

Volunteer, community-based
student-run clinics for
the underserved:
Can they be used to attain 21st century
medical education goals?

Thesis submitted in partial fulfillment for the
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Declaration

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ABSTRACT

Background: Community-based education has increasingly become emphasised as an important aspect of health professions education. Not only does it provide opportunities for student-centred learning; it also facilitates the attainment of graduate attributes desired of health care professionals in the 21st century. Further, it can influence career choices and thus retain doctors in primary care, where the greatest practitioner deficit is. South Africa has committed to training community-based, primary care generalists who can attend to the country's greatest healthcare needs. Consequently, Health Science Faculties aim to include community-based teaching and learning opportunities in their curricula. At the University of Cape Town, this has proved a challenge due to the limited number of sites available for student placements. However, there are several voluntary community-based student-run clinics co-ordinated by the Students Health and Welfare Centres Organisation (SHAWCO), which could offer students community-based teaching and learning experiences.

Objectives: To investigate students' perceptions of the benefits of SHAWCO clinic attendance to their learning and personal development, in order to determine these clinics' suitability for inclusion into the undergraduate curriculum as community-based teaching and learning sites.

The research questions that guided this research were:

Does attending volunteer SHAWCO clinics in under-serviced communities impact on student learning; the development of graduate attributes; and/ or students' development as individuals?

Based on these findings, do SHAWCO clinics offer the same opportunities described for community-based education, and if so, could they be used as a formalised platform for community-based education at the University of Cape Town?

Subsidiary questions

1. How, if at all, do students think SHAWCO clinic involvement benefits their learning?
2. How do students learn at these clinics?
3. Does SHAWCO clinic involvement facilitate the development of desired graduate attributes?

4. How, if at all, does SHAWCO involvement impact on students' personal development?
5. Based on students' experiences of the SHAWCO environment, do SHAWCO clinics offer the same opportunities as standard CBE, and if so, could they be formalised into the UCT undergraduate medical curriculum?

Methods: This was a descriptive case study using semi-structured focus group interviews for data collection. Ethical clearance for the study was obtained from The Universities of Cape Town and Stellenbosch. Seven focus groups were held with medical students; one with SHAWCO Steering Committee members in any year of study; three with preclinical students (years one and two); and three with clinical students (years four and five). A total of 49 students were interviewed. Interviews were analysed inductively using thematic content analysis.

Results: SHAWCO clinic involvement did offer the same opportunities as standard community-based education, but the fact that SHAWCO is student-run conferred many additional qualities to this experience. Involvement in SHAWCO complimented and enhanced the curriculum but also took students far beyond curricular bounds, which allowed for the development of many graduate attributes, in addition to personal growth and professional identity development. The voluntary nature of SHAWCO attendance for both students and supervising clinicians was central to its success, as it created an enabling learning environment, where teachers were enthusiastic and patient. Other facets of the SHAWCO learning experience included peer-assisted learning and mentorship, early patient contact, accountability and emotional engagement.

Conclusions: While SHAWCO clinics provide an ideal community-based teaching and learning opportunity, they should not be formalised into the curriculum to any great extent, as doing so would rob SHAWCO of the very essence that makes it so beneficial. However, one compulsory visit in students' first year of study during a period when many become disillusioned due to dry academic bookwork is suggested, after which time students could return if they so choose. Offering senior students, who are responsible for the majority of teaching, voluntary input on effective clinical teaching and mentorship methods could potentially enhance the educational value of the SHAWCO learning experience.

ABSTRAK

Agtergrond: Gemeenskapsgebaseerde onderrig word toenemend beklemtoon as 'n belangrike aspek van gesondheidsberoep-onderrig. Dit voorsien nie net geleenthede vir student-gesentreerde leer nie, maar fasiliteer ook die bereiking van gewenste eienskappe van graduandi vir gesondheidssorgdeskundiges in die 21ste eeu. Dit kan ook loopbaankeuses beïnvloed en dus geneeskundiges in primêre sorg behou, waar die grootste tekort aan praktisyns tans bestaan. Suid-Afrika is daartoe verbind om gemeenskapsgebaseerde, primêre-sorg algemeniste op te lei wat die land se grootste gesondheidsorgbehoefte kan aanspreek. Gevolglik mik fakulteite van gesondheidswetenskappe om gemeenskapsgebaseerde leer- en onderriggeleenthede by hul kurrikula in te sluit. By die Universiteit van Kaapstad was hierdie mikpunt 'n uitdaging te danke aan die beperkte aantal beskikbare plasings vir studente. Daar is egter 'n aantal vrywillige, gemeenskapsgebaseerde klinieke wat deur studente gelei en deur die *Students Health and Welfare Centres Organisation* (SHAWCO) gekoördineer word wat moontlik vir studente gemeenskapsgebaseerde leer- en onderriggeleenthede kan bied.

Doelwitte: Om studente se persepsies te ondersoek van die voordele aan hul leer en persoonlike ontwikkeling van SHAWCO kliniek-bywoning, sodat die geskiktheid van hierdie klinieke vir insluiting in die voorgraadse kurrikulum as gemeenskapsgebaseerde leer- en onderrigplasings bepaal kan word.

Die navorsingsvrae wat die studie gerig het is:

Impakteer die bywoning van SHAWCO-klinieke in ondervoorsiene gemeenskappe op studenteleer; op die ontwikkeling van eienskappe van graduandi en / of studente se ontwikkeling as individue?

Gebaseer op hierdie bevindinge, bied SHAWCO-klinieke dieselfde geleenthede wat vir gemeenskapsgebaseerde-onderrig beskryf is en, indien wel, kan hulle as 'n geformaliseerde platform vir gemeenskapsgebaseerde-onderrig by die Universiteit van Kaapstad gebruik word?

Spesifieke vrae:

1. Hoe, indien enigsins, dink studente bevoordeel betrokkenheid by SHAWCO-klinieke hul leer?
2. Hoe leer studente by hierdie klinieke?

3. Fasiliteer *SHAWCO*-kliniek betrokkenheid die ontwikkeling van gewenste eienskappe van graduandi?
4. Hoe, indien enigsins, impak *SHAWCO* betrokkenheid op studente se persoonlike ontwikkeling?
5. Gebaseer op studente se ervarings van die *SHAWCO* omgewing, bied *SHAWCO* klinieke diselfde geleenthede as gewone gemeenskapsgebaseerde-onderrig, en indien wel, kan dit in die Universiteit van Kaapstad se voorgraadse mediese kurrikulum geformaliseer word?

Metodes: Hierdie was 'n beskrywende gevallestudie wat semi-gestruktureerde fokusgroeponderhoude vir data-insamelings ingespan het. Etiese klaring vir die studie is van die Universiteite van Kaapstad en Stellenbosch verkry. Sewe fokusgroepe is met mediese studente gevoer; een met lede van die *SHAWCO*-bestuursskomitee in enige studiejaar; drie met prekliniese studente (eerste- en tweedejaar) en drie met kliniese studente (vierde- en vyfdejaar). 'n Totaal van 49 studente is ondervra. Onderhoude is induktief ontleed met behulp van tematiese inhoudsanalise.

Resultate: *SHAWCO*-kliniekbetrokkenheid het dieselfde geleenthede as gewone gemeenskapsgebaseerde-onderrig gebied, maar die feit dat *SHAWCO* deur studente gelei is verleen vele addisionele eienskappe aan die ervaring. Betrokkenheid by *SHAWCO* komplimenteer en brei op die kurrikulum uit, maar het studente ook ver buite die perke van die kurrikulum geneem, wat die ontwikkeling van verskeie eienskappe van graduanditoegelaat het benewens persoonlike groei en die ontwikkeling van professionele identiteit. Die vrywillige aard van *SHAWCO* bywoning vir beide studente en toesighouende klinici was sentraal tot die sukses daarvan, omdat dit 'n bemagtigende-leeromgewing geskep het, waar dosente entoesiasies en geduldig was. Ander fasette van die *SHAWCO*-leerervaring het eweknie-ondersteunde leer en -mentorskap, vroeë pasiënt-kontak, aanspreeklikheid en emosionele betrokkenheid.

Gevolgtrekkings: Terwyl *SHAWCO* klinieke 'n ideale gemeenskapsgebaseerde-leer- en onderriggeleentheid bied, moet dit nie in die kurrikulum tot enige groot mate geformaliseer word nie – om dit te doen sou *SHAWCO* van die wese wat dit so voordelig maak, beroof. Daar word egter voorgestel dat eerstejaarstudente een verpligte besoek onderneem, dié in 'n jaar waar baie studente ontnugter raak as gevolg van droë akademiese boekwerk. Na so 'n besoek sou studente kon terugkeer sou hulle dit verkies. Die opvoedkundige waarde van die *SHAWCO*-leerervaring kan potensieël verbeter word deur senior studente (wie vir die

meerderheid van die onderrig verantwoordelik is) vrywillige insette oor effektiewe kliniese onderrig en mentorskap metodes te bied.

ABBREVIATIONS

ACGME	Accreditation Council for Graduate Medical Education
CBE	Community Based Education
GSH	Groote Schuur Hospital
HCPs	Health Care Practitioners
HIV	Human Immunodeficiency Virus
HPCSA	Health Professions Council of South Africa
LOT	Learning-orientated Teaching
PAL	Peer-assisted Learning
SA	South Africa
SHAWCO	Student Health and Wellness Centres Organisation
SRCs	Student-Run Clinics
UCT	University of Cape Town

TABLES AND FIGURES

Table 1: Core competencies for undergraduate students in clinical associate, dentistry and medical teaching and learning programmes in South Africa

Table 2: Types of learning at SRCs and how they might be facilitated

Table 3: Learning experiences and the way in which they relate to types of learning seen at SHAWCO

Figure 1: Overview of study findings

Figure 2: The challenge-support model of personal growth

CHAPTER 1: Introduction

1.1. Overview

Contemporary expectations of medical doctors extend well beyond being ‘merely’ clinically competent. This project explores whether a student-run clinic can contribute to a community-based education programme at the University of Cape Town, which could help prepare medical graduates to navigate complex current healthcare challenges demanded in the 21st century.

