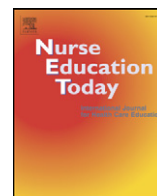




Contents lists available at SciVerse ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Writing a bachelor thesis generates transferable knowledge and skills useable in nursing practice

Solveig M. Lundgren^{*}, Barbro Robertsson¹

Institute of Health and Care Sciences, Sahlgrenska Academy, University of Gothenburg, Sweden

ARTICLE INFO

Article history:

Accepted 24 October 2012
Available online xxx

Keywords:

Transferable knowledge and skills
Utilization of knowledge and skills
Bachelor thesis
Nursing education
Content analysis

SUMMARY

Generic skills or transferable skills have been discussed in terms of whether or not skills learned in one context can be transferred into another context. The current study was aimed to explore nurses' self-perceptions of the knowledge and skills they had obtained while writing a Bachelor's thesis in nursing education, their experience of the extent of transfer and utilization in their current work. Responding nurses (N = 42) had all worked from 1 to 1.5 years after their final examination and had completed a questionnaire that was structured with open-ended questions. Only five nurses reported that they were unable to use any of the knowledge and skills they had obtained from writing a thesis. A majority of the nurses (37/42) could give many examples of the practical application of the skills and knowledge they had obtained. Our findings indicate that writing a thesis as part of an undergraduate degree program plays a major role in the acquisition and development of knowledge and skills which can subsequently be transferred into and utilized in nursing practice.

© 2012 Elsevier Ltd. All rights reserved.

Introduction

It is important to investigate if knowledge and skills obtained from researching and writing a Bachelor thesis, as a part of undergraduate nursing education, is usable and applicable in nursing practice. In Sweden, all registered nurses have a professional qualification as well as a Bachelor's degree in nursing following the implementation of the Bologna process (SFS, 2006: 1053). Bologna process aims to harmonize program structures in European Higher Education Area so they are comparable among countries in Europe (European Commission: Tuning educational structures in Europa, 2006). Since the nursing education has moved into universities, academia demands an emphasis on a scientific approach to critical thinking (Department of Education, 1992). Whereas Greenwood (2002) states that the intention of Bachelor programs is to produce lifelong learners, obtaining a range of theoretical insights and capacity to solve practical problems. Some of these demands can be expected to be met during the learning process and while undertaking a thesis project during nursing education (Blenkinsop, 2003). Education concerning research as part of the academic nursing education has been found to promote positive attitudes towards research, and increase knowledge of research procedures and the interpretation

of results (McCleary and Brown, 2003). In addition, in a study by Lundgren and Halvarsson (2009) Swedish nursing students clearly state that they expected that the skills acquired through writing a Bachelor thesis would be of great value in their future professional life. In contrast, several studies have shown that some nursing students perceived that their education did not fully integrate the clinical and the academic aspects (Holmström and Larsson, 2005) and that the scientific theoretical perspective did not always reflect actual clinical practice (Maben et al., 2007). Some nurses having had 3 years of work experience rated the teaching of research methodology during their education as being the least important in their professional work (Danielson and Berntsson, 2007). Hek and Shaw (2006) found that newly qualified nurses after three months of work believed they had received instruction regarding research in nursing school that they could not relate to clinical practice. However, 12 months later, some of these nurses could acknowledge a greater relevance of the research components in their current and future activities.

Transferable Knowledge and Skills

There are many terms used in the literature for the process of putting research knowledge into practice, such as *knowledge translation*, *knowledge transfer*, and *research utilization* (Graham et al., 2006; Wallin, 2009). Transferable knowledge and skills are described in a variety of terms such as key, core, soft and generic skills (Bridges, 1993; Curry and Sherry, 2004). According to Curry and Sherry (2004) transferrable skills include both academic, works, social and personal skills. Generic skills or transferable skills have been discussed in terms of whether or not skills learned in one context can be transferred into another new

^{*} Corresponding author at: Institute of Health and Care Sciences, Sahlgrenska Academy, University of Gothenburg, Box 457, SE-405 30 Göteborg, Sweden. Tel.: +46 317866094; fax: +46 317866120.

