

Scaling up nursing sciences research and scholarship; An evaluation of a national nursing sciences PhD capacity development programme in South Africa, in the context of the global shortage of nursing graduates

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Abstract

Background

The global shortage of nursing professionals educated at baccalaureate level and beyond has been highlighted. Within America, services are preparing to treat an additional 32 million individuals under the new Health Reform Bill. Within South Africa the existing nursing education outputs do not meet service demands. Many countries are addressing these shortages by developing advanced nursing roles which require research degrees.

Objective:

To evaluate a national nursing PhD development programme within the context of a nurse education strategy and a national health insurance plan.

Design:

A comparative effectiveness research design was employed.

Setting:

The setting was South Africa between 2011 and 2013, a country with 51.7 million inhabitants, 18 universities, with eight offering nursing degrees and 12 public nursing colleges offering diplomas.

Participants:

Participants included PhD candidates, programme facilitators, supervisors and key stakeholders.

Methods:

Data from a day long workshop was analysed using an inductive thematic analysis. Three years of evaluation reports were analysed. A mapping of the alignment of the PhD topics with priorities was conducted. A comparison of the development of nurse education of the national and international funder and an interpretation of the findings within the context of the programmes curriculum, the national nurse education strategy and the National Health Insurance plan was conducted.

Results

The evaluation rated the programme highly. Three themes were identified from the workshop. These were, “support” with the sub-themes of burden, leveraging and a physical supportive place; “planning” with the sub-themes of the national context and practice, and “quality” with the sub-themes of processes as well as monitoring and evaluation. The mapping of PhD topics revealed that research was in line with development priorities. However, in order to match the underpinning values (sustainability, partnership and effectiveness) of the funders, further investment and infrastructural changes were found to be necessary to sustain the programme and its impact

To address sustainability and capacity in nations scaling up nurse education and healthcare insurance it was recommended that top-up degrees for diploma educated nurses be developed along with the implementation of a national nursing strategy for PhD and post-doctoral research encompassing practice implementation and collaboration.

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Key words

Capacity; development; education; health insurance; Ireland; nursing; PhD; research; South Africa; strategy.

Scaling up nursing sciences research and scholarship; An evaluation of a national nursing sciences PhD capacity development programme in South Africa, in the context of the global shortage of nursing graduates from baccalaureates to Doctoral candidates.

Introduction

A global shortage of nursing professionals educated at baccalaureate level and beyond exists and the impact of this shortage is apparent on each continent. Nickitas and Feeg (2011) found that less than 1% of nurses have a doctoral degree and that forecasters predict substantial shortfalls in future nurse academics and as a consequence future nurse practitioners.

Many countries are addressing these shortages in healthcare provision by ensuring that the basic nursing education qualification is at degree level and by developing advanced nursing roles which have a wider remit and which require research degrees. One such role is the nurse practitioner. According to Riegel, Sullivan-Marx and Fairman (2012) nurse practitioners are nurses who have acquired advanced clinical and decision making skills and usually hold a master's degree. They assert that 23 countries formally recognise this role and believe these roles can be used to address some of the global demands within healthcare services and practice.

Within Europe and the United States some evaluation of the impact of these roles on the profession, clinical care, education and the service user has been carried out by Bryant et al (2004), Begley et al (2010), Kennedy et al (2012) and Comiskey et al (2013) and all found positive impacts of the expanded role.

To address the nursing shortfalls within the United States (US), national targets have been set to increase the number of registered nurses holding baccalaureate degrees from 50% to 80% over the next ten years and to ensure that at least 10% of all baccalaureate graduates enter into a master's or doctoral program within 5 years of graduation. Within the US, the predicted shortage of nursing professionals and academics is further exacerbated by impending national health insurance plans which require not only a large number of highly skilled professionals but also research evidence that treatment is effective. Devi (2011) highlights that within the US, services are preparing to treat an additional 32 million individuals under the new Health Reform Bill.

Across Africa, healthcare policy and practice is undergoing a period of radical change with increasing demands. Within Rwanda, as with many other African countries, there has historically been a shortage of health workers and individuals skilled at clinical research. Government and healthcare academics within Rwanda have stated that going forward, building research infrastructure and capacity will be essential pillars for development of the Rwandan healthcare policy (Rwandan Research Implementation and Writing Group, 2014).