Recent years have seen a change in the understanding of the attributes and roles of a medical doctor. This has been in response to a rapid and extensive global change in disease patterns and healthcare needs (Frenk, Chen, Bhutta, Cohen, Crisp, Evans, Feinberget al., 2010). These attributes include: social accountability; the capacity for lifelong learning; reflective practice; critical thinking; altruism; patient advocacy; and effective resource management (Boelen & Woollard, 2009; Frank, Snell, ten Cate, Holmboe, Carraccio, Swing, Harris et al., 2012; Frenk, et al., 2010). Frenk et al. (2010), in their seminal paper, have emphasised an increasing need for doctors to be leaders and *change agents*. Thus, the general understanding of the roles of doctors has shifted from an emphasis on academic knowledge and clinical skills alone to a more all-encompassing set of expectations. This has resulted in the formulation of competency frameworks like those of the Accreditation Council for Graduate Medical Education (Swing, 2007) and the Canadian Royal College of Physicians and Surgeons CanMEDS Framework (Frank, 2012) (both aimed at post-graduate students), which could guide medical training. The Health Professions Council of South Africa (HPCSA) has committed to an adapted version of the latter for undergraduate training (HPCSA, 2014).

Community-based Education (CBE) is defined as “activities that use the community extensively as a learning environment, where students, teachers, community members and representatives of other sectors are actively engaged throughout the educational experience in providing medical education that is relevant to community needs” (Mennin & Mennin, 2006). In addition, students have experienced CBE as (amongst other things): adding relevance to learning, allowing space to develop relationships with patients, improving their understanding of social determinants of health, increasing exposure to engaged, positive role-models and mentors, as well as being more enjoyable than hospital-based medicine (Mennin & Mennin, 2006).

Tertiary, hospital-based medicine has indeed come under fire because of its limitations (De Villiers, 2010; Karle, Walton & Lindgren, 2012). For example, it has been argued that scientific and hospital-based teaching does not provide graduates with the skills and knowledge required to practise as undifferentiated generalists, nor does it prepare students for the emotionally draining, stressful “real world” complexities of general practice (Tallentire, 2011; Goldacre, 2003; Illing, Morrow, Rothwell, Burford, Baldauf, Davies, Peile, et al, 2013). By contrast, students have reported a positive impact of CBE on their personal development and stress management skills (Worley, Prideaux, Strasser, Magarey & March, 2006).

Finally, it has been claimed that CBE has the potential to increase recruitment of Health Care Practitioners (HCPs) into generalist and primary (or “first point of contact”) care (Howe, 2002). This is of critical importance, since specialised medicine, which serves a small minority of the population is often valued over primary care (WHO/PEPFAR, 2009). Locally, this is relevant because the South African Department of Health has decreed that graduates should be *undifferentiated primary care* practitioners (Department of Health, South Africa, 2009).

The University of Cape Town (UCT) has committed to CBE but is struggling to find sites in which to roll this out (Burch, 2012), a difficulty the author has herself experienced as a UCT medical educator.

1.2. Motivation for the study

The University of Cape Town (UCT) has committed to the set of HPCSA-defined graduate attributes, as well as CBE, but is struggling to realise these goals. One avenue that could help fulfil these needs and expectations could be the clinics run by the UCT Students' Health and Welfare Centres Organisation (SHAWCO). In my own experience as a medical educationist at the Department of Obstetrics & Gynaecology at UCT, my clinical teaching currently straddles tertiary, hospital-based and primary, community-based teaching. When I took over the role as the Gynaecology course convenor for the fifth and penultimate study year of my institution's undergraduate medical curriculum, I discovered that the Gynaecology students only spend two days seeing patients in a primary care setting during their four week-long block – all other teaching takes place in secondary and tertiary care facilities. Reflecting back, I recalled that this lack of primary care Gynaecology exposure mirrored my experience as an undergraduate student at this same institution. It occurred to me that I had learned significant portions of truly valuable, ‘real’ medicine’ at the voluntary, student-run,

after-hour clinics that take place in under-served, impoverished communities, under the auspices of SHAWCO. I had also volunteered as the attending doctor at many SHAWCO clinics after I graduated, and I recalled the many opportunities that had arisen for me to teach students.

1.3. Background

SHAWCO student-run clinics (SRCs) had their origins many years ago. In 1943, a UCT medical student began driving ambulances for extra income. One of the areas he visited was Kensington-Windermere, a shanty town then on the outskirts of Cape Town. Disease was rife in this area, yet there were no health facilities available. He was so appalled by the conditions he saw that he resolved to open a student-run clinic to relieve the burden of disease suffered by residents in the area. He approached a tutor at UCT, and together they established the Kensington Students' Clinic (Favara & Mendehilson, 2012). This initiative was soon formalised into a registered non-governmental organisation, comprising two arms-Health and Education, which function as separate units. SHAWCO Health has now evolved into various types of clinics that are entirely student-run. They are 'full function' clinics, insofar as that they all have small pharmacies, overseen by pharmacists. However, the attendance of students from other disciplines varies by clinic (for example, at paediatric clinics, occupational therapists are routinely present – this is not the case at other clinics). Apart from permission to use fixed-site clinics, municipal clinics are not involved in clinic management.

Students are responsible for all fundraising, drug sourcing and the day-to-day management of clinics. They recruit students and supervising doctors to attend. 'Pre-clinicals' (years 1 to 3) and 'clinicals' (years 4 to 6) attend in varying numbers (usually between 10-15), with one attending volunteer doctor, who may or not be a UCT staff member (private practitioners also volunteer). 'Pre-clinicals' sit in with 'clinicals' while they clerk and examine patients. All final patient management decisions are signed off by the supervising clinician. In 2014, 195 clinics were held; 4292 patients were seen; 881 students attended clinics; and 2251 total student clinic sessions logged (illustrating that some students attended several times), (SHAWCO, 2014).

A maximum of 20 patients is booked per clinic, with the exception of rural clinics. The latter are clinics run during student vacations in rural parts of the Eastern Cape Province or semi-

rural areas up the West Coast of the Western Cape Province of South Africa. While most patients present with upper respiratory tract infections, gastrointestinal disorders and musculoskeletal problems, the patients are completely undifferentiated, so any medical condition may be seen (SHAWCO, 2012). Each patient has a pro-forma set of notes completed by the student to ensure that all aspects of the patient's background are covered, and patients keep these records in case they present to future clinics. A substantial amount of health promotion and screening is done at clinics; for example, patients are educated on common conditions in the waiting area, HIV tests are routinely offered, and blood pressures are routinely checked. On rural clinics, students also do Pap smears and offer contraception to patients as well.

Steering Committee members work with community representatives to advertise SHAWCO services and to identify community healthcare needs. SHAWCO runs specific initiatives such as contraception awareness workshops, breast cancer screening among other health promotion and screening events.

Although SHAWCO is a voluntary, student-run clinic, it has been incorporated to a limited extent in the formal curriculum. Currently, final year Family Medicine students have to attend two prescribed SHAWCO clinics in that rotation, though this is not necessarily supervised by a Faculty Family Physician (Beckett, 2013). SHAWCO has also joined the School of Child and Adolescent health for a paediatric clinic initiative; this too, has become part of the 5th year Paediatric block but involves usually only 2 clinics per student (Wicombe, 2013). Finally, 3rd year students must include a minimum of one SHAWCO patient in their portfolio (Favara & Mendehilson, 2012). For the most part, however, student participation remains voluntary. I decided to further explore what is known on student-run clinics in order to determine how they can contribute to CBE experiences, and ascertain their benefits to students' learning.

CHAPTER 2: Literature review

2.1. Student-run clinics

Literature on student run clinics is limited in scope, and the bulk of it is limited geographically to the United States (US). According to Ellet, Campbell & Gonsalves (2010), the US has more than 100 student-run, volunteer clinics running all over the country. There are various models, but all are community-based and focus on primary care conditions. All involve clinics for the under-served, for whose patients clinic visits and medications are free. Many clinics also provide opportunities to work with communities to address their health care needs, further contributing to the CBE model (Simpson & Long, 2007). In this way, SRCs represent in part a CBE model.

All clinics are supervised by faculty members (Ellet, et al., 2010; Meah, Smith & Thomas, 2009). Some schools have formalised these clinics into their curricula, where students obtain 'credits' for their attendance (Sheu, Zheng, Coelho, Lin, O'Sullivan, O'Brien, Yu, & Lai, 2011). Various services are offered at these clinics, including screening and health promotion (Mays, Ly, Allen, & Young, 2009) and professional counselling (Meah, et al., 2009). Students learn and practice essential skills and procedures at these clinics, often for the first time. Examples include: taking a history, examining patients and presenting cases to clinicians (Simpson & Long, 2007).

Sheu, et al. (2011) found that "the greatest impact of the clinical experience [for students] was in offering real patient encounters and opportunities to practice clinical skills-opportunities not available in the classroom" (p.230).

There can be no arguing about the value of this kind of experiential learning in terms of acquiring certain *clinical* skills. It is assumed that SHAWCO involvement would offer similar benefits. However, experiential learning in the context of SRCs not only fosters clinical skills, but can also fulfil the need for attaining the desired kinds of graduate attributes discussed in the introduction to this paper.

2.2. Benefits of SRCs: Desired graduate attributes acquired through involvement in SRCs

As mentioned in the introduction, the HPCSA has adopted a set of guidelines outlining the core competencies that should inform medical training curricula. These are, broadly speaking, illustrated in the table below.

Table 1: Core competencies for undergraduate students in clinical associate, dentistry and medical teaching and learning programmes in South Africa (HPCSA, 2014).

Role	Attributes
<i>Health Care Practitioner</i>	“HCPs integrate all of the graduate attribute roles, applying profession-specific knowledge, clinical skills and professional attitudes in their provision of patient/client-centred care. The healthcare practitioner is the central role in the framework of graduate attributes.”
Communicator	“HCPs effectively facilitate the carer-patient/carer-client relationship and the dynamic exchanges that occur before, during and after interventions.”
Collaborator	“HCPs work effectively within a team to achieve optimal patient/client care.”
Leader & Manager	“HCPs are integral participants in healthcare organisations, organising sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the healthcare system.”
Health Advocate	“HCPs responsibly use their expertise and influence to advance the health and well-being of individuals, communities and populations.”
Scholar	“HCPs demonstrate a lifelong commitment to reflective learning as well as the creation, dissemination, application and translation of knowledge.”
Professional	“HCPs are committed to ensure the health and well-being of individuals and communities through ethical practice, profession-led self-regulation and high personal standards of behaviours.”

