Policy interventions to improve health worker retention in rural areas: Results from the CREHS Cohort Study in South Africa

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ABOUT CREHS

The Consortium for Research on Equitable Health Systems (CREHS) is a five year DFID funded Research Programme Consortium that is made up of eight organisations based in Kenya, India, Nigeria, South Africa, Tanzania, Thailand and the United Kingdom. It aims to generate knowledge about how to strengthen health systems, policies and interventions in ways which preferentially benefit the poorest. The research is organised in four themes: health sector reform, financial risk protection, health workforce performance and scaling up.

The consortium will achieve its aim by:

• working in partnership to develop research

• strengthening the capacity of partners to undertake relevant research and of policymakers to use research effectively

• communicating findings in a timely, accessible and appropriate manner so as to influence local and global policy development

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1. INTRODUCTION

Internationally, there is a strong awareness of the critical importance of human resources in improving health system performance (WHO 2000; Liese, Blanchet et al. 2003; WHO and World Bank 2003). Among other things, many countries are concerned about shortages of health workers. In the 2006 World Health Report, WHO identified 57 countries, most of which were in Sub-Saharan Africa, with critical shortages of health care providers. On top of this, in virtually all countries, this shortage is more critical in rural areas (Dussault and Franceschini 2006; Serneels, Lindelow et al. 2007). These dual concerns of over health worker shortages and imbalances between rural and urban areas are also present in South Africa. Over the years, various initiatives have been implemented to attract health workers and retain them in rural areas, including the employment of foreign doctors in rural areas, community service and the payment of rural allowances (De Vries and Reid 2003; Gilson and Erasmus 2005).

In keeping with such concerns, this report seeks to present some initial findings from the CREHS Cohort, a research project that will essentially try to answer the following question:

What policy interventions are most likely to be effective in improving the recruitment and retention of health workers in rural areas?

Research Strategy and Objectives

It was thought that a prospective cohort of nursing students will enable a meaningful contribution to this key question of interventions that could be implemented to recruit nurses to and retain them in rural areas. In essence, the idea of a cohort refers to the repeated collection of data over a period of time (years, if possible) from the same group of research respondents. So, this particular research project was initiated with a group of final-year nursing students about to graduate and the idea is to keep collecting data from them for as long as possible in order to track their career decisions and progression over time.

Such a prospective cohort sidesteps the potential bias of a cross-sectional survey where there might, for example, be an over-representation of those who have not been able to leave the public sector or rural areas. It also does not face the difficulty in a retrospective cohort of trying to trace and locate individual nurses after graduation. Such a prospective cohort allows one to ask people about their job preferences and intended job choices before they graduate and then to build up over time a rich store of knowledge about their actual career choices and the reasons for these. These actual career choices and movements, as well as the reasons for them, can then be monitored over time and also compared to the cohort members' initial stated job preferences and intended job choices.

In parallel to this research project in South Africa, very similar cohorts are also being implemented in Kenya and Thailand. This report focuses only on the South African cohort.

Within the overall framework of the prospective cohort, the specific research objectives are:

1. To describe the main characteristics of the health worker labour market and policy environment in South Africa, Kenya and Thailand;
2. To determine the attitudes of the cohort members towards working in rural areas and to evaluate their preferences for various policy interventions that may be used to recruit health professionals to rural areas;
3. To investigate the underlying values that influence these attitudes and preferences;
4. To describe the early career choices of the cohort of health graduates and to investigate the discrepancies between actual career paths and initial stated preferences;
5. To assess the likely effectiveness of current and future government interventions to improve the recruitment and retention of health professionals in rural areas; and
6. To compare and contrast these dynamics across South Africa, Kenya and Thailand.

2. METHODOLOGY

Constituting the Cohort

Selecting provinces and nursing training institutions

In South Africa, the cohort members were recruited from nursing training institutions located in two provinces: North West (a comparatively rural province) and Gauteng (a much more urbanised setting). This rural-urban logic was incorporated into the project because of its potential direct relevance to the ultimate research question around the willingness of nurses to work in rural and under-serviced areas. It was thought that nursing training institutions in rural and urban areas might be training students from different backgrounds and exposing them to different settings, with possible consequences for their future willingness to work in rural areas. Convenience and efficiency of resource use also informed the selection of Gauteng and North West among other urban and rural settings in that the Centre for Health Policy is based in Gauteng, with North West being relatively close by and easily accessible.

Within these two provinces, the research team, in constituting the cohort, also distinguished between nursing colleges and universities. As was the case with the rural-urban logic outlined above, it was thought that these different types of higher education institutions might be training different types of students with different outlooks on their future careers. Respondents from both nursing colleges and nursing studies departments within universities were therefore included in the cohort in order to explore the dimensions along which they might be different and the extent to which they displayed different attitudes and career choices.

Practically speaking, the nursing training institutions from which respondents were recruited into the cohort were identified through discussions with provincial-level nursing managers in North West and Gauteng. These discussions covered issues such as the number of nursing training institutions in each province, the types of students trained by these institutions and the maximum number of final-year students who might graduate to become professional nurses. In North West, 4 training institutions with approximately 310 final-year professional nursing students were eligible for inclusion in the study. The research team approached all of them as it would otherwise have been impossible to reach the required number of respondents in order to achieve an approximate balance between the cohort members recruited from North West and those from Gauteng. In Gauteng, 7 training institutions with approximately 500 final-year professional nursing students were eligible for inclusion. Here, 4 institutions were excluded and 3 eventually approached. The reasons for exclusion included that some of the research tools had been piloted with final-year professional nursing students in some of the institutions, that some simply had too few students to make fieldwork worthwhile in the context of the overall desired sample size, and that some were felt to be potentially atypical in ways that would undermine the rural-urban sampling logic outlined above. Following these discussions with provincial-level nursing managers and the initial inclusion and exclusion decisions, the selected nursing training institutions themselves were approached.

Approaching nursing training institutions and their students

In each of the selected nursing training institutions (4 in North West and 3 in Gauteng), the group of final-year professional nursing students was approached with the consent of the management of the institution and relevant academic staff. The first step in this approach involved calling together the group of final-year professional nursing students, providing them with information about the research, answering their questions about the research, and asking them to volunteer to take part in the research. Some of these sessions lasted up to 1 hour.

In all cases, the agreement was that those students who wanted to participate in the research would report to a pre-agreed venue at some later point in time. In one case, it was later on the day of the initial approach and information session. Usually it was the day after, but in a couple of cases it was a few days after the initial approach had been made. The final-year professional nursing students who came to this pre-agreed venue were then regarded as members of the cohort and included in the baseline data collection phase of the research.

This process of approaching the individual nursing training institutions, informing the final-year professional nursing students about the research, securing their participation in the research and doing the baseline data collection began in July 2008 and ended in late-October 2008.

Using this method, the research team recruited a total of 377 final-year professional nursing students into the cohort at the time of baseline data collection. Table 1 shows the number of cohort members recruited from each training institution, the response rate per institution, as well as the total number of cohort members by province and type of training institution.

Table 1: Cohort Members by College, University and Province

Training institution	Approximate maximum number of graduates	Actual number recruited into study	Response rate
College 1 (North West)	135	37	27%
College 2 (North West)	99	73	74%
University 1 (North West)	19	9	47%
University 2 (North West)	57	42	74%
College 1 (Gauteng)	79	71	90%
College 2 (Gauteng)	159	125	79%
University 1 (Gauteng)	30	20	67%
TOTAL	**578**	**377**	**65%**
Total from North West	161		
Total from Gauteng	216		
Total from colleges	306		
Total from universities	71		

At the outset, the intention was to have a 250-member cohort. This initial target was exceeded for a number of reasons. Firstly, given the numbers of final-year professional nursing students in each of the training institutions it was difficult to arrive at a combination that would yield 250 participants. In each case, we also asked the whole final-year class to volunteer, so it was not entirely possible to control the number of students recruited into the cohort. Secondly, it was decided to try and over-recruit to ensure that the cohort would remain viable in the case of drop-outs. One of the cohort members passed away in December 2008, reducing the total membership to 376 at the end of February 2009.

Research Instrument Development and Implementation

This research has drawn on a range of data collection approaches and research instruments. These data collection approaches and research instruments, their objectives and development, as well as their implementation in the context of the cohort baseline data collection process will be outlined here. As stated earlier, the baseline data collection began in July 2008 and ended in late-October 2008.

