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## A perspective on the future possibilities for research by health care professionals

### Abstract

Midwives, members of allied health professionals and nurses make up 64 % of the personnel in the Austrian health sector. These occupational groups are now being educated at the tertiary level – at universities of applied sciences. Due to this academisation, health professionals have to meet the challenge of conducting research on their own or in collaboration with others. While some European countries are already experienced in doing research, Austria is just beginning to do so. This article focuses on the demands placed upon universities of applied sciences and collaborations that could potentially strengthen their research capabilities. It also highlights the critical aspects of conducting research within these young academic disciplines and describes research strategies for performing this research.

### Keywords

academic development, health professionals, science, funding

## Ein Ausblick in die zukünftige Forschung der Gesundheitsberufe

### Zusammenfassung

64 Prozent des Personals im Gesundheitswesen wird von nichtärztlichem Personal gestellt. Die Berufsgruppen der gehobenen medizinisch technischen Dienste sowie der Hebammen haben eine Akademisierung erfahren und stehen nun vor der Herausforderung, aktiv in die Forschung einzutreten. In einigen Ländern der EU ist dieser Prozess schon weit entwickelt, in Österreich jedoch stehen wir am Beginn. Dieser Artikel versteht sich als Anregung und beleuchtet die kritischen Punkte in der Umsetzung der Forschungsaufgabe der Gesundheitsberufe in Österreich. Das Streben nach Vernetzungen macht deutlich, dass Gesundheit gleich der Forschung keine Grenzen kennt.

### Schlüsselwörter

Hochschulentwicklung, Gesundheitsberufe, Forschung, Finanzierung

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# 1 Health professionals in science

## 1.1 Role of health professionals

The medical and health care sector focuses on the diagnosis, prevention and treatment of illness. This sector is extremely large, with a huge variety of clinical, administrative and commercial jobs in both public and private industry. The sector has been the subject of significant change and review in recent years, and due to the requirements of evidence-based medicine and quality assurance, attempts have been made to increase the quality in this highly sensitive field. Sixty-four percent of the total personnel in Austrian medical institutions are midwives, members of allied health professionals and nurses (Gesundheit Österreich GmbH [GÖG], 2011).

Health professionals' major task is to contribute their specific knowledge to the health care team in helping to restore the health of patients. The roles and skills of health care professionals are being affected by the changing social, economic and technological environment, as well as the changing demographic structure of the population (European Hospital and Healthcare Federation [HOPE], 2009). Consequently, they also work in health protection, health counselling and rehabilitation. This challenge has led to an ongoing increase in the professionalization of the group.

In the majority of European countries, the education of health professionals is conducted at the tertiary level (university, university of applied sciences) and results in the achievement of at least a standard Bachelor degree (1st cycle of the Bologna process), although Masters and PhD levels are also available (European Association for Professions in Biomedical Science [EPBS], 2009). In particular in the United Kingdom, the Scandinavian countries, the Netherlands and the United States of America, the academisation of health professionals has been widely established, and adequate positions are available in the labour market for graduates of different levels (FRIEDRICHS & SCHAUB, 2011).

## 1.2 Development of health professionals to become scientists

Due to the aforementioned academisation, an appropriate research environment must be provided and an openness to scientific research must be instilled in these health professionals. Therefore, the education in scientific research has to be embedded in the study programmes. In Austria, the education of health professionals has been regulated by law and has been available at universities of applied sciences (UAS) since 2005 (allied health professionals) and 2008 (nurses). Besides professional methodological competences, §1 stipulates that graduates must also acquire social communication competences and self-competences, as well as scientific competences (Bundesministerium für Gesundheit [BMG], 2006).

Annex 9 defines the scientific competences acquired by the graduates, which should allow them to understand and plan research processes. They must be able to

1. retrieve information on recent scientific findings obtained at the national and international level;

2. formulate issues of relevance to research in the field specific to their profession;
3. select and apply relevant scientific research methods and process the data obtained for finding answers to the issues raised;
4. make scientific findings and phenomena usable for professional and scientific development (BMG, 2006).

Health professionals without higher education are also working on research projects; in many cases, they are doing research for other academic personnel (physicians, natural scientists). The scientific staff, medical doctors (MD) and PhDs appreciate the work of the health professionals who are competent in research methods and in analysing data. However, even if they are doing good work, it is hard for them to become acknowledged by the scientists as a research expert. Few health professionals make their research visible by publishing articles in peer-reviewed journals or by giving lectures at scientific congresses. Traditionally, they have not conducted their own research, but rather were “co-workers” for researchers mainly at medical universities and typically in the fields of medical and natural science. This point of view has changed with the academic change in education in the aforementioned areas. As the education is now academic, the demand for research has also reached these areas of education.