Student-run clinics have the potential to foster these kinds of competencies. Indeed, SRCs have been shown to offer opportunities to develop such attributes that may not be found in formal curricula. Batra, Chertok, Fisher, Manseau, Manuelli, & Spears (2009), critiquing the current, prevalent model of largely inpatient exposure in medical education, note that, “[t]hrough altruism and patient advocacy are promoted in curricula, students are given few opportunities to develop these skills... [and that SRCs can] provide a space in which students can develop skills unaddressed in large teaching hospitals” (p.781). Clark, Melillo, Wallace, Pierrel, & Buck (2003) showed that students developed “social awareness, compassion & empathy, teamwork & confidence-building” (p.396). Davenport (2000), with reference to holistic patient care, refers to the teaching done by the preceptors at an SRC, who specifically tried to emphasise the importance of “considering the whole person when looking at a patient – because it was not likely to be a message they heard anywhere else” (p. 323). Another desirable graduate attribute is the ability to be a good resource manager. Meah et al. (2009), state that “[t]he restrictions on these SRCs make creative management and delivery of effective healthcare a constant challenge uniquely experienced outside of traditional medical arenas” (p.349).

2.3. Benefits of SRCs: Learning

There are several teaching and learning theories and paradigms potentially at play in community-based SRCs. As mentioned before, experiential learning is a key feature of SRC learning. In addition, existing literature has mentioned constructivism and active-learning (Meah et al., 2009; Sheu et al., 2011; Clark, et al., 2003). Transformative learning has been hinted at but not fully described (Davenport, 2000). The next section describes these learning theories and ways in which they could be effected at SRCs.

Constructivism posits that new knowledge will be internalised, and constructed on the foundation of what is already known (Torre, Daley, Sebastian & Elnicki, 2006). Constructivist learning requires that learners *critically reflect* on their *experiences*, in order to obtain meaning from them. A key element of constructivism is student independence, attained through self-directed learning (Meah, et al. 2009). Constructivism can be associated with “deep” approaches to learning, resulting in true understanding, as opposed to “surface” approaches to learning, characterised, for example, by rote learning merely to pass a test (Ramsden, 2003). True understanding and internalisation do not occur in this case (Entwistle & Peterson, 2004). Clearly, the former is preferable, and this kind of *internal* knowledge

construction process can be fuelled by the fire of experiences arising from the *external* environment. This is experiential learning, whereby a student learns by *doing* (Kolb, 1984).

In the case of the SRCs, this experiential learning is situated in the community– the ‘coal face’, and has the potential to be not only constructivist in a general sense, but in fact effect transformative learning, as seen in CBE in general (Mennin & Mennin, 2006). Transformative learning can be defined as the transformation of a set assumptions or attitudes through critical reflection of one’s experiences and oneself (Mezirow, 1997). Cashman & Seifer (2008) note that being actively immersed in a community-based environment can challenge values, beliefs and attitudes –key elements of transformative learning experiences. These are more likely to occur when students face “disorienting dilemmas” that make them re-evaluate their ways of understanding the world (Mezirow, 1981). SRCs expose students to novel, complex problems and situations that can provide such transformative experiences, which may not occur in their normal curricula (Davenport, 2000; Batra et al., 2009). All of the above types of learning require active involvement of students, this being of key importance to effective, deep learning (Michael, 2006).

A final means of effecting the above-mentioned ways of learning is peer-assisted learning (PAL), through direct instruction or role-modelling, or through mentorship. Several authors note that PAL occurs in SRCs (Meah, et al., 2009; Davenport, 2000; Simpson & Long, 2007; Clark et al., 2003). Peer-assisted learning is a powerful, yet under-utilised tool in medical education (Batchelder, Rodrigues, Lin, Hickey, Johnson & Elias, 2010), which, when used effectively, fosters collaborative learning. PAL falls under the umbrella of the social learning theories, developed by Bandura, Piaget, Vygotsky and others (Ashworth et al., 2004), which state that learning together is more effective than learning alone. It has been shown teaching from peers is at least as good as that of residents and consultants (Graziano, 2011; Heckman, Dutsch, Lang, Weih & Schwab, 2008). Benefits to students doing the tutoring include the enhancement of clinical, teaching, communication and leadership skills (Buckley & Zamora, 2007).

A summary of the ways in which learning might occur and the approaches through which to facilitate these is shown in Table 2 below.

Table 2: Types of learning at SRCs and how they might be facilitated

Ways learning might happen	Approaches to facilitate this learning
Constructivism Transformative learning	Learning by doing (active, experiential learning;) Learning in context (community based education; situated learning) Peer assisted learning (social learning theories)

As can be seen, there are a variety of potential benefits for students attending community-based SRCs, such as the acquisition of clinical skills, and the attainment of generic skills and graduate attributes, all of which are called for in current medical education practice. It is assumed that involvement in SHAWCO could similarly aid the development of these attributes, thereby contributing to the development of the competencies described in the CanMEDS and HPCSA documents. There are gaps in what is known, and existing literature has called for further research, as shown below.

2.4. Envisaged contribution of this study

The role that SRC's can play in support of, or as part of a medical curriculum have not been comprehensively defined. Existing literature on the topic emanates from the developed world (predominantly the US). However, SRCs in the US have two important differences to SHAWCO. Firstly, there seems to be much more formal Faculty involvement in clinics in the US than at SHAWCO. Secondly, the US equivalent to South African Pre-clinical students already have a 3 year minimum 'premedical' degree, and are thus older and more 'life-experienced' than SA students – the latter are usually school-leavers; this may confer different benefits or challenges to SA students. Though there are four other SRCs in South Africa, attached to the Universities of Kwa-Zulu Natal, Witwatersrand, Free State and Stellenbosch respectively (Burger & Allie, 2012), no publications could be found on these.

The existing literature has mainly focused on the use of SRCs in learning about systems-based practice, and how this might affect students' understanding of community health needs. It has also assessed patients' experiences of such clinics, the quality of care at SRCs, and the degree to which SRCs can contribute to care for the indigent. However, evidence on the ways in which students learn at SRCs is limited, as is a comprehensive understanding of the full extent of the skills and competencies that could be attained through SRC involvement. Little evidence is available regarding the effects of SRC involvement on personal development. An understanding of the degree to which beliefs about public service or career intentions could be influenced is also lacking.

Using SHAWCO as a case study, this project is aimed at exploring these gaps in the knowledge about SRCs, with a view to determining whether SHAWCO clinics could be a part of the CBE platform for UCT undergraduate medical training.

2.5. Problem Statement

The University of Cape Town (UCT) has committed to the set of HPCSA-defined graduate competencies, as well as CBE, but is struggling to find opportunities to fully realise these goals. One existing avenue that could potentially help fulfil this need for CBE are the volunteer, student-run SHAWCO clinics based in impoverished communities. However, more information is needed as to how SRCs in general contribute to curricular goals, how they effect student learning and personal development, and to what extent they can contribute to the development of desired graduate competencies. More specifically to our local context is whether an SRC in SA with its six year-long undergraduate medical programme would have similar student outcomes to SRCs in the US.

2.6. Research Questions

Main questions:

Does attending volunteer SHAWCO clinics in under-serviced communities impact on student learning; the development of graduate attributes; and/ or students' development as individuals?

Based on these findings, do SHAWCO clinics offer the same opportunities described for community-based education, and if so, could they be used as a formalised platform for community-based education at the University of Cape Town?

Subsidiary questions:

1. How, if at all, do students think SHAWCO clinic involvement benefits their learning?
2. How do students learn at these clinics?
3. Does SHAWCO clinic involvement facilitate the development of desired graduate attributes?
4. How, if at all, does SHAWCO involvement impact on students' personal development?
5. Based on students' experiences of the SHAWCO environment, do SHAWCO clinics offer the same opportunities as standard CBE, and if so, could they be formalised into the UCT undergraduate medical curriculum?

CHAPTER 3: Research Methods

3.1. Research design

This was a case study. A case study is defined as the study of a “bounded system” (for example, a school or community) (Cohen, Manion & Morrison, 2011:289). The research constituted explorative qualitative research (Ringsted, Hodges & Scherpbier, 2011), following an interpretivist paradigm, which is “associated with an interpretive effort to gather a range of in-depth accounts with the aim of building a detailed picture of how a particular phenomenon is understood by those who have personal experience of it” (Bunniss & Kelly, 2010:360).

3.2. Research context

This project was undertaken at the University of Cape Town, which has a six-year undergraduate medical degree. Successful graduates must then complete a two-year internship and one year of community service (the latter often in a rural area). Most students are school leavers. First and second year are essentially entirely classroom-based, where students learn foundational subjects such as Anatomy and Physiology around paper-based cases in the problem-based learning model. Some courses are shared with other health science students (e.g. physiotherapy students). They are also exposed to broader aspects of health care systems, and what it means to be a health professional, in courses such as “Becoming a doctor”. Third year consists of further exposure to the basic sciences, but also has a semester of introductory clinical medicine. Years four to six are clinical clerkships, where students are predominantly based in hospital wards in district, secondary or tertiary (academic) level hospitals. In addition, all students undertake some day visits to primary care clinics in rotations such as Family Medicine and Public Health.

3.3. Research participants

For the purposes of this project, the focus was on medical students, since they represent the majority of SHAWCO volunteers. Purposive sampling was used to ensure an adequate representation of different students, so that a full range of experiences might be determined (Cohen, et al., 2011). Three types of student were interviewed: pre-clinical (years 1 & 2), clinical (years 4 & 5) and SHAWCO Steering Committee (any year) students, with the assumptions that the motivations for attending, and benefits derived from clinics, may differ between them. The first group was for Steering Committee members; this served as a pilot for the interview questions. SHAWCO statistics from 2011/2012 showed that most students do not attend more than 2 clinics per year. It was thus decided that students were eligible if they had attended more than one clinic throughout their student careers; since returning even once implied some benefit was derived from the first visit. However, Steering Committee members and many other participants had been to many more than two clinics in their student careers (one student [the SHAWCO president] had attended 68 clinics in one year!).

Only students who volunteered for SHAWCO were eligible for the study. For the Pre-clinical years, only first and second year students were eligible, since third year students are required to attend one SHAWCO clinic. For the clinical years, since sixth year students must attend two night-time SHAWCO clinics, they were not eligible for the study either. To be eligible, fourth and fifth years must also have attended two night-time clinics or more, excluding the compulsory fifth year weekend Paediatric clinic visits.

Participants were recruited through presentations by the interviewer in classes; at clinics and through Steering Committee members. No incentive to participate was offered; however, refreshments were provided during the interviews.

