

# Debating the impact of doctoral research on the future of nursing

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## Abstract

The major obligations of universities are to teach, to do research and to provide community service. Doctoral programmes should prepare nurse leaders for the academic, service and policy-making sectors. In order to be awarded a doctoral degree by most universities, the candidate needs to satisfy the examiners that his/her thesis has made a unique and original contribution to nursing and/or health sciences. The impact of these 'unique and original contributions' on nursing, healthcare services and policies should be examined. Presenting the research findings in academic and popular publications and at conferences should help to disseminate the findings. However, the implementation and evaluation of the recommendations made in the studies should also be realised in order to impact on the future of nursing.

**Keywords:** distance education doctoral programmes, doctoral research, international recognition of doctoral qualifications, nursing's future, research publications, South Africa, supervision of doctoral students

## INTRODUCTION

The 'general goals of universities are to produce high quality graduates for the job market, continuously advance the frontiers of knowledge in all the disciplines, and, ultimately, to advance human civilization' (Hussin and Ismail 2009, 83). All these academic obligations could be met by students who complete their doctoral degrees to benefit themselves, their supervisors, the universities concerned and also the communities participating in their research. If it is accepted that higher education institutions (HEIs) 'are charged with the responsibility of graduating students who are well-grounded and can contribute to societal development and advancement' (Govender 2011, 1355), then the potential impact of doctoral theses on the future of nursing in South Africa should be debated.

Once a doctoral student's examiners and examination committee have accepted his/her thesis, and the supervisor has read the validation at a graduation ceremony, the supervisor's job might be considered done. However, this state of affairs remains 'unfinished business' because many opportunities remain unexplored, limiting the supervisor's, the student's and the university's academic outputs while depriving

communities of potential health-related benefits. These potential impacts, or the lack thereof, could influence the future of nursing in numerous ways.

### **Doctoral programmes' impact on the future of nursing**

Students sacrifice much time, money and effort to obtain their doctoral degrees. This degree serves as an academic passport for graduates for procuring jobs, recognition and promotion.

#### ***International recognition of doctoral degrees in nursing***

A person's doctoral degree is his/her academic passport, and unless a doctoral degree is recognised internationally, its value will be limited. 'Cross-border communication and cross-border reputation seem to be viewed as almost identical with "quality" – the most positive thing in academia' (Teichler 2009, 96). To be listed on the World Health Organization Collaborating Centres (WHOCCs), on the websites of the International Forum for International Nursing Doctoral Education Network (INDEN) and of the Sigma Theta Tau International (STTI) – a distinguished scholarly international nurses' research association – helps to make doctoral degrees in nursing internationally visible.

#### ***Aspects pertaining to supervisors of doctoral students***

The impact of doctoral students' outputs on the future of nursing could also be diluted if one supervisor is expected to supervise many students doing research in several diverse fields. To some extent, this could be addressed if a student could be supervised by a panel comprising three to five experts, and a designated coordinator for each student. The student has to present the proposal and every chapter of the thesis for approval to the panel after the supervisor's approval had been obtained. Panel members can be appointed from different departments in one university, or from different universities and/or from national and international research or clinical experts in the related fields of study. One of the expectations of panel members should be to encourage the student to share his/her research results through effective media, and to identify and address potential contributions that any doctoral research project could make to the future of nursing.

#### ***The diversity of research topics***

Each university should seriously consider which health-related topics its supervisors can accommodate effectively. One way of expanding doctoral graduates' potential competitiveness is to expand the research focus. For example, instead of studying AIDS patients' adherence to their anti-retroviral (ARV) medications, adherence to other chronic medications (eg, diabetes, epilepsy and hypertension) could also be studied, and contrasted within the same communities. Such follow-up studies could be conducted by a number of postgraduate students in different areas of various countries. In this way, global guidelines about enhancing patients' adherence to

chronic medications could be established, based on international research results, and could impact positively on the future of nursing to the benefit of many healthcare consumers.

Supervisors and panel members should be able to specialise in specific fields and to accept doctoral students conducting research only within these fields. Universities should also monitor and evaluate the number of doctoral students assigned to each supervisor and panel member. In the United Kingdom (UK), supervisors are assigned to a maximum of four full-time (required to complete within three years) doctoral students or eight part-time students who may take five years to complete their theses (Montgomery, Semenic and Edwards 2008, 42–43).