E-mail address: Solveig.Lundgren@gu.se (S.M. Lundgren).

¹ Tel.: +46 317866082.

context (Crebert et al., 2004). Tennant (1999) claimed that transfer process occurred when there was a possibility of some learning and practical assistance to the new or transfer situation. Knowledge and skills which can be applied across a range of situations are said to be more 'generic' than knowledge and skills that are limited to the context in which they are acquired (Tennant, 1999). Transferable interpersonal skills on the other hand, are assumed to transfer readily across a range of contexts (Boyce et al., 2001; Curry and Sherry, 2004).

Employers have expectations that formal education should produce the kind of learning that allows adaptability and flexibility and creates workers who quickly and willingly apply their existing knowledge and skills to new situations (Tennant, 1999). In nursing education, Blenkinsop (2003) proposes that the learning which takes place when undertaking a thesis project can give transferable skills and knowledge that qualified nurses can subsequently use in nursing practice.

Research Utilization

According to Estabrooks (1999) research utilization is the use of research findings which can be conceptualized as instrumental, conceptual and/or symbolic. Instrumental referees to a concrete application of research findings such as making a decision or an intervention. Conceptual research utilization can increase awareness of the research, result in changes in thinking but not always in actions whereas symbolic is the use of research to influence the views of others on a particular issue. Lack of academic degree among nurses significantly increased the odds of perceiving barriers to research utilization (Nilsson Kajermo et al., 2008) whereas nurses who had studied research methods in their basic nursing education seemed to experience fewer barriers (Nilsson Kajermo et al., 1998). Education seems to be one factor in overcoming negative attitudes towards research utilization (McCleary and Brown, 2003). From an educational perspective, very little is known about how academic attitudes and values obtained through writing a Bachelor thesis and the skills obtained, are transferred and utilized in clinical practice.

Aim

To investigate how nurses' knowledge and skills obtained from writing a Bachelor thesis in their nursing education are transferred and utilized in clinical practice.

Method

The current paper reports the results from a questionnaire structured with a series of open questions, given to nurses who had completed a Bachelor thesis during their education. All the nurses had been initially prepared for the work on their theses by taking two 5 point courses in scientific methodology during their first five terms of the education. The aims of these courses were that the student should learn to analyze, critically review and discuss scientific papers. The compulsory thesis writing course was held in the sixth and final term of the student's education. The theses are, to a great extent, based on literature reviews of scientific papers and should be written and presented according to the university's accepted standards. The students were free to choose any topic within the overall scope of caring and nursing, and could write their thesis individually or in cooperation with another student. The course included a final seminar discussion of the thesis with a co-student acting as a "critical opponent."

Sample

Two classes of nurses who had been working 1 to 1.5 years following their graduation from the university, a total of 64 nurses, were invited to participate in the study. All graduated from the University

of Gothenburg. The nurses were contacted in conjunction with a planned follow-up of alumni. All nurses were at the time working in inpatient care. No further demographic data were collected.

Data Collection

The questionnaire consisted of nine open-ended straight forward questions concerning the possible importance and usefulness of writing a thesis to their choice of nursing specialty and everyday nursing practice. The questions were formulated in order to capture their self-perceptions and experiences of the extent of transfer and utilization of the knowledge acquired during the writing of their theses. Examples of questions are: "Have you used your thesis work in your professional work? How?", "Have you been able to use the way to work, which you used for thesis work, in your profession?" and "Did you learn anything new during the thesis work about your own abilities? Describe what!" The questionnaire was sent by post and a reminder was sent four weeks after the initial distribution.

Data Analysis

The answers given in the questionnaire were collated, transcribed and content analysis subsequently performed. Initially, all the answers given were read thoroughly, in order to obtain a sense of the overall response. Since the questions were partly overlapping and some were deliberately vaguely formulated, the answers did not easily fall in to mutually exclusive categories. Because of this, the whole text had to be consolidated into one document, and the text was then read carefully with the aim of the study in mind (Graneheim and Lundman, 2004). The text was re-read and key sentences or words were marked and divided into meaning units, codes were created and considered according to any apparent similarities and differences, interpreted, sorted and abstracted into themes (Krippendorff, 2004). To increase credibility the analysis was performed by both authors who debated and discussed the values and assignments of the codes and themes in order to confirm validity until a consensus was reached.