3.4. Data collection plan

Data was collected through semi-structured focus group interviews lasting approximately ninety minutes each. Students were asked a series of open-ended, semi-structured questions. This data collection technique was chosen because the “focus group interview strategy is based on the assumption that group interaction will be productive in widening the range of responses, activating forgotten details of experience and releasing inhibitions that

may otherwise discourage participants from disclosing information” (Nieuwenhuis, 2012). Focus groups also lend themselves to collecting rich and detailed data. These were also chosen in an attempt to “neutralise” the power differential between me and the students (Cohen, et al., 2011). I conducted the focus groups myself. Interviews were voice-recorded and then transcribed by a third party. All transcripts were sent to participants for comment or adjustment.

A total of 49 students were interviewed, in seven focus groups: one Steering Committee, three pre-clinical and three clinical groups. The initial aim was to have eight students per focus group, as suggested by MacIntosh, (1989), but participant numbers varied from five to nine students per group, based on who volunteered and when.

3.5. Data analysis

Inductive analysis was undertaken, with the development of codes during data analysis. Codes were allowed to emerge from the data, and then broad themes were created, encompassing various quotes (Bunniss & Kelly, 2010). Thematic content analysis was done; raw qualitative data was analysed such that the meaning behind what was said by participants was interpreted (Nieuwenhuis, 2012). Analysis began while data collection was ongoing. Codes were developed and refined in an iterative process as each new data set was collected and analysed. The initial intention was to use Atlas Ti™ analysis software, but incompatibility across computer operating systems resulted in numerous technical difficulties which meant that reverting to manual coding was more feasible.

Data saturation, where no new constructs emerged by the end of data collection, was achieved in this study (Cohen et al., 2011).

3.6. Ensuring trustworthiness

Questions were piloted before being administered to other groups to ensure their clarity. All interviews were recorded verbatim and raw data was verified by submitting transcripts to participants for their comment and corrections where applicable (no comments or corrections were made). Having more than one focus group represented an attempt to ensure content validity through having multiple data sources (Nieuwenhuis, 2012; Ringsted et al., 2011;

Toma, 2010). Indeed, the similarity of responses across interviews lends credibility to the findings. The supervisor validated emerging codes before these were finalised, thus aiding triangulation of the data (Toma, 2010). The in-depth focus group discussions and the number of participants ensured that data saturation was reached.

My role as researcher

Having reflected on my own experiences of SHAWCO, I assumed that by and large, many students would say that SHAWCO was, in fact beneficial to their learning, and that they would volunteer benefits other than just clinical skills. Another assumption was that students would feel largely positive towards SHAWCO, which may not have been the case in all instances.

Furthermore, I am partly biased against secondary and tertiary-care in the undergraduate curriculum quite apart from the directive handed to the Faculty by the HPCSA regarding its lack of primary care teaching platforms. This bias arises from ongoing anecdotal reports from students that they feel under-prepared for primary care practice, as this is under-represented in the existing curriculum. This echoes my own experience as an undergraduate student.

All students were aware that I am a SHAWCO volunteer doctor and as such, hold particular opinions about volunteer work. All the clinical students also know me to be a lecturer and several of the pre-clinical students know me from clinic attendance. While this may have led to bias, it was also useful, as I could establish a good rapport with students during the interviews; a key skill required of a case-study researcher (Cohen, 2011). This also allowed me to understand the nuances of what students were saying, and to pick up on cues that an interviewer unfamiliar with the setting would not have been able to do.

3.7. Ethical considerations

Permission to conduct this study was granted by the Stellenbosch University Research Ethics Committee (reference number: S13/03/055) and the University of Cape Town Human Research Ethics Committee (reference number: 375/2013). All students were provided with information leaflets by email prior to the interviews, and were informed that participation was voluntary and that no penalties would be incurred if they declined participation, or if they

withdrew from the study. They signed consent to be interviewed, and were allocated pseudonyms which ensured confidentiality from the public. They were informed that confidentiality could not be entirely guaranteed due to the nature of focus groups, but they were asked not to discuss any aspect of the interviews outside of the interview room. Voice-recordings were kept on my personal computer and transcripts were kept in password-protected files.

CHAPTER 4: Results

4.1. Terms of reference

The results were rich and complex, and are represented in a map overleaf (Figure 1), in order to help orientate the reader. Findings are reported in four broad categories, as follows:

- From whom do students learn?
- How do students learn?
- Benefits of involvement in SHAWCO
- Difficulties experienced through SHAWCO involvement

Quotes are numbered as such: Q1 denotes Quote 1; Q2 is Quote 2 and so on.

Students are identified by their pseudonyms, and by whether they are pre-clinical students (“pre-clinicals”), clinical students (“clinicals”), or Steering Committee members. Comments in bold are my own emphasis.

In this paper, the term “SHAWCO” is taken to refer to “SHAWCO clinics” unless otherwise specified.

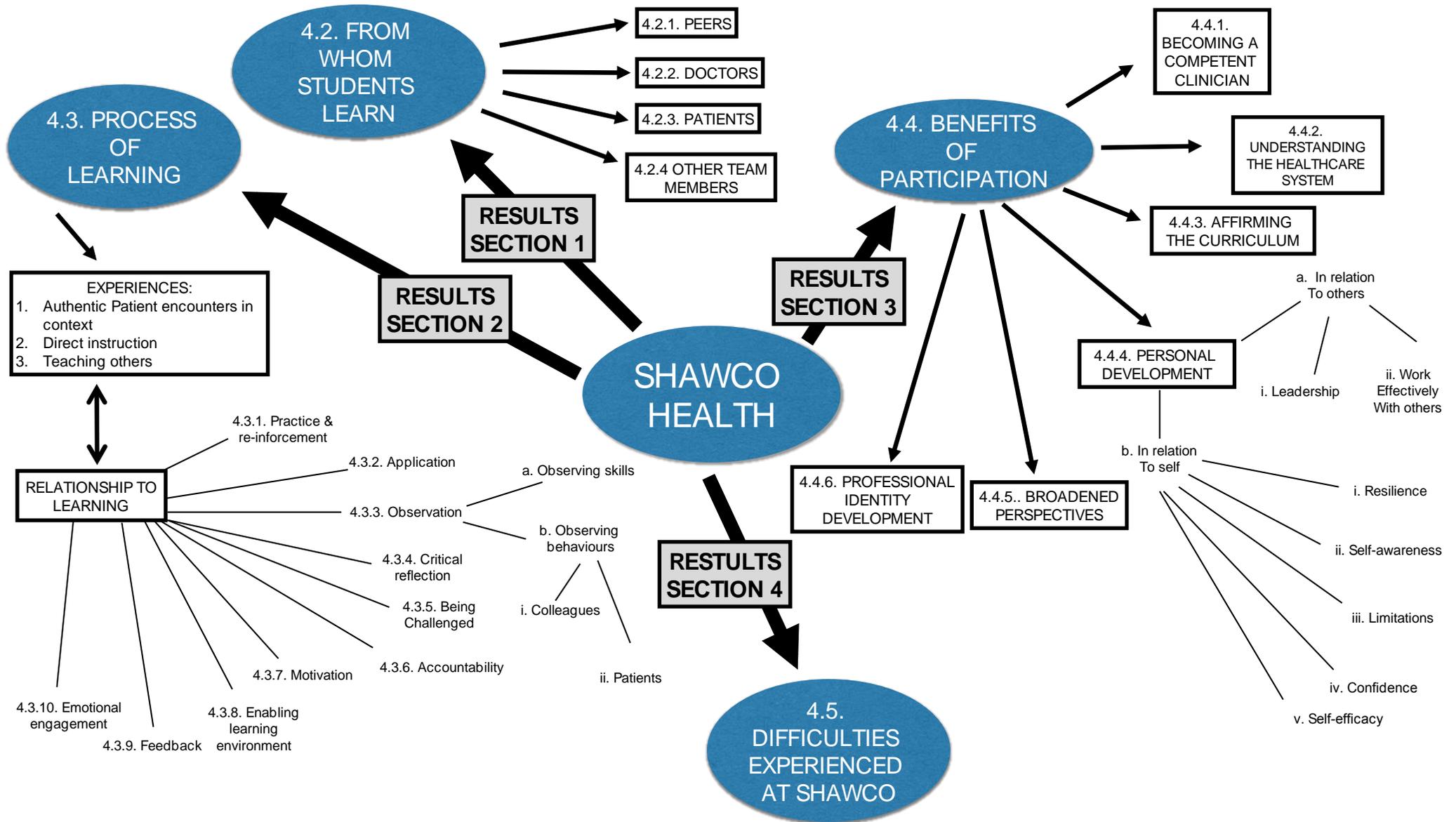


Figure 1: Overview of study findings

Numbering in the figure corresponds to section in the Results chapter /Chapter 4.

4.2. From whom do students learn?

Before progressing onto the ways in which students learn at SHAWCO clinics, it is important to know from *whom* they learn: in this case peers, doctors, patients and other team members. These people may teach explicitly, or learning may occur tacitly through observation. Benefits resulting from teaching will be discussed later.

4.2.1. Peer teaching

The vast majority of teaching is done by clinical students. A crucial aspect of peer teaching was that senior peers knew or asked at what level the more junior student was, in terms of where they were in their course, what problem-based learning cases they were busy with in class etc.; they were then taught accordingly, having insight into the curriculum.

Q1: *Albert* (Pre-clinical): “[With respect to a final year student at the Paediatrics clinic]: “She kind of **checked have I ever done it**. [I said] ‘no’, then she was like, ‘well then let’s do it now’, which I wouldn’t have been like, ‘okay I’ll try that’ I think because at that time **I was still very nervous** about the whole experience. I wouldn’t have actually have pushed for it, if she hadn’t said, ‘okay you can try that. **You are going to do this and I’m going to teach you how to do this**’.”

Q2: *Harvey* (Pre-clinical): “For me **it is always the students who teach us** and mostly the doctor will just come and consolidate what they’ve said or add something extra. **In some cases, what the student said is completely wrong**, and I found that **in those situations you’d remember it better** because you also thought along the same lines as the students, and then the doctor will say, ‘well this is what you missed.’ It’s a combination of the students and the doctors.”

Though ‘clinical students as teachers’ was the predominant theme, students also said that they learned from others at the same level, or even from junior students.

Q3: *George* (Clinical): “There was one night where **we had a very, very smart pre-clinical** that he actually ended up giving us some management plans. It was quite embarrassing, but anyway.”

Doctors also contributed to teaching, as shown below.