Experimental Economic Games

During the actual baseline data collection process, the cohort members were first exposed to ***experimental economic games***. In a nutshell, these experiments asked of the cohort members to divide sums of real money between themselves and other persons (recipients) whom they did not know and would never meet. The cohort members kept the portion of the money that they did not want to give away, with the remainder being paid out to the recipients. The underlying idea is that one can learn a lot about people's values and their responses to certain types of incentives from the way they divide the money. The overall relevance of this method to the study is that there might be some links between nurses' values or their responses to certain types of incentives and their willingness to, for example, work in rural areas.

In an attempt to gauge their altruism, the cohort members first played what can be referred to as the altruism game. This is a very straightforward game that simply involves the respondent dividing a sum of money between himself/herself and the recipient. In this project, the cohort members were asked to divide R100 between, first, themselves and another student, second, themselves and a patient, and third, themselves and a poor person (Annex 1contains the data collection tool that was used for the altruism game). The altruism game was followed by what was termed the social preference game. This game presented the cohort members with five sets of choices, with each set containing ten choice pairs (so, fifty choice pairs in the questionnaire as a whole). Each pair asked the cohort members to consider whether they preferred Option A (a certain division of money between themselves and a patient) or Option B (another division of money between themselves and a patient). The first set of ten choice pairs was used to establish a base, but the other four represented attempts to duplicate certain incentives or contextual factors that the cohort members might face in real-life. For example, in one of the choice sets the cohort members were given (fictional) information on how other nursing students had answered the questions, with it being made clear that these students had in general chosen the more altruistic divisions of money between themselves and patients. This was designed to replicate the contextual factor of peer pressure, with it then being possible to see if the cohort members responded to this by making more altruistic

choices than they did in the first, base set of questions (For illustrative purposes, Annex 2 contains an extract from this peer pressure choice set of the social preference game). The findings of the social preference game are not yet ready and consequently not addressed further in this report.

In keeping with good practice, the experimental economic games were conducted according to a script and with the aid of a PowerPoint presentation that was developed prior to data collection. It was also implemented, as far as was practically possible, by the same researcher in an attempt to limit any potential bias. Both experimental economic games were piloted with a group of nursing students prior to their implementation as part of the cohort baseline data collection. This allowed the research team to explore issues such as the sums of money to be divided (e.g. was it too much or too little) and whether the respondents understood the incentives and contextual factors that the research team had hoped to duplicate in the social preference game in the way that was intended. The project had a limited budget and during the course of the ethical review process it was also clear that it would be necessary to limit the amounts received by the cohort members in order to avoid allegations of the undue inducement of research participants. Payments were therefore not made (to either the cohort members or the recipients) for each of the 53 choices/divisions made by the cohort members (3 in the altruism game and 50 in the social preference game). Instead two question numbers (1 from the altruism game and 1 from the social preference game) were randomly drawn, with the cohort members' answers to these questions determining how much money they would receive and the amount that would be paid to the other recipients. The maximum amount that a cohort member could win was R210, both games inclusive.

Discrete Choice Experiment

The experimental economic games were followed by a ***discrete choice experiment***. A discrete choice experiment (DCE) is a methodology for understanding the relative importance of different factors to the decisions that people make. Discrete choice experiments are increasingly being used to assess patient preferences for different ways of organising health care services. However, there are also a few studies that have utilised DCE to evaluate the preferences and choices of health care workers. In this project, we used DCE to investigate the relative importance of different policy interventions that may be used to attract and retain health workers in rural areas.

We followed the standard recommended steps for ensuring rigour in DCE research. The design of the DCE questionnaire was informed by a literature review of policy interventions, but also by two focus group discussions with nursing students and the piloting of the draft questionnaire with a small group of nursing students. The policy interventions included in the final DCE design are summarised in Table 2.

Table 2: DCE Attributes

Policy Intervention	Question	Levels
1. Choice of facility type	Type of facility	– Clinic – Hospital
2. Provision of additional rural allowance	Rural allowance	– None – Additional R12 000 per year – Additional R24 000 per year – Additional R36 000 per year
3. Provision of better housing	Housing provided	– None – Subsidised single room with shared amenities – Subsidised 2-bed house for you and your family
4. Shorter time before being able to specialise	Number of years to work before getting study leave to specialise	– 2 years – 6 years
5. Faster promotion	Number of years to work before being eligible for promotion	– 1 year – 2 years
6. Provision of additional car allowance	Car allowance	– None – R500 per month
7. Change in workplace culture	Workplace culture and management style	– Hierarchical culture – Clan culture

We used statistical software to generate the questionnaire from this design. In the final questionnaire cohort members were presented with 16 questions where they had to choose between a rural job and an urban job with different combinations of the design attributes (an extract from the DCE questionnaire is presented in Annex 3). In the analysis we then used statistical techniques to calculate the relative importance of the different attributes in influencing respondents' choices of a rural or urban job.

Self-Administered Questionnaire

The last questionnaire to be completed during the cohort baseline data collection was a ***self-administered questionnaire (SAQ).*** This questionnaire was in large part developed by the research team, but also drew selectively from other available instruments. Through this questionnaire, information was collected on, among other things, cohort members':

- personal and demographic characteristics, e.g. sex, age, marital status, number of children, place of birth and the educational and employment status of parents;

- nursing training, preferences for community service and work preferences after community service, e.g. whether they completed a community health course, whether their first choice for community service was a rural or urban area, or whether they wanted to work in the public, private or NGO sector after community service;
- reasons for choosing nursing, e.g. to help others or because they would always be able to find a job;
- feelings about working and living in rural areas, e.g. whether rural quality of life is good or whether it is easy to raise children in rural areas; and
- attitudes towards certain nursing matters and aspects of the profession, e.g. whether community service is a good thing or whether they are proud to tell people that they are nurses.

This questionnaire yielded information that was of interest in its own right, for example the personal characteristics necessary to describe the cohort and the attitudinal information in relation to aspects of the nursing profession. However, its aim was also to generate information that could be analysed together with the results of the experimental economic games and the discrete choice experiment to address questions such as whether more altruistic nurses (experimental economic games) are more likely to want to work in the public sector after community service (SAQ) or whether nurses who grew up in rural area (SAQ) are more likely to want to work in rural areas (discrete choice experiment).

Focus Group Discussions

As the last step in the baseline data collection, certain cohort members were asked to participate in ***focus groups discussions (FGDs)***. Two FGDs, generally with 6-8 participants each, were held in each nursing training institution, with the exception of University 2 (North West) where there was no time for any FGDs and University 1 (North West) where only a single FGD took place because of the very small number of cohort members from this institution. Cohort members were randomly selected to participate in the FGDs. The FGDs explored themes such as the factors influencing nurses' choice of jobs, the meaning of "rural area" to them, possible interventions to attract nurses to rural areas and also gave the participants the opportunity to comment on how they interpreted and completed the questionnaires, especially the experimental economic games and discrete choice experiment, which were unfamiliar to them.

Follow Up of the Cohort

Detailed information was collected from each cohort member at baseline to facilitate subsequent follow-up including:

- Different names that the study participant may use;
- All possible addresses and contact numbers including at least one mobile phone number; and
- Addresses and contact details of participant's spouse, other family members and friends.

All cohort members were contacted every 4 months during the follow-up period. Follow-up was done telephonically and outsourced to a professional tracing company. All personal and workplace contact information were checked and updated at each quarterly communication.

Ethical Approval

This research proposal was approved, in the first instance, by the relevant ethical committees of the University of the Witwatersrand in Johannesburg (Wits) and the London School of Hygiene and Tropical Medicine (LSHTM). The Centre for Health Policy, where the South African researchers are based, is primarily accountable to the ethical committee of Wits. The LSHTM is the lead-member of the research consortium through which this project is funded, hence the submission to the ethical committee of that institution. Subsequently, the research protocol was scrutinised and approved by officials and committees from the Gauteng and North West Departments of Health. Hereafter, the protocol was submitted to each of the nursing training institutions were it was again reviewed and approved, in certain cases very formally by the established research or ethical committees of those institutions. The final-year professional nursing students were only asked to volunteer to join the cohort after all these approvals had been received.

3. RESULTS

The rest of this document will be devoted to the main findings thus far extracted from the self-administered questionnaire, experimental economic games and discrete choice experiment. However, we first present a brief profile of the cohort.

Description of the Cohort

Table 3 contains a fairly self-evident summary of the main socio-demographic characteristics of the cohort. In the column "Total" the table contains the answers to certain questions for the cohort as a whole, but the information is also disaggregated by "Gauteng College Students", "North West College Students" and "University Students". This disaggregation reflects the selection logic outlined above: the initial propositions that, i) students from North West, the more rural province, might be different in certain respects to the students from Gauteng, the more urban province, and ii) nursing college students might be different in certain respects from university students.