South Africa is also undergoing major reforms to revitalise and restructure the health system and to ensure access to healthcare for all. As part of improving the healthcare system and ensuring that all South Africans have equitable access to essential healthcare services, the government is introducing a National Health Insurance (NHI) system (Green Paper on National Health Insurance (DoH, 2011).) Concurrently, the Department of Health (DOH) launched the National Strategic Plan for Nurse Education, Training and Practice: 2012/13 – 2016/17 (DoH, 2013). This strategy has set priorities in nursing education and training; resources in nursing; professional ethos and ethics; governance, leadership, legislation and

policy; positive practice environments; compensation, benefits and conditions of employment and nursing human resources for health.

Resolutions taken at the National Nursing Summit (5-7 April 2011) emphasised improving and strengthening of nursing education in the country. Currently, less than 20% of registered nurses holds a bachelor's degree in nursing and the majority of professional nurses are still trained at nursing colleges at a diploma level. Due to changes in the higher education landscape (White Paper for Post School Education and Training, approved by Cabinet on 20 November 2013), all future professional nurses will need to be trained at bachelor degree level at a higher education institution of learning.

Thompson and Hyrkas (2014) also commented on the demands on nursing and in particular nursing leadership at a global level. In their editorial, they state that the biggest demand facing nursing in the 21st century is the transformation within nursing. They believe that nurse leadership needs to be active not only in practice but also in education, research and the policy and political arenas. A high standard of nursing education will assist in the active involvement of nurses in leadership, health policy, system improvement, research and evidence-informed practice. Indeed, Begley et al (2012) demonstrated the improvements in clinical leadership among those with advanced nursing practice roles and degrees. Recognition of nurses as independent providers of care and working as equals with other practitioners has also been affirmed in the Institute of Medicine (IOM) report (National Research Council, 2011). Thompson and Hyrkas (2014) believe that nursing leadership needs to be based on, and draw from, the expertise of international scholars and researchers who can expand the understanding of leadership and skills within a collaborative, cross cultural environment without borders.

In order to address these issues and the current and anticipated deficits in nursing research and scholarship capacity across South Africa a PhD proposal development programme for nursing sciences was initiated by a South African educational trust in collaboration with the Irish African Partnership for Research Capacity Building (IAPRCB). The IAPRCB is a network of all universities in the Republic of Ireland and Northern Ireland. The programme aimed to contribute to South Africa's national research and development agenda, and to enhance the position of nursing sciences in higher education. The educational trust had experience of delivering PhD capacity development across the country in many disciplines (see <http://santrust.org.za/portal/>). The programme was aimed at nurse academics and senior nurse practitioners who had already obtained a Master's degree. It consisted of six modules delivered over the course of a year in seven, one-week- residential blocks. The six modules were, orientation to the role of theory in a doctorate, conducting a literature review and an overview of a doctoral proposal; conceptualising/defining research problems and questions; research designs; overview of qualitative and quantitative methods; dealing with data, a theoretical introduction (part one); presenting and defending the research proposal and finally dealing with data, at an applied level (part two). Module five part two was carried out after the PhD candidates had passed the assessment and defence of their research proposal and had collected their pilot or preliminary exploration data. Each module was co-facilitated by an experienced South African and Irish academic.

The aim of this research study was to evaluate the PhD proposal development programme and to determine if it was 'fit for purpose' in relation to meeting current and future needs for nursing sciences within the new Strategic Plan for Nursing Education, Training and Practice and the National Health Insurance policy context. The objectives were:

1. To ascertain, how the programme (curriculum, content and process) was experienced by the candidates, facilitators and assessors
2. To explore to what extent the programme contributed to both the funders and the national nurse education and training and the proposed healthcare insurance policies.
3. To compare nursing sciences development in Ireland and South Africa (as the programme was jointly funded from South Africa and Ireland). The development of nursing sciences within South Africa was to be interpreted in an international context with particular reference to counterpart experience of Nursing Sciences in Ireland, a country once noted for its supply of highly trained and qualified nursing professions (Nelson, 2004).