4.2.2. Doctors

Attending clinicians are responsible for making all management decisions at SHAWCO clinics. As already illustrated in the section above, students will clerk, examine and then present their patients to the doctor. Clinicians may double-check findings on history and/or examination, and will refine these as necessary. Some clinicians will teach explicitly on the patient case and management; in other situations, students may learn through observation or listening alone – for example, sometimes the doctor will simply state the management plan or confirm the plan formulated by the student. The latter serves as tacit confirmation of what is already known by the student, which is a moment of learning in itself. *Types of teaching* seen at SHAWCO will be discussed later, under the ‘*How do students learn?*’ section. Students valued the fact that they were given a voice, even as pre-clinicals.

Q4: *Audrey* (Pre-clinical): “And also the **doctors that go as well**. It is really cool how when they do rounds and then they come to you and **even if you’re not in the clinical years, they’ll ask you** what do you think it is.”

Interestingly, patients also explicitly taught students.

4.2.3. Patients

Aside from learning through exposure to patients (discussed in detail below), one student described actual, explicit instruction (and support) from patients, which was uniquely empowering.

Q5: *Albert* (Pre-clinical): “I can speak a little bit of Xhosa but **I’m not very confident, generally speaking, around other people**, so the one time **the patient edged me on**. She was like, ‘say it this way’. **I found that really empowering**. She was helping me to help her. At another time, I did Health Promotion at SHAWCO and it was on asthma. I didn’t know what asthma was, so **I asked one of the patients** and they were like, ‘oh, do you mean when you get tight here?’ I’m like, ‘yes, that one’. They

told me what it was, [and **I realised that the patients want] to help you, if you let them help you. Like I've learnt that, they're there for you and they also want you to be good at what you do** because you're helping them.”

Several other team members also contributed to teaching; discussed next.

4.2.4. Other team members

At SHAWCO clinics, students get exposure to team members they may otherwise never get to work with (e.g. pharmacists and social workers), or that they might only work with later in their careers (e.g. nurses or health and rehabilitation professionals). Not only do they get exposure to the team members per sé; they also get to see the interprofessional team system at work, which gives them insight into other interventions available for holistic patient care.

Q6: *Steven* (Pre-clinical): (With respect to being taught by the **pharmacist**): “At this point it is gibberish to me but...they kind of ask you, ‘Why this? Why do you want me to give you this?’ **Normally you're the errand boy** who will go and get the medication **and now they are teaching you**. They say, ‘This is for this and that is for that’... and that is also consolidating what I've learnt from the doctor and the patient.”

Q7: *Billy* (Pre-clinical): “[B]asically **everybody who's at SHAWCO, you can learn something from**. You can learn from the **social worker**...you can learn from the **pharmacist**, who is always making a joke. She will tell you the dosages and why it's this, like this. Even the data capturer, yes. **SHAWCO'S just amazing**.”

Being instructed was a major way in which students learned, but there were many other ways in which they learned, and these will be expanded on next.

4.3. How do students learn at SHAWCO?

As has been mentioned in the literature review, there are several learning theories that could explain student learning through engagement in the SHAWCO experience. The constant theme underpinning types of learning at SHAWCO was the fact that students have real,

situated, concrete learning experiences (i.e. experiential learning), which makes all the learning active and student-centred. This applies even to students who were very junior. These learning experiences included *authentic patient encounters in context*, *direct instruction* and *teaching others*. *Authentic encounters in context* are actual encounters with a patient *in the specific SHAWCO setting*, whether by the student or observed by the student. *Direct instruction* entailed explicit teaching from a peer, doctor or other SHAWCO team member, while *teaching others* involved the teaching of peers, or patient education by the student. These constructs, and how they manifest in different ways, are represented in table 3 (overleaf).

Table 3: Learning experiences and the way in which they relate to types of learning seen at SHAWCO.

		Experience		
		Authentic patient encounters in context	Direct instruction	Teaching others
Relationship to learning	Practice and Reinforcement	X	X	
	Application	X		
	Observation	X	X	X
	Being challenged	X	X	X
	Critical reflection	X		
	Accountability	X		X
	Motivation	X		
	Enabling learning environment	X	X	X
	Feedback	X	X	
	Emotional engagement	X		
	Mentorship		X	

Each quote used notes in brackets thereafter whether the learning described was in the context of an authentic encounter, direct instruction and/ or the teaching others.

4.3.1. Practice & reinforcement

Practice here refers either to the opportunity to try out newly learned skills, or to gaining mastery of an existing skill through the repeated execution of that skill over time. Reinforcement refers to the reinforcement of knowledge. These were mutually beneficial – not only were skills and content that students learned in class practised and reinforced at SHAWCO, but what was learned in SHAWCO also helped prepare students for class. Being “armed with” skills and knowledge prior to formal teaching was seen as a major benefit of SHAWCO attendance.

All students mentioned that they learned through practising their skills at SHAWCO. This referred to all skills, from technical skills (e.g. measuring blood pressure) to more intangible ones (e.g. reading body language). Practice in the context of SHAWCO was characterised by:

- Practising on real patients
- Practising under direct observation
- Practising without pressure.

Practising allowed students to hone their skills, build confidence and prepared them for exams and foster future competencies (see Q96 under the Personal development ‘Confidence’ section).

Q8: *Arya* (Pre-clinical): “[I]f I didn’t go to SHAWCO, I would not know how to take a proper blood pressure, for example, even though we do it in ‘clinical skills’ you just **practice so much more** there. (*Authentic encounter*)

Students were exposed to more patient encounters at SHAWCO than they would otherwise have had, which allowed greater opportunities for learning through repetition.

The chance to apply knowledge also contributed to reinforcement, as shown below.

4.3.2. Application

Application here implies the opportunity for students to actually *use* the knowledge and skills they are acquiring, as distinct from practice and reinforcement. SHAWCO attendance gives

students the opportunity to apply what they are learning in class to *real clinical practice*. This reinforces their skills and knowledge, allows them to flex their clinical reasoning capabilities, contextualises what they are learning, prepares them for exams, affirms their existing knowledge and skills, as well as motivating them (see also *Motivation* below).

Q9: *Meredith* (Pre-clinical): “It is very difficult sometimes, when you’re sitting in lectures, they are sometimes **seen as so irrelevant**, so it is nice to be able to go there and actually apply something that you’re like, ‘**okay, this makes sense**. This is what I am actually doing. **I am actually making a medical change**’.” (*Authentic encounter*)

Q 10: *Jeremy* (Pre-clinical): “I can actually apply what I’ve learned, and **it makes remembering what I need to know a whole lot easier** if I actually apply than just studying and waiting for exams. So that’s why I go to SHAWCO. It makes application a whole lot easier.” (*Authentic encounter*)

Pre-clinical students in particular could apply skills learned to more complex or novel situations than available in a simulated environment. The following clinical student reflected on a pre-clinical course:

Q11: *George* (Clinical): “[I]n Clinical Skills **you are taught this one or specific way** to examine a patient, whereas in real life you have patients that are bigger, that are smaller, that are more hairy, that are sweaty. **That type of thing that they don’t teach you in Clinical Skills** how to examine.” (*Authentic encounter*)

Pre-clinical students found it affirming to be able to use what they were learning, even at their junior level.

Q12: *Ryan* (Pre-clinical): “[At] times we get despondent by just sitting in lectures all day and learning the whole time. So it’s nice to actually go out, and see that **even now there is stuff that we can apply**.” (*Authentic encounter*)

4.3.3. Observation

Observation refers to students learning through watching each other or doctors practise Medicine. In this case, observation was not merely the simple, passive observation of technical skills: students were also tacitly being socialised into how to *be* and how to *behave* through what was being role-modelled before them. Since students were able to observe encounters and situations in particular contexts, this provided them with templates for future interactions with patients, colleagues and situations. Students also had the opportunity to watch patient behaviours unfold during consultations – especially useful to pre-clinicals who could watch and process information from a slightly detached position. This allowed them the space to reflect on these consultations as they progressed, as well as afterwards (reflection will be dealt with in more detail in a subsequent section). Through this process of constant reflection on behaviours occurring in these specific contexts, learning became more active, reflexive and transformative.

a. Observing skills:

Students were able to observe all sorts of basic clinical skills and how they applied to real situations (for example, physical examination). More intangible skills were also observed – for example, juniors could watch seniors employ their skills of diagnostic reasoning. This would not be an opportunity that juniors would be afforded in the normal curriculum.

Q13: *Albert* (Pre-clinical): “I also noticed that fourth to sixth years are really good at picking up when patients may not be 100 percent truthful. I’m not at that level but **you can already start seeing how they do that or how they may, sort of figure out** that ‘okay the patient is saying they are coming in with this but actually they want help with something else’. Often they present with a different issue than what their true intention was.” (*Authentic encounter*)

b. Observing behaviours:

i. Observing colleagues: Role-modelled behaviours

The SHAWCO experience was notable in that students could observe peers and doctors repeatedly and up-close as they interacted with others. This was of crucial importance in socialising students as to how to *behave*; this facilitated professional identity development (discussed later).

The next quote illustrates how intensely seniors are scrutinised:

Q14: *Ashwarya* (Pre-clinical): “You **feed off** what the clinical year students do. Like how they emit a response or their **facial expressions**. Little things like that. It is like you think [appropriate behaviour] is intuitive but it’s not as simple as it sounds.” (*Authentic encounter*)

Students could be deeply inspired by what they observed.

Q15: *Kim* (Pre-clinical): “[O]n one occasion there was a doctor...I was like ‘**wow, this is amazing and I want to be like that one day**’... [H]e just had such a great bedside manner. If he was my doctor, I would be very chuffed with him. He was just nice to the patient and he was gentle, like how I would want my doctor to treat me, so I thought that was really nice.” (*Authentic encounter*)

It was noted that not all behaviour being observed was desirable, however, but even this was also an excellent opportunity for reflection and learning.

Q16: *Lucy* (Pre-clinical): “[O]ccasionally, I’ve seen a sixth year or a fifth year do something that **I thought that ‘I wouldn’t have done that’**.” (*Authentic encounter*)

Q17: *Julius* (Pre-clinical): “**One ‘bad behaviour’ that I’ve observed is not relating on a deeper level with a patient**, so seeing the patient as a bunch of signs and symptoms. Not really communicating with the patient and I really think communication is so critical, so **I’ve noted that and I’ve made a mental note to**

emphasise communication, whenever I deal with people, to get the right message, and also make sure that they are hearing the right thing from me.”(*Authentic encounter*)

Students spoke not only of *doing* the observing, but also about *being* observed. The next quote illustrates a student’s transformation into being a role model for juniors, which conferred a certain responsibility.