Very briefly, this table shows that there are many more female than male cohort members, but that there is quite a high proportion of men among the college students from North West. By far the most of the cohort members are black/African, although it is also evident that quite a high number of the university students are white. The mean age of the cohort members is 31 years, although the university students are on average substantially younger. Not only are the university students younger, but more of them are also single compared to the college students from Gauteng and North West. About a third of the cohort members are married. The average cohort member has one child, although this figure is substantially lower for university students (0.6) and higher for North West college students (1.4). Just fewer than 50% of the cohort members said they were born in rural areas. Lastly, the table shows that the cohort members' mothers have varying levels of education and that less than 50% of their parents are employed, with relatively few of them working in the public sector.

Table 3: Demographic Characteristics

Variables		N	Total	Gauteng College Students	North West College Students	University Students	Sig
Total cohort		377		196	110	71	
Sex	% Male	377	14.3	10.7	21.8	12.7	*
	% Female		85.7	89.3	78.2	87.3	
Age	mean ± sd	374	31.0 ± 7.7	31.2 ± 7.5	33.2 ± 8.2	27.0 ± 5.6	***
Race	% African	375	89.3	93.9	97.3	64.8	***
	% Coloured		2.9	3.1	2.8	2.8	
	% White		7.7	3.1	0.0	32.4	
Marital status	Single	372	65.9	68.0	55.1	76.1	*
	Married		30.4	28.9	37.4	23.9	
	Divorced / Widowed		3.8	3.1	7.5	0.0	
Number of children	Mean ± sd	377	1.0 ± 1.1	1.0 ± 1.0	1.4 ± 1.3	0.6 ± 0.9	***
Any children	% Yes	377	61.0	63.8	73.6	33.8	***
Age of children	Mean ± sd	230	11.4 ± 6.2	10.8 ± 6.1	12.3 ± 6.4	11.0 ± 4.94	
Area where Born	% Very rural	375	11.2	6.7	15.5	16.9	***
	% Relatively rural		35.7	26.3	50.9	38.0	
	% Urban town		37.6	46.9	23.6	33.8	
	% Urban city		15.5	20.1	10.0	11.3	
Mother's education Level	Primary	364	27.2	24.9	35.2	21.4	***
	Secondary		41.2	41.3	46.7	32.9	
	Matric		13.2	14.8	7.6	17.1	
	Post-Matric		18.4	19.1	10.5	28.6	
Parents' employment	% Father working	233	44.2	45.4	37.5	50.0	NS
	% Mother working	319	34.8	37.4	28.3	37.7	NS
	% Father works in public sector (if working)	93	36.6	37.5	34.8	36.4	NS
	% Mother works in public sector (if working)	102	49.0	43.9	68.0	40.0	NS

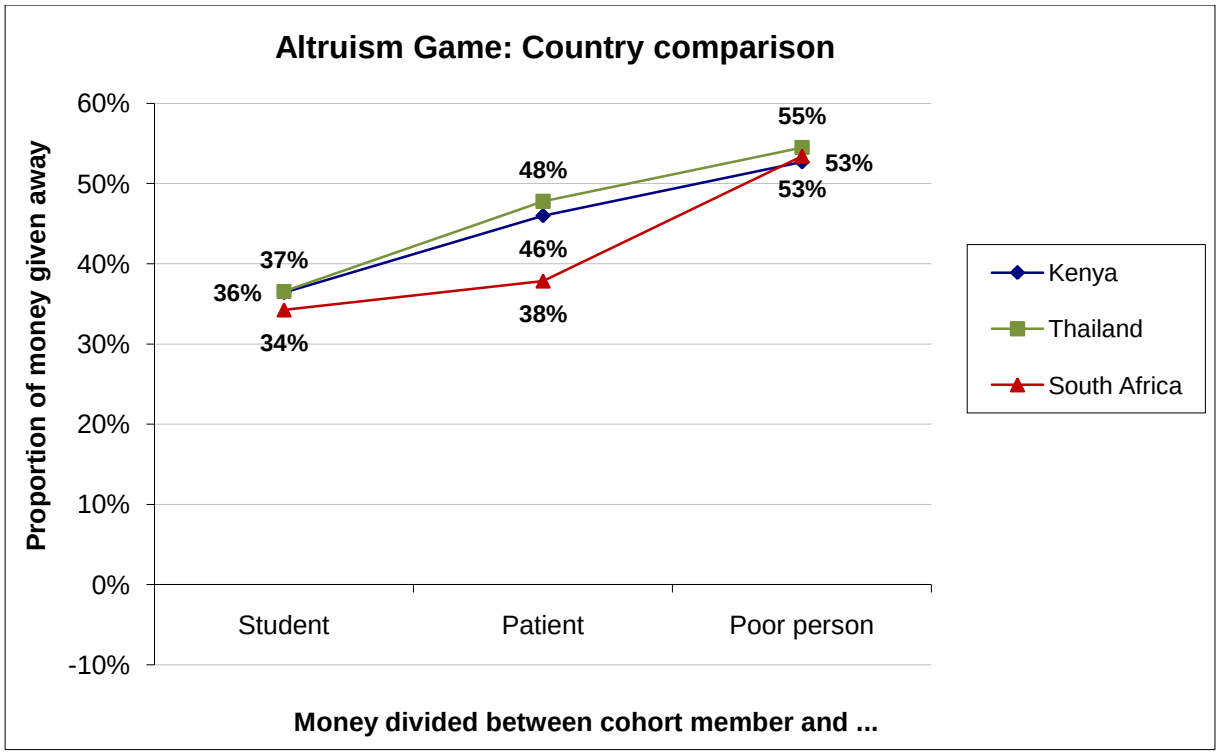
NS Not significant; * p< 0.05; ** p<0.01; *** p<0.001. chi^2 for categorical variables, ANOVA for numerical variables

Experimental Economic Games

As explained above, the altruism game involved the respondent dividing a sum of money between himself/herself and the recipient. The cohort members were asked to divide R100 between, first, themselves and another student, second, themselves and a patient, and third, themselves and a poor person.

Of the R100 available, the South African cohort members on average gave R34 to another student, R38 to a patient and R53 to a poor person. Figure 1 shows how the South African cohort members compare to the Kenyan and Thai cohorts. A key difference is the proportion of the money given to patients, where the South African cohort gave significantly less.

Figure 1: Altruism Game: Country comparison



Within the South African cohort, the university students consistently gave away a greater portion of the R100 to another student (R36), a patient (R40) and a poor person (R56) than college students (R34, R37 and R53). Also, male cohort members gave consistently less than female cohort members to other students (0.30 vs. 0.35), patients (0.32 vs. 0.39) and the poor (0.45 vs. 0.55). Also, those for whom nursing was not their first career choice tended to give away less of the money. These differences are shown in figure 2, figure 3 and figure 4.