Methodology

Design

To realise these objectives a Comparative Effectiveness Research (CER) study design was adopted. The CER approach is the new ‘Gold Standard’ in effectiveness research and has been endorsed and funded in the President Obama Health Reform Bill in the United States March 2010 (Tunis, Benner, McClellan, 2010). The purpose of CER is to provide evidence-informed positions to clients, health care providers, and decision-makers, and to respond to their needs about which interventions and treatments are most effective for which clients under specific circumstances. At the centre of CER is meaningful engagement and feedback from local policy and service providers and the incorporation of a wide variety of relevant research into policy and service provision decisions.

Methods

To realise the first objective, evaluation reports from three cohorts of nursing science PhD candidates, facilitators and assessors from 2012, 2013 and 2014 were collated and descriptive summaries were prepared.

To realise objective two, a one day consultation workshop with both health and education key stakeholders was held. This workshop was to provide to the stakeholders the necessary background information to the study and to obtain their input and feedback on both the research process plan (task 1) and their input to the recommendations for the development of the existing and possible expanded curriculum and their input to addressing the supply of nursing education, training and practice, following a discussion comparing their experiences as facilitators, supervisors and assessors (task 2).

Workshop participants included facilitators, assessors, supervisors, programme managers and a wide range of the key stakeholders. There were three Professors of Nursing who had additional roles as leaders within national nursing organisations (including FUNDISA - the Forum of University Nursing Deans of South Africa) as well as facilitators on the curriculum of the PhD Proposal Development Programme; a Department of Health advisor; three senior representatives from the South African national funding organisation; a senior representative from the international development funding organisation and national and international external academics/consultants with a track record in the delivery international healthcare education.

Signed informed consent was not obtained for the workshop as it was considered a consultation with experts and the acceptance of the invitation demonstrated willingness to participate. Invited Participants to the workshop were provided with written information on the nature of the workshop approximately two months in advance. On the day of the workshop verbal assent to participate in the workshop was obtained and participants had the

option to attend a concurrent leadership planning meeting if they did not wish to participate in the workshop. No audio recordings of the workshop were taken and participants had the opportunity to read, review and comment on the workshop notes as well as the details of the thematic analysis of the workshop content.

Data Analysis

Evaluation reports, for each module, for each of the yearly cohorts were reviewed and an early, mid- way and a later module were purposively sampled and selected for analysis. Reports were checked for accuracy and any discrepancies were noted and corrected against the original individual forms. Frequencies of responses were prepared for individual cohorts and were also collated across cohorts. Mean values were also calculated where appropriate. Findings arising from the collated responses were reviewed in relation to the components of the Kirkpatrick (1998) evaluation framework and evidence of the presence or absence of a factor at a level within the framework was noted.

A thematic as opposed to a content analysis was implemented for the analysis of the data arising from the consultation workshop task two. According to Braun and Clarke (2006) a thematic analysis differs from a content analysis in that content analysis often focuses on counts or frequencies across data sets and can allow for quantitative analysis of initially qualitative data. Thematic analysis differs from this in that themes tend not to be guided by prevalence but by a clear definition of the theme, where a theme is described according to Braun and Clarke (2006) as, ‘...capturing something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set.’

Guided by the work of Braun and Clarke (2006) an inductive data driven, realist approach was adopted for the analysis of the workshop data rather than a deductive, or theory driven

approach. This approach was deemed appropriate as the participants' comments and data arising from task two of the workshop were not generated by participant responses to a set of predefined theoretically informed questions. The data were also not analysed for hidden or underlying meanings, instead, themes emerging from the data were identified at a semantic and explicit level rather than at a latent or interpretive level.

Results

Programme Participants

Analysis of the demographics of the candidates within the programme revealed that the majority of the programme participants were Black, older women. This may have been a result of the situational reality of the country which has many Black older women entering PhD studies at a later stage in their life-cycle. Many of these women may have been adversely affected by the apartheid policies, which lasted until 1994 and for socio-economic and political reasons, would not have advanced their careers in a health and education system that catered and provided quality for the minority of the population. Additionally, on a gender dimension, many women interrupt their education for reproductive responsibilities.