The graduates are still trained for the tasks in their professional practice, but the difference to non-academic education is that they are now expected to work with a higher degree of professionalism, since they are accredited with higher scientific skills. According to the Dublin Descriptors, one aim of higher education is to enable the graduates to apply and produce scientific knowledge and to critically reflect on their working methods (Joint Quality Initiative Informal Group, 2004). To develop the reflexive competences of students, curricula are supposed to contain courses for learning skills, self-management, and bachelor seminars. To develop research competences, courses on scientific work, qualitative and quantitative research methods are preconditions. Furthermore, the direct involvement of students in research projects within the study programmes is regarded as an effective measure for strengthening the scientific competences of the students. Since the academic education of health professionals is a rather young field, to some extent, those employed in the education (i.e. the full-time teaching and research staff) do not have the proper academic qualifications, since by law a graduate degree in the particular health professions is a precondition for a full-time position as a teacher in the UAS (BMG, 2006).

Academisation on its own does not ensure the professionalization of health professionals. They also need control over the production, imparting, application and evaluation of professional knowledge in their practical experience (KACHLER & BEHRENS, 2005). To meet this demand, graduates at the Master and PhD levels are needed, and, as mentioned above, appropriate positions in the labour market must be established. Furthermore, the research infrastructure must be developed, research funds must be made available, and researchers must be encouraged to apply for projects (including all stages of a project from planning to dissemination).

### 1.3 What is the specific research field for health professionals?

Research is a rather young field of activity in the working experience of health professionals. As mentioned above, health professionals' research is conducted in different scientific disciplines, such as medicine, natural sciences, human and social science, philosophy and psychology. In Austria, only nurses have their own scientific discipline (nursing science) and professorships/chairs at universities. In Europe, and especially in the northern countries, where the academisation of health professionals is well established, only some health professionals have their own scientific disciplines (e.g. Occupational Science, Physiotherapy Science). When searching the internet, one finds that most professional research done by health professionals in Europe is conducted in the United Kingdom and in Scandinavia.

In 2010, the Austrian Ministry of Health started a project with representatives from the health professional study courses to evaluate and coordinate the research activities of health professionals and to implement a "research strategy for health professionals". The overall objective was to define the main foci of research activities/fields, which are:

- research on the demand for health professionals and health services
- research on the efficiency and effectiveness of interventions, methods and techniques
- research in the field of health promotion, prevention and strategy for dealing with limited activities in daily life
- research in the field of social and/or health diversity

Research strategy for health professionals also means establishing structural and organisational requirements as one scientific discipline for all the health professionals, as well as enhancing the research competences of the personnel by implementing PhD programmes at universities and by establishing postdoc positions and professorships (GÖG, 2011).

Nevertheless, the homepages of the universities of applied sciences that offer study courses in one or more health professions show little evidence of research activities in Austria. The rare projects represent the heterogeneity of the health professionals but could all be related to one of the main foci mentioned above.

It seems that health professionals do not yet possess the full competences for doing research on their own. They are still at the stage where they have to decide whether to develop their own scientific discipline or to figure out what the reference sciences are and then apply these findings to their research area. Both approaches would contribute to the further professionalization of health professionals.

One significant advantage for health professionals could be research in interdisciplinary teams. A basis for this approach could be created in education. Practice-oriented seminars and exercises could be taught in an interdisciplinary fashion. Students would learn to work together with different health professionals and would learn how to collaborate in an interdisciplinary team. They would recognize their own competences and the competences of the other professionals.

## 1.4 Funding

One major disadvantage for UAS in the health care sector is that there is often only one source of research grants in the area of medicine. For the UAS, who are facing there new task of conducting research, this means competing directly with (medical) universities. Moreover, the programmes are strongly focussed on basic research, which is primarily conducted at universities and rarely at UAS. Consequently, the chances of UAS receiving funding are fairly low.

A logical approach to enabling funding for UAS in the health care sector would be for the Austrian Science Fund (Fonds zur wissenschaftlichen Förderung [FWF]) and the "Österreichische Nationalbank" (OENB) to offer special programmes especially designed for UAS. Such programmes could support the development of research at UAS in the health care sector.

## 2 Outlook

Overall, a mental and scientific change is now needed on both sides. First, those who were formerly relegated to the status of "co-workers" need to take responsibility for their own research and projects. Second, the former main researchers and project leaders (mainly MDs and/or Phds) have to have a change in mindset from seeing themselves as project leaders to seeing themselves as cooperation partners with health professionals.

Health professionals traditionally have not had experience doing their own scientific work. As the curricula in this area have now changed dramatically, the scientific expertise is a major area to be developed. Classical (medical) universities often have hundreds of years of research tradition, while UAS only have a few years.

Therefore, the implementation of a development strategy could help to improve research at UAS in the Austrian health care sector. First, it is necessary to increase the number of research projects and research students, to raise the number of active researchers at UAS through targeted recruitment, to expand research activity and to promote international partnerships/collaboration. Second, in terms of organisation and management, research funding must be increased to facilitate research productivity and excellence, notably in new centres of excellence. The last objective for UAS in the health care sector is to develop specific institutional profiles and to ensure a strong research-based teaching.

Learning from pioneering European countries could help greatly, as in some European countries (e.g. Sweden) health care professionals have always been academically oriented. Establishing connections with these scientifically well-educated countries holds great potential.

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