Figure 2: Altruism Game: College vs University

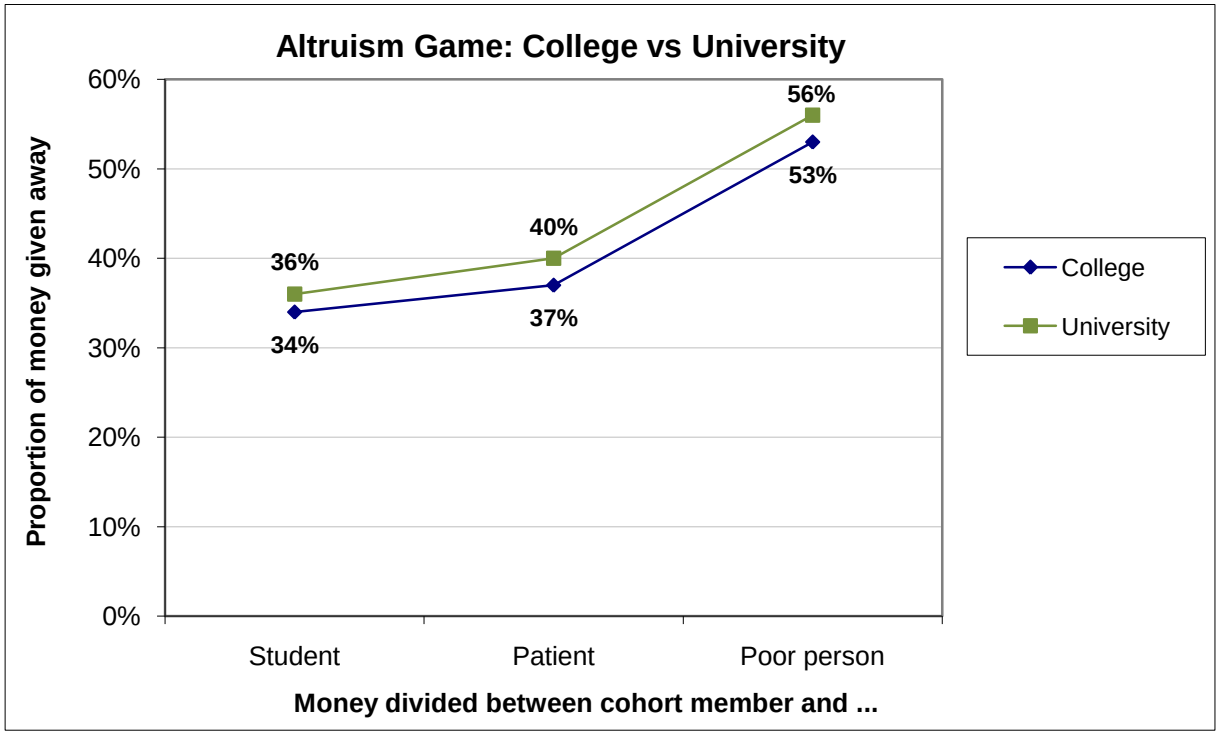


Figure 3: Altruism Game: Men vs Women

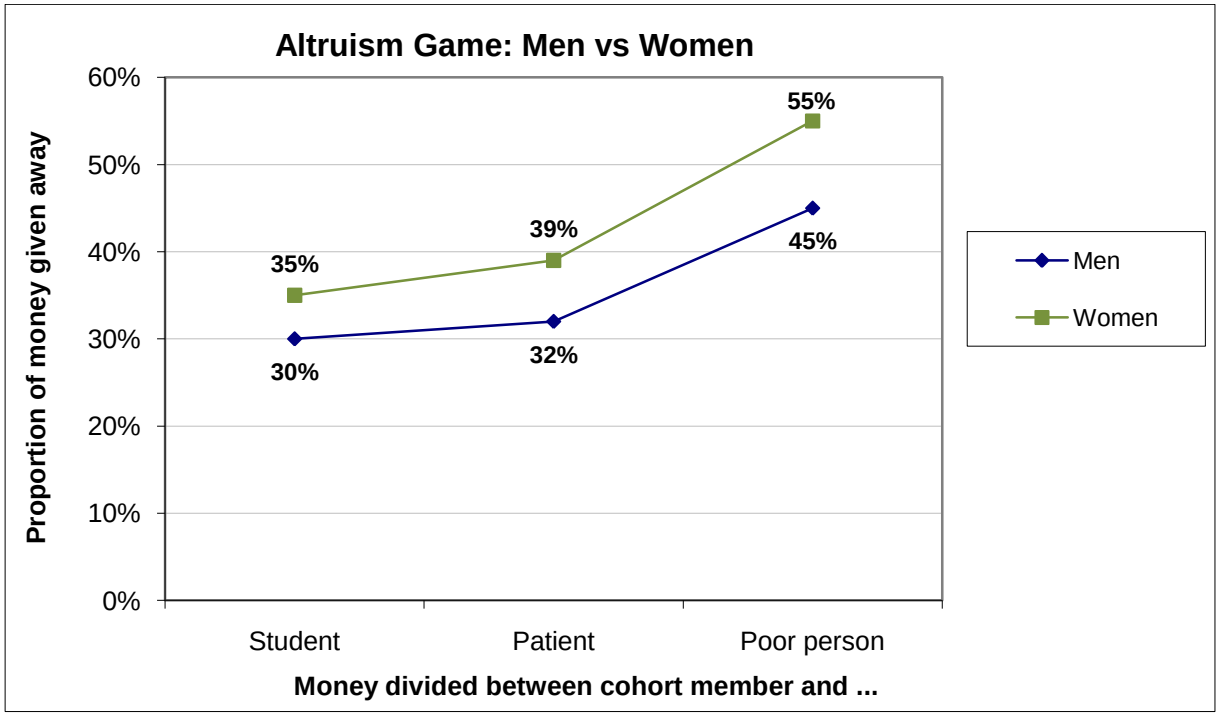
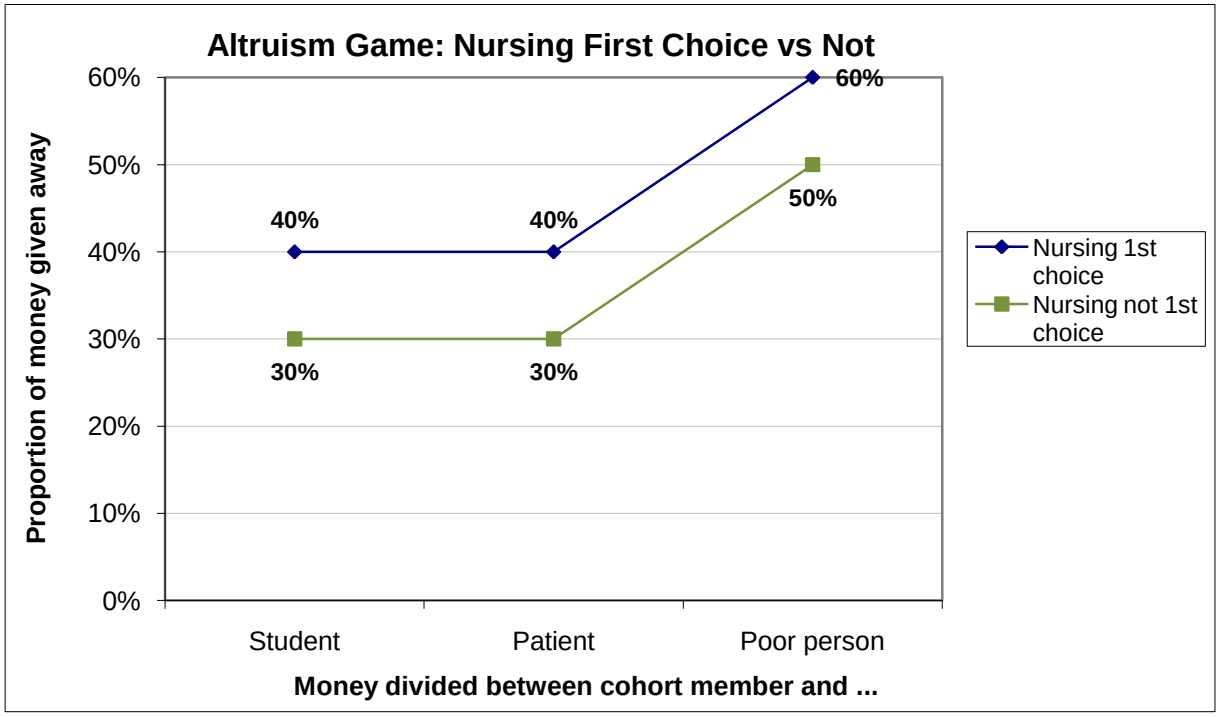