The Evaluation Report Forms

Since the start of the Nursing Science PhD Proposal Development Programme, two cohorts of candidates had been part the programme, one based in two national sites of Johannesburg and Cape Town, one in Durban. At the time of the research study the Johannesburg and Cape Town cohort had completed the first six modules which included a module 5, part two, which was completed after candidates have collected pilot or preliminary exploration data. The Durban cohort, at the time of the study had not completed all modules and data for this cohort were not complete.

Analysis of the candidate evaluation forms revealed that the vast majority of candidates valued the academic content of the modules highly with the majority of candidates rating each question with a score of five, denoting excellence. A further interesting finding from this analysis was the range in scores across the sites in response to the question on, ‘learning from your group’. Again, the overall score across the three sites was above four but one site scored below four indicating that these candidates did not experience the same level of learning from their colleagues. This may have been the result of varying geographical location from which the group was drawn or it may have arisen from other extraneous factors. Details are provided in Table 1.

Table 1 about here

Overall the majority of candidates ranked facilitation as excellent, however, several aspects of facilitation appeared to be valued more highly than others, the aspects of facilitation that obtained the majority of excellent scores were, in order, the facilitator as “a role model for scholarship”, “attention to making useful links between theory and application” and the “content of the module”. Details are provided in Table 2.

Table 2 about here

Results from the analysis of the facilitators’ reports overwhelmingly provided positive feedback on facilitation and a real interest in improving the programme and continuing to be involved in it. Facilitators gave constructive comments, in all cases, and showed real concern for the quality of the programme and of nursing sciences doctoral research in South Africa. It was however worth noting that the facilitator reports were provided as internal reports to the educational trust and there may have been a degree of bias in reporting.

The Consultation Workshop with Key Stakeholders

Workshop participants were also asked to share and discuss their experiences as facilitators, assessors and supervisors. The thematic analysis of the data was conducted within the broader context of the full data set arising from the research project.

Theme One: Supports

The need to support all stakeholders across the research process emerged. This included candidates, facilitators, supervisors, funders, practitioners and practice. Within this theme three sub themes could be identified: leveraging the resources that the stakeholders and the universities bring, stakeholder burden and providing a physical supportive place.

The need for support was evident in varying forms: from the need for financial resources to the need for alleviating supervisor frustration at overload and lack of support. Evidence for this could be found in the following input from one supervisor/workshop participant, *‘Disparate allocation of candidates to supervisors eg 29 candidates for one supervisor’*. Reflective note 5 from the workshop facilitator also demonstrated this, *‘The facilitator remembers thinking 29 candidates for supervision, that can’t be right’*. Financial burden was also noted with one participant noting, *‘No bursary support for students’*. The burden felt by supervisors and facilitators was also evident in the following contributions from participants, *‘Major problem with writing and English – compounds the work’* and *‘Releasing of staff [to attend the PhD Proposal Development Programme] within Universities is difficult’*.

However, in spite of the burden experienced by participants, the notion of the stakeholders as a potential asset to the research process was also evident. The notion of identifying champions among stakeholders was evident from several of the participant comments and questions, these included, *‘Fundisa [Federation of University Deans in South Africa] – driving give weight behind the SANTRUST prog’*; *‘Chief nurse – to be the champion?’*; *‘Who are the drivers?’*. The idea of leveraging resources from within was not only restricted to

individual stakeholders but to organisations. Participants identified the assets that could be leveraged from other organisations, this was evident from the comments, *‘liaise with uni [university] for writing workshops’* and *‘Institutionalise pre doc. Prog [pre doc Programme as the PhD Proposal Development Programme is colloquially called] within the universities’* and the comment, *‘Case study the MRC of S.A’* and *‘CAPRISA¹ – partnership. \$20m U.S.- see that model-restructured the organisation’*.

