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Including sustainability issues in nurse education: A comparative study of first year student nurses' attitudes in four European countries

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SUMMARY

Introduction: Education in sustainable development is a goal recognised by a large number of countries and a vital concept in healthcare. It is therefore important that nurse education incorporates elements of sustainable development into nursing education curricula. However, there is limited research on student nurses' attitudes towards sustainability and no comparison of attitudes towards sustainability and its inclusion in the nursing curriculum across Europe.
Aim: This project aims to assess student nurses' attitudes towards sustainability, its relevance to nursing and its inclusion in the nursing curricula.

1. To assess base-line attitudes at the start of nursing and midwifery training;
2. To compare sustainability awareness between students participating in training in a number of European universities.

Design: A comparative survey design using the Sustainability Attitudes in Nursing Survey (SANS_2) questionnaire.
Settings: Nursing classes of Universities and Nursing Schools in four European countries were investigated using a questionnaire consisting of five sustainability-related items.
Participants: 916 nursing students (UK: 450, Germany: 196, Spain: 124, Switzerland: 146).
Data analysis: Standard descriptive and inferential statistical methods were used to establish psychometric quality (Principal Components Analysis, Cronbach's alpha, Pearson correlations) and compare student nurses from the four countries.
Results: The reliability of SANS_2 was good (Cronbach's alpha = .82) and the five items loaded on a single factor which explained 58% of variance. ANOVA of the SANS_2 total score showed significant differences between countries with German nursing students showing more sustainability awareness than students from the UK and Spain.
Conclusions: SANS_2 is a reliable instrument to assess nursing students' sustainability awareness; there are significant differences in sustainability awareness of students of different European countries.
Limitations of the study include non-random sampling, possible method effects and social desirability effects.
Relevance to clinical practice: Sustainability will become increasingly important in clinical practice; greater knowledge about the attitudes of nurses towards sustainability can support the development and testing of sustainability-focused teaching and learning materials.

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Introduction

Sustainable development is a concept vital to healthcare: due to its relatively large CO_2 emissions, the use of toxic materials and the production of vast amounts of waste, healthcare is ultimately compromising public health and damaging the ability of future generations to meet their needs (Healthcare Without Harm, 2010). In the EU, the health sector creates at least 5% of total CO_2 emissions, the equivalent of the region's international aviation and shipping industries combined (KPMG, 2012). Hence, reductions in energy use and improvements in resource efficiency are vital elements of a more sustainable health sector. Recent research commissioned by Health Care Without Harm and Health and Environment Alliance (Healthcare Without Harm, 2010) puts forward a strong case for greater EU leadership in climate change policy that puts peoples' health first. Higher Education has a role to play in developing students of all disciplines with skills that support sustainable development. For example, one of the five priority actions for the Global Action Plan (UNESCO:ESD after, 2014) is to integrate sustainability practices into education and training environments through whole institution approaches.

Background

High CO_2 producing sectors across the EU are responding to the need to take a lead on sustainability. For example, the German Government reaffirmed its commitment to reduce Germany's greenhouse gas (GHG) emission by 40% by 2020 and to increase renewable energies to 18% by 2020 and 60% by 2050.

The Spanish Climate Change and Clean Energy Strategy aims to support clean energies, while improving social welfare, economic growth and environment protection; according to official data on the Spanish GHG emissions Inventory data for 1990–2005, gross emissions increased by 52.2% with respect to the base year. The Spanish strategy includes objectives to develop measures to increase the capacity of citizens to take action through education, professional training and public awareness, to approach climate-related issues in the best possible way.

In Switzerland, following the Federal Council's 2011 decision to abandon nuclear energy, an action plan has been developed which places greater emphasis on renewable energies. The new action plan aims to increase the share of total energy consumption accounted for by renewable energies by at least 50% by 2020, and to cut greenhouse gas emission by at least 20% by 2020 (compared with their 1990 level). Moreover, the plan includes measures to ensure a broader understanding of the principles of sustainable development by everyone through education and also fiscal policy (Sustainable Development Strategy).