Ethical Considerations

The study was approved by the Head of the Institute of Health and Care Sciences and conducted according to the ethical standards and guidelines of the declaration of Helsinki (World Medical Association, 2008). Each questionnaire was coded, and names and codes were kept separately, thus guaranteeing confidentiality. A participant information fact sheet giving details of the study was enclosed together with the questionnaires, and participation consent was assumed on the basis of the return of the completed questionnaire.

Findings

The number of completed and usable questionnaires was 42, giving a response rate of 65%. The answers were mostly rather short. Only five nurses reported that they had not been able to use any of the knowledge and skills obtained from writing a Bachelor thesis in their current clinical practice.

Two domains were identified: the knowledge and skills gained through working with the thesis; and the utilization in clinical nursing practice of gained knowledge and skills. These domains are described and illustrated below.

Knowledge and Skills Gained

A Critical Approach to the Research Process

The nurses stated that they had learned how to find and evaluate research findings through the research methods used in the thesis. The nurses had also developed a scientific approach towards research

findings. As a result they had become far more analytical and selective regarding research sources, and had developed a critical thinking ability and attitude. The nurses declared that they now had ... a *better insight in how many conclusions can be underpinned scientifically* (34) and ... *learned how to process information* (29). Consequently, their reading and automatic acceptance of research reports had changed. They had become more uncertain and dubious about some research sources and research findings, and this circumstance had: ...*contributed to the fact that I am now far more selective and critical about transferred knowledge and have a better understanding of how it has been developed* (22) ... *and am more critical in my reading* (10, 14). Some of them even had an attitude of suspicion and skepticism towards the results of many research findings ...*one should not believe in everything one reads, as it is easy to distort research results* (59). Others declared that they relied more on research findings than knowledge presented in other media. Furthermore, they declared that they had become more adept at writing and formulating their thoughts, better at analyzing information, critically scrutinizing and questioning information and texts.

Awareness of Patients' Needs

By immersing themselves in a nursing area in the thesis the nurses became more aware of patients' situation and could understand how certain patients and relatives could experience their situation, as stated by two nurses ...*Better understanding and insight into the patients and relatives situation* (19) ...*facilitates the understanding ... of patients with symptoms that I wrote about* (46).

Awareness of Personal Abilities

During the process of writing the thesis, the nurses became aware of some of their personal characteristics they had not earlier realized, and one of them stated that: ...*it's a long exciting process when you write a paper, and it sometimes reveals personal limitations and abilities – its' both exciting and challenging* (60). Almost all of the theses were co-written by two authors. Being two responsible authors required extensive team work which made the students discover both their strengths and weaknesses such as i) being more of a leader, ... *got reaffirmation that I'm a controlling person who easily go into a leadership role in a group project* (26) as one nurse declared ii) being able to accept criticism ... *I've learned to accept criticism in a better way without getting discouraged* (29) or iii) avoiding and being afraid of conflicts ...*how afraid I am of conflicts* (33). As a result they experienced a feeling of "personal fulfillment" and felt that they could ...*accomplish more than I would have thought possible, if I only give myself time enough and if I am patient* (37) *I felt that I "had grown"* (20).

The nurses reported that they were now more confident in their own abilities, and their self-confidence and self-esteem had increased ...*that I can now trust myself, and what feels good* (55). They felt that they had developed more patience, endurance, and were more goal-orientated than before.

