

Evaluating Singapore Nursing Education for Relevance and Application in the
United Kingdom

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Executive Summary



This report comprised information collated in the various institutions whilst undertaking the International Scholarship Scheme by the Higher Education Academy (HEA). The information was obtained in a 4-month period between July and November 2012 from a range of observations, meetings and experiences with some of the key stakeholders of the main provider of nursing education in Singapore including: executive board of directors, nurse teachers, nurse students, executive board of directors and clinical instructors of clinical placements.

These observations and meetings were purposeful and focused with the intention to elicit good educational practices for possible application in the United Kingdom, and which might also be useful for building on the existing good work in the local institutions. An empirical study was also conducted to map findings from these activities. This was conducted with the aim of acquiring better insights into the way nursing education was working towards maintaining its relevance in a fast moving and challenging healthcare industry, such as that in Singapore.

These investigations have come to sufficient fruition that it warrants sharing more broadly, hence this report. However, it is appreciated that this report is based on one short visit. Distillation of the learning based on these investigations to inform the future direction of nursing education provision in the United Kingdom (UK) needed to be considered with care. Any contextual issues must be accounted in the application of knowledge based on the current findings:

1. The agenda for nursing education receives policy support in terms of direction and resources to support its implementation.
2. There is a collective recognition that nursing education should produce critical thinkers who are fit for practice and not doers who follow instructions; or professionals who are competent in nursing skills and have a strong disposition of caring to exercise both instrumental as well as expressive caring behaviours.
3. Nursing education is underpinned by the concept of caring; being transacted using myriad pedagogic approaches. These included the heavy reliance on
 - i. state of the art simulation-based learning; collaborations with practice for instilling critical thinking; and

- ii. government funds for a) maintaining close student-staff contact hours; b) support and timely feedback and facilitating learning by teachers equipped with pedagogical content knowledge and skills.
4. The innovative, interesting and challenging teaching and learning practices which could be potentially applied, with appropriate adjustments in the UK context, fall under 5 of the 9 overarching HEA themes are as follows:
- i. Assessment and feedback;
 - ii. Education for sustainable development;
 - iii. Employability;
 - iv. Internationalisation; and
 - v. Retention and success
5. The challenges in nursing education associated with the fast changing healthcare in Singapore, which the country is working through, successfully relate to:
- i. student recruitment and selection from overseas which resulted in an increasing number of international students with good academic standards.
 - ii. continuous sustaining of an infrastructure to support the changing student profile, a consequence of the increasing volume of international students and mature students
 - iii. the continuous demands in the content-heavy curriculum for the necessary expansion of knowledge base, which risk having inadequate time for reflective practice, which is important for instilling the concept of caring.

In essence, the issues challenging current nursing education delivery in school are similar to those currently faced by nurse academics in the United Kingdom; there is a strong emphasis on teaching critical thinking, enforcing practice evidence-based learning and technological-based learning in addition to the core skills and knowledge of nursing that the curricula may risk becoming content-heavy. Nevertheless, there are good educational practices in general specific ones in the area of curriculum delivery, particularly employing close contact hours, encouraging innovative student projects and simulation-based learning have been identified to be relevant and applicable in the UK context at the time of this report.



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1 Introduction

In the United Kingdom (UK), stringent criticism about nursing was observed as far back as in the late 1960s (Willis 2012). In recent times, increasingly, critical remarks were made about the poor standards of nursing care, specifically highlighting the lack of a caring attitude of nurses observed in practice (Francis Inquiry 2010; 2013; Abraham 2011; Healthcare Commission 2007; Care Quality Commission 2011). This phenomenon often blamed on contemporary nursing education at pre-registration level, especially the one which commenced with Project 2000 (Gillet 2011). Nursing education which led individuals to registration with the professional regulatory body to qualify as professional nurses could not be the reason for increasing incidents of poor nursing practices. In fact, accusation of pre-registration nursing education in higher education for poor quality nursing care had been considered groundless (Willis 2012). Still it was important for careful thoughts into the future direction of nursing education in the UK, especially at pre-registration level.

Nursing education in higher learning was expected to underpin high quality nursing care in practice (Davies et al. 2000). The predisposition to care is to be nurtured with nursing education which in turn, is expected to develop such a characteristic of individuals into professional caring behaviour (Murphy et al. 2009). While more rigorous research into nursing education is needed in the UK for curriculum evaluation (Lauder, et al. 2008; Roxburgh et al. 2008), the realisation of institutional context in countries where there are good reputations of their healthcare and educational systems would seem pertinent.

Singapore provides a particularly appealing evaluative study of the nursing education system. First, its small scale and high degree of influence by the western nursing education system lays bare a great deal about the effects of teaching and learning practices that would be more difficult to discern in larger and more complex political contexts. Second, the country's porosity to advancement in nursing education, particularly that of the West which is in the lead in nursing education development (Loke 2012) and nursing being practised in a successful healthcare system has helped secure the reputation as the regional healthcare hub for a whole spectrum of healthcare services, such as integrated healthcare services, hospital management, laboratory services, healthcare consulting, medical informatics, pharmaceutical research and clinical trials (Lim 2005). More critically, is Singapore's versatility in adapting to the 1997–98 Asian economic crises, and to the subsequent rise of China as a manufacturing powerhouse and its ability in the capacity of a small Southeast Asian city state to turn things around to even benefit from the evolving global knowledge-based economy, for the country to be recognised as a "global education hub" (Olds 2006).

Given the high value added global city status of Singapore in both healthcare and higher education, examining Singapore nursing education system provides an opportunity to discern some of its interesting, innovative and challenging teaching and learning practices which might be useful for application in the UK context. The current study was therefore proposed in Singapore to answer the research question “Were there strategies employed by nursing education provider in Singapore to have successfully transacted the caring behaviour to nursing students”, and it was conducted based on the following research aim and objectives:

1.1 Research aim

To contribute to the understanding of how the concept of professional caring disposition was transacted in the various student experiences in the nursing programme in Singapore for possible application in the context of the United Kingdom.

1.2 Research objectives

- i. To determine the ways instrumental and expressive caring behaviours were demonstrated, taught, encouraged and reinforced in the critical areas of students’ educational experience based on the physical environment, the caring disposition of nurse teachers and the educational process, which included the curricula contents and delivery
- ii. To evaluate the impact of the educational experience on student nurses’ caring disposition.

2 Literature Review

2.1 The concept of caring in nursing

Caring as the central dominant and unifying focus of nursing knowledge (Leininger 1994; Watson 1988) was considered a complex concept integrated into the underpinning ethics, ontological and epistemological perspectives in the nursing profession (Brown 2011). In other words, nurses could do what they did as morally correct in their interactions with others based on the nature of nursing as well as the advancement and development of nursing knowledge. In the consideration of what caring entailed, many theorists such as Leininger (1994), Watson (1988), Boykin and Schoenhofer (2001) had taken a focus on the expressive aspect of caring, whilst other nurse researchers had included instrumental caring (Karaöz 2005; Wolf et al. 1994; Woodward, 1997). Whilst the former was grounded in humanism, based on human science perspective related to meeting patients’ psychological and emotional needs; the latter was about clinical competence related to the technical aspect of care (Karaöz 2005; Wolf et al. 1994; Woodward, 1997).

These distinctions in caring highlighted the importance that both expressive and instrumental aspects of caring be considered in nurses’ approach to care. Such distinction also illuminated the need for contextualising nurses’ approach to care in order to mix and match the different

aspects of care to achieve individualised care. Otherwise, the diverse needs of different individuals in a particular context would not be met. Indeed, many attempts had been made to explain this complex concept of caring in the nurse profession and many tools had since, been devised to measure caring (Nelson et al. 2009). Many studies were conducted to evaluate students' perspective of caring (Karaöz 2005; Khademian & Vizeshfar 2007; Lee-Hsieh et al. 2005; Watson et al, 1999a; b). In recent years, patients' opinions were becoming far more important than that of students' for informing the approach to care in that many researchers were observed to increasingly seek understanding of caring based on patients' perspective (Griffiths et al. 2012; Hatem et al. 2008).