### ***Challenges posed by pursuing part-time and distance education doctoral programmes in nursing***

In some countries, nurses pursue doctoral studies solely by distance education, without requiring any face-to-face interactions with the supervisor. While this enables the student to continue with his/her family, community and work-related duties, it also poses challenges. Completing doctoral research in isolation from the student's supervisor (and panel members) and without contact with his/her academic peers deprives the student of academic inputs from academics and peers. According to academics at the University of Victoria in Canada, data analysis poses specific problems when supervisors and students are separated by geographic distances. The analysis and interpretation of quantitative and qualitative data require intensive involvement of the student with the supervisor and preferably with other supervisory committee members (Bruce et al 2008, 6). Such isolation might impact negatively on establishing relevant networks for disseminating the student's research findings and for implementing some of the study's recommendations. Doctoral studies, conducted in isolation under the guidance of one or two supervisors, might remain isolated in books in libraries without impacting on the future of nursing. Part-time and distance education doctoral nursing students should be required to attend university campuses during specific weeks when doctoral students share information about their research projects with fellow students, academics and interested parties from the healthcare services, including policymakers. Ideally, doctoral students should present and defend their chapters to a specific panel of experts, and doctoral fellows, even if this is done by using tele-tuition technology.

Doctoral students, especially part-time and distance education doctoral candidates, might collect their data independently of their supervisors as it could be logistically impossible for the supervisors to be present during their students' data collection in different countries. Academic colleagues might question supervisors' ability to verify that their students had indeed collected the data in the supervisors' absence. Ethical challenges could also arise if the student encounters problems during data collection, in the absence of the supervisor or a panel member. Joint supervisors, appointed from each doctoral student's own country, should be present during the data collection phases in order to certify that the data has indeed been collected as stated

in the thesis. Recommendations, based on doctoral students' research findings, could have far reaching effects on the health and well-being of many people. Unless the nature and quality of doctoral students' data collection is monitored by supervisors, or designated responsible academics, the impact of doctoral studies on the future of nursing might remain relatively insignificant. This is the case because the validity and reliability of such quantitative data, or the trustworthiness of qualitative data, collected in the absence of an academic supervisor or monitor, might be questionable.

### ***Number of years taken to complete a doctoral degree in nursing***

The potential impact of doctoral research will be diminished if the students take several years to complete their studies and only publish articles, based on their research, many years after collecting the data. Extended registration periods for postgraduate studies involve additional student fees, and depletion of students' energy and motivation. Students who suspend their doctoral registrations and re-institute them at a later stage, might find that their 'momentum and immersion in thinking and writing get dispersed, leading to the potential risk of abandoning their programmes' (Bruce et al 2008, 3). Globally, about 60 per cent of nurses complete their doctoral studies within four years (Hinshaw and Leino-Kilpi 2005, 32).

The wisdom of allowing any student to take eight years (or even longer) to complete his/her doctoral studies could be questioned. This is because it can imply lifelong 'unfinished business' for the student. If the student had collected the data three or more years prior to completion of the thesis, it is doubtful whether any accredited health or nursing journal would consider publishing an article based on such outdated data. Policymakers and healthcare planners would not pay attention to outdated data. Literature consulted up to eight years prior to the completion of the thesis, and statistics supporting the initial significance of the study, would be outdated, and could be potentially dangerous to healthcare consumers.

The global average age of nurses when they attain their doctoral degrees is reportedly 40 (Hinshaw and Leino-Kilpi 2005, 32). This implies that the doctoral graduates could complete a limited number of research projects, and produce limited research outputs during their remaining professionally active years. Encouraging students to complete their doctoral degrees earlier would ensure potentially longer academic careers (Lee, Tinevez and Saeed 2002, 20).

### ***Post-doctoral programmes***

The purpose of post-doctoral programmes is to enable the doctoral graduate to develop his/her research skills and to become an independent researcher (Montgomery, Semenic and Edwards 2008, 36). Effective post-doctoral programmes could help a doctoral graduate to attain academic recognition as an independent researcher and author. Ideally, these post-doctoral programmes should attract doctoral graduates from different universities and even from different countries in order to facilitate international liaison at the highest academic level; to stimulate challenging academic

debates; and to identify potential contributions that specific post-doctoral endeavours could make to the future of nursing.