Figure 4: Altruism Game: 1st Choice nursing vs Not



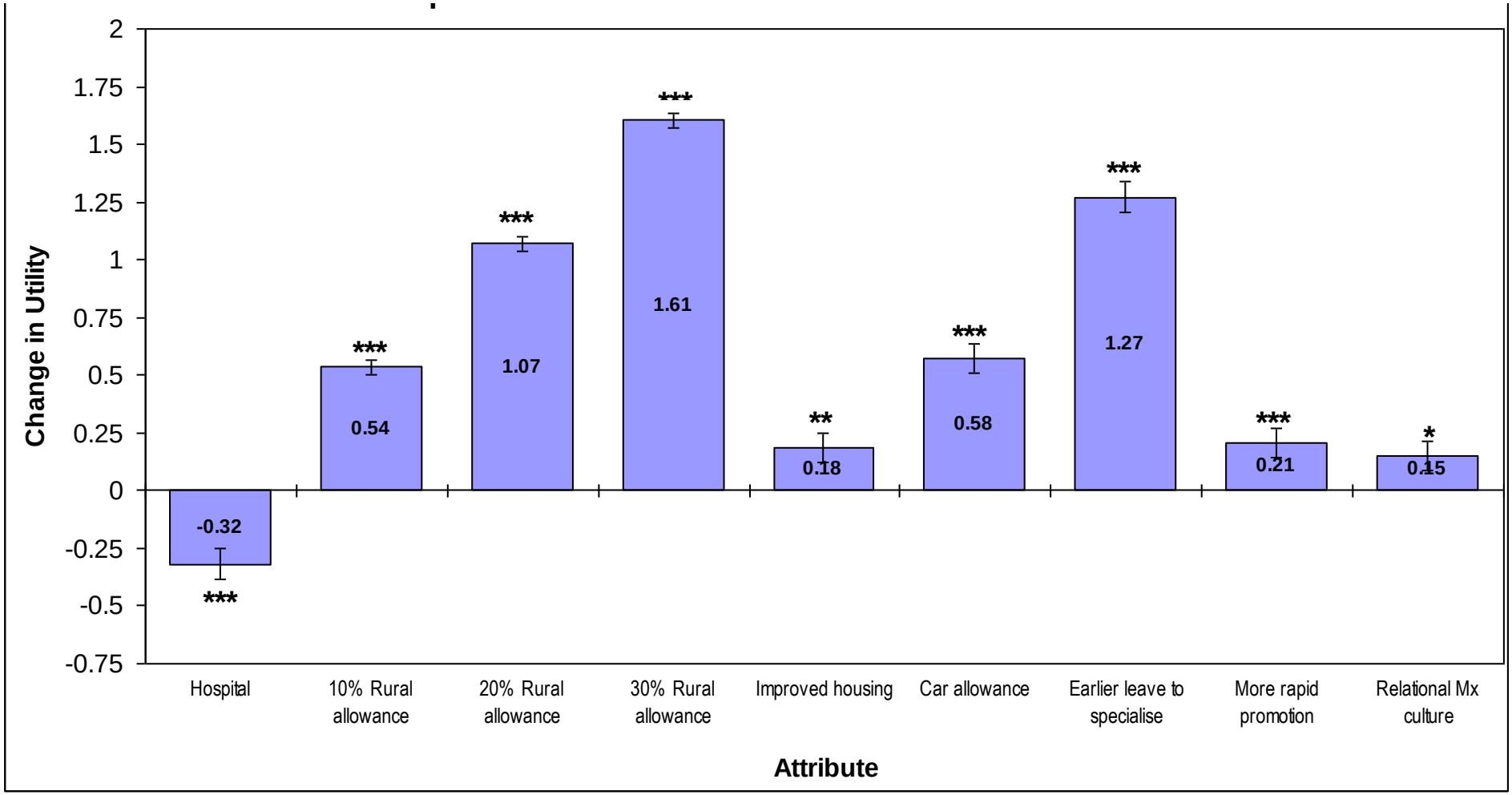
Also those who were 35 years and older also gave significantly more money to other students, patients and the poor at the time of the baseline data collection.

Discrete Choice Experiment (DCE)

The DCE was used to investigate the relative importance of different aspects on the respondents' choices of a rural or urban job. The relative impact of different job characteristics on the choice of the rural job is shown in the figure overleaf (figure 5). All of the job characteristics were statistically significant in influencing the choices of respondents.

Figure 5 shows that a 30% rural allowance would have the most impact on persuading nursing graduates to take up a rural job. But making it easier to specialise was more important to students than a 20% increase in salary. It was interesting that providing a car allowance was more important to participants than a 10% increase in salary even though it was actually worth less money. Better housing, more rapid promotion and changing to a more relational management culture were less important to these respondents. The fact that the facility attribute is negative indicates that the respondents prefer a job in a clinic to a job in a hospital.

Figure 5: Relative Importance of Job Characteristics on Choice of Rural Job



NS: Non significant, *: p<0.05, **: p<0.01, ***: p<0.001

In a DCE it is also possible to investigate whether or not the characteristics of the respondents influences their choices. In our analysis, the sex, age and race of the students did not influence the choice of a rural job. However, students that were single, those that had any children, and those from University were less likely to choose a rural job. On the other hand, students born in a rural area, and those studying in the North West province were statistically more likely to choose the rural alternative.

The DCE results can be used to model the impact of different combinations of policy options. The results from a few different scenarios are shown in Table 4.

Table 4: Modelling the Impact of Different Policy Interventions

Scenario	Package of Interventions	Details	Percentage who choose Rural Job
1	***None***	No interventions	**33.2%**
2	***Minimal financial***	10% rural allowance	**45.9%**
3	***Maximal financial***	30% rural allowance	**71.2%**
4	***Non-financial***	No rural allowance Better housing Earlier study leave Quicker promotion Relational organisational culture	**75.2%**
5	***All interventions***	Located in clinic 30% rural allowance Better housing Car allowance Earlier study leave Quicker promotion Relational organisational culture	**97.8%**
6	***Practical package***	Located in clinic 10% rural allowance Better housing Earlier study leave Relational organisational culture	**85.3%**

Based on the DCE model, in the absence of any interventions 33.2% of students would choose the rural job. Providing a 10% rural allowance would increase that to 45.9% while a 30% increase in

salary would influence an additional 25% to prefer the rural alternative. Interestingly non-financial improvements could have a similar impact to a large increase in salary. A practical combination of financial and non-financial interventions would result in 85.3% of respondents choosing the rural job.

Self-administered Questionnaire (SAQ)

Nursing career findings

Disconcertingly, nursing was not the first career choice of 60.11% of the South African cohort. Analysis revealed significantly ($p<0.01$) different answers from cohort members associated with Gauteng colleges (67.35%), North West colleges (55.96%) and universities (46.48%). There was also a statistically significant difference between men and women ($p<0.01$), with 80% of men saying nursing was not their first career choice, compared to 57% of women. The careers that were mentioned as their first choices included medicine (±20 mentions), doctor (±7 mentions), electrical engineering (±8 mentions), information technology (±10 mentions), law (±16 mentions) and teaching (±16 mentions).

When asked why they chose the nursing profession, the cohort as a whole agreed most strongly with the statement that this choice was about wanting to help others. On a scale of 1 to 6 (where 1 refers to strongly disagree and 6 to strongly agree) the mean score for the cohort as a whole on this question was 5.5. On this issue of wanting to help others, the university students showed significantly ($p< 0.05$) stronger agreement (5.7) than the Gauteng college students (5.3). A second reason for choosing the nursing profession that the cohort identified with strongly had to do with always being able to find a job, with the mean score for the group as a whole being 4.7. This was followed by the reason of wanting to earn money, where the mean score for the group as a whole was 4.0, and the mean scores for the different training institution groups as follows: Gauteng college (4.3), North West college (4.2) and university (3.0). As is clear from these figures, university students were significantly less ($p<0.001$) inclined to agree with this reason for choosing their profession. The reason for choosing their profession that the cohort members agreed with least was that they chose their profession because others valued it. Here, the mean score for the group was 3.0.

Community service findings

In the self-administered questionnaire, the cohort members were asked to state their three most-preferred locations for community service. Overall, 28.7% of the cohort members identified a rural area as their first choice, while 11.9% identified only rural areas as the places where they would most prefer to do community service. These averages, however, mask significant differences between groups of respondents. As shown in table 5, North West college students were very significantly more likely to both identify a rural area as their first choice for community service and to identify only rural areas as their preferred community service destinations.

Table 5: Choice for Community Service

Variables		N	Total	Gauteng College Students	North West College Students	University Students	Sig
Choice for community service	% First choice rural	348	28.7	6.5	67.0	34.9	***
	% All three choices rural	352	11.9	1.6	31.3	11.9	***

*** p<0.001

On this issue, other findings that might be of interest include:

- Of those cohort members with children, 33% mentioned a rural area as their first choice for community service, compared to 20.3% for those with no children. When it comes to all three community service choices being rural, 13.7% of those with children articulated this option, compared to 9.2% for those with no children.
- Approximately 44% of men and 26% of women named a rural option as their first choice for community service. 16% of the former and 11% of the latter named only rural options as their preferred destinations for community service.
- Of those cohort members born in rural areas, 50% expressed a 1st choice preference for a rural area, compared to 10% for those not born in rural areas. With regard to all three choices being rural, the results are as follows: 21% for those born in rural areas and 4% for those not born in rural areas.

The questionnaire also probed cohort members' attitudes towards community service. On average, they agreed with the statement that compulsory community service is a good thing. On a scale of 1 to 6 (where 1 refers to strongly disagree and 6 to strongly agree) the mean score for the cohort as a whole was 3.8. Consistent with this, and on the same scale, the statement that community service is a waste of time yielded a mean score of 2.6. Again, these averages mask statistically significant differences. With regard to the statement that community service is a good thing, both the university students (mean score of 4.5) and North West college students (mean score of 4.2) were much more positive than the Gauteng college students (mean score of 3.4) ($p<0.001$). Similarly, the idea that community service is a waste of time got most support from Gauteng college students (mean score of 2.9), followed by the North West college students (mean score of 2.4) and the university students (mean score of 2.1), with the difference between the university and Gauteng college students being statistically significant ($p<0.01$).