2.2 The concept of caring and nursing education

Whilst caring was being viewed as a contextualised concept and therefore continued to remain difficult to define and measure, it was advocated that the three perspectives of nursing ethics, ontology and epistemology as linked in the concept of caring should be reinforced in any academic environment which in turn should cultivate the caring behaviour of students (Bevis & Watson 2000). Whilst Brown (2011) believed that the concept of caring should be transacted in educational setting, and honed in on clinical placements, others (Beck 2001, Paterson & Crawford 1994), who shared similar views also insisted that caring in nursing education was best expressed in interactions amongst faculty members, and between nursing students and patients. Teaching based on own story experiences and role modelling by teachers and use of peer support and evaluation were suggested as effective measures in transacting caring behaviours (Adamski et al. 2009; Fahrenwald et al. 2005).

Apparently whilst caring was believed to be transacted and nurtured in the process of nursing education, there was a general consensus that pre-registration nursing education was responsible for imparting the skills and knowledge of nursing which must be underpinned by the essence of caring (Griffiths, et al 2012). In this regard, the Americans had taken the lead by implementing the concept of caring in the nursing curriculum development in the late 1990s (Brown 2011; Hatem et al, 2008; Hughes et al. 1998; Simmons & Cavanaugh 2000). Similar efforts were followed by many other countries in the West and East (Anthony & Landeen 2009; Baldacchino 2008; Khouri 2011; Kuo, et al, 2007; Murphy et al. 2009; Öhlen & Holm 2005; Wu et al 2009). In the UK, the standards for pre-registration nursing programme by the Nurse Midwifery council had also in recent times given pre-eminence to caring and compassionate client-centred care in that the concept of caring was explicitly emphasized in the all new graduate nursing programme, which was to be implemented throughout the UK by September 2013.

2.3 Evaluative studies of nursing education

Many small scale research studies to evaluate the impact of nursing education on caring had been conducted in many parts of the world (Anthony & Landeen 2009; Khouri 2011; Murphy et al. 2009; Öhlen & Holm 2005; Wu et al 2009). In the UK, evaluations were on large scales but were mainly in response to the changes of the nursing curriculum, for example 'Making a difference', 'Project 2000' and the 'Fitness for Practice'. As a result of the specific aims of these evaluative studies, the curriculum contents and processes were the focus. The original Scottish Project 2000 evaluation (May et al. 1997), the evaluation of Fitness for Practice Pre-Registration Nursing and Midwifery Curricula Project (Lauder et al. 2008) were amongst the few large evaluation research projects of that nature. By highlighting the weakness of the previous work which relied on impressionistic data, various nurse researchers (Lauder et al. 2008, Watson et al. 2002) had used a comprehensive approach to evaluate the effectiveness of the curricula in terms of students' competencies. However, curricula referred to module contents and mode of delivery, whereas education and programme encompass the entire student learning experience. In view that nursing programmes in different institutions have different curricula with specific aims and goals, previous evaluation studies (May et al. 1997, Lauder et al. 2008, Watson et al. 2002) posed limitations in addressing issues of nursing education as a whole.

Also, the elements of nursing competence as the instrumental dimension of caring in Woodward's term (1997) was the product of the nurse curriculum commonly evaluated in the UK (Lauder et al. 2008, Watson et al. 2002). In contrast, the expressive aspect of caring as an effect of the curriculum was commonly researched in other parts of the world (Adamski et al. 2009; Fahrenwald et al. 2005, Kuo et al. 2007, Simmons & Cavanaugh 2000, Wu et al. 2009). In essence, research studies within the UK focused on instrumental caring and outside the UK tended to focus on expressive caring based on Watson's theory (1988). There was therefore an apparent dearth of evidence to nursing education evaluation, particularly so in Singapore where a good reputation as a regional hub for education and healthcare was established, that there might be useful lessons learnt.

3 Research Design: The '3P' Model as an Evaluative Framework

The '3P' model as an important 'Input-Environment-Output' model commonly used to evaluate quality in higher education (Biggs 1993) was employed in this study in the hope for a systematic evaluation of the different dimensions in the nursing educational process, including both students' and teachers' perspectives on issues other than the curriculum.

In this model, the variables under consideration in an evaluation was categorised into 3 distinct dimensions namely, 'Presage', 'Process' and Product' (Gibbs 2010). According to

Gibbs (2010), the presage dimension was the context prior to student learning; the process dimension referred to the context in which student was experiencing the programme and; the product dimension related to outcome of that student learning experience. Although every variable in each dimension was a distinct element, they were dialectically interrelated. For example, a student with poor academic performance (presage variable) gained entry into a nursing programme, was taught to appreciate the use of certain pedagogic tools for assimilating the essence of caring in nursing (process variable), and then showed improvement in academic performance (presage variable) and was able to display a caring disposition during clinical placements (product variable).

By using the '3P' model, quality was conceptualised as relative to the purpose of education, and evaluation of educational quality could therefore be based on the parameters that students were customers or institutionally defined conceptions of quality (Gibbs 2010). Therefore the 'quality of education' in the '3P' model in this study was measured in terms of educational effectiveness, specifically transacting of the concept of caring (Table 3.1).

Table 3.1 Evaluation of Singapore nursing education based on the '3P' model

The '3P' model	Variables		Evidence reviewed to identify:
			The transacting of caring
Presage	Reputation/Funding of the school		Availability of teaching, learning and social facilities
	Quality of Teaching Staff		Subject specialties and caring disposition of teaching staff
	Quality of Students		Potentials for learning about caring based on selection/recruitment practices
Process	Curriculum development, contents and delivery	Programme hours; Class contact hours, independent study hours	Interactions which promoted caring
		Modules: Quality of teaching; Level of Intellectual challenge	Module contents/Pedagogic approaches which encouraged/facilitated caring
		Formative assessment and feedback	Opportunities for reinforcement of caring
	Extracurricular activities	Research environment based on national/international projects	Research culture which promoted caring disposition
	Mentoring support system	Student support, quality enhancement processes	Interactions which promoted caring
Product	Students' achievements/performance in demonstration of caring behaviour		Caring disposition of students based on: <ul style="list-style-type: none"> i. Self-reported survey based on CBI ii. Self narratives which showed understanding of caring Student performance in simulation-based learning environment and clinical placements

4 Research Methods

4.1 Context of study

In the evaluation of Singapore nursing education, it would be sensible to include all 4 educational institutions which provide pre-registration nursing education in the country. However, pioneering contemporary nursing education in the country was one of the nursing schools in a polytechnic. Although this school delivers nursing programme at diploma level, till today, it remains to enjoy the largest share of the market in pre-registration nursing education (Table 4.1). Given a short 4-month period, focusing on the school is a promising strategy to elicit good educational practices.

Table 4.1 Diplomates/Graduates from various institutions of higher learning (Tan, 2012)

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
No of Diplomates and Graduates	First HEI (Polytechnic) established in 1992: Pioneer in Nursing education											
	549	569	472	557	701	792	1127	907	730	691	675	
	Second HEI (Polytechnic) established in 2006											
								147	269	357	422	
	Third private HEI by Parkway Health Organisation/ Fourth HEI (University) established in 2006											
									Negligible (not reported)			

Whilst decision was being made to evaluate a nursing programme at diploma level, it was appreciated that nursing education in the UK was in the process of migrating to graduate level. The choice of the school therefore raised concerns especially when the aim and purpose of the evaluation was to seek relevance and application of the findings in the UK context. However, it is critical to appreciate that producing competent nurses with critical thinking and compassion who could deliver quality care was the most important goal in nursing education (Willis 2012). It is therefore not the interest of this study to be overly concerned with the academic levels at which the nursing programme was offered and delivered, but more important to focus on the teaching and learning environment and the pedagogic approaches which elicited good nursing education outcomes.