### *Indigenous knowledge systems*

In South Africa, the National Research Foundation (NRF) emphasises indigenous knowledge systems in higher education curricula as an important research focus area. 'The thinking here is that of decolonizing the African university and decolonizing the way of producing and distributing knowledge in the African university' (Ondari-Okemwa 2011, 1463). Doctoral theses, that emphasise indigenous knowledge systems, should present both the advantages and disadvantages of incorporating aspects of traditional healers' and traditional birth assistants' practices into current healthcare and nursing practices. Traditional healers could monitor tuberculosis (TB) patients' swallowing of their anti-TB medicines as prescribed by doctors or nurses. Traditional birth attendants might be able to administer ARV medication to a newborn baby whose mother is HIV positive.

However, these medications should never be administered concurrently with any traditional remedies as the potential interactions of medications with traditional remedies are unknown. Such interactions might render the medications useless, dangerous or even lethal. Bitzer (2012, 1183) warns that doctoral degrees must be based on ethically sound research behaviour and quality control procedures. Indigenous health-related knowledge and practices need to be acknowledged and cooperation between Western and traditional healthcare providers might have potential benefits for communities and countries. However, collaboration should be based on scientific knowledge about the possible impacts on healthcare and on nursing and midwifery practices. Ondari-Okemwa (2011, 1464) warns that 'Africanising curricular, teaching, research and knowledge production and distribution by institutions of higher education in sub-Saharan Africa may be seen as inward looking, contrary to the principles of producing knowledge collaboratively'. However, according to Le Grange (2002, 67), collaboration between HEIs and indigenous people could be mutually beneficial. Many nurses are knowledgeable about local cultures and health-related beliefs and practices as well as about the Western biological-oriented healthcare system. Based on this knowledge, nurses could form bridges between the two healthcare systems to the advantage of individual patients and communities and could in turn educate their colleagues about the impact of culture on local health-related practices. Jonas (2001, 149) asks whether the trend towards 'integrated' medicine will result in unscientific practices or whether it will be used to cure diseases and decrease human suffering. Nurses, knowledgeable about both the traditional and biomedical (Western) healthcare systems, are in a unique position to identify the strengths of both healthcare systems and to educate healthcare providers from both orientations.

## **The impact of doctoral research on the future of nursing**

‘Knowledge is big business but its rewards vary between those who possess it and those who put it to work’ (Akinsanya 2002, 42). Unless research results are published, they remain invisible and cannot impact on the future of nursing or healthcare.

The research outputs, based on doctoral theses, are usually published as articles in academic journals and conference presentations. Limited evidence could be traced about the impact of doctoral theses on nursing and health-related policies. This might be attributable to the fact that many nursing research projects, even at doctoral level, continue to be at the explorative-descriptive level (McConnell 1995, 420). Findings based on small-scale individual explorative-descriptive studies are unlikely to have an impact on health and nursing-related policies and legislation. Doctoral studies in nursing need to advance beyond the level of exploratory-descriptive research before they can make an impact on policies and on the wellbeing of the people in South Africa. University nursing departments that offer doctoral programmes could be instrumental in advancing the potential impact of nursing doctoral studies’ findings on the wellbeing of the country’s people. This could be done by encouraging students to conduct studies on similar topics in different parts of a number of countries at the same time. By presenting a meta-analysis of these doctoral studies’ findings and presenting them to the relevant authorities, more impact could be achieved than by trying to present recommendations based on individual small-scale studies.

### ***Publication of research reports***

Florence Nightingale’s (1820–1910) interventions during the Crimean War (1853–1856) succeeded in reducing the mortality rate among soldiers at the Scutari Hospital from 43 per cent to 2 per cent within six months (Cook in Burns and Grove 2009, 18). Nightingale ‘improved the organisation of army administration, hospital management, and hospital construction. Because of Nightingale’s influence, society began to accept responsibility for testing public water, improving sanitation, preventing starvation, and decreasing morbidity and mortality’ (Palmer in Burns and Grove 2009, 20). Part of Nightingale’s historical legacy could be attributed to the successful publication of her statistics and acceptance by the British army of her recommendations. By contrast, James Lind’s (1716–1794) discovery that lemon juice prevented scurvy took 264 years to be adopted by the British Navy (WHO 2004, 21), probably due to ineffective dissemination of this knowledge.