Utilization in Clinical Practice of Knowledge and Skills Gained

The Use and Application of Relevant Research Findings

The nurses reported a new basic understanding of how a study is conducted. Increasing skills in identification and assessment of research findings and the ability to apply this knowledge and skill in their nursing practice were also reported ...*I have learned to search for relevant research papers and critically examine them, which has been of great importance when a representative from a pharmaceutical company presented study results that proved that their drug is the best* (26). Writing a thesis had led to an understanding of the importance of being updated in their specific nursing field, and applying this new knowledge, which had ...*helped my professional work to become more evidence based* (22). Some nurses had used the information seeking skills in post graduate courses. One of the nurses reported having

used these skills in the creation of an instrument for quality assurance of nursing care on the ward.

The Use and Application of the Thesis Topic in Work Situations

Some nurses worked on wards that specialized in the same field of nursing as the topic of their thesis, and they had thus been able to utilize the findings from their thesis in nursing practice. Nurses declared that the knowledge gained had been generally very useful in different caring situations and was retained in their memory for practical use. ...*I use the results from what we wrote almost every day in different situations* (8). The special understanding and insight into the situation of certain patients which was the topic of the thesis could by some nurses be used and applied in practice, but another nurse stated: ...*I have not used any of my work. Today, I realize that I should have specialized in a completely different topic* (28).

Nurses provided examples of situations in which they had used their knowledge from the thesis work in every day work... *I tried to remember to do as much as possible at the same time, in order to minimize any disturbance to the patient during the night* (42). Some nurses reported having been given specific work related to the topic of their thesis; such as giving lectures, being responsible for a specialized area of nursing care, or participating in targeted quality development, one nurse wrote that ...*I am now responsible for pain management on the ward* (58). Some nurses had been able to offer their specialized knowledge to other health-care professionals and to support colleges by ... *teaching other staff members, and giving suggestions for organizational development* (22).

Application of Personal Abilities

Increasing self-awareness of their own abilities or limitations in collaborative situations could lead to changes in the behavior of the nurses. The person ...*who easily go into a leadership role in a group project... am now trying to restrain myself and take a step back at my clinical work and do not always take the role of leader* (26). Some individuals had become more skilled in the dealing with conflicts, and could collaborate with other members of the team and give support to others. Others stressed that they were now able to stand up for themselves and declare and defend their own opinions. Some of these newly revealed attributes had been very useful, and some nurses even stated that those attributes are essential in nursing practice. One nurse stated ...*I have become much more independent* (29) and another wrote ...*my analytical thinking and my reflective ability have increased...I think that these two requirements must be nurses' main characteristics* (22). Other professionals had asked a lot of questions about the findings in the thesis and discussions had started. As a result, the nurses' self-esteem had increased since they had received recognition, appreciation and respect for their thesis as stated by one nurse ... *got many questions about my findings and a lot of respect for the thesis work* (16).

Discussion

This study investigated nurses' knowledge and skills obtained from writing a Bachelor thesis. The most prominent findings in this study were that the thesis work had generated transferable knowledge and skills useable in daily work.

Nurses reported that they now know how to search for and find information and critically assess information in a scientific manner since these attributes were required as a crucial and integral part of their thesis work. This kind of knowledge is thus what Biggs and Tang (2009) call functional knowledge; knowledge that is within the experience of the learner, knowledge that "requires a solid foundation of declarative knowledge", which in this case is theoretical knowledge in finding and assessing information. It thus seems as if writing a thesis is a way of learning functional knowledge which the nurses can apply in clinical practice. Some nurses confirmed that they had been able to find relevant information to update their

knowledge in a specific area. However, much of the knowledge and skills mentioned by nurses are related to the research process and are what is known as generic skills or generic attributes (Barrie, 2006).

In the current study many nurses stated that they could distinguish between science and non-science, they think and read more critically and are critical of sources. Almost all of the respondents associated critical thinking primarily with their reading of scientific papers or articles. They had become more critical, and even in some cases, skeptical towards research findings and the way findings were produced. The critical thinking and critical investigative skills that nurses believe they had were also valued positively and highlighted as an important prerequisite for evidence-based work in clinical practice.

In several studies, critical thinking is regarded as an important generic skill and a desirable educational outcome particularly in relation to professional and higher education (Profetto-McGrath et al., 2003; Daly, 1998; Worrell and Profetto-McGrath, 2007). In nursing practice today critical thinking is important, since nurses have to keep pace with current scientific knowledge (Profetto-McGrath et al., 2003).