Q18: *Neil* (Clinical): “But something that is **really profound** about the learning experience as well, for me, is [that] you realise that **you’re becoming a role model** for other people as well. And that makes you...me think twice about doing something that is dodgy, you know. I must be honest because **I know there’s a student, who is with me**, who is expecting to learn something from me. So you try and **make sure that you are giving them the right knowledge and, hopefully the right skills** as well, so that they don’t think... time that they spend at SHAWCO, was a wasted opportunity...”(*Authentic encounter; teaching*)

ii. Observing patients

Students also had the opportunity to observe patient behaviours during consultations, which not only taught them about patients’ disease processes, but about how patient behaviours and cues should inform doctors’ behaviours.

Students were taught how to use observation as part of the diagnostic process from the moment they set eyes on a patient.

Q19: *Steven* (Pre-clinical): “A doctor at SHAWCO once said that, you should **just take a step-back and just view the patient as a whole**, as soon as the patient walks in. Just pick up on the way he or she walks. The way he or she is sitting and also just physical signs, so I’ve tried to learn that, observational skills.” (*Authentic encounter; direct instruction*)

One student noted that “observation” was not only confined to visuals. In the quest to become diagnostically efficient due to patient numbers at the Rural clinic, the next student was to have to use her ‘whole self’ as a diagnostic tool.

Q20: *Thuli* (Clinical): “So [you learn to use] **all your senses...**” (*Authentic encounter*)

Reading body language was highlighted repeatedly as a skill learned at SHAWCO.

Q21: *Mundi* (Clinical): “You learn to **[r]ead peoples’ body language**. And sometimes even in these consultations, when we watch doctors. You can just tell, body language, a patient doesn’t understand...and I think it just **allows you then to reflect**, so that you, like see how you do things as well.” (*Authentic encounter*)

Students could also observe patients in contexts other than consultations, for example, in a waiting area.

Q22: *Julius* (Pre-clinical): “I definitely learn [to pick] up on cues and little things, so I remember one instance... the clinic was running and...I had to go back to the mobile SHAWCO truck, to get something. I just noticed all the patients in there. **They were really tense and sallow** and like they **didn’t look comfortable** to me. I noticed that there were no Xhosa or Zulu speaking people around so I was like, ‘hey, let me just speak with the limited Xhosa that I know and just converse with them a little bit’. **Immediately they just smiled** and became more relaxed and felt more comfortable. I thought if that is the little that I can do then I’d do that, so **I observed how they looked and I tried to help.**” (*Authentic encounter*)

4.3.4. Critical reflection

Critical reflection is defined here as the process of thinking about something in a way that will allow *improvement in future performance*. This process was represented in two ways. Firstly, students reflected on clinical or operational problems; secondly, they reflected on behaviours of patients, peers, doctors and themselves (as also illustrated in the section *Observation* above, in quotes Q16, Q17 and Q21).

Q23: *Marshall* (Clinical): “[Y]ou have...**as much time as you want** to sit and think

about the actual problem. What's going on with the patient? Like to get a full overview of what's exactly wrong and all, what it is and so on. And then to be able to, like **you don't get it right the first time, so you, you go back and you think about what you did wrong**, and you go back and change it for the next time." (*Authentic encounter*)

4.3.5. Being challenged

For the purposes of this section, "being challenged" refers to being pushed beyond one's expected level of knowledge or skills – i.e. one's comfort zones, either by the situation, by one's peers, clinicians, or even by oneself. This theme came up repeatedly. The challenges ranged from being small and simple to more intense and complex, and occurred both while being supervised and while alone.

Being challenged allowed students to come up with their own solutions; which would not have happened had they not been put in those situations. Notably, students were usually challenged to get to the next level in a supportive environment, without fear of being judged should they get things wrong. Though these situations might be uncomfortable, students could still see their value. Indeed, they acknowledged that their discomfort was the most important part of some of their learning experiences.

These challenges sometimes happened gently, with scaffolding of learning.

Q24: *Albert* (Pre-clinical): "I was paired up with a sixth year, doing Paeds, and she was like, **'okay, have you ever taken a pulse?'** I was like **'no'**. She's like, **'you can do that now'**. She obviously made sure that I was doing it correctly, and then she was like, "respiratory? Okay I'm going to teach you how to do that... **Blood pressure, no, you've never done that. Okay, you're going to do that now too.'** She kind of checked have I ever done it. No, then she was like, 'well then let's do it now'." (*Authentic encounter, direct instruction*)

Conversely, student could be "thrown in the deep end".

Q25: *Billy* (Pre-clinical): "Well yes, I, I'd say that with regards to working with the patients, like **I didn't have that much confidence, like in dealing with people**...I remember this one time, **one of the clinical years threw me in the deep end**, and said I must

take a history. And so I was sitting there, and I asked the person's name and the person looked at me... I was [anxious]. I'm thinking yo! And then I realised, okay, no. Like, it's, **a situation is only as awkward as you make it, right?** I started to think like that, and started to realise that, you know, it's what I decide this, **this discussion or conversation goes where I want it to go.** So, it's, that's to a certain degree in SHAWCO, that's **helped [build my confidence]** a lot. (*Authentic encounter*)

Q26: *Thuli* (Clinical): "I remember when I went to **my first SHAWCO clinic**, I think in second year, and they said this is how we do it. You **see one, you do one, and then you teach one. And that was it. They weren't lying.** You [actually had to] -you saw one, the next one it was for you to do, and then the next one you were supposed to teach." (*Authentic encounter, teaching*)

A highly relevant challenge in South Africa, with our eleven official languages, is learning how to bridge language barriers. While students at UCT do learn Xhosa and Afrikaans in their pre-clinical years, this happens in the absence of patient contact in the formal curriculum. Attending SHAWCO clinics, however, offered the chance to practise languages, as students themselves were responsible for getting and giving accurate information that would affect diagnoses and management (as opposed to deferring responsibility to a hospital registrar or consultant, for example). This was more than practising what they had been taught in class; it was about navigating what they *didn't* learn in class. The following student is a *Xhosa speaking student* and yet still struggled with communicating in 'medical' Xhosa, highlighting the limited utility of formal teaching.

Q27: *Jetta* (Clinical): "[T]hey teach us formal way of speaking. People don't speak like that... Now **you will have to find the words that they use** in order to try and explain something to them. For example, a lot of things, if you take them from Xhosa to English and **you do a direct translation, it is just not the same thing because they use a lot of slang.** Xhosa patients have this thing where, if they have nausea, or they are just feeling unwell, they say "**intlizo inyamo**". If you translate it to English, **it means 'my heart is black'**." (*Authentic encounter*)

Students learned to be more resourceful through having to work in a resource-constrained setting – something they would not experience to the same degree at hospitals.

Q28: *Marshall* (Clinical): “[At SHAWCO] **you don’t have all the facilities** like you have um, here at GSH...So **you have to really, like work your way around** and like you don’t have the nice reclining beds and so on. So you either have to find that you have to find your way around, **you either have to compromise and it’s not ideal, or you have to like, make a plan**. That’s really like a big thing that I’ve learned -**you have to work with what you have.**” (*Authentic encounter*)

Students running clinics had to become more resourceful at a systematic level.

Q29: *Winnie* (Clinical) “You know that **you’ve got 20 patients or 30 patients**, or I don’t know, however many... it’s currently **taking you 20 minutes** to half-an-hour to see a patient, you **need to speed that up a bit**; or do I need to streamline the way I ask questions? I know at one point, for example, when we were doing counselling for HIV **the one day we just had a huge amount of patients** and we actually had to bring them in, in twos or threes to give them the, the broad overview of the counselling, and then bring them in... one at a time again after that, to [round off the individual counselling] and then do the [HIV test] too.” (*Authentic encounter*)

4.3.6. Accountability

Accountability is seen here as the process of taking responsibility. Actual patient contact conferred graded responsibility to students, which they found very fulfilling, as it both challenged them and affirmed their sense of practising ‘proper’ Medicine; rather than staring at textbooks or having ‘truncated’ hospital experiences where they played very passive roles (see Q14). The need to be accountable also motivated students to learn (see section *Motivation* below).

Q30: *Amelie* (Clinical): “I think the difference with SHAWCO is that **you’re engaging without a safety net**. You’re engaging on a **very real level** where you’re saying, ‘listen, I’m coming with everything I have and all the knowledge I have and, yes, there is a doctor consultant to sign off, but **I am it. I am the team**. For this particular patient, I am it.’ And I think that, on itself, **forces you to reach into places you didn’t know you had** because sometimes you’ll be sitting there...absolutely stuck and you’re like, ‘I think it’s flu but it can’t just be a flu and it can’t just be...’ and then

something clicks....and **if you hadn't have been in that situation you would have run to your [registrar], you would have run to your intern**, and kind of had that situation." (*Authentic encounter*)

Q31: *Pocahontas* (Clinical): "I have had some very uncomfortable situations with regards to pregnancy, HIV testing, which were really **hard for me to deal with**. I think in a hospital setting **we don't really take the responsibility**, so as a student you sort of step back, and you don't deal with those things. But, **there you are the person who has to help this patient**. You have to say what the diagnosis is and make the plan. I have had a couple of very **uncomfortable situations**, but I've definitely learned from them. I feel like the **next time I will be able to deal with the situation a lot better**. That has been very valuable for me." (*Authentic encounter*)

Students were not only accountable to individual patients. Some had transformative moments, which made them feel more socially accountable to communities and the country. Through the exposure they were getting to the grassroots problems faced by patients and communities (see also under *Broadened perspectives*, below).

Q32: *Audrey* (Pre-clinical): "For me it was the **realisation that 'I can't just strive to be a doctor and just want to move away from this'**. I have to be able to go back to a place where I grew up in a community like that and be able to help people. I need to realise that **what I'm working towards has to apply here as well**. You need to be able **to go back to where you were raised** and use this. That was something that **just clicked**, while I was actually there." (*Authentic encounter*)

There was also a sense of accountability towards each other, especially in the context of teaching.

Q33: *Thuli* (Clinical): "But also, you **appreciated a lot of lifelong learning** as well. So when you're in that situation and everybody looking to you for answers, and then you get reminded that **you didn't actually go through physiology properly**, to actually understand what's going on with this person. So you go back um, at home and regroup. As such, you'll have something to tell the people tomorrow. You'll have something to test people. So um, **it teaches**

you how to be really responsible and how to be accountable, I think.” (*Authentic encounter*)

4.3.7. Motivation

Motivation in the general sense refers to the factors that drive people to pursue tasks or behave in certain ways. Motivation in the context of *learning* is seen as one’s *goal orientation* – what drives one to attain certain goals. This motivation may be healthy or maladaptive. Students who attended SHAWCO were motivated to learn more, or learn more effectively. SHAWCO also enhanced adaptive goal orientation. The sense of accountability to patients and clinics was key; pre-clinical students could also see the impact on patients of what they were learning in the curriculum, and thus were encouraged to persist.