Job preferences (sectors and countries**)**

Of the total cohort, 87.7% said they would prefer to work in the public sector after they had fulfilled their initial community service and contractual obligations to government, with 10.4% opting for the private for-profit sector and 1.9% for the private not-for-profit sector. The Gauteng and North West college students leaned much more towards the public sector than the university students (92.6%

and 88% vs. 73.9%), while the opposite is true for the private sector (6.8% and 10.2% vs. 20.3%) ($p<0.01$). A further attitudinal question confirms that the average member of the cohort does not have a strong inclination to work in the private sector. On a scale of 1 to 6 (where 1 refers to strongly disagree and 6 to strongly agree) the mean score for the cohort as a whole was 3.0 on the issue of whether the private sector appealed to them. Again, the university students had the most favourable attitudes towards the private sector with a mean score of 3.5 compared to 3.3 for the North West college students and 2.7 for the Gauteng college students ($p<0.001$).

For the cohort as a whole, there was, at baseline, not a very strong desire to work abroad. On a scale of 1 to 6 (where 1 refers to strongly disagree and 6 to strongly agree) the mean score for the cohort was 3.0 when presented with the statement "I can see myself working overseas in future". University students expressed the strongest inclination to work abroad (mean score = 4.2), followed by (North West college students (mean score = 3.3) and Gauteng college students (mean score = 2.4). On this question, the differences between all three types of students were statistically significant ($p<0.001$).

At this stage, the cohort members neither strongly oppose nor support the idea of leaving nursing altogether in the future. On a scale of 1 to 6 (where 1 refers to strongly disagree and 6 to strongly agree) the mean score for the cohort was 2.9, with the mean scores for the subgroups as follows: Gauteng college students (3.0), North West college students (2.9) and university students (2.8).

Job preferences (rural areas) table 6 illustrates the cohort's answers to a variety of questions about living and working in rural areas. The overall picture is not one of unequivocal enthusiasm. As a whole, the cohort agrees that it is stressful to work in rural areas and they don't think that rural quality of life is good, that the rural lifestyle appeals to them (excepts North West college students) or that rural social life is enjoyable. On the upside, they think that one can earn more money and get faster career advancement in rural areas, associate working in rural areas with support from colleagues and supervisors and think that it is, to some extent, easy to raise children in rural areas.

Table 6: Preferences for Working in Rural Areas

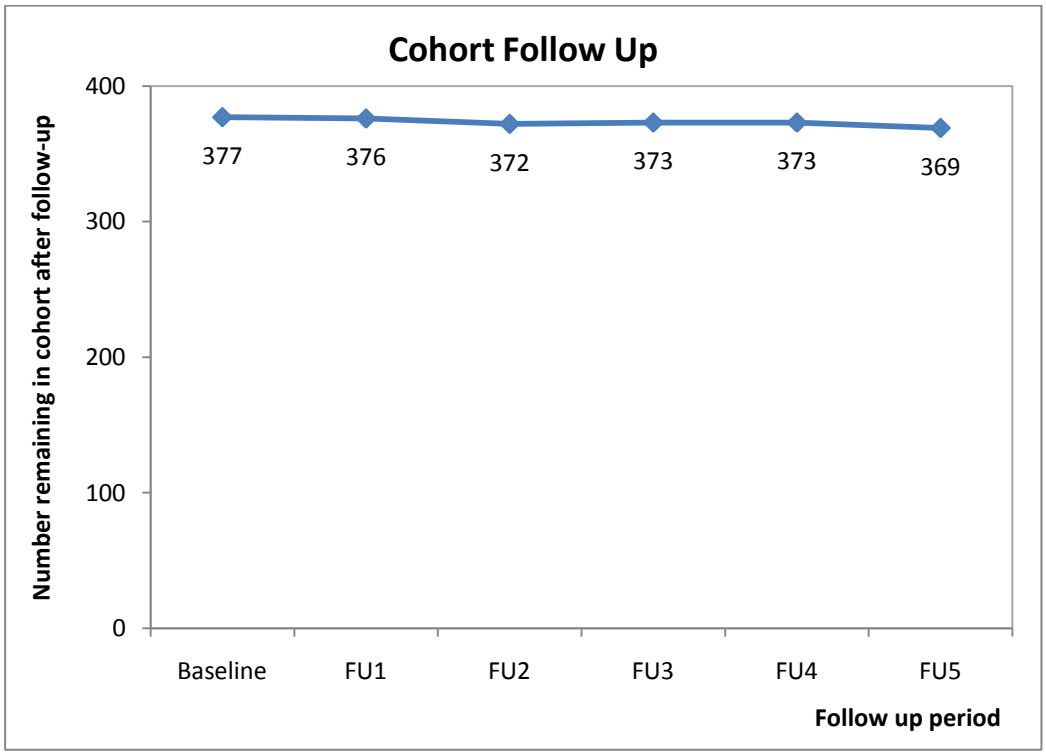
Variables		N	Average Rating (Mean ± sd)				
			Total	Gauteng College Students	North West College Students	University Students	Sig
Perceptions about work in rural areas 1=Strongly disagree 6=Strongly agree	Working in rural areas is stressful	372	4.5 ± 1.7	4.6 ± 1.6	4.5 ± 1.8	4.3 ± 1.8	NS
	Earn more money in rural area	371	4.4 ± 1.5	4.4 ± 1.5	4.5 ± 1.4	4.1 ± 1.5	NS
	Get quick career advancement in rural area	369	4.2 ± 1.6	4.1 ± 1.6	4.3 ± 1.7	4.1 ± 1.6	NS
	In rural areas you have support from colleagues/ supervisors	373	4.7 ± 1.6	4.6 ± 1.6	4.7 ± 1.8	4.8 ± 1.5	NS
Perceptions about rural and urban lifestyles 1=Strongly disagree 6=Strongly agree	Rural quality of life is very good	372	2.7 ± 1.6	2.7 ± 1.6	2.6 ± 1.7	2.8 ± 1.5	NS
	Rural lifestyle appeals to me	369	2.8 ± 1.7	2.6 ± 1.6	3.3 ± 1.7	2.8 ± 1.5	**
	Rural social life is enjoyable	371	2.8 ± 1.8	2.7 ± 1.7	3.1 ± 1.9	2.7 ± 1.7	NS
	City living is stressful	371	3.7 ± 1.8	3.7 ± 1.8	3.9 ± 1.8	3.3 ± 1.8	NS
	Raising children in rural areas is easy	372	3.5 ± 1.8	3.5 ± 1.8	3.3 ± 1.9	3.6 ± 1.9	NS

The self-administered questionnaire also suggests that the presence of good housing and the ability to choose a rural area might be of some relevance in persuading more nurses to work in rural areas. On a scale of 1 to 6 (where 1 refers to strongly disagree and 6 to strongly agree) the mean score for the cohort was 5.4, indicating very strong agreement, when presented with the statement “If I have to work in a rural area it is important to be able to choose which area”. Similarly, cohort members said they were on average happy to go to rural areas if decent housing was provided. On this question, the mean score for the cohort as a whole was 4.2, again indicating quite strong agreement.

Cohort Follow-Up

The follow-up of cohort members every 4-5 months over a period of two years is shown in Figure 6.

Figure 6: Number of cohort members retained during follow-up



Overall, after two year we managed to follow-up and keep 98% of the original members in the cohort. Of the 8 members that had left the cohort by the end of the two years; 3 had died, 3 had left South Africa and could not be traced overseas, 1 nurse was completely lost to follow-up, and 1 decided that she no longer wanted to be part of the study.

4. CONCLUSIONS

This report summarised much of the history of the CREHS Cohort to date. It described the rationale behind the project, outlined how the cohort was created and then presented findings emerging from various data collection approaches and tools used in the cohort, including experimental economic games, a discrete choice experiment and a self-administered questionnaire. The findings covered a wide array of topics such as the reasons why the cohort members became nurses, their feelings about community service, their preferences for which sectors they want to work in and the factors that shape their decisions when it comes to choosing between jobs in rural and urban areas. We have also demonstrated that we have been able to keep contact with cohort members over a period of two years.