4.2 Study samples

Stake holders of the main provider of nursing education in Singapore were invited to participate in the study. Since the aim of this study was to evaluate the effect of educational experience, inclusion criteria therefore specified that individual participants were to be the following:

- i. first year students who had only 6 months of curricula exposure and the final year students who had 6 months in pre-registration clinical placements (PRCP) remaining before graduation.
- ii. nurse teachers including clinical instructors who were responsible for nursing students' learning experience in HEI and clinical placements.

4.3 Ethical considerations

Ethical approval was obtained from the ethics review board of the Faculty of Health and Social Care of the University of Hull, and the ethics review committee of the participating school. Permission to conduct the study was also obtained from the participating school and the various healthcare institutions where clinical placements took place. Prior to making any observations, capturing photographic images, digitally recording interactions, interviewing the participants and distributing the questionnaires, informed consents were obtained from the students, nurse lecturers, clinical instructors and patients, as appropriate.. All participants were given opportunities to clarify any issues before agreeing to participate. They were told that all identities would be kept anonymous and confidential. In situations when capturing of images was required, participants gave permission for photograph taking and publishing of the images. Participants were also informed that they could withdraw from the study at any time. Contact details of the researcher were provided for any clarification if needed. All data obtained in the study were stored in secured databases which were accessible based on a pass word which was known to me as the researcher and no one else.

4.4 Research procedures

The study was based on multiple visits to the main provider of nursing education in Singapore, as well as 3 healthcare settings where more than half of the clinical component within the nursing programme was delivered. These visits were made between 10th July and 26th October 2012. This provided the opportunities for an evaluative study which comprised a mixed method approach divided into 3 phases:

- i. Phase 1: Meetings were held with key stake holders; main providers and students of pre-registration nursing education and main providers of pre-enrolment nursing education. These were to gain insights of the education system in relation to practices in recruitment, selection, teaching, learning, assessments and student support in curricular and extra-curricular activities.
- ii. Phase 2: Observations were made in specific teaching areas in the schools and placement areas and a single cross sectional survey of teachers to determine their level of caring disposition.
- iii. Phase 3: Divided into 3 stages

- a. First stage: conducted content analysis of the relevant documents to gain insights of the contents and aims of the curriculum.
- a. Second stage: conducted a single cross sectional survey on first and final year students to evaluate the impact of the nursing curriculum on students' predisposition to professional care.
- b. Third stage: made observations in clinical placements and interview students to fill any knowledge gaps based on the earlier phases of study.

4.4.1 Qualitative data collection/Analysis

Meetings with open questions with education providers were held in groups to gain understanding of the curriculum which was collected for content analysis. Semi-structured interviews with students were conducted on a one-to-one basis. Whilst meetings took place in quiet office rooms, interviews were conducted in a designated office or in the school compound based on interviewees' preferences. Open-questions with educational providers lasted for 4 hours and interviews with students lasted between 1 and 2 hours (Table 4.2).

Table 4.2 Scheduled questions

Meetings with education providers/teachers (open questions)	Interview with Students in clinical placement (semi-structured questions)
1. The aim and goals of nursing education in the institution was explored	1. How would you describe caring behaviours in nursing?
2. The topic on recruitment and selection process was discussed	2. Can you tell me your perspective of caring behaviour in nursing?
3. The specific measures/best practices used to achieve the goal of nursing education were discussed.	3. Can you please comment on the extent to which you think you have demonstrated caring behaviour in relation to the nursing intervention you have carried out.
	4. Think about the nursing intervention you implemented during that observation period, could you highlight any aspects of that intervention that you would find that you have displayed a caring behaviour.
	5. Did you experience any difficulty in expressing your caring behaviour towards patients while performing the nursing intervention?
	6. What enhanced the displaying of your caring behaviour?
	7. What has inhibited you from displaying caring behavior.

A non-participant approach was used for observations in both the educational institution and clinical placements; the former lasted an entire 1-hour teaching session and the latter, 1 to 3-hour duration of the nursing interventions being implemented at the time of observation.

Whilst verbal interactions from interviews and observations were digitally recorded, field notes were made. All data were transcribed verbatim and inputted into NiVo Version 10. Transcripts were read several times for a deep understanding of participants' responses and then coded. Content analysis of the transcripts and field notes was conducted for emerging themes which were then analysed in relation to the demographic information to allow interpretation of all data as a whole.

4.4.2 Quantitative data collection/Analysis

The Caring Behaviour Inventory (CBI) by Wolf et al. (1994) was used in this study to establish the predisposition to professional care of participants. It was used with permission based on a 'release form for the CBI' sent to Professor Wolf's last known address in La Salle University. Accompanied by a non-standardised questionnaire tool to elicit demographic details, the CBI was distributed to students in large lectures theatres just before the start of a lecture. I was there to explain the purpose of the research and to obtain informed consent. The CBI tool was also distributed with the non-standardised questionnaire and written informed consents in sealed envelopes to the nurse teachers. Both students and teachers were given time to fill out the questionnaires and the choice for returning the filled out questionnaires either in person or via land mail. The quantitative data were entered into the statistical package for social sciences (SPSS) version 19 for descriptive and inferential analyses. The demographic data was summarised based on descriptive statistics and the caring behaviour was analysed based on descriptive statistics and independent sampled student *t*-tests as appropriate.

4.5 Rigour: instrument and measures

The quantitative data source based on the CBI by Wolf et al. (1994) was developed using Watson's transpersonal caring theory, in which nurse caring was conceptualised as an 'interactive and inter-subjective process that occurs during moments of vulnerability between nurse and patient and that, this is both – and other- directed' (Wolf et al 1994, pp107-111). The CBI comprised 42-items aimed at measuring the expressive as well as the instrumental aspects of caring through a forced-choice 4-point Likert scale (Table 4.3) from '1' as 'strongly disagree' to '4' as 'strongly agree'. In one most recent study, a high Cronbach's alpha of 0.96 and a test-retest reliability $r = 0.82$ on 42 nurses was reported (Wu 2006). This tool used consistent language and easy-to-understand instructions. Nevertheless, it has not been used in Singapore, and was therefore piloted amongst 20 local students who were not the sample of this study. On this occasion, it was demonstrated that no revision of the 42 items was needed.

Table 4.3 Caring Behaviours Inventory by Wolf et al. (1994)

Caring Behaviours		Strongly Disagree	Disagree	Agree	Strongly agree
1	Attentively listening to patients				
2	Giving instructions or teaching the patient				
3	Treating the patient as an individual				
4	Spending time with the patient				
5	Touching the patient to communicate caring				
6	Being hopeful for the patient				
7	Giving the patient information so that he or she can make a decision				
8	Showing respect for the patient				
9	Supporting the patient				
10	Calling the patient by his/her preferred name				
11	Being honest with the patient				
12	Trusting the patient				
13	Being empathetic or identifying with the patient				
14	Helping the patient grow				
15	Making the patient physically or emotionally comfortable				
16	Being sensitive to the patient				
17	Being patient or tireless with the patient				
18	Helping the patient				
19	Knowing how to administer intravenous infusions				
20	Being confident with the patient				
21	Using a soft gentle voice with the patient				
22	Demonstrating professional knowledge and skills				
23	Watching over the patient				
24	Managing equipment skilfully				
25	Being cheerful with the patient				
26	Allowing the patient to express feelings about his or her disease and treatment				
27	Including the patient in planning his or her care				
28	Treating patient information confidentially				
29	Providing a reassurance presence				
30	Returning to the patient voluntarily				
31	Talking with the patient				
32	Encouraging the patient to call if there are problems				
33	Meeting the patient's stated and unstated needs				
34	Responding quickly to the patient's call				
35	Appreciating the patient as a human being				
36	Helping to reduce the patient's pain				
37	Showing concern for the patient				
38	Giving the patient's medication on time				
39	Paying special attention to the patient during first times, as hospitalization and treatments				
40	Relieving the patient's symptoms				
41	Putting the patient first (patients are my priority)				
42	Giving good physical care				

Instrumental Caring

Expressive Caring

The CBI determined the product dimension, which was the primary outcome in this study. Since it could only elicit self-reported caring disposition, the collected information would have to be verified by qualitative measures, and these too, would have to be rigorous.