Several nurses also declared that they had gained detailed knowledge in the field that was the topic of their thesis. This kind of knowledge is usually called declarative/propositional knowledge (Biggs and Tang, 2009), i.e. knowledge about specific patients or nursing activities, such as caring for patients with certain diagnoses. This knowledge also seemed to be functional knowledge, knowledge that the nurses have been able to transfer into action. Nurses understood for example how patients may experience illness and they knew how they could respond both clinically and interpersonally to those patients. Here, then, the findings in the thesis rather than the scientific method is the source of knowledge. The nurses had thus been able to utilize research findings, which in literature is called research utilization (RU) (Estabrooks, 1999). All three different types of RU: conceptual, instrumental and symbolic (Estabrooks et al., 2003) were found in this study. The most common form in the current study was the conceptual use since there were several examples of how research findings in the thesis led to an increased awareness and change in thinking about certain patients or situations. Instrumental RU was also seen, for example in how nurses had learned about various treatments, such as pain management. An example of symbolic use is when nurses had discussed the topic of the thesis with colleagues and other professionals. Our findings are in line with other studies that have reported conceptual RU as most frequent (Estabrooks, 1999; Profetto-McGrath et al., 2003).

Other skills or attributes that nurses claimed they had obtained are personal and interpersonal transferable or generic skills. Nurses reported that they had detected or developed personal attributes such as adaptability, and positive self-esteem with an increased self-awareness of their own capabilities by working with the thesis. Furthermore, interpersonal skills they reported were teamwork, and communication skills. Today they are able to cooperate with, and to coach and mentor colleagues in their thesis work. These generic skills are in line with the attributes that have been described as desirable outcomes of education both by employers and academics (Bowden and Marton, 1998). Nurses also describe other capabilities detected or developed, such as to be patient and sensitive, apply conflict resolution skills which may have increased their maturity (Barrie, 2006). They considered these personal qualities and skills as important and both a requirement for nursing work and a prerequisite for working with people. Thus the nurses seem to be aware of the personal qualities that are required in professional work. According to Biggs and Tang (2009) a generic view of graduate attributes often comes down to personality change. However, these attributes cannot only be seen as independent of discipline knowledge; they rather interact with and shape discipline knowledge, and are in turn shaped by disciplinary knowledge (Barrie, 2004). Additionally, generic attributes are essential in allowing the translation and application of discipline knowledge in the real world of clinical practice (Barrie, 2006). The

generic attributes, learned through writing a thesis have given the nurses the capacity to apply knowledge in other contexts, thus being able to master the transfer of skills (Bridges, 2006; Bowden and Marton, 1998). Bridges (2006) argues that any social context is unique and hence that any reproduction of a skill learned in one context and used in another must involve transferability.

Nurses who had successfully completed a thesis perceived that they were given a higher professional status by others and earned their respect. This respect may facilitate the process of reworking a professional identity (MacIntosh, 2003) and may strengthen their ability to represent the nursing profession (Watkins, 2011). Furthermore, thesis work in nursing education may also be important to increase nurses' professional credibility. In addition, it can be suggested that a supportive climate is essential if nurses are able to utilize and transfer their knowledge and skills into the working context (Tennant, 1999). This study describes and concludes that the knowledge and skills obtained from writing a thesis are transferable and can be applied in clinical nursing practice during the first two years after graduation. The findings demonstrate that nurses perceive that they have acquired and have used a variety of skills and knowledge as a result of their undergraduate thesis work. We propose that writing a thesis can create a link between the learning process and future tasks, both in the continuing learning domain, and in the clinical nursing setting where the knowledge and skills are to be applied, forming a link between theory and practice (Burke et al., 2005). In addition it can be suggested that allowing students to make their own choice of thesis topic is important in order to become independent lifelong learners (Biggs and Tang, 2009; Lundgren and Halvarsson, 2009).