Reviewing the order of the transcribed workshop notes the sub theme of learning from others followed from the emerging theme of a physical supportive place. The need for a supportive place within which the range of all doctoral candidates from the varying universities and places of practice could be supported throughout the PhD and research process was found in the comments, *‘ Recommendations SA + IRL[Ireland] ...Others ...E.g. educational development unit’*; *‘Before, during and after the Santrust prog. Are the candidates supported? ; Step up / Step down?; Hybrid Model’*; *CAPRISA.. see that model’* and *‘Centre of Excellence’*.

Theme Two: Planning

Planning emerged as a theme with the two subthemes of the South African context and healthcare practice. A clear need to devise and implement a visionary longer term plan for nursing research that addressed the South African context and translated into practice emerged from the workshop. Currently, one of the funders provides a research and academic pipeline for the development of the research and knowledge economy in South Africa.

¹ CAPRISA was created in 2001 and formally established in 2002 under the NIH-funded Comprehensive International Program of Research on AIDS (CIPRA) by five partner institutions; University of KwaZulu-Natal, University of Cape Town, University of Western Cape, National Institute for Communicable Diseases, and Columbia University in New York. CAPRISA is a designated UNAIDS Collaborating Centre for HIV Prevention Research. The main goal of CAPRISA is to undertake globally relevant and locally responsive research that contributes to understanding HIV pathogenesis, prevention and epidemiology as well as the links between tuberculosis and AIDS care

Comments, underlining and arrows in the text that reflected the need for a longer term vision and planning included, ‘*National history of PhD and for Santrust to look at short, medium, long term –caveats – remember these*’. An arrow on flip chart pointed from the word “short” to the note; ‘*exclusive output here [the proposal achieved at the end of the PhD Proposal Development Programme]*’. A facilitator reflection also noted the need for planning in the reflection, ‘*The facilitator remembers thinking that the age issue could be a major factor that no one is addressing, the investment of resources may be inappropriately targeting those who will not remain in the system*’.

Planning and addressing the South African context was also evident in the comments on PhD topics, these included, ‘*to what extent are the PhD topics relevant to national priorities – this will also address Irish Aid/Funders needs*’ and ‘*PhD Topics Proposals Curr[Curriculum] / Alignment with police and needs*’. The specific South African context was also found in the comments, ‘*Remember importance of Irish Aid – Funders needs*’; ‘*Remember the S.A. context*’ and ‘*uniqueness of the health burden*’.

The importance of research relating to practice and healthcare needs clearly emerged from the underlining of text and arrows in the comments; ‘*Translational Research*’; ‘*Dissemination and implementation*’; ‘*Bedside to bench \leftrightarrow Bench to bedside*’ and ‘*IHI institute for health improvement*’ and ‘*Outputs, outcomes (NRF Irish Aid)*’ and ‘*Needs \leftarrow* ’ and ‘*Balanced with profession / caring*’.

Theme Three: Quality

The third and final theme emerging from the analysis was one of quality. Two sub themes within this arose. These were processes and monitoring and evaluation.

The need for improvements in processes was evident from the comments. The need to examine processes for candidate selection, supervisor allocation, PhD topic choice and implementation processes emerged in the comments. Comments illustrating this included; *‘Random distribution of projects to supervisor – co supervisor?’*; *‘not implementing regulation / policy eg 10 PhDs but what about quality’*; *‘Selection of the place on the Pre doc – Criteria for selection may be informed further’*; *‘Are the criteria stringent?’* and *‘Enablers / barriers to implementing the programme’*.

The quality processes at individual candidate level were also questioned and gaps in learning were identified. Comments included, *‘Educational disparity eg rural writing skills vary accordingly’*; *‘Older age group numbers higher – challenges with technology and familiarity with the field’*; *‘Major problem with writing and English – compounds the work’*; *‘part-time and long distance learning’* and *‘No shortage of PhD candidates shortage of quality’*.

The importance of monitoring quality emerged as a sub theme. This focus of the sub theme was not so much the monitoring of process as above but rather monitoring and evaluating the outputs from the research and PhD process. Comments illustrating this included; *‘define specifics and outputs eg completion rates, publishing’*; *‘Be aware of the limitations of the metrics eg accepted proposals’* and the underlined comment, *‘Note publication rates’*.