Therefore, the power relation that could occur between the researcher and participants was taken into consideration, albeit the fact that I was not a nurse teacher in the institution. All qualitative data collection did not occur in my first meetings with the participating students. Data collection commenced only after the purpose of the study was explained and well understood by the participants, also, when a good rapport was established and the participating student was showing signs of feeling at ease with my presence. Interviews were conducted amongst students whom I have already met in the survey research and observations in clinical settings, all of which commenced only after visits were made on 2 occasions. To allow participants to become less conscious about the observation an additional hour as allowance was added to the observational period.

In terms of validity of the findings, the qualitative data were compared to results from the quantitative research. To reduce biased interpretation, the findings based on non-participant observations and interviews were also validated with the participants and identified themes verified with a clinical educator and nurse deputy director from practice, 4 nurse lecturers and the nurse director of the education institution. The member checking was conducted at varying stages of the analysis.

5 Findings

5.1 Presage Dimension

5.1.1 Participants

Students who completed and returned the questionnaire were representative of the targeted cohort: 240 (41.4%) were from the first year and 417 (69.5%) from the final year (Table 5.1). Less than 20% of the respondents were males in both cohorts. The mean age of the first year students was 19.34 (SD 3.577) and that of the final year was 21.32 (SD 3.691). Many students were still minors who only turned 21 years of age during the course of study. Almost 50% of the entire student population were from neighbouring countries. This reflected a diverse culture in the school. Thirty students who participated in the interviews and twenty-eight students who gave consent for clinical observations were from this sample but might not have answered and returned the questionnaire.

5.1.2 Reputation, funding and the caring attribute of students

By succeeding the then School of Nursing in 1992, the current school has been pioneering nursing education in the country. As verified by the nurse director and teachers, the school has established itself based on generous government funding as a teaching-oriented

institution focused on nurturing individuals with a caring attribute; “*aimed at producing compassionate, committed and competent nurses who can meet ongoing and ever-changing challenges in practice, and to challenge it as appropriate*”. The characteristic features of individuals required for achieving this vision were visibly displayed in the school as the 5 big C’s representing: i) Caring; ii) Compassionate; iii) Committed; iv) Competent; and v) Challenging.

Table 5.1 Students’ demographic data

Items	First year students 2012 Cohort	Final year students	
		2010 cohort	2011 cohort 2-year programme
	n_1 (%) = 240 (36.53%)	n_{2a} (%) = 397(60.43%)	n_{2b} (%) = 20 (3.04%)
Gender			
Female	197 (82.1%)	373 (89.4%)	
Male	43 (17.9%)	44(10.6)	
Age (mean)	19.34 (SD 3.577)	21.32 (SD 3.691)	
Nationality			
<i>China</i>	47 (19.58%) (3 permanent resident PR) (1.25%)	98 (23.50%)/(3 PR)(0.72%)	
<i>India</i>	1 (0.42%) (PR)	2 (0.48%)	
Indonesia	3 (1.25%)	2 (0.48%)	
Malaysia	47 (19.58%)	59 (14.15%)	
Myanmar	10 (4.2%)	15 (3.60%)	
Nepal	2 (0.83%)	5 (1.20%)	
Philippines	3 (1.25%) (1PR)	0	
Singapore	126 (52.5%)	236 (56.59%)	
<i>Ethnicity</i>			
Chinese	48	130	
Eurasians	1	0	
Indians/Sikhs	19	25	
Malay	58	79	
Pakistani	0	1	
Philippino	0	1	
Vietnamese	1 (0.42%)	0	
Number of years in Singapore			
<1	62 (25.83%)	0 (0%)	
1-<5	35 (14.58%)	159 (38.13%)	
5-<10	3 (1.25%)	7 (1.68%)	
10-<15	2 (0.83%)	4 (0.96%)	
15-<20	8 (3.33%)	5 (1.20%)	
20 and more	4 (1.67%)	6 (1.44%)	

Being the pioneer of nursing education in the country, it had established collaboration with highly reputable higher education institutions locally as well as in the UK, the school remained in a unique position for benchmarking nursing education. Based on its aspirations in becoming a premier nursing educational institution of global distinction, one of its dedicated commitments to quality nursing education is through its active partnership with several Universities around the world, including America, Australia, England, Germany and Japan. For these reasons, although the entry standards were similar to the other institutions for nurse diploma programmes, the school experienced higher entry standards of some students. The following testimonies revealed that the good reputation of the school had secured good quality students. As revealed by a third year student:

“my grades could have allowed me to do something else, but I want to be a nurse, and help the sick. I felt lucky to be able to study here”.

Another first year student nurse explained:

“I scored 15 points for my CGE ‘O’ level, and I actually can do accountancy, but I want to help others see myself being a nurse”.

Evidently, less than 2% of students possessed an academic qualification at Advanced level for general certification in both cohorts, many students had successfully gained a place in this higher education institution to pursue nursing based on an ‘Ordinary level qualification’ [(n₁ (%) =215 (89.58%); (n₂ (%) =378 (90.65%)]. Those who did not have that would still have the relevant nursing qualifications for enrolled nursing [(n₁ (%) =19 (7.9%); (n₂ (%) =30 (7.21%)] (Table 5.2).

Table 5.2 Participants’ academic qualifications

Qualifications	2012 Cohort (first year students)	2010/11 cohort (final year students)
	n ₁ = 240 (100%)	n ₂ = 417 (100%)
A levels	4 (1.67%)	8 (1.91%)
O levels	215 (89.58%)	378 (90.65%)
NITEC (Nurs)	18 (7.5%)	29 (7.0%)
NITEC (Nurs) + Midwifery	1(0.4%)	0
NITEC (Nurs) + Dip(accounting)	0	1 (0.21%)
unreported	2	1

When asked about the reasons for undertaking a nursing programme, many students responded with practical ones (Table 5.3). However almost 50% [(n₁ (%) = 117 (48.8%); n₂ (%) =175 (42%)] felt that they had the caring attributes for nursing. This perspective was in line with previous studies on nurses’ perspective of caring, that it is about treating and relating to individuals on a human level (Savage, 1995; Wilkin and Slevin 2004). Many

believed individuals who pursue nursing as a career would have some degree of expressive caring. As shared by a year one student:

“Nursing was not my first choice, but my father kept saying nursing is good for me, so I joined. After taking this nursing course and then coming to this clinical posting, I realised I am actually a caring person, and I like talking to people and helping them, especially the sick and ill ones...so nursing is for me.”

Table 5.3 Participants’ reasons for undertaking the nursing education programme

Items	First year students)	Final year students)
	n ₁ (%)= 240(36.53%)	n ₂ (%) = 417 (63.47%)
Possess caring disposition for nursing	117 (48.8%)	175 (42%)
Job satisfaction by caring for others	127 (52.9%)	160 (38.4%)
Good opportunities for career development	79 (32.9%)	95 (22.8%)
Job security	89 (37.1%)	203 (48.7%)
Did not meet entry criteria for other courses	25 (10.4%)	66 (15.8%)
Not knowing what else to do	24 (10%)	64 (15.3%)
Family influences	3 (1.3%)	8 (1.9%)
Able to travel to Singapore	2 (0.83%)	6 (1.44%)

5.1.3 Profile of teaching staff and its impact on transacting caring behaviours

There were 145 teaching staff employed at the time of the research; 75 had a nursing background, five of whom were advanced nurse practitioners, with the remaining 70 having a background in medicine, pharmacy and other allied healthcare disciplines. There was therefore a good skill and knowledge mix of teachers such that students were taught by subject experts. When a sample of 55 (73.33%) nurse teachers completed and returned the questionnaires, a high level of caring disposition (mean 4.46; SD 0.46) was obtained. A bivariate correlation test revealed no statistical significance between teachers’ caring behaviour and their years of teaching experience ($r=0.04$; $p = 0.769$).