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6. ANNEXES

Annex 1

Altruism Game Questionnaire

STUDY NUMBER:

TASK 1

For each question (A, B and C), circle the number of the option you choose

Coding

		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Option 10	Option 11	
A	You get	*100%* R 100	*90%* R 90	*80%* R 80	*70%* R 70	*60%* R 60	*50%* R 50	*40%* R 40	*30%* R 30	*20%* R 20	*10%* R 10	*0%* R 0	
	Another student gets	*0%* R 0	*10%* R 10	*20%* R 20	*30%* R 30	*40%* R 40	*50%* R 50	*60%* R 60	*70%* R 70	*80%* R 80	*90%* R 90	*100%* R 100	
	YOU CHOOSE:	1	2	3	4	5	6	7	8	9	10	11	*T1a*

		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Option 10	Option 11	
B	You get	*100%* R 100	*90%* R 90	*80%* R 80	*70%* R 70	*60%* R 60	*50%* R 50	*40%* R 40	*30%* R 30	*20%* R 20	*10%* R 10	*0%* R 0	
	A patient gets	*0%* R 0	*10%* R 10	*20%* R 20	*30%* R 30	*40%* R 40	*50%* R 50	*60%* R 60	*70%* R 70	*80%* R 80	*90%* R 90	*100%* R 100	
	YOU CHOOSE:	1	2	3	4	5	6	7	8	9	10	11	*T1b*

		Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Option 10	Option 11	
C	You get	*100%* R 100	*90%* R 90	*80%* R 80	*70%* R 70	*60%* R 60	*50%* R 50	*40%* R 40	*30%* R 30	*20%* R 20	*10%* R 10	*0%* R 0	
	A poor person gets	*0%* R 0	*10%* R 10	*20%* R 20	*30%* R 30	*40%* R 40	*50%* R 50	*60%* R 60	*70%* R 70	*80%* R 80	*90%* R 90	*100%* R 100	
	YOU CHOOSE:	1	2	3	4	5	6	7	8	9	10	11	*T1c*

Annex 2

Extract from Social Preference Game

STUDY NUMBER: **SET 5**

For each of the 10 choices, choose either Option A or Option B.
The percentage at the bottom indicates the responses of another group of nursing students in the country

	Option A		Option B	
Q1	you: 100 R a patient: 50 R difference: 50 R total: 150 R	16%	you: 75 R a patient: 65 R difference: 10 R total: 140 R	84%
You choose:	☐		☐	
Q2	you: 100 R a patient: 50 R difference: 50 R total: 150 R	25%	you: 85 R a patient: 85 R difference: 0 R total: 170 R	75%
You choose:	☐		☐	
Q3	you: 100 R a patient: 50 R difference: 50 R total: 150 R	33%	you: 75 R a patient: 85 R difference: -10 R total: 160 R	67%
You choose:	☐		☐	
Q4	you: 100 R a patient: 50 R difference: 50 R total: 150 R	28%	you: 85 R a patient: 65 R difference: 20 R total: 150 R	72%
You choose:	☐		☐	
Q5	you: 100 R a patient: 50 R difference: 50 R total: 150 R	39%	you: 50 R a patient: 100 R difference: -50 R total: 150 R	61%
You choose:	☐		☐	

Annex 3

Extract from DCE Questionnaire

STUDY NUMBER: ☐

Question 1 : Which of these two public sector facilities would you choose to work in?

	RURAL Facility	URBAN Facility
Type of facility	Hospital	Clinic
Annual salary	R120,000 per year	R120,000 per year
Rural allowance	None	None
The number of years you would have to work before getting study leave to specialise	2 years	6 years
The housing provided	You can choose to stay in the subsidised accommodation provided which is a single room with a shared kitchen and shared toilet.	None
The number of years you would have to work before being eligible for promotion	2 years	2 years
The car allowance offered	R500 per month	None
The workplace culture and style of management	This facility is formal and structured. The managers emphasise stability, following rules, and keeping things running smoothly.	This facility is formal and structured. The managers emphasise stability, following rules, and keeping things running smoothly.
Which facility would you choose?	**Rural Facility** ☐	**Urban Facility** ☐

Annex 4

Summary of the answers to most questions in the SAQ

Variables		N	Total	Gauteng College Students	North West College Students	University Students	Sig
Total cohort		377		196	110	71	
Sex	% Male	377	14.3	10.7	21.8	12.7	*
	% Female		85.7	89.3	78.2	87.3	
Age	mean ± sd	374	31.0 ± 7.7	31.2 ± 7.5	33.2 ± 8.2	27.0 ± 5.6	***
Race	% African	375	89.3	93.9	97.3	64.8	***
	% Coloured		2.9	3.1	2.8	2.8	
	% White		7.7	3.1	0.0	32.4	
Marital status	Single	372	65.9	68.0	55.1	76.1	*
	Married		30.4	28.9	37.4	23.9	
	Divorced / Widowed		3.8	3.1	7.5	0.0	
Number of children	Mean ± sd	377	1.0 ± 1.1	1.0 ± 1.0	1.4 ± 1.3	0.6 ± 0.9	***
Any children	% Yes	377	61.0	63.8	73.6	33.8	***
Age of children	Mean ± sd	230	11.4 ± 6.2	10.8 ± 6.1	12.3 ± 6.4	11.0 ± 4.94	
Area where born	% Very rural	375	11.2	6.7	15.5	16.9	***
	% Relatively rural		35.7	26.3	50.9	38.0	
	% Urban town		37.6	46.9	23.6	33.8	
	% Urban city		15.5	20.1	10.0	11.3	
Mother's education level	Primary	364	27.2	24.9	35.2	21.4	***
	Secondary		41.2	41.3	46.7	32.9	
	Matric		13.2	14.8	7.6	17.1	
	Post-Matric		18.4	19.1	10.5	28.6	
Parents' employment	% Father working	233	44.2	45.4	37.5	50.0	NS
	% Mother working	319	34.8	37.4	28.3	37.7	NS
	% Father works in public sector (if working)	93	36.6	37.5	34.8	36.4	NS
	% Mother works in public sector (if working)	102	49.0	43.9	68.0	40.0	NS

NS Not significant; * p< 0.05; ** p<0.01; *** p<0.001. chi2 for categorical variables, ANOVA for numerical variables

Variables		N	Total	Gauteng College Students	North West College Students	University Students	Sig
Nursing was first career choice	% Yes	376	39.9	32.7	44.0	53.5	**
Had community health course	% Yes	372	82.5	72.0	90.7	98.6	***
Spent time in rural facility during training	% Yes	373	53.1	15.4	99.1	87.3	***
Sources of funding for studies	% Supported by parents	377	13.3	4.1	8.2	46.5	***
	% Salary	377	60.5	68.4	60.0	39.4	***
	% Loan	377	9.6	0.0	0.9	49.3	***
	% Study leave	377	14.6	16.8	20.0	0.0	***
	% Government bursary	377	28.7	31.1	28.2	22.5	NS
	% Private bursary	377	2.4	0.5	0.0	11.3	***

Variables		N	Total	Gauteng College Students	North West College Students	University Students	Sig
Choice for community service	% First choice rural	348	28.7	6.5	67.0	34.9	***
	% All three choices rural	352	11.9	1.6	31.3	11.9	***
Duration of contract	Mean ± sd	351	1.3 ± 0.6 yrs	1.3 ± 0.5 yrs	1.2 ± 0.5 yrs	1.3 ± 0.9 yrs	NS
Job preferences	% Prefer public sector	367	87.7	92.6	88.0	73.9	
	% Prefer private for profit sector	367	10.4	6.8	10.2	20.3	**
	% Prefer NGO sector	367	1.9	0.5	1.9	5.8	
	% Prefer general nursing	372	13.7	4.7	18.4	31.4	
	% Prefer community nursing	372	40.9	46.1	45.9	18.6	***
	% Prefer specialised nursing	372	45.4	49.2	35.8	50.0	
Work values	Rank (rank sum / average rank) of good income	375	2 (368) (0.976)	2 (203) (1.036)	2 (104) (0.945)	2 (61) (0.859)	
	Rank (rank sum / average rank) of safe job	375	3 (259) (0.687)	3 (118) (0.602)	3 (85) (0.773)	3 (56) (0.789)	
	Rank (rank sum / average rank) of working with people you like	375	4 (31) (0.082)	4 (14) (0.071)	4 (7) (0.064)	4 (10) (0.141)	
	Rank (rank sum / average rank) of doing important job	375	1 (449) (1.191)	1 (246) (1.255)	1 (124) (1.127)	1 (79) (1.113)	
Social capital index	Mean ± sd	377	6.7 ± 3.4	5.4 ± 2.8	8.4 ± 3.6	7.5 ± 3.3	***