In the UK, the National Health Service (NHS) produces approximately 19.7 million tonnes of CO_2 equivalent (NHS Sustainable Development Unit, 2012); significant work needs to be done in order for the NHS to meet its CO_2 reduction targets for 2020. Ninety percent of senior NHS leaders agree that sustainability is important, 60% believe it is essential for the running of their organisation (Naylor and Appleby, 2012).

Sustainable development is becoming increasingly important for healthcare in other countries in Europe as well. For example in January 2012, MVO Nederland (Corporate Social Responsibility Netherlands) established the MVO Netwerk Zorg (CSR Network Health Care) with the objective to enhance Corporate Social Responsibility (CSR) and sustainability within the sector. The associated Manifest 'Voor een gezonde toekomst van de zorgsector' ('For a healthy future of the health care sector') is currently signed by more than 80 health care institutions (Klimaatagenda, 2013).

The important role of education in sustainable development (ESD) has long been recognised, supported by many initiatives under the United Nations (UN). Decade of Education for Sustainable Development (2005–2014). At the 2012 UN Conference on Sustainable Development (Rio+20) Member States resolved to "promote education for sustainable development and to integrate sustainable development more actively into education beyond the Decade of Education for Sustainable Development". In response, the Global Action Programme (GAP) was endorsed by the General Conference of UNESCO in 2013 and launched at the World Conference on Education for Sustainable Development in Aichi-Nagoya (Japan) in 2014 (UNESCO, 2014).

Addressing climate change and sustainability requires specific training and action for mitigation and adaptation. For example the Andalusian Environmental Health Plan states that it is necessary: to promote information and basic knowledge of environmental health aimed at the health professionals of the Andalusian Public Health System (primary care professionals, specialists, etc.); to help to inform healthcare professionals of the activities of the environmental health services in their area; to encourage healthcare professionals to give true and evidence based information; and to contribute to the management of environmental risk perception in their area. Nursing is a specific professional group that requires information and training to participate in meeting these objectives and promote sustainability behaviour. For example, sustainability has been included as a topic in the recently formulated Dutch nurse education profile Bachelor Nursing 2020 (LOOV, 2015).

Despite the widely acknowledged importance of both education for sustainable development (ESD) and a more sustainable healthcare sector, there is limited European literature on nursing and climate change/sustainability; nursing students are poorly prepared to understand the connections between resources, climate change, sustainability and health (Kirk, 2002; Goodman and Richardson, 2010). Sustainability can be embedded in the healthcare curriculum through a range of learning opportunities; for example in the context of public health and health inequalities, poverty, food security, infectious diseases, and skills development (Richardson and Wade, 2010; Richardson et al., 2014). Each learning programme should have sustainability literacy for its nursing students nested within a broader context of links between health and the natural environment, including inequalities in health and opportunities for chronic disease prevention (Barna et al., 2012). Arguably, as climate change and fossil fuel dependency pose serious threats to future healthcare we have an obligation to prepare our students for the consequences, to ensure that they are able to deal with the associated healthcare planning and resource issues.

Nurses are agents of change, have a remit to promote health and control the use of health resources; nursing is one of the largest professions in Europe. Anaker et al. explored nurses' perceptions of climate change and environmental issues in an attempt to understand how they view their role in sustainable development (Anaker et al., 2015). This Swedish interview study concluded that nurses have a responsibility to address climate change and environmental issues. An earlier concept analysis (Anaker and Elf, 2014) concluded that sustainability has far reaching implications for nurses, and recommended that the health sector incorporate sustainability and promote sustainable development. As energy saving and Corporate Social Responsibility are being increasingly taken up by healthcare institutions across Europe, nursing staff need to be equipped with knowledge and skills to support this transition towards a more sustainable heath sector.

Nurse educators have a responsibility to embed this learning using practical (vocational) examples; a nurse who cannot make the links between clinical waste, resource use, carbon reduction and health inequalities will not be able to devise solutions for future healthcare challenges in the face of climate change and sustainable development (Richardson et al., 2014). Yet there is little evidence to suggest that nursing students would welcome this or view sustainability as relevant to nursing. In contrast, sustainability as a topic for inclusion in the Higher Education curriculum has been explored more generally. For example a study conducted with UK students in 2005 found that the majority of respondents think sustainability is "a good thing" but their positive response did not correlate with their degree of familiarity