These findings suggested that students not only would benefit learning from subject experts with the pedagogical content knowledge and skills but also, from teachers with high level of caring disposition. This observation was verified in the following qualitative findings based on students’ interview:

“It is good that we had lessons from Mrs X (a pharmacist by background) first, I could understand why the medication behaved the way it did, so when Mrs (Y) (a nurse teacher) teach nursing care, I can see the reasons in that particular nursing interventions”.

“it is always good to be able to catch Dr Z (a medical doctor by background) to explain the anatomy and physiology, mmm .. I can then understand better when I do my clinical skills with the nurse lecturers...who are the ones who explain the caring aspects of nursing”.

Clearly, students had benefited from the nurse teachers who adopted caring-focused strategies to link concepts of instrumental and expressive caring. However, instrumental

caring was built from a non-nursing knowledge base, made possible by specialist teachers. Further evidence of other caring focused strategies is discussed in the next section.

5.2 Process Dimension

5.2.1 Curricular contents

To keep abreast with the development in healthcare, whilst staying competitive in nursing education, the curriculum was developed under the pressure of external bodies to fulfil the standards of the professional regulatory body which was in alignment with healthcare needs. Hence, the curriculum, although subjected to a 5 yearly accreditation by the Singapore Nursing Board (SNB 2012), was regularly reviewed using internal processes which involved the nurse teachers and colleagues in practice. The aim for having such regular reviews was to address the fast changing demands in healthcare to ensure curriculum development was in line with governmental initiatives at all times to provide excellent healthcare service based on complex healthcare needs (Table 5.4). Hence, the curriculum was designed to lead individuals to registration as a general nurse with the aim of increasing diplomates' employability in a variety of healthcare settings. It was clear that the school aimed to produce and maintain a competency based pre-registration nursing curriculum. The goal of the curriculum was clarified by one of the nurse lecturers as:



“our aim is to produce competent and safe nurses who can nurse individuals from “womb to tomb”, be they in general medical and surgical units. Even, in the community or at somewhere specialised for example mental health institution or obstetric units”.

Table 5.4 Top 10 conditions for hospitalisation and the 10 principal causes of deaths in Singapore

Statistic from Singapore Ministry of Health for 2011 (latest information)		
Top 10 conditions of hospitalisation	Healthcare Issues	Principal causes of Deaths
1st	Accidents, poisoning & Violence	5th
2nd	Cancer	1st
3rd	Ischaemic Heart Disease	2nd
4th	Pneumonia	3rd
5th	Other Heart Diseases	6th
6th	Obstetric Complications affecting Foetus or newborn	-
7th	Chronic Obstructive Lung Disease	7th
8th	Cerebrovascular Disease (including stroke)	4th
9th	Infections of Skin Subcutaneous Tissue	-
10th	Urinary Tract Infection	8th
-	Nephritis, Nephrotic Syndrome & Nephrosis	9th
-	Diabetes Mellitus	10th

The curriculum therefore comprised a range of modules: nursing, biological and behavioural sciences, research principles and critical thinking, and a variety of assessment strategies to monitor learning outcomes.

Table 5.5 Module hours, teaching methodologies and assessment strategies

Modules	Teaching methodologies	Assessments (summative)	
1800 hours			
Biological Science	Lectures/Tutorials	Unseen Examinations	
Anatomy and physiology		+ practical tests	
Pathophysiology			1 suite - 120 pieces of computers
Microbiology			Unseen Examinations only
Nutrition			
Pharmacology			Lectures/Tutorials
Behavioural Science			
Psychology	+ small group discussions	+ group presentations	
Sociology			
Nursing Science	Lectures/Tutorials	Unseen Examinations Group Presentation	
Communication	+ small group discussions		
Clinical Nursing			
Patient safety			
Evidence-based Practice			
Health education			
Nursing Management			
*Health Assessment	Role-Play	Practical Examination only	
Research			
Research process	Student project	Project presentation	
Statistics	Lectures/Tutorials	Unseen Examinations/ Project presentation	
General Studies Modules	Lectures/Tutorials		
Clinical skills (in lab)	Simulation-based learning Role Play (360 hours)	Practical Examination	
1520hours			
Clinical placements	Clinical supervision	Case presentation/skills tests	

Whilst nurse lecturers favour the content-heavy curriculum, students agreed with them the importance of knowledge on biological and pharmaceutical sciences, which in their opinion had allowed them to acquire instrumental caring behaviours effectively in the clinical settings. These students accentuated the need for non-nursing subjects in the nursing curriculum as indicated by the following comment:

“lectures on anatomy and physiology are important for me to understand how the human body function, then when I learn about pharmacology, I can imagine how this medication works on the heart to get it pump quicker. All these things I learn in school helped me understand the use of the medicine in the ward. For example this helped to me to understand what to expect when I serve the medicine with my staff nurse.”

Without giving less weightage to any non-nursing subjects, nursing science and particularly clinical nursing knowledge and skills were intensely emphasised. Albeit an equal distribution of hours between theory and practice (1800 theory hours:1520 practice hours) 360 hours of the former were assigned for simulation-based learning of clinical skills (Table 5.5). Nevertheless, SBL was designed to match the theory modules. For example, the clinical skills on endo-tracheal tube insertion were delivered as part of the critical care module, which was followed up by the next clinical placement in an accident and emergency department to reinforce learning. Students generally liked the heavy emphasis on clinical skills in the curriculum, which in their opinion enhanced their instrumental caring behaviour:

“the clinical skills sessions are important for me to build my confidence as a nurse, I can make sure my clinical skills is good and this is verified by the nurse lecturers before I use them on real patients“.

5.2.2 Curriculum delivery

As discussed, government funding was generous, and the school was able to maintain state of the art teaching and learning spaces and technologies. This promoted and enhanced a wide range of pedagogic approaches for teaching and assessments: including didactic approaches, student-centred learning and experiential learning (Table 5.5).

Students expressed that they have learnt expressive caring behaviour in the optional modules on customer communication and life skills in the General Studies Modules, all of which comprised an explicit element of caring. Nevertheless, students also felt that the expressive caring behaviour which resided in individuals upon entry to the nursing courses were often reinforced in lectures, albeit its didactic nature:

“I like Mrs X’s lectures, she always uses many personal experience to tell us how she delivered patient care. The interesting thing is not about what she did to the patient, but it was how she has rendered the care that had made her different from other nurses. I learn how to be a caring nurse from her examples.”

Other than learning from the teachers, the availability of clinical resources had allowed students to frequently organise themselves for self-directed learning in the conducive school compound or in low fidelity clinical laboratories to increase clinical competent knowledge and skills (Figure 5.1). As one student explained:

“I like to attend the study group organised by ourselves, we always have so much fun learning from each other. I also have my friends to correct my clinical skills in a non-threatening environment”.

Many students (n=20) also articulated the potentials of clinical placements in inducing and enhancing expressive behaviour amongst students.

“ I like clinical placements and wish for it to be longer as I learn lots more about how to care for the patients clinical. Also in clinical I don't just learn from NYP lectures, I also learn from staff nurses and the ANs [assistant nurses].”

Figure 5.1 Self-directed learning in low fidelity simulation laboratories



The extent to which students benefited from clinical placement was observed in the following interactions between a student and a nurse lecturer after bed-bathing a 60 yr old with paraplegia. It was by the nurse lecturer encouraging reflection on learning based on students' real experience with patient care.