Q34: *Billy* (Pre-clinical): “[Sometimes you make excuses not to go to SHAWCO]. ‘I’m busy’. And that’s basically, that, that’s the excuse. ‘No I’m tired and...’ But then when you go and you see patients, and **sometimes you see it’s, it’s children who come at night**. And you think, my word, this is a five-year-old. Shouldn’t, and, and sometimes, then I look at the watch and be like 9:00. This child is still awake and, **but he has to be awake, because he needs to get healthcare**. And then you, you do something or you play with them, **and you see the smile. Man, this is worthwhile**. This is, this is why, **this is why I come**...and then you realise, yo, this [Integrated Health Sciences course], ag it’s so annoying. Learning this anatomy. Ag, physiology, understanding. **And then you see, okay, I’ll push through. I’ll push through.**” (*Authentic encounter*)

Students were motivated both by what they *did* know (as this set up a positive feedback loop) and what they *didn’t* know (which inspired them to improve). This quote is notable in that the student experienced a sense of motivation and accountability after just two clinic visits.

Q35: *Mulan* (Pre-clinical): “[W]hen you are in Clinical Skills and you are **doing it with your friends** or whatever, you **maybe overlook a word**, and you’re like ‘I don’t know what this word is but **I’ll look it up later**.’ But when you’re [at SHAWCO] you’re like, ‘no, I

have to make sure that everything is perfect because this is an actual person coming for help’. (*Authentic encounter*)

Some Pre-clinical students said that they had formed beneficial teaching relationships with specific seniors:

Q36: *Harvey* (Pre-clinical): “Now I go because **I’ve built quite a good relationship** with some of the fourth/fifth/sixth years, at the clinic, and they **teach me a lot** and I see lots of different cases and **I speak to doctors**, so I just really feel like it helps me learn a lot of stuff about medicine. (*Direct instruction*)

More senior students, while also motivated to learn for the sake of patient care, had the added motivation of learning so that they could teach juniors (see Q33).

4.3.8. Enabling learning environment

A central feature of SHAWCO was that it created an environment that facilitated and supported learning for students at all levels of study. In their junior years, they could practise without the usual time pressures and without being scrutinised by clinicians, as would be the case in the hospital.

Q37: *Winnie* (Clinical): “[Y]ou clerk the patient, then **your senior medical student teaches you**, then you present and the **doctor there teaches you**. And then they ask you to do something that maybe you don’t know how to do, so then **you ask your peers, ‘how do I do this?’** Yes, so, so it’s very much **everybody learning from each other, teaching each other** kind of environment.” (*Authentic encounter, direct instruction*)

Q38: *Arya* (Pre-clinical): “So at SHAWCO **you are given [as much time as you need] to practice it**, with the **clinical watching you and guiding you** and giving you tips, really great tips by the way.” (*Authentic encounter*)

Q39: *Michael* (Clinical): “I **love** that SHAWCO creates an environment like that, where **you are taught and then you go back, and then you teach someone else**. For me **that is just beautiful**. **Everyone is just willing to share knowledge** at SHAWCO, from the students, who are senior to you, the first year students, who are in the same year as you, and the doctors. Like **everyone is just willing to teach you something**.” (*Teaching*)

While there were certainly pressures at SHAWCO (see section *Being Challenged*), these had a different quality to those in a hospital setting, and SHAWCO was seen to be far more friendly and collegial.

Q40: *Thuli* (Clinical): “So I think that’s one of the good things about SHAWCO. That...**you’re allowed to make mistakes**. And um, and people will let you try again, and again, and again. Not like, like **the hospital, if you make a mistake then everyone thinks you’re incompetent**, and that you should go home and sleep.” (*Authentic encounter*)

Furthermore, students were allowed to make mistakes and not be judged for that, as it was tacitly understood that students were there to be supported in their learning.

Q41: *Arya* (Pre-clinical): “...[O]nce **I asked a woman if she was sexually active** and she looked very **uncomfortable** when I asked that. Then somebody explained to me afterwards. **I didn’t even notice that she looked uncomfortable** and then the clinicals told me afterwards, ‘**you have to be a bit more sensitive** and maybe approach them this way’.” (*Authentic encounter, direct instruction*)

4.3.9. Feedback

One difference to the hospital environment was that students could work under direct supervision, which provided golden opportunities for constructive critique by others on their performance; as well as the chance to observe feedback on others’ performance. Feedback was gentle and supportive for the most part, contributing to the enabling environment. The following student demonstrates how he was given the chance to ‘give it a go’, followed by immediate feedback on his performance:

Q42: *Albert* (Clinical): “[The clinicals were] just like, ‘**do it, you’ll find your way through**’. Just to learn. Like...it wasn’t more about the time resource. They just wanted you to take the initiative, and like...It wasn’t because they couldn’t help you. They said, ‘**let’s see what you do, and then we’ll correct you afterwards**’. And then that’s, it was a nice way of learning.” (*Authentic encounter, direct instruction*)

4.3.10. Emotional engagement

The definition of the term ‘emotion’ is contentious and very varied. For our purposes, emotion is defined as a state which could be prefaced by “I feel/felt...” Several emotional states were used to describe the SHAWCO experience, mostly positive. Several students, however, described negative feelings about the curriculum as having driven them to start attending SHAWCO.

At present, first- and second-year students get no exposure to patients at all in the formal curriculum. They have whole class lectures in subjects such as Chemistry and Physics. Some students felt *frustrated* by this, and felt *despondent* by sitting in lectures every day instead of “getting their hands dirty”. Seeing patients at SHAWCO gave them a sense of *excitement* and the *hope* of light at the end of the theory tunnel.

Q43: *Kim* (Pre-clinical): “...For me, because I’m a first year, I’ve had no medical experience, so stuff like **doing a urine test is still quite exciting**. Just getting to do anything, so often it is small things but it is really exciting to do them.” (*Authentic encounter*)

Q44: *Pocahontas* (Clinical): One of the reasons why I did Medicine was because I felt I wanted to help people. Make a difference on a daily basis. Sometimes I feel **frustrated**. I feel with our degree we don’t necessarily always get to do that. With SHAWCO...at least you know **you have made a difference in someone’s life that day**.” (*Authentic encounter*)

Clinical students were not only frustrated by bookwork; they were frustrated that, at the hospitals, they felt *useless* in being able to contribute to patient care, but that SHAWCO made them feel *useful*.

Q45: Scarlett (Committee): “For the first time at Med School, **I felt useful.**” (*Authentic encounter*)

Pre-clinical students felt *encouraged* by the fact that even at their level, they could apply what they knew (no matter how little they perceived their knowledge to be) to contribute to patient care (see Q12).

Students even spoke of *love* drawing them back for more.

Q46: *Meredith* (Pre-clinical): “I suppose the more you do it, the more, in a way, **you kind of fall in love with SHAWCO** and what you’re doing there and why you go there.” (*Authentic encounter*)

This section has explored the processes of learning that occur through SHAWCO clinic involvement. There are clear benefits to students’ learning at SHAWCO clinics, and we now turn to exploring other benefits of SHAWCO involvement.

4.4. Benefits of participation in SHAWCO clinics

As has been evident from the previous sections, students learn an enormous amount at SHAWCO by being placed in particular situations. Ultimately, SHAWCO – essentially a voluntary, extracurricular activity – teaches students how to be medical professionals by supplementing the curriculum in significant ways; especially in ways that the formal curriculum does not or cannot provide. For example, SHAWCO presented pre-clinical students with opportunities to learn skills not yet taught, or to apply skills learnt in a simulated environment to real clinical settings. Further, senior students perceived SHAWCO to offer the opportunity to work directly with greater numbers of patients, which enriched what they were learning in other settings; or to encounter experiences not available in the formal curriculum. This section discusses ways in which SHAWCO involvement contributes to the development of clinical competence and an enhanced understanding of the healthcare system. It also touches on how SHAWCO exposure affirms the formal curriculum.

4.4.1. Becoming a competent clinician

Students were able to understand that being a clinician meant much more than possessing skills and knowledge – it was critical to appreciate how those are actually used in patient care. At an individual patient level, the job of a clinician is to establish a rapport with a patient so that they can take a history, conduct a physical examination, synthesise a differential diagnosis, and devise a management plan. SHAWCO helped with all of these processes.

a. Establishing a rapport

Q47: *Aaron* (Clinical): “It is learning to **use your moment with the patient correctly**. I think **that rapport** that you establish with the patient can take you far.”

Q48: *Steven* (Pre-clinical): For me it is just, initially, **the small talk**. It is so easy but I’m not nervous about it anymore. Meeting someone and just asking them...I don’t know. Asking them a question about their family or who they voted for, or something or did they watch the soccer and that kind of thing. **Bedside manner**, if you can call it that, and that kind of thing. Just being in that environment helps me with that.

Q49: *Arya* (Pre-clinical): “[L]ike **at campus, you are with all people at the same age**. You kind of know who they are and where they’re coming from. But when you go into **the community, it is a different cultural experience entirely**. So you **learn to be culturally sensitive**.”

Q50: *Melanie* (Committee): “I’m not sure which doctor it was that told me [to make sure] you **see what the patient’s expectations are**, so even if there’s something else going on when they sit down and you ask ‘why are you here today’ you’ll see that’s why they’ve come, that’s what’s bothering them and **when they walk out they must feel like you have dealt with that issue** and...they need to feel like their expectations have been met.”

b. Taking a history

As has been shown, “communication” was a common theme across respondents. This was not only about language; it was about the process of interacting with patients in a way that facilitated the gathering and delivery of the correct information.

Q51: *Morgan* (Pre-clinical): “They teach you all these diseases, all these symptoms, how they interact. But it’s sort of expected for you to sort of pinpoint what’s actually wrong with the patient and to sort of use your clinical knowledge to find, to, to suss out symptoms that you think will be...will lead to a diagnosis... Because **sometimes you may know absolutely everything in a...book**. But when a patient comes in presenting with maybe one or two of those symptoms, **if you don’t know how to ask the right questions**...in order to basically rule out one diagnosis... so I think SHAWCO just builds on that skill, to provide a diagnosis.”

Apart from routine history-taking, students learned to navigate more difficult situations around unexpected or sensitive topics.