Alignment to Funder priorities:

An analysis of the alignment of the nursing PhD research with national and funding priorities was undertaken. An analysis of topics revealed that topics were in general in line with priorities with some areas being addressed more frequently than others and that this would need ongoing monitoring to ensure the relevance of topics to practice and policy needs. In addition while priorities were being addressed the analysis revealed that in order for the

underpinning values of Irish Aid of (partnership, sustainability and effectiveness) to be fully addressed, continued investment and infrastructural development was required.

Finally a review of the Irish case study revealed the importance of strategic planning for research, providing supports and collaborating closely with practice to ensure implementation. A review of the South African case study revealed that although the National Strategic Plan for Nurse Education, Training and Practice 2012-2017 had just been launched in March 2013, this Plan related to education, training and practice, and did not encompass research. Post study dissemination indicated that a national draft research policy had been developed, but there was lack of integration between these two key areas.

Discussion

The comparative effectiveness research design provided rich descriptive data both qualitatively and quantitatively. The PhD Proposal Programme received positive 360 degree endorsements for its 'fit for purpose' to address doctoral education (especially for redress of Black, older women); to relieve supervisors' overload as well as to support supervisors in their own development; to advance Nursing Science scholarship, both through better capacitated academics and their potential throughput to PhD graduation and to contribute to the two seminal national strategies of South Africa named above. Attendant to this, the research also demonstrated that the programme was well aligned to the priorities of the funders: Ireland's "One world, one future: Ireland's policy for international development" (Government of Ireland 2013) and those of the National Research Foundation of South Africa that has declared Nursing Science as a vulnerable Science (Pillay: Interview).

With reference to the Kirkpatrick (1998) model for evaluation, the candidate assessment forms provided strong evidence of the factors identified within Level 1 of the model labelled 'Reaction', these factors being engagement, relevance and customer satisfaction. Level 2

identified as 'Learning' contained the factors, knowledge, skills, attitude, confidence and commitment and again, based on the candidates' feedback, these factors were clearly present. However, evidence of the sustainability of the commitment factor beyond the later module of the programme was not captured in the evaluation forms analysed but may possibly be found within later completion rates of the cohorts.

From the workshop consultation, three themes emerged. These were, support with the subthemes of burden (experienced in overload of the education and health sectors), leveraging and the importance of providing a physical supportive place; the centrality of planning with the sub themes of the South African context and healthcare practice and finally the theme of quality with the sub themes of processes and monitoring and evaluation. Although the thematic analysis was conducted with an inductive data driven approach findings must be interpreted within the limitation of the study design and the researcher bias.

The study also showed that the programme could conceivably be scaled up to include more cohorts as well as to include interventions that would assist with the so-called pipeline towards attaining Nursing Science excellence, within the country, such as Doctoral and Post-Doctoral interventions, support for Masters students, a Nursing Science "Top Up" Degree (to up-skill from a Diploma to Degree) and a Nursing Leadership programme. This would need to be supported systemically, administratively and academically though the remit of the educational trust and/or other like-minded organisations.

While the role of the funders was encouraging and the results equally encouraging for the funders' national and international goals, the absence of the national Department of Health as a contributor is noted. In relation to this, the National Research Foundation's pipeline strategy seems systemically under emphasised in the mind-sets of the stakeholders of the

programme and the broader custodians of Nursing strategies. This was highlighted when the findings of the evaluation reflected on the absence of a research strategy, and only at dissemination stage, was the existence of a draft research strategy tabled. These three areas of oversight speak to a bigger issue, namely the lack of “relational or systemic” responses to support, at a more overarching level (Head, 2008:4), an innovative doctoral education programme (Smit et al, 2013). Should critical areas, such as these, be ‘stitched up’, the impact of the respective and collective programmes and strategies might be more pronounced (Head, 2008). The results of the study reinforced this and also indicated that the sustainability and the more long-term impact of the PhD Proposal Development Programme were influenced by factors beyond the control of the programme.