Nurse Lecturer: *“Student 1 and Student 2 (names mentioned), do you know why it was important to keep asking the patient if she was ok when we turned her over to check her bed sore area?”*

Student 2: *“yes, because she had a stroke and she had no sensation on her right side, and to keep her turned over to left we are using a bit of strength on her right, and we have to make sure we are not over exerting force on the patient”.*

Nurse Lecturer: *“Yes you are right....S2, what did you notice what else I did other than keep asking if she was alright”*

Student 1: *“mmm...I think you did not just ask the question, whenever you had the chance you actually keep checking on her - you focused on her facial expression to check if she was really alright”*

5.2.3 Assessments of learning

For theoretical modules, they were mostly in the form of unseen written examinations which accounted for 50% of the overall mark. Student group presentations, based on case scenarios to reinforce content knowledge, caring disposition and critical thinking skills accounted for the other 50%. Summative assessment for clinical skills took place in clinical skill labs mostly by nurse teachers who subsequently provided the clinical supervision. It was during clinical placements where core clinical, critical thinking and management skills were reinforced and assessed in real clinical situations.

Other than summative assessments, there were also formative assessments. With regards to theoretical modules, these were formatively assessed based on student projects and case studies. Similarly, formative assessments for clinical skills were regularly conducted in both schools and clinical placements by the nurse teachers; during high and low fidelity simulation-based learning and in student presentations of case studies respectively.

5.2.4 Mentoring as a support system

Mentoring by lecturers was in the ratio of 1 lecturer to approximately 20 students, with the aim of facilitating student academic success through provision of academic and social support to students in their experience of the entire programme. Many mentors claimed that they enjoyed these mentorship programmes by which regular contact was possible for building rapport with students. This had given them the opportunities to transact expressive caring, a concept which to the teachers resided as the hidden curriculum and difficult to teach. As one mentor explained:

“It is in these meetings, that I am able to demonstrate the concept of caring to my students. It is hard to explain what caring is, but when I care for the students in the capacity of a mentor, I become a role model for students to care about their patients in the same professional way. It is easier for me to show rather than teaching it”

The positive effects of transacting caring behaviour in mentorship were felt by the students:

“I see a lot of caring behaviour being displayed by my mentor. She will take the initiative to call students up and make queries about our progression. She even stayed back after 6pm to speak with us.”

Between students, there was a ‘buddy-system’. This was catered for International students, who were paired with peers in senior years for support and learning. Many students found the system invaluable to their learning experience, especially for the transacting of caring disposition. One international student expressed:

“I felt homesick at the start of the programme, and my student mentor has helped me a lot, she even brings me around to the local shops to show me where things are... I am still homesick, but I am able to cope well because she has been very nice and kind to me...we even meet on Sundays so that she can teach me on some of the modules”.

5.2.5 Extra-curricular activities

Regardless of a content-heavy curriculum, any available gaps were filled by extra-curricular activities (Table 5.6); every opportunity was seized to increase contact hours between students and teachers. The large volume of extra-curricular activities in fact provided additional opportunities for self-directed learning for balancing the didactic lectures with experiential learning. Through the active participation of these extra-curricular activities, the knowledge students accumulated in a didactic approach to learning of theoretical knowledge was reinforced and enhanced through real life research projects. One student claimed:



“I learn a lot more about how to become a caring nurse through my participation of the World Skills competition, I have used many principles I learnt in classroom, that is why I win this competition.”

It was through fulfilling the requirement to actively participate in extra-curricular activities; many of which were on an international basis with a strong focus on caring, that students not only received an internationalisation of the learning experience, but also a rich learning platform to acquire a better understanding of the notion of caring in nursing.

“By going to another country to help the poor, it can be as simple as just teaching them how to wash their hands, but this opportunity has allowed me to understand the importance of caring for another human being”

As highlighted by Gibbs (2010), a deep approach to learning was essential for long term and meaningful outcomes from higher education. Having information acquired in the classroom and then the opportunity to expand it in real life settings, had allowed deep learning of the notion of caring amongst the Singapore students.

Table 5.6 Extra-curricular activities

<p>Student-led Celebratory Events: Nurses’ day and National Day celebration</p>  <p>given additional opportunities to exercise their leadership, innovative and creativity skills in community caring</p>	
	<p>World Skills Competition</p> <p>to promote excellence in technical competencies and standards of various trades. One of which is ‘Caring Trade’ designed for healthcare students to compete in.</p>
<p>Overseas Charity Work</p> <p>The school ties up with various charity organisations so that students can actively engage in real-life projects in caring for communities in Singapore as well as in rural communities in less developed neighbouring countries such as Cambodia, Laos, Thailand and Vietnam (NYP 2012)</p>	
<p>Overseas Industrial Placements</p> <p>linked up with overseas Universities for clinical placements in countries like America, Australia, England, Germany, and Japan. - students benefited from the enriched experience in learning and working with healthcare professionals and communities in different cultural contexts</p>	

5.3 Product Dimension

5.3.1 Students’ concept of caring based on self-reported CBI scoring

The Caring Behaviour Inventory scale was analysed for scores of the two cohorts of students. Both cohorts had achieved a high mean score for each item (Table 5.2). However, for each item, the final year scored lower than the first year, except for items 3 (‘Treating patient as an individual’) 4, (‘Spending time with the patient’) and 5 (‘Touching the patient to communicate care’). The overall mean score for the first year was 4.45 (SD 0.35) and for the

final year was 4.30 (SD 0.36) (Figure 5.2). The reduction in the mean score from the first year to the final year was significant ($p < 0.001$) (Table 5.7). This result suggested that there was a tendency for opinions to differ as more nursing knowledge was acquired.

Figure 5.2 Mean CBI score of each item by the two cohorts of students

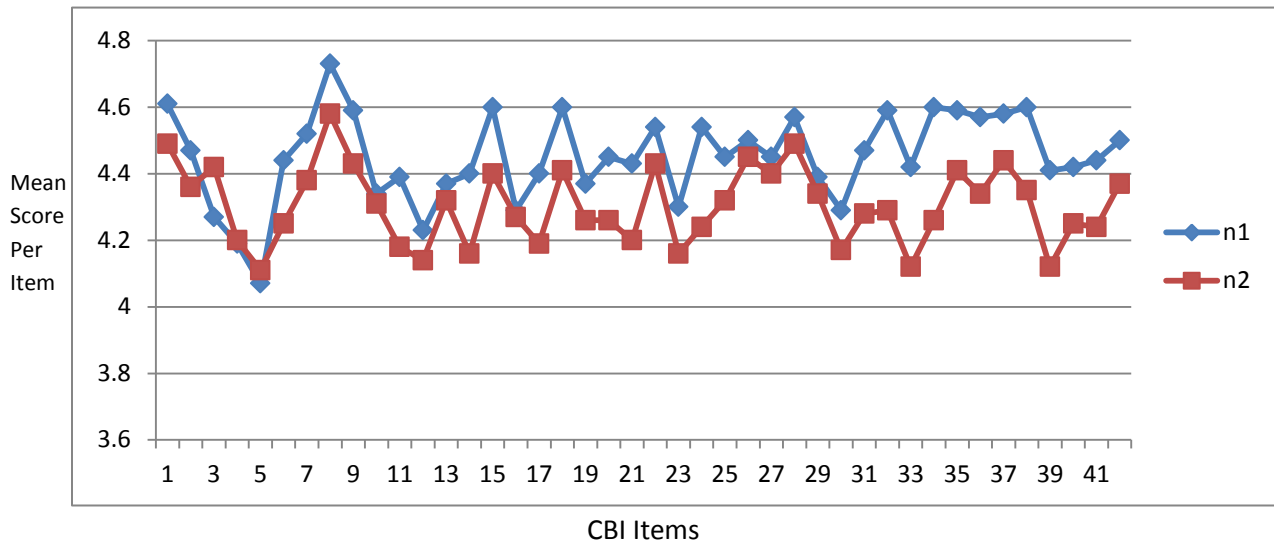


Table 5.7 Independent samples t-test of the two cohorts

CBI score	First year students	Final year students
	n_1 (%) = 240 (36.53%)	n_2 (%) = 417 (63.47%)
Mean	4.45	4.30
SD	0.35	0.36

5.3.2 Comparison of CBI scoring based on previous nursing experiences

When the possibility of the effects of previous nursing experiences as enrolled nurses or paramedic was investigated using independent samples t-test, there was a significant reduction in score amongst first year students (Table 5.8). For first year cohort, students who had nursing experiences had a higher rating ($x_{1a} = 4.59$; $SD = 0.31$) than those who did not have the nursing experiences ($x_{1b} = 4.44$; $SD = 0.35$). In the final year cohort, previous nursing experiences did not have an effect on students' caring attribute ($x_{2a} = 4.30$; $SD = 0.30$; $x_{2b} = 4.30$; $SD = 0.36$). These findings suggested that previous nursing experiences which might have an effect on students' caring disposition would soon be taken over and determined by their current educational experience. Nevertheless, the standard deviations of the mean scores of students without nursing experiences were more varied indicating the effects of education for conceptualising the reality of caring.

