are interviewed are primarily patients (60%). **Table 2** shows the percentage of interviewees of the total number of interviews in 2018 and in 2021.

**Table 2:** The interviewed as a percentage of the total number of interview studies in the two samples.

The interviewees in 2018	The interviewees in 2021
Nurses 70%	Nurses 34%
Patients 23%	Patients 60%
Nurses and patients 3%	Nurses and patients 1%
Relatives 4%	Relatives 5%

### Box 1

- *What challenges do nurses experience in having to abstain from screening patients with alcohol overuse upon admission to an emergency ward?*
- *How does the nurse experience being able to support the patient with alcohol dependence in the treatment of alcohol withdrawal during hospitalization?*
- *What may be the reasons for the nurses' failure to report pressure sores as an unintended event?*
- *What experience does the nurse have with nonpharmacological interventions that can promote sleep in the elderly hospitalized patient in an orthopedic surgery department?*

We have previously been critical of the fact that many students interview nurses about their experiences of patients' experiences or of nursing [1]. However, it may be relevant to interview e.g., expert nurses as part of an evidence-based approach, if there are no studies that can inform this better. This is not the case with the 14 assignments from the 2021 sample where nurses have been interviewed. The examples in **Box 1** are representative of these assignments.

For these assignments it is not expert nurses who are being interviewed. They are studies describing specific local conditions, and at worst, the students have interviewed nurses about problematic nursing behavior on the ward. This leads to unfolding of criticism of the local practice which can be well justified as a starting point of a bachelor assignment, but not as a conclusion where we would rather see the students describe best practice.

The examples of problems mentioned in **Box 1** can be relevant for studies leading to organizational changes, postgraduate education, workplace-based education, or better management. But in our perspective, these are not problems relevant for a bachelor assignment which should be the conclusion of a basic nursing education. The point of both analysis (2018 and 2021) is that interviews provide local knowledge, while literature studies can provide global, possibly evidence-based knowledge.

As seen in **Table 1**, 66% of the assignments in 2021 have used literature studies as a method. **Table 3** shows the focus of the literature studies, where 74% have an experience-oriented focus, divided between patients' experiences, nurses' experiences, and relatives' experiences. The remaining 26% (24 out of 92) are literature studies examining the effect of interventions, evidence for interventions or looking for suggestions for interventions.

Table 3: Focus of literature studies.	
Literature studies 2021 (n=92)	
Experience-oriented focus 74%	Patients experience (=51)
	Nurses experience (=17)
	Relatives experience (=4)
Effect/intervention or action-oriented focus 26% (=24)	

Out of the 26% literature studies, many investigate the effect of various interventions. Two examples of this are investigations of *Non-pharmacological intervention for the prevention of delirium in hospitalized elderly patients at the intensive care unit* and a project looking into *Early postoperative course in the pain-affected patient who has had a total knee arthroplasty*.

This suggests that some bachelor assignments (17% of all assignments) are beginning to reflect evidence-based practice, and that these students in their assignment demonstrate that they can intervene evidence-based. And thereby showing that they have the academic skills required by newly qualified nurses.

Something we did not see in the 2018 sample are intervention studies. In the 2021 sample this was 2% of the assignments (n = 3). In these assignments, the following have been studied:

*What effect does Virtual Reality have on pain and pain anxiety, in the context of first-time mobilization postoperatively in patients with HF, compared to conservative pain management?*

*What effect do tryptophan-containing meals have on the amount of sleep in the nursing home resident?* The students who have prepared these assignments have all been closely associated with the place of practice where the intervention was carried out.

### Conclusion

This mini-review is a summary of an original article renewed with the account of a new analysis of 140 bachelor assignments seen in the light of the latest literature in the field. The two samples of nursing bachelor assignments analyzed in 2018 and 2021 show the same inclination of nursing students to be more concerned with experiences than with nursing interventions aimed at problems patients have. However, there is an incipient tendency for students at this level to investigate the effect of various interventions and even test interventions themselves during the bachelor period. We now see more assignments where students focus on nursing interventions and knowledge of effect when they explore how the nurse should handle a clinical problem the patients have. This is a positive tendency, but still only 17% of the students demonstrate competence to use evidence-based practice in bachelor assignments.

Therefore, we must conclude that most bachelors' assignments in nursing do not demonstrate an adequate level of academic competence at graduation and we can also conclude that this is a problem which

in internationally recognized. The need for educational development in this field seems obvious and the execution of experiments and publication of the results along with pedagogical reflection could make a huge difference to enhance nursing education at this point.

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