Methodological Considerations

Although the findings of this study provide insights into the transferability of education and skills there are some limitations that should be noted. A qualitative design is adequate for the investigation of nurses' knowledge and skills gained from writing a thesis. However, the collection of data in the form of a questionnaire leads to a perhaps somewhat incomplete in-depth understanding of the respondents' perceptions, as no possibility is allowed for clarification or explanation of the responses. Accordingly, the completed and collated texts were carefully analyzed; both researchers subsequently analyzing them independently to avoid any risk of bias. A consensus following the analysis and results was then established and confirmed between the two researchers. It is reasonable to assume that this particular approach can give an interesting and worthwhile supported credibility to the study. Trustworthiness and credibility were further achieved by including representative quotations from nurses, that show how the findings are grounded in the transcribed text, and enables the reader to more fully understand the findings.

Conclusion

The result of this study suggests that writing a thesis in nursing education has a major role to play in the acquisition and development of knowledge and generic skills which can be transferred into and utilized in nursing practice. The knowledge and skills obtained while writing an undergraduate thesis are research orientated, cognitive, personal, interpersonal and communicational. These acquired skills had strengthened the nurses in their profession, and contributed to a more professional structured way of thinking and working. Our findings add to the evidence that education concerning research as an integral part of nursing education is associated with, and can promote, transferable knowledge from formal, theoretical education into practice.

Acknowledgment

We are most grateful to the nurses who participated in this study.

Author Contributions

Study design: SML; data collection: SML; data analysis: SML, BR; manuscript preparation: SML, BR; literature review: SML, BR.

Funding

No funding has been granted.

Ethical Approval

The study was approved by the Head of the Institute. Approval from the university research ethics committee was not required or requested since this study does not fall under the Swedish Act concerning Ethical Review of Research Involving Humans. The participants were fully informed about the voluntary nature of participation and that data would be handled with confidentiality.