Table 5.8 Independent samples t-test: comparison between students with and without previous nursing experiences

Students	With nursing experiences		Without nursing experience	
	2012 Cohort (first year)	2010/11 cohort (final year)	2012 Cohort (first year)	2010/11 cohort (final year)
n	14	30	228	387
CBI scores	$x_{1a} = 4.59(SD=0.31)$	$x_{2b} = 4.30(SD=0.30)$	$x_{1b} = 4.44(SD=0.35)$	$x_{2b} = 4.30(SD=0.36)$

5.3.3 Students' concept of caring based on interviews

Qualitative findings confirmed the quantitative findings that the concept of caring emphasised by the school is shared amongst year one and final year students. There was broad consensus amongst the students that professional nurse caring behaviour included a set of competent core technical nursing skills which aimed to address physical and physiological needs of the patients, and a set of good communication and interpersonal skills to address the psycho-social and emotional needs of patients. As claimed by a third year student:

“Being caring is very important in every nurse; being caring means able to attend to the physical and physiological needs as well as the psychosocial and emotional needs of the patients.”

Another first year student qualified by saying:

“a caring nurse is one who can perform all nursing task effectively and safely and at the same time, she must be a nurse who is able to communicate well and able to empathise with the patient”

Apparently, the key components of caring, being instrumental and expressive as suggested by Woodward et al (1997) was agreed by both students and teachers in this school. Like their teachers, students were strong in their views that the two components had to co-exist in any time during nursing. A final year student from year 3 felt:

“if a nurse was just good at ‘talking’ and does not know what to do to help the patient to achieve physical comfort, then that nurse is not considered to be caring.”

Another first year student affirmed:

“There is no point being very nice to the patient and cannot manage even a simple iv drip, to me not able to address patient fundamental needs is not caring...so you actually need to be competent in your nursing skills and be able to use them efficiently, and also you must have good interpersonal skills to communicate in a caring way.”

Students were also suggesting that without knowing the patient at a personal level, it would not be possible to display any caring behaviour. This was explained by a first year student:

“I can only be caring to the patient whom I know very well, like his concerns, his fears, and his likes and dislikes...mmm...I can then be in the patients’ shoe and emphasise with the patient.”

“Caring involves becoming familiar with the patient and developing that positive relationship”

Another third year student who shared the same view elaborated:

“...this is because caring is about giving holistic care to the patient, treating the patient with respect and treating him as a human being who has unique needs. A nurse is not caring if she sees the patient as a disease to be cured or a medical condition to be managed.”

5.3.4 Students’ disposition of caring based on non-participant observations and interviews

Observations in the clinical settings revealed that the majority of students communicated with patients in a gentle way as appropriate and were able to provide alternatives (based on bioscience knowledge). Hence, students generally could simultaneously display both instrumental and expressive caring behaviours which addressed patients’ physiological as well as emotional needs.

Student: *“pek (uncle in the local context), you’re not eating your lunch?”*

Patient : [waved to indicate ‘no’] (diabetes)

Student: *“[moved a step closer to patient and bend over to where patient was seated to establish eye contact with the patient], are you waiting for your daughter again?”*

Patient: *“Yes.”*

Student: *“Do you know when she arrives today? - She usually would have come by now.”*

Patient: *“in a while, she should be here, today she is late as she has a meeting to attend first.”*

Student: *“In that case, shall I put it in the pantry first? When your daughter arrives, I can then heat it up for you....would you like to have the banana first?”*

Patient: [Smiled with a nod]

5.3.5 Students’ view on expressive and instrumental caring based on non-participant observations and interviews

Many students felt that in order to be caring, one has to have competent clinical skills. Otherwise, the implementing of instrumental caring would be affected whilst they attempted to display expressive caring.

“I always need to concentrate on what I am doing, I do not want to get things done wrong. However, when I concentrate on my nursing task, I just cannot speak to my patient”.

However, students generally felt that even if one was competent in clinical skills, there would not be enough time for communicating with patients. This was because the emphasis in

hospital institutions was measurable outcome, and patient satisfaction, which albeit measured, was generally in relation to instrumental care rather than the degree of expressive care being received by the patient. As affirmed by one student:

“I need to get my work completed on time, otherwise I am seen as not proficient, the patient may lose confidence in me, and the worst case scenario was, I will fail this professional practice. So I rather finish what I need doing for the patient and make sure I don’t make mistakes, I will chat with the patient and provide him the education he needs afterwards.”

Observations confirmed these perceptions, when students were undertaking a complex nursing intervention, or were undertaking a nursing routine for the first time, that there was absolute silence. Student appeared to be making the extra effort to complete the task at hand and there was no verbal communication being conducted between the student as care giver and the patient, unless absolutely necessary.

6 Discussion

Successfully nurturing a predisposition to care, is a critical strategy for achieving retention and success of nursing students in higher education. When the educational experience included a curriculum that underpinned the notion of caring which consisted two components; instrumental and expressive, improved employability of graduates in healthcare and more critically, good quality nursing care can be achieved. By using a multi-method approach, the nursing education system was investigated for the specific strategies which aid its educational delivery to achieve the aim of nursing education in nurturing and transacting the caring disposition of individuals.

The result demonstrated that the Singapore nurse curriculum was not branch-specific. Specialised knowledge for specific nursing-branches was therefore taught to all students. Knowledge might not be taught in great depth, but was adequate to equip individuals who, upon graduation and qualification as a registered general nurse, could work in either community nursing or in any specialised areas in secondary care settings. In this regard, the generic curriculum in the Singapore education system enhanced the employability of student nurses. Further, the curriculum was well balanced in its modules, such that the theoretical to practical components were in a ratio close to 1:1. Both theoretical and practice components were delivered to enhance the instrumental and expressive aspects of caring within the various general and specialised health disciplines, so that theory learnt was always closely linked to practice.

Unlike the UK where students were mostly away from the HEI and expected to conduct self-directed learning, students in Singapore spent 50% of theory time within the education institution. In this time students received large amounts of input by teachers who were

subject experts for theoretical knowledge and clinical skills. The didactic teaching approach was well balanced by student-centred learning and formative assessments; students were frequently observed spending time preparing student presentation of case studies and creative research projects, practising clinical skills or organising extra-curricular activities, where large volume of feedback was received on an informal basis. Hence, other than the stipulated theoretical hours, students were always present in the institution, engaged in self-directed learning with peers and reflective learning guided by nurse teachers (Quinn & Hughes 2007). In this school, curricular and extra-curricular activities were well mixed and provided the opportunity for innovative learning opportunities and sustainable development. One of these was the expectation of final year students in producing a group projects which focused on one aspect of either community care or secondary care, which promoted the innovative and research culture in the school. Consequently, considerably more than 50% of onsite and directly supported learning was in the HEI and not in the clinical settings. The fact that many of the student projects were conducted as charity work in neighbouring countries and a large number of the student population were non-Singaporeans, cultural exchanges were enhanced by default in these students' cooperative work. In essence, the nursing education system could also gear towards fulfilling the local government's internationalisation agenda in higher education. The possibility for multiple learning approaches in student-led activities, all of which were made possible by adequate governmental resources and funding had also resulted in diversity in learning being respected. Consequently, students' active engagement was encouraged and life-long learning skills were fostered.