While the throughput of the candidates to graduation level could not be ascertained from the data, owing to the lead time still to go for the cohorts to complete, the comparative case study of the Irish nursing programme demonstrated that candidates were provided with structured supports which included specific targeted supports for data analysis. The evaluation study noted that the PhD Proposal Development Programme did provide for a week of data analysis at the applied stage during module 5 part 2 which took place post the PhD proposal assessment. In the dissemination of the study, it was encouraging to learn that candidates could apply for an additional nine years of funding (three years during the doctorate, three years as post- doctoral and three years as an emerging researcher) through a National Research Foundation, in a competitive process. (Pillay, 2013: Dissemination Discussion) Additional research on longitudinal data would allow for the efficacy of this sustained and programmatic support to be measured for impact.

Conclusion

The evaluation data provided the evidence for a 'snap-shot' of the success of one, multi-year cohort programme, within a health and education system that faces multiple challenges and vast swathes of redress to overcome inter-generational, multiplier effects that persist from the historical legacy of a systematically oppressive and highly disparate development trajectory for different racial and gender groups. The programme showed it was fit for purpose and that it delivered observable benefits to the cohort group for whom it was conceived and intended. The results do however show the need for a deepened response, on a systems and multi/ inter-relational level by a broader continuum of stakeholders for this programme and others of its nature to deliver longer-term and embedded benefits for health, education and research, within not only a democratic developing country, such as South Africa but within a profession that needs to expand rapidly to meet the urgent shortage of nursing care.

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Table 1 Candidate assessment of academic content of an early module

Comments are rated 1-5. One = poor and Five= excellent. Frequencies and mean values are provided.

	Cape Town Ratings						Johannesburg Ratings						Durban Ratings						Overall	
	Mean	n	2	3	4	5	Mean	n	2	3	4	5	Mean	n	2	3	4	5	Mean	n
Relevance of your current research stage	4.36	14	0	2	5	7	4.59	22	1	3	0	18	4.00	5	0	0	5	0	4.32	41
Extent to which you have acquired information that is new to you	4.14	14	0	4	4	6	4.36	22	2	2	4	14	-	-			-	-	4.25	36
Module's help in enabling you to review your PHD research with broader perspective	4.64	14	0		5	9	4.64	22	1	1	3	17	4.54	13	0	1	4	8	4.61	49
Module's help in enabling you to identify suitable approaches for your research activities	4.07	14	0	3	7	4	4.62	21	1	1	3	16	4.42	12	0	1	5	6	4.37	47
Increase in your knowledge of the research process	4.36	14	0	2	5	7	4.67	21	0	2	3	16	-	-			-	-	4.51	35
Learning from your group	3.86	14	1	4	5	4	4.14	22	0	7	5	10	4.33	12	0	2	4	6	4.11	48
To what extent are you satisfied that this module contributes to your expectations of the SANTRUST programme	4.57	14	0	0	6	8	4.81	21	0	1	2	18	4.62	13	0	0	5	8	4.67	48
Santrust Orientation – Day 1 (Not applicable to module 2)																				

Table 2 Candidate assessment of academic content of a later module

Comments are rated 1-5. One = poor and Five= excellent. Frequencies and mean values are provided

	Cape town						Johannesburg						Durban (Data not available)						Overall	
	Mean	n	2	3	4	5	Mean	n	2	3	4	5	Mean	n	2	3	4	5	Mean	n
Relevance of your current research stage	4.78	9	0	0	2	7	4.40	15	1	2	2	10							4.59	24
Extent to which you have acquired information that is new to you	4.44	9	0	0	5	4	4.94	16	0	0	1	15							4.69	25
Module's help in enabling you to review your PHD research with broader perspective	4.56	9	0	0	4	5	4.87	15	0	0	2	13							4.71	24
Module's help in enabling you to identify suitable approaches for your research activities	4.56	9	0	0	4	5	4.71	14	0	0	4	10							4.63	23
Increase in your knowledge of the research process	4.56	9	0	0	4	5	4.67	15		1	3	11							4.61	24
Learning from your group	3.56	9	0	4	5	0	4.13	15	2	2	3	8							3.84	24
To what extent are you satisfied that this module contributes to your expectations of the SANTRUST programme	4.78	9	0	0	2	7	4.80	15	0	0	3	12							4.79	24
Santrust Orientation – Day 1																				