

Project report – English abstract

Ergonomic patient handling in the nursing vocational education

Ergonomic patient handling in the nursing vocational education

Current situation in Germany and consequences for action

Stella Hermann, Martina Michaelis, Alexandra Schulz

January 2014

The entire project report in German language is available at

<http://www.ffas.de/assets/pdf/VORSPANN-Homepage-Projektbericht-ErgonomPatHand-V6.pdf>

Background and aims

The nursing profession has high physical workload which is aggravated by the increasing number of obese and elderly people, and a chronic and increasing deficit of health care workers in Germany. This makes prevention of physical strain in nurses much more important. Appropriate concepts should be taught currently during nurses' vocational education, in a way that assures newly qualified nurses can work safely.

Ergonomic patient handling (EPH) is defined as a systematic approach to achieve a risk reduction of the strain from work situations. This includes a holistic and multidimensional approach across all manual handling methods, which considers a systematic patient assessment of moving resources and risks, an optimised organisation of rooms, working team and lifting devices/aids.

Until this study, the current status of EPH in German nursing and geriatric nursing vocational education was not fully known.

The aim of this mixed methods project was to highlight the current status of EPH both in terms of the vocational education documentation and of theoretical and practical education for nursing students, and to make resulting recommendations for action.

Methods

The survey was conducted in three sub-projects (**SP**) adopting qualitative and quantitative approaches between 2012 and 2013:

1. **SP1**: Analysis of the decision-making structures of vocational education in the nursing profession, as well as analysis of the content of documents on which the vocational education is based (national laws and federal state guidelines, curricula, reference books, textbooks, and specialist textbooks related to patient handling techniques).
2. **SP2**: Interviews with experts to evaluate ergonomics aspects of nursing teachers' education at German universities and universities of applied science to understand and define the need for action with regard to physical strain when handling patients (including experts from the fields of school, university and vocational education as well as from the fields of statutory accident insurance, trade unions, professional associations and welfare associations).
3. **SP3**: Nationwide empirical survey of nursing teachers at nursing schools, related to the current anchoring of EPH contents and quality-assurance structures in theoretical and practical vocational education and to the quality of 'learning site partnerships' with actors in hospitals and geriatric nursing homes ⁽¹⁾. Descriptive analysis with statistical comparison between both types of the nursing education in the German health care services.

Results

SP 1: In the current wealth of documents on which professional nursing education is based, EPH has, until now, not been uniformly anchored as a subject in the training curriculum from either the aspect of nursing expertise or that of prevention.

Moreover, there is a lack of professional quality standards and textbooks related to patient handling techniques aimed at protecting the health of trainee nurses. In the nursing textbooks examined, there were only a few points of reference for systematic and comprehensive development of EPH action strategies for nurses.

However, back-friendly working methods when handling patients have featured in content, at least regarding specific aspects in recent years. Nursing textbooks related to practical nursing techniques rarely include content covering all relevant areas of activity or about protecting oneself from physical straining a comprehensive way.

SP 2: All the experts referred to the need for EPH qualification as part of teacher training as well as for practical instructors ⁽²⁾, especially those who teach practical EPH skills. Nearly all the experts also emphasised the need for general improvements to the structural framework of practical training. Such improvements would include uniform basic standards for the minimum scope of practical instruction and more specifically detailed content in a practice curriculum.

¹ Special structure in the German nursing vocational system

² Staff members from the ward in charge of mentoring the practical job training

SP 3: Of 1309 nursing schools contacted, the response rate was 20% (n=267). Thus, generalising statements should be treated with caution. The responding teachers with patient handling expertise stated self-protection of nurses while handling patients had a positive status, although the majority did not treat the subject consistently from the ergonomic aspect. There were differences in the EPH-related qualifications of teaching personnel and the ergonomic equipment available in school practical training rooms ⁽³⁾.

The situation as regards scope and quality of practical EPH training and cooperation between all involved at the interface between theory and practice (esp. teachers and practical instructors) in Germany is very heterogeneous and notably deficient in geriatric nursing training.

Discussion

To assure the quality of EPH training in nursing nationwide, uniform and mandatory qualification standards should be introduced to enable quality assurance in nurses' vocational education.

Currently, the situation is inconsistent in Germany, since the vocational education of nurses is neither integrated completely into the general German educational system nor into the European system of nursing college education. So far there is no sufficient common action across the federal states towards nationwide professional qualification standards. This prevents any step forward to establish a common general reform process with nationally uniform and mandatory framework syllabus with an agreed practice curriculum. Furthermore a future anchoring of EPH aspects on this base is not yet foreseeable.

An alternative objective that could be established at short notice for the acquisition of EPH skills could be a common curriculum 'module' for instruction and practical training, based on a cooperation between nursing sciences and health and safety actors. This would describe:

- examination-relevant learning goals and practical skills in EPH (expressly as an approach that cuts across motion concepts),
- specified minimum times for practical instruction, training and exercises to consolidate practical EPH skills, and
- time-bound EPH-related minimum rules for mentoring practical work and instruction.

In addition, all teachers, who are involved in mentoring practical work and act as examiners should have:

- A basic, EPH-related qualification, possibly with external financial support.
- Evidence of practical EPH skills.
- Access to systematic EPH training of practical instructors/qualified nurses which takes place at the practice learning site (if need be as 'training on the job' by in-house facilitators).

³ Simple skills labs for practical training

Quality features of good practice collaboration between schools and practical learning sites include coordination of EPH learning content and its implementation in practical training. This includes agreed criteria for the use of aids and technical devices, the performance of aid assessments and appropriate use of equipment.

It is recommended that future editions of nursing textbooks should provide a basic knowledge of work related prevention issues and workplace health promotion, as well as an overview of general principles of prevention when working with patients, along with principles of kinematics, biomechanics and ergonomics (illustrated by case studies and the provision of criteria and/or assessment instruments for the selection and use of aids and technical devices, along with safe handling options).

For the practical training and mentoring of nursing students curriculum-based guidebooks are recommended instead of textbooks to give guidance for practical nursing techniques. (These should be geared towards an EPH-related 'module' of a practical curriculum that has yet to be developed.)

Conclusion and outlook

At all the levels examined, there is a need for action to ensure that in future nurses are suitably educated in ergonomic patient handling (EPH) as defined above. The improvements required apply to

- the documents on which nursing vocational education is based in different German federal states,
- the inadequate form of specialist learning materials,
- the insufficient prerequisites for the proper teaching of EPH among teachers,
- the lack of regulations governing cooperation between learning sites ⁽⁴⁾, and
- differences in the implementation of practical training at practical learning sites.

In view of the increasing demand for professional nursing in society and the associated importance of EPH, changes to raise the importance of the subject are urgently needed. Changes must be made at the curricular level, better provision textbooks, widespread qualification of teachers of nursing science and practical EPH trainers.

In future, there is a need for research aimed at comparing the training situation in other countries that serve as role models in the development of EPH standards, such as the Netherlands, Finland or the United Kingdom.

Acknowledgement

We wish to thank the *Institution for Statutory Accident Insurance and Prevention in the Health and Welfare Service [Berufsgenossenschaft fuer Gesundheitsdienst und Wohlfahrtspflege – BGW]* for funding and translation assistance, and Mike Fray, Loughborough University (GB) for helpful language check.

⁴ Between nursing school and the different workplaces during nursing training