Whilst there might be concern that the resultant content-heavy curriculum would have adverse effects on student learning, on the contrary, it provided the opportunity to develop effective time management skills of students, which was one of the seven principles of good practice in undergraduate education (Chickering, & Gamson 1987). Still, there ought to be time for reflective learning (Quinn & Hughes 2007). Recognising that the content heavy curriculum might pose a problem for effective learning, the curriculum team was re-developing the existing modules at the time of this report. Other than this, good practices which helped to develop the disposition of caring amongst nursing students were generally evident in both curriculum content and its delivery.

In sum, consistent with the qualitative findings in the presage and process dimensions, the key finding based on the survey was that a high level of caring attribute of students was found amongst the students, including those in the first year who had only 6 months of curriculum exposure. This positive finding of students' caring attribute was also explained in the qualitative findings, where there was broad consensus based on the qualitative research

that student caring attribute was instilled and further enhanced by the curriculum contents and its delivery. For example, the intense use of SBL for teaching nurse clinical management knowledge and skills and the introduction of student projects to address community needs in Singapore and the surrounding less developed countries were highlighted by the nurse teachers and students as effective resources for teaching caring. In addition, role modelling by nurse lecturers and clinical instructors as supervisors in clinical practice was specifically mentioned by students and observed as critical for directing students to reflective practices, which facilitated the acquisition of a caring disposition amongst students.

Consistent with a previous research study recently conducted (Murphy et al. 2009); while there was evidence to suggest that the curriculum has sustained the core value of caring amongst the nursing students, there was however, a reduction in caring behaviour in year three students. Such observation was accounted by the fact that expressive caring was being epitomised more as the caring aspects in Wolf's CBI (1994) (Murphy et al 2009). Therefore, when student nurses were socialised by a successful nursing education -one which provided the balance of transacting instrumental and expressive caring, which was the case in this school, final year students would be expected to achieve lower CBI scoring. This highlighted the usefulness of the mentoring support system, which the school had employed to ease the learning process of caring in professional nursing; a concept which might have been different from one which emphasized expressive caring as conceptualised by students at the start of their nursing programme.

7 Limitations and strengths

The product dimension was evaluated amongst selected groups of students involving comparison of the matched group. This was considered the best approach in evaluating the effects of the education experience, when not only the time period permitted to conduct this study was a short 4 month period, but also, attrition amongst students in any longitudinal study would have been an issue.

As in any other survey based research, the responses of those who chose to return the questionnaires were obtained. However, more than 40% of the students who took time and made the effort to return the questionnaires, when they could actually leave the lecture theatre immediately after the completion of the lectures. In this light, this self-selected sample might bias findings and produced these positive results. Nevertheless, there was a good response rate. If returning of questionnaires was itself, an indication of a caring disposition then the positive results which indicated that the majority of students in the institution were caring, was not far from being credible. Also, there was qualitative evidence from participants who did not answer the questionnaire to support the positive quantitative findings. Therefore

whenever appropriate, the educational strategies as useful means for adjustment to the system in UK should be made. Recommendations based on this study are made in the next section based on 5 of the HEA themes.

8 Recommendations based on the HEA themes

8.1 Assessment and feedback

For theoretical modules, re-introduce more unseen written examinations as summative assessments and student projects/presentations as formative assessments. For clinical skills, more SBL sessions within higher education settings should be in place to create opportunities for feedback which aimed at exploring the caring concepts within a safe and controlled environment. As such, core nursing knowledge and competent nursing skills to be balanced with the acquiring of the art of expressive caring in nursing. As Lord Willis (2012) put it, it was important for academic excellence to be balanced with values. Also for the clinical components, consider the returning of nurse lecturers to placements for joint clinical supervisions and assessments of students to reduce variation in levels of clinical skills attained at the point of qualification (Willis 2012).

8.2 Education for sustainable development

Provide opportunities for student engaging in projects or group presentation of case studies to learn more about the research process, which can then be introduced gently into the programme. Based on interactive learning and peer support, students were likely to acquire the skills necessary for constant questioning or challenging practice and to proactively look for evidence to improve nurses' performance and patient outcomes (Willis Commission 2012). Ultimately, successful retention along with a life-long learning skill is developed that upon post registration, these individuals were likely to engage in continuing professional development programmes (Thomson & Jamieson-Ball, 2011).

8.3 Employability

Reintroduce general nursing whereby branch-specific knowledge and skills are taught as appropriate in the pre-registration programme of study. At the point of registration, nurses would be able to function effectively in a range of settings. From a sustainable professional development point of view, pre-registration nurse qualification would not be seen as an end to the nursing career path, rather a required qualification to access further development opportunities in the various specialised nursing disciplines.

Otherwise, consider introducing nursing core skills and knowledge which were important to develop and sustain instrumental caring, currently found only in the common foundation year in the UK, across all three years in the entire branch specific nursing programme. In this way,

even if branch-specific, nursing programmes were to continue at pre-registration level and individuals would graduate with the required knowledge and skills to nurse different aged group with different medical and health conditions. This helps fulfilling the goal of having nurses being able to function in different settings as stated in the Willis commission report (2012).

8.4 Internationalisation

Involve students in charitable work in the form of student projects in surrounding less developed countries to learn more about healthcare issues around the world. Closely related to the theme of 'Retention' and 'Success', is to provide students who had displayed excellence in theoretical/clinical performances the opportunities to participate in competitions at international levels so as to expose them to work with students of other parts of the world.

8.5 Retention and success

Reward and recognition of successes were important influencing factors for nurturing and retaining professional pride, good attitudes and behaviours (Keller 1999). Student's work which demonstrated caring disposition should be encouraged to put through national or international competitions. Those which focused on current health issues to be showcased to commemorate significant events such as World Children's Day, Nurses' Day, World Aids Day.

To enhance retention and success, it is important to reduce isolation (Chickering and Gamson 1987) by exploiting the personal supervision for face-to-face contact with students on a regular basis. Explore opportunities and financial support for social activities through a buddy system for a caring climate of peer support (Hughes 1993) especially amongst first year students and international students. This would help in mitigating attrition resulting from poor learning outcomes (Christiansen & Bell 2010).

9 Conclusion

While the need for transacting caring is widely advocated, research-based strategies for implemented it in nursing education for higher learning are not well articulated. Consequently, justifying nursing education in higher education is not as convincing, especially in the United Kingdom where the good effects of nursing education might not have been obvious, and instead, clouded by numerous critical incidents in clinical practice (Francis 2010; 2013). Gaining insights to students' way of acquiring the caring attributes in country where there is good reputation for successful healthcare and education is useful. Certainly, understanding how student nurses learn is an important first step to effective transacting caring in nursing education.

This study, based on the '3P' model was completed using a collection of research methods demonstrated that educating individuals to acquire the innate caring attribute requires an intact infrastructure to support a dedicated team of teachers who could then have opportunities to use a variety of challenging and innovative pedagogic strategies in higher education. Certainly all which could not be achieved if nursing education was based on bedside apprenticeship as suggested by O'Brien in the recent Prime Minister's Question on 13 March 2013. The findings in this study which did not comprise any surprising elements, had highlighted some important educational principles embodied in the Singapore educational practices, which should direct us to rethink the nursing students' learning experience we created in the UK.

It was appreciated that the school was set in a different context from the UK. Hence, making direct comparison between the school and the UK institutions for applications was not the intention of this study. Recommendations based on the findings should be considered with modifications and enhancements in places where confidence regarding the UK nursing education to teach caring disposition in nursing was reduced (Willis 2012). Certainly, possible changes to the key stakeholders, such as the NHS, the nurse professional bodies and the universities should be considered whilst using the recommendations.

10 References

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