Research findings can be disseminated to academics by publishing research reports in academic journals, thereby enabling academic debates and an exchange of information to take place (Woods in Kapp, Albertyn and Frick 2011, 743). Research findings need to be published before they can have an impact on the future of any profession, service or situation. Limited publications of research reports, based on doctoral theses, impact negatively not only on the dissemination of knowledge, but possibly also on the future production of new knowledge (Ondari-Okemwa 2011, 1448).

The publication of articles, based on theses, is facilitated by official institutional policies sanctioning such actions. Some institutions maintain that the student should be the first author as the primary investigator. However, this policy might benefit no one as the student might only publish one or two articles in his/her life, while the supervisors could end up being the second or third authors for 30 or 40 articles despite being the corresponding authors and the driving force for most publications. 'When we hear our own voice affirmed, we can move mountains. Indeed we do it every day; too often we give credit to others. However, this is not helpful to them or to us in the long run' (Tshudin 1999, 146).

The long-term deleterious effects of supervisors who do not publish articles with doctoral students are almost incalculable for the student, the supervisor, the university and the nursing profession globally. 'Without it, the world's information riches are out of reach, and therefore become meaningless and of little value' (Ondari-Okemwa 2011, 1449). Few doctoral candidates might have their articles published without assistance from and guidance by their supervisors. By co-authoring an article with a student, the supervisor publicly endorses (and defends) the quality of the research done by the student. The supervisor also guides the student to react appropriately to criticisms, and introduces the student to national and international academic forums, journals, societies, authors, editors and conferences.

The supervisor's curriculum vitae benefits from additional publications with subsequent advantages for the supervisor and the university concerned, making research results known and proclaiming the expertise of the supervisor and the student. This also has advantages for all current and future doctoral students because some international and national employers request the supervisor's curriculum vitae before they will consider a doctoral graduate for a position. The underlying assumption is that the supervisor's academic expertise should be evaluated (based on publications, conference presentations, and other academic outputs) to guide the student towards the successful completion of his/her thesis.

As the publication and dissemination of research findings are integral components of the research process, some universities require the publication and/or submission of specific numbers of articles to academic accredited journals, based on the doctoral thesis, prior to graduation. Presumably, this implies that a student whose articles are never published by accredited journals cannot graduate despite having fulfilled the university's requirements for conducting independent research and making an original unique contribution to the science of nursing and/or healthcare. Such a student cannot graduate even though his/her doctoral thesis might be of a high academic standard. Articles from certain parts of the globe, such as Africa, face tough global competition to be published. 'More than 90% of scientific publications in health are published by researchers in the developed world. There is widespread systematic bias in medical journals against diseases that dominate the least-developed regions of the world' (WHO 2004, 7).

This approach of granting a doctoral degree only after the student has published a number of articles, could cause serious delays before doctoral students graduate.

This is the case because it can take two or more years after articles are accepted before they are published and acceptance depends on many issues. Another question that needs to be answered in this context concerns who is conferring the doctoral qualification, the university concerned or the editor of the journal(s) concerned? While the publication of research results is essential for the dissemination of findings and for any potential impact on the future of nursing, universities that award doctoral degrees should be the primary evaluators of the quality of research, and not journal editors. Universities that award degrees based on journal publications, should question their quality control measures as journal editors are responsible to their editorial boards and publishers, not to ensuring that specific universities' doctoral students meet the required criteria to be awarded doctoral degrees.

### ***Presentation of research findings at national and international conferences***

Publications, and to some extent conference papers, within specific fields will facilitate the supervisor's (and possibly also the graduate's) academic rating. Dialogues about education, research and service-related aspects at international conferences 'are important in prioritizing nursing research for the health of people and the development of nursing' (Turale et al 2009, 167). Presenting research results at international conferences provides opportunities for international scrutiny and criticism, and also for meeting international researchers doing similar research in different parts of the world. Ideally, the supervisor should guide the student through the presentation process at international conferences. Debates at such events could stimulate potential contributions to the global future of nursing.