Variables		N	Average Rating (Mean ± sd)				
			Total	Gauteng College Students	North West College Students	University Students	Sig
Attitudes towards polices 1=Strongly disagree 6=Strongly agree	Compulsory comm. service is good	373	3.8 ±2.0	3.4 ± 2.0	4.2 ± 2.0	4.5 ± 1.8	***
	Fine to pay more if nurses in disadvant. /remote area	373	5.5 ± 0.9	5.5 ± 0.9	5.7 ± 0.8	5.4 ± 1.0	*
	More respon. is good way to motivate nurses	373	4.1 ± 1.8	3.9 ± 1.9	4.2 ± 1.8	4.5 ± 1.6	*
	If I have to work rural it is import. to choose which area	369	5.4 ± 1.1	5.4 ± 1.1	5.3 ± 1.3	5.4 ± 1.0	NS
	Happy to go rural if decent housing	372	4.2 ± 1.8	4.1 ± 1.8	4.5 ± 1.7	4.2 ± 1.7	NS
	Year in a remote or disadv. area should count twice as much as elsewhere	370	4.3 ± 1.5	4.3 ± 1.5	4.6 ± 1.5	3.8 ± 1.6	**
	Comm. serv a waste of time	373	2.6 ± 1.9	2.9 ± 2.0	2.4 ± 2.0	2.1 ± 1.5	**
Attitudes relating to profession 1=Strongly disagree 6=Strongly agree	Chose prof. to help others	376	5.5 ± 1.0	5.3 ± 1.1	5.6 ± 0.8	5.7 ± 0.8	*
	Chose prof. to earn money	372	4.0± 1.7	4.3 ± 1.6	4.2 ± 1.7	3.0 ± 1.7	***
	Chose prof. because others value it	372	3.0 ± 1.8	2.9 ± 1.7	3.1 ± 1.9	3.1 ± 1.8	NS
	Chose prof. because can always get job	372	4.7 ± 1.6	4.7 ± 1.5	4.7 ± 1.6	4.5 ± 1.7	NS

Variables		N	Average Rating (Mean ± sd)				
			Total	Gauteng College Students	North West College Students	University Students	Sig
Perceptions about work in rural areas 1=Strongly disagree 6=Strongly agree	Working in rural areas is stressful	372	4.5 ± 1.7	4.6 ± 1.6	4.5 ± 1.8	4.3 ± 1.8	NS
	Earn more money in rural area	371	4.4 ± 1.5	4.4 ± 1.5	4.5 ± 1.4	4.1 ± 1.5	NS
	Get quick career advancement in rural area	369	4.2 ± 1.6	4.1 ± 1.6	4.3 ± 1.7	4.1 ± 1.6	NS
	In rural areas you have support from colleagues/ supervisors	373	4.7 ± 1.6	4.6 ± 1.6	4.7 ± 1.8	4.8 ± 1.5	NS
Perceptions about rural and urban lifestyles 1=Strongly disagree 6=Strongly agree	Rural quality of life is very good	372	2.7 ± 1.6	2.7 ± 1.6	2.6 ± 1.7	2.8 ± 1.5	NS
	Rural lifestyle appeals to me	369	2.8 ± 1.7	2.6 ± 1.6	3.3 ± 1.7	2.8 ± 1.5	**
	Rural social life is enjoyable	371	2.8 ± 1.8	2.7 ± 1.7	3.1 ± 1.9	2.7 ± 1.7	NS
	City living is stressful	371	3.7 ± 1.8	3.7 ± 1.8	3.9 ± 1.8	3.3 ± 1.8	NS
	Raising children in rural areas is easy	372	3.5 ± 1.8	3.5 ± 1.8	3.3 ± 1.9	3.6 ± 1.9	NS

Variables		N	Average Rating (Mean ± sd)				
			Total	Gauteng College Students	North West College Students	University Students	Sig
Attitudes towards the poor, unemployed and social grants (SGs) 1=Strongly disagree 6=Strongly agree	Gov. should spend more on poor, even if leads to higher taxes	373	3.8 ± 1.7	3.7 ± 1.7	3.9 ± 1.9	4.0 ± 1.7	NS
	Most unempl. could get job if really wanted	372	3.5 ± 1.7	3.6 ± 1.6	3.2 ± 1.7	3.5 ± 1.7	NS
	Many who get SGs deserve them	371	3.4 ± 1.8	3.1 ± 1.8	3.8 ± 1.8	3.8 ± 1.9	**
	People would learn to stand on own feet, if SGs were less generous	371	4.4 ± 1.7	4.5 ± 1.6	4.4 ± 1.7	4.0 ± 1.6	NS
	Cutting SGs would damage too many lives	373	4.5 ± 1.6	4.3 ± 1.6	4.8 ± 1.7	4.5 ± 1.5	NS
Government's responsibility is to… 1=Strongly disagree 6=Strongly agree	Ensure that everyone is provided for	369	4.5 ± 1.5	4.6 ± 1.5	4.3 ± 1.7	4.6 ± 1.4	NS
	Redistribute income from rich to poor	371	3.8 ± 1.5	3.7 ± 1.5	4.0 ± 1.6	3.6 ± 1.5	NS
	Provide job for all who want	371	4.3 ± 1.7	4.2 ± 1.7	4.4 ± 1.7	4.3 ± 1.6	NS
	Provide health care for sick	373	5.8 ± 0.6	5.8 ± 0.6	5.8 ± 0.6	5.9 ± 0.5	NS
	Give decent standard of living for old	371	5.5 ± 0.9	5.6 ± 0.8	5.5 ± 0.8	5.2 ± 1.3	**
	Give decent standard of living for unemployed	369	3.8 ± 1.5	3.8 ± 1.5	3.7 ± 1.7	3.9 ± 1.3	NS
	Financially help univ. students from poor families	373	5.4 ± 1.1	5.5 ± 1.1	5.4 ± 1.2	5.1 ± 1.2	NS

Variables		N	Average Rating (Mean ± sd)				
			Total	Gauteng College Students	North West College Students	University Students	Sig
People live in need because… 1=Strongly disagree 6=Strongly agree	They have been unlucky	368	2.6 ± 1.6	2.5 ± 1.5	2.9 ± 1.7	2.4 ± 1.4	NS
	Of laziness or lack of will power	368	3.5 ± 1.7	3.5 ± 1.7	3.5 ± 1.8	3.6 ± 1.5	NS
	Of injustice in our society	368	3.9 ± 1.6	3.9 ± 1.5	4.0 ± 1.6	3.6 ± 1.7	NS
	It's an inevitable part of modern life	367	3.5 ± 1.5	3.4 ± 1.5	3.5 ± 1.7	3.5 ± 1.4	NS
Attitudes towards helping others 1=Strongly disagree 6=Strongly agree	Criminals must get help rather than punishment	371	2.3 ± 1.7	2.1 ± 1.6	2.3 ± 1.9	2.5 ± 1.8	NS
	Govt. should help poorest	373	5.3 ± 1.0	5.3 ± 1.0	5.3 ± 1.1	5.1 ± 1.0	NS
	Helping others with my time or money is very important to me	371	4.8 ± 1.3	4.7 ± 1.3	4.8 ± 1.3	4.9 ± 1.2	NS
	OK for those in need to depend on others	371	2.3 ± 1.4	2.4 ± 1.4	2.2 ± 1.4	2.4 ± 1.3	NS
	People must not only look after themselves, but also worry about others	371	4.0 ± 1.7	4.0 ± 1.7	4.0 ± 1.8	3.8 ± 1.7	NS
	Personally helping people is very important to me	373	5.1 ± 1.1	5.1 ± 1.1	5.2 ± 1.2	5.2 ± 1.0	NS

Variables		N	Average Rating (Mean ± sd)				
			Total	Gauteng College Students	North West College Students	University Students	Sig
Attitudes towards nursing and sectors to work in 1=Strongly disagree 6=Strongly agree	I always wanted to be a nurse	373	4.0 ± 1.9	3.7 ± 1.9	4.3 ± 1.8	4.6 ± 1.6	***
	I am proud to tell people I am a nurse	373	5.3 ± 1.2	5.2 ± 1.4	5.5 ± 1.1	5.5 ± 1.1	NS
	I can see myself leaving nursing in the future	372	2.9 ± 1.9	3.0 ± 1.9	2.9 ± 2.0	2.8 ± 1.9	NS
	I can see myself working overseas in future	373	3.0 ± 2.0	2.4 ± 1.8	3.3 ± 1.9	4.2 ± 2.0	***
	Working in the private sector appeals to me	372	3.0 ± 1.6	2.7 ± 1.6	3.3 ± 1.7	3.5 ± 1.6	***