References

- Barrie, S.C., 2004. A research-based approach to generic graduate attributes policy. *Higher Education Research and Development* 23 (3), 261–275.
- Barrie, S.C., 2006. Understanding what we mean by the generic attributes of graduates. *Higher Education* 51, 215–241.
- Biggs, J., Tang, C., 2009. *Teaching for Quality Learning at University*. Maidenhead Open University Press. (McGraw-Hill Education).
- Blenkinsop, C., 2003. Research: an essential skill of a graduate nurse? *Nurse Education Today* 23, 83–88.
- Bowden, J., Marton, F., 1998. *The University of Learning Beyond Quality and Competence in Higher Education*. Kogan Page Limited, London.
- Boyce, G., Williams, S., Kelly, A., Yee, H., 2001. Fostering deep and elaborative learning and generic (soft) skill development: the strategic use of case studies in accounting education. *Accounting Education* 10 (1), 37–60.
- Bridges, D., 1993. Transferable skills: a philosophical perspective. *Studies in Higher Education* 18 (1), 43–52.
- Bridges, D., 2006. Transferable skills: a philosophical perspective. *Studies in Higher Education* 18 (1), 43–51.
- Burke, V., Jones, I., Doherty, M., 2005. Analysing student perceptions of transferable skills via undergraduate degrees. *Active Learning in Higher Education* 6, 132–144.
- Crebert, G., Bates, M., Bell, B., Patrick, C.-J., Cagnolini, V., 2004. Developing generic skills at university, during work placement and in employment: graduates' perceptions. *Higher Education Research and Development* 23 (2), 147–165.
- Curry, P., Sherry, R., 2004. The hidden value of higher education learning: transferable skills and their importance for graduates of modern language programmes. Trinity College Dublin, Dublin City University, Waterford Institute of Technology.
- Daly, W.M., 1998. Critical thinking as an outcome of nursing education. What is it? Why is it important to nursing practice? *Journal of Advanced Nursing* 28 (2), 323–331.
- Danielson, E., Berntsson, L., 2007. Registered nurses' perceptions of educational preparation for professional work and development in their profession. *Nurse Education Today* 27 (8), 900–908.
- Department of Education, 1992. *EU Directives Regarding Nursing Education and Midwifery Education*. Utbildningsdepartementet, Stockholm. (in Swedish).
- Estabrooks, C.A., 1999. The conceptual structure of research utilization. *Research in Nursing & Health* 22, 203–216.
- Estabrooks, C.A., Floyd, J.A., Scott-Finlay, S., O'Leary, K.A., Gushta, M., 2003. Individual determinants of research utilization: a systematic review. *Journal of Advanced Nursing* 43 (5), 506–520.
- European Commission, 2006. *Tuning educational structures in Europa*. (Education and Culture, Socrates).
- Graham, I.D., Logan, J., Harrison, M.B., Straus, S.E., Tetro, J., Caswell, W., Robinsom, N., 2006. Lost in knowledge translation: time for a map? *The Journal of Continuing Education in the Health Professions* 26, 13–24.
- Graneheim, U.H., Lundman, B., 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today* 24, 105–112.
- Greenwood, J., 2002. Critique of the graduate nurse: an international perspective. *Nurse Education Today* 20, 17–23.
- Hek, G., Shaw, A., 2006. The contribution of research knowledge and skills to practice: an exploration of the views and experiences of newly qualified nurses. *Journal of Research in Nursing* 11, 473–482.
- Holmström, I., Larsson, J., 2005. A tension between genuine care and other duties: Swedish nursing students' views of their future work. *Nurse Education Today* 25 (2), 148–155.
- Krippendorff, K., 2004. *Content Analysis: An Introduction to Its Methodology*, 2nd edn. Sage, Thousand Oaks, CA.
- Lundgren, S.M., Halvarsson, M., 2009. Students' expectations, concerns, and comprehensions when writing theses as part of their nursing education. *Nurse Education Today* 29, 527–532.
- Maben, J., Latter, S., Macleod, Clark J., 2007. The sustainability of ideals, values and the nursing mandate: evidence from a longitudinal qualitative study. *Nursing Inquiry* 14 (2), 99–113.
- MacIntosh, J., 2003. Reworking professional nursing identity. *Western Journal of Nursing Research* 25 (6), 725–741.
- McCleary, L., Brown, T., 2003. Association between nurses' education about research and their research use. *Nurse Education Today* 23, 556–565.
- Nilsson Kajermo, K., Nordström, G., Krusebrant, Å., Björvell, H., 1998. Barriers to and facilitators of research utilization, as perceived by a group of registered nurses in Sweden. *Journal of Advanced Nursing* 27, 798–807.
- Nilsson Kajermo, K., Undén, M., Gardulf, A., Eriksson, L.E., Orton, M.-L., Arnetz, B.B., Nordström, G., 2008. Predictors of nurses' perceptions of barriers to research utilization. *Journal of Nursing Management* 16, 305–314.
- Profetto-McGrath, J., Hesketh, K.L., Lang, S., Estabrooks, C.A., 2003. A study of critical thinking and research utilization among nurses. *Western Journal of Nursing Research* 25 (3), 322–337.
- SFS 2006: 1053. Higher Education Ordinance, Förändring om ändring i högskoleförordning (1993:100) <http://www.notisum.se/rnp/sls/sfs/20061053.PDF> (retrieved 20121015).
- Tennant, M., 1999. Is learning transferable? In: Boud, D., Garrick, J. (Eds.), *Understanding Learning at Work*. Routledge, London.
- Wallin, L., 2009. Knowledge translation and implementation research in nursing. *International Journal of Nursing Studies* 46, 576–587.
- Watkins, D., 2011. The influence of Masters education on the professional lives of British and German nurses and the further professionalization of nursing. *Journal of Advanced Nursing* 67 (12), 2605–2614.
- World Medical Association Declaration of Helsinki, 2008. *Ethical principles for medical research involving human subjects*. Seoul. Available 20100510 at www.wma.net/en/30publications/10policies/b3/17c.pdf.
- Worrell, J.A., Profetto-McGrath, J., 2007. Critical thinking as an outcome of context-based learning among post RN students: a literature review. *Nurse Education Today* 27, 420–426.