### ***Policies***

Recommendations, based on the findings of nurses' doctoral theses, should theoretically impact on health-related policies. However, this does not seem to be the case and this situation is not unique either to nursing or to Africa. The Netherlands Development Assistance Research Council (RAWOO) reported (in Ondari-Okemwa 2011, 1466) that 'it has increasingly recognised that the linear model of [the] science-society relationship that prevailed in the past has failed because it was based on the false assumption that the findings of basic research would more or less automatically find their way into new applications, innovations and development interventions'. Government and private institutions in sub-Saharan Africa do not seem to consult universities about research conducted in their regions, and universities do not seem to communicate the results of their research to these institutions. This situation results in a 'know-do gap' where decision-makers could formulate policies that are not based on any relevant research results (knowledge), although doctoral candidates and supervisors at universities might possess such knowledge. Ondari-Okemwa (2011, 1466) recommends that 'think-tanks' should be used as a mechanism to overcome the knowledge-practice gaps 'and in using existing knowledge more effectively for innovation in policy and practice'. If doctoral graduates could communicate



their research results to the relevant nursing and health-related policymakers, then doctoral research might indeed impact on the nursing profession in important ways.

Nurses' and midwives' knowledge of and insight into communities' cultural values should impact on policies at community, regional and national levels. For example, in some communities, a pregnant woman's mother-in-law is expected to be present during the birth process to verify the authenticity of the baby as part of the paternal family. If the clinics and hospitals do not allow mothers-in-law to be present during the birth, some women will continue to give birth to their babies outside of hospitals and clinics, thereby risking their own and their babies' lives and well-being. By enabling mothers-in-law to be present during the birth of their grandchildren, if agreeable to the woman in labour, more mothers could be assisted to have safe births in hospitals and clinics. This could help to reduce the maternal and neonatal mortality and morbidity rates in these communities.

### **Community service**

In the same way that the dissemination of Nightingale's achievements was successful, research results need to be disseminated and implemented in order for any impact to occur on the lives and well-being of people. If unique and original contributions have been made to nursing and/or healthcare by global nursing doctoral graduates, the impact of these contributions on nursing and healthcare should be evaluated. Implementing at least some of these unique and original contributions could support a university's claim to rendering community service and advancing scientific knowledge to the benefit of humanity. Even those graduates who published their results in academically accredited journals, might have rendered no contribution to the people of the studied communities, the majority of whom are unlikely either to read these journals or to access electronic information. The potential of 'information and communication technologies have not been harnessed systematically to bring about important improvements in the health of the population, particularly among those who are poor and isolated in developing countries' (Edejer 2000, 797). Publications of relevant research results in local newspapers, women's magazines and radio broadcasts could help to educate more people about health-related aspects. The impact of such information dissemination in specific communities should be evaluated in order to identify the contribution of doctoral nursing research to the future of nursing and healthcare.

Universities' contributions have reportedly helped to improve people's lives in Korea and in California. The California University system has played an essential role in helping the Californian economy become the world's tenth largest (Ki-Seok and Yong-Je 2009, 135). Korea's higher education system helped to transform Korea into the 'world's 11th largest economy, virtually from the total ruins of the civil war' (Ki-Seok and Yong-Je 2009:136). The quality of many people's lives could be improved if their health status could be enhanced, based on the recommendations of doctoral studies in nursing conducted in different countries. However, much more might be

achieved if cooperation between nursing departments and other departments at the same and/or other universities could collaborate, not only concerning a student's thesis, but also concerning the implementation of some recommendations. This ideal might become more feasible if every doctoral student had a panel of supervisors from different departments, universities and countries. These impacts could help to address health-related global problems, with a marked influence on the future of nursing as a global caring profession, based on evidence gathered from research projects conducted in different countries, to the benefit of diverse communities.

'As the case of AIDS and antiretroviral drugs suggest, relevant knowledge generated from research is necessary, but not sufficient to tackle difficult and complex problems. Involvement of civil society and political commitment are also necessary' (WHO 2004, 7). Universities should enter into partnerships with disadvantaged communities. 'They [the universities] must see the interrelationships of service, education and research and develop new models for addressing the problems of the disadvantaged' (Blumenthal and Boelen 2001, 11). The feasibility of implementing research findings and recommendations of doctoral theses at policy-making and civil society levels should be investigated. If some of these recommendations could be implemented at community level, then the impact of nurses' doctoral studies could benefit communities and assist universities to accomplish their community service obligations. Such collaboration could enable communities to have their needs reflected in national research and/or service agendas, to the benefit of the communities and universities concerned.