Q52: *Clint* (Committee): “You learn...how to interact with patients and **how to be empathetic and not overstep the boundary**...especially if it’s a very **sensitive issue** so the patient starts crying when you’re asking just a normal question than [you think] what do I do now?...Just having that become something natural definitely is something that [helped] because **you won’t learn it anywhere else**.”

Q53: *Winnie* (Clinical): “Um, **how do I create an environment that they feel safe** talking to me, and will volunteer information that they think is important, that I may not. Especially in setting of, of **sensitive topics, like abuse** and that kind of thing.”

Q54: *Julius* (Pre-clinical): “Well, a mother came in with her daughter and **she didn’t know what to say but she was really sad and distraught** at how her daughter had been...

Interviewer: “**Was she assaulted**, her daughter?”

Julius: “Yes, a very young child, very young, so that was **quite a shocking thing**.”

Interviewer: “What did you guys do, in that situation?”

Julius: “**We had a moment of silence**, just for it to sink in. We didn’t want to rush out with answers. **We just wanted it to sink in and to show that we were listening** to her story and that we valued it as important, and that it was something, with gravity that you had to sit and think about. Then **afterwards we asked her what she wants us to do about this**, and then we told her how we can help, and the limitations of how we can help, and just advised her like that but I think it was more important to just give her social support and that.”

c. Diagnostic skills

Clearly, “diagnosing” relies on collating the correct history and on examination. In this section, however, we focus on how these findings are *interpreted and integrated* – i.e. clinical reasoning.

Students could start learning to think diagnostically earlier, which helped them process curricular information and prepared them for the future (see also Q19).

Q55: *Jasmine* (Clinical): “Then in my clinical years, I think also just [attend to have the opportunity] to **have to think on your feet**, because you can get anything. So it is not like a block where you, there is specific things, so you study around those topics. But **at SHAWCO you can get anything.**”

Q56: *Taylor* (Committee): “[The clinicals] help you **start fostering your clinical reasoning from a younger age**, which is nice because there’s so many things to remember you kind of need to start learning, like **you have to work things out instead of learning a list of tables** and what this ... means. You kind of need to think about a condition and all the various effects it will have and I think if you have that clinical year than they can start teaching you things like that from a younger age which is pretty good.

Expert clinicians usually use pattern recognition to make diagnoses on an unconscious level, and resort to step-by-step reasoning in difficult cases. SHAWCO helped junior students in particular to start developing this skill, through repeated exposure, earlier

than they otherwise would have in the normal curriculum. It also taught students to be able to triage cases that were not serious.

Q 57: *Kim* (Pre-clinical): “The first time I went there were like four women who were presented with [urinary tract infections], so **just hearing the same symptoms, over-and-over**, it is just interesting that you can actually see this and this must lead to that and that sort of thing.”

As mentioned in the *How do students learn* section, the reflex diagnostic process of expert clinicians was often laid bare for students, which is enormously helpful in developing innate clinical reasoning.

Q 58: *Kim* (Pre-clinical): “Then [the doctor] came back to the patient, asked a few questions and then he **related each of them back** to each kind of headache that he had told us and it just stuck with me. That was very interesting, **seeing those little connections being made.**”

d. Clinical management

Students learned a lot about holistic management (including the available referral network) of patients; something that was sometimes missing from the curriculum, or was made more explicit by SHAWCO.

Q59: *Simon* (Pre-clinical): “...**[Y]ou learn a lot about further management.** We learn things to a certain extent. Up till now our education is how to find things, and once it’s found, it’s like, good. So at SHAWCO it’s like now **we’re taken past that.** Now we actually see how they’re treated and what sort of **referrals** happens after that, like further management.

Q60: *Jimmy* (Clinical): “I think that **it is very good practice for coming up with management** plans, I think that is **something that you don’t really start doing much of it until 6th year really, where you are expected to suddenly just know it.**”

The importance of getting the patient engaged in the management process was also highlighted.

Q61: *Amelie* (Clinical): “[Y]ou need to **know how to negotiate a conversation** where **[the patient is] going to go home** and you don’t have to do what I’ve told you to do. You’re not strapped down to a bed. **You’re not stuck in a hospital** where we’re going to give you a little red ticket if you decide you’re going to abscond. We just have to trust [that patient’s will do what we recommend], so because of that I found that it’s helped facilitate my capacity...**to actually communicate the vital information, and concisely**, because if they are only going to pay attention to **the first two minutes**, before you start talking about all the wonderful and weird side effects.

Q62: *Mila* (Clinical): “So in that way, I **understood my role differently** um, in bringing the aspect of **health promotion to make my treatment or my consultation more effective**. So it was **less of just give medication** and we do some counselling, and hopefully we take it in. Um, you actually tailor it and **you have discussions with patients**...in getting them involved in [their management], and understanding the best way to go forward.”

Students spoke of the actual motor act of having to look up drug doses in books and put pen to paper for prescriptions as being beneficial.

Q63: *Christina* (Committee): “I learn a lot...from experiencing drugs...**Having to prescribe drugs** and **not being able to ask** the intern for what the drug is called or what the dose is was an important learning curve.”

Q64: *Michael* (Clinical): “[M]y favourite place to be, at SHAWCO, is actually at pharmacy and just go through the medications,. I don’t know, I have a ‘thing’. **I learn pharmacology** and, yes, **my friend always asks me, ‘why do you always know so much about what medication to give?’** It’s **because I sit by the pharmacy at SHAWCO.**”

4.4.2. Understanding the healthcare system

Students learned about how the referral system works in South Africa, and what roles other health professionals played. They also learned *for what, and to whom* patients should be referred; as well as *how* to refer.

Q65: *Nelson* (Clinical): “I learned how to **write a referral letter** there, because lots of the patients we referred.”

An unexpected finding was that SHAWCO gave students hope for the South African system – it had been anticipated that the harsh reality of what they were exposed to would make them feel despondent.

Q66: *Neil* (Clinical): “SHAWCO has allowed me to understand that there are some things that the Government can do and **some things that the citizens can do as well**. When I say ‘citizens’ I mean capable citizens like medical students or doctors, during their free time. That they can do to **give people hope**. It might not be at another clinic but it **might be something that would initiate some conversation surrounding health promotion** and surrounding some topics that are taboo in communities. **SHAWCO has given me that idea or seedling** that it is okay to have seminars at a Community Healthcare place and just teach people there, in the community. **You don’t need the Government to do that. You don’t need approval from people to share knowledge**. You can do it, as a student, as long as you are confident that the information you are giving is the right information. Then nothing, really, should stop you from distributing that knowledge. That is what I’ve learnt the most, of course, for me, and my passion for health promotion.”

Q67: *Audrey* (Pre-clinical): “For me, it’s sort of me **realising that there is hope**. There are times when you just think, ‘South African healthcare – the healthcare in South Africa we’re never going to actually reach that place that we want to’. But with SHAWCO, it shows you that **there is something that people can do**. Like **even a little step**, there’s something that can contribute to it, so it gives you that sense of ‘**we can actually get there**’. Even though it is a really small thing, like **a few students going just once every week**, it’s a step and the whole thing that we were talking about, it’s just a little trailer that you are helping someone out of a little trailer, it actually does a lot. It gives you a sense of hope.”

Q 68: *Michael* (Clinical): “SHAWCO does something, even if it is just touching a small bit of the community, but **a little goes a long way**. Just a handful of students can do so much more than they think they’re doing.

Q69: *Meredith* (Pre-clinical): “**It makes me very positive** and I’ve actually been more surprised from **how impressed I’ve been** at the fact that people are actually getting healthcare and we can help people. You just see that **everyone needs to do their bit** and it relies on people stepping up to the plate and actually going to SHAWCO and going to these places and doing their part. But it is possible. **It is possible to get good quality healthcare to people.**”

Furthermore, they saw that constrained resources did not necessarily translate into poor quality care.

Q70: *Lucy* (Pre-clinical): “I think what SHAWCO has shown me is that **how excellent the actual quality of the care**, by the professionals and doctors, can be. **Just because there’s often a lack of resources** or facilities, or anything, it makes very often the case not any lesser quality.”

Students in leadership roles understood what it meant to manage a clinic – a taste of what actually happens in other clinics.

Q71: *Maggie* (Committee): “[You’re] trying to **manage a clinic** especially when you’re like short staffed and you don’t have enough people there and...**[you yourself are] doing everything at once** [makes] you understand **why doctors are practicing the type of medicine they are** in primary health care because, **it is tiring** seeing patient after patient and it is **very despondent** when you have patients coming in over and over again because their sugars aren’t controlled and because this has happened and not that it’s ever the patients fault entirely, and not that it’s the doctor’s fault but you can understand why the system is [failing].”

4.4.3. Affirmation of the curriculum

As mentioned before, students were frustrated by the curriculum at times, but SHAWCO helped them understand the point of what they were being taught; i.e. affirmed the formal curriculum.

Q72: *Wesley* (Clinical): “There’s a lot **I’ve learnt about advocacy**. Like **primary healthcare and principles**...the importance of...health promotion and **educating patients**. You really **understand the point of primary healthcare** and the primary healthcare approach through SHAWCO and that is one of the things I’ve learnt the most from SHAWCO.”

Q73: *Audrey* (Pre-clinical) “Okay, another thing is [the Becoming a Professional course]. I used to think BP was completely, like I was just like **‘this is a waste of my time. I don’t understand’**. But **when you got to SHAWCO and you saw it in practice**, you can **actually see the interviewing skills and everything come together**. You actually realise how...the interaction with the patients. How it’s not just ‘what’s wrong?’. Here, here or here. It is so much more than that.”

4.4.4. Personal development

Personal development includes the development of positive life-skills, healthy self-esteem and enhanced self-awareness. Students cited many ways in which SHAWCO enhanced their personal development. These opportunities differed from those in the usual curriculum in that: they might not occur at all in the curriculum; they might occur less frequently; they might occur only in later years of study; or they might occur at a more intense level at SHAWCO.

a. Personal development in relation to others

i. Leadership

SHAWCO involvement offered several opportunities for students to develop leadership skills; opportunities which were unlikely or less likely to be found in the normal curriculum.

Obviously, this was especially relevant to students on SHAWCO committees, but it also held true for some other students.

The main leadership skill mentioned by committee members was the ability to **manage people** in order to get the clinic system to function. This entailed motivating peers to keep attending, learning how to build and lead effective teams, and learning how to manage conflict.

Q74: *Ken* (Committee): “I guess you learn how to **manage people** and work with people, as Clint said, so you get, once you start in leadership roles you start to identify