## **CONCLUSION**

The potential impact of doctoral studies on the future of the nursing profession could be enhanced by:

- ensuring that the doctoral qualification is recognised internationally;
- encouraging students to complete their doctoral theses within the shortest period of time possible to prevent their data from becoming obsolete;
- admitting students who want to conduct research within academic supervisors' specified fields of interest;
- avoiding the assignment of too many doctoral candidates to a specific supervisor;
- preferably utilising supervisory panels instead of one or two supervisors;
- enabling the student's supervisor (or one panel member) to be present during data collection;
- instituting post-doctoral programmes to enable doctoral graduates to publish research; and
- incorporating relevant indigenous knowledge, based on scientific research, with the biomedical approach.

The research-related impact of doctoral theses on the future of nursing depends on the quality and quantity of articles published in academic journals and presentations at international conferences. If the findings and recommendations of doctoral studies could be considered during policy formulations, then doctoral research could indeed influence the future of nursing and, possibly, also of healthcare.

One of the university's major functions is community service. Such a service could be rendered by doctoral students if their research were based on a community's needs and if the community were involved with the research process. Communities can only benefit from relevant research if the findings and recommendations are communicated to their members in accessible ways such as radio broadcasts, church and/or community gatherings and publications in local newspapers and popular magazines. Doctoral nursing research projects that progress beyond exploratory descriptive studies could implement some of these recommendations and evaluate such interventions. By conducting doctoral research, based on communities' needs, universities could enable students to:

- obtain their doctoral qualifications (meeting the university's tuition obligations);
- conduct worthwhile research (fulfilling the university's research obligations); and
- provide community service (eg, if health education and/or services are adapted to the communities' specific needs based on the doctoral study – meeting the university's community service needs).

## **RECOMMENDATIONS**

The impact of doctoral research conducted by nurses at South African universities on the future of nursing could be enhanced if these doctoral degrees were to be recognised internationally. This implies that these results should be published before the research findings become obsolete and scientifically irrelevant. Doctoral graduates in nursing, together with their supervisors, should publish articles in academic journals and present conference papers in order to make their findings known and to communicate with other researchers in similar fields.

Each university should ensure that a supervisor has a limited number of doctoral students conducting research within the supervisor's field of specialisation so that the supervisor and his/her students will become well-known within specific research areas. If the supervisor introduces his/her doctoral graduates via successful conference presentations and publication of articles, the impact of such doctoral theses could become significant for the future of nursing. The policy makers of the country must be informed about the findings and/or recommendations of doctoral theses to impact on current and future nursing and health-related policies. Relevant indigenous knowledge, based on scientific research, should be included in such policies.

Nursing research should have a greater impact on people's lives and nurses should conduct research based on communities' needs; venture beyond descriptive exploratory studies; and implement relevant interventions. The findings of studies should be shared with the communities that participated in the study at avenues accessible to these communities.

Consequently, research about nursing doctoral students' research is overdue and should be done to benefit future students, departments of nursing and universities. Also, it should be done for the potential benefit of the people and communities who could benefit from such research projects. Once such content analyses have been done, future doctoral students and supervisors should be encouraged to focus on national and international research programmes, within which individual students will still focus on specific projects within limited geographical areas. However, if similar studies were conducted by a number of students in different parts of a country, and in different countries, then international comparative data would become available with the potential to impact on the national and on the global future of nursing. The Forum of Nursing Deans in South Africa (Fundisa) could coordinate a content analysis of doctoral theses completed during the previous five years to identify potential research areas which could impact on the future of nursing in the country. If similar studies could be conducted in countries affiliated to the International Forum for Doctoral Education in Nursing (INDEN), then research areas with potential global future impacts on the nursing profession could be identified and implemented.

Unless research is done on the global research findings and recommendations of doctoral nursing graduates, the potential impact of these research projects on the future of nursing might remain invisible and negligible. Current and future nursing and healthcare academics, leaders, planners, policymakers and service providers could influence the future of nursing more effectively if they were more knowledgeable about relevant doctoral theses' findings and recommendations. 'The history of health research is too often featured by activities that are fragmented, uncoordinated, uneven, and unsustainable' (Suwanwela and Neufeld 2000, 46). More sustained, coordinated and systematic health and nursing research could be conducted if a 'critical mass' of research findings at regional, national and global levels could be constructed and be made available to current and future researchers. McConnell (1995, 423) states that: 'Nursing has the ability, as well as the responsibility to help redirect the focus of healthcare worldwide.'

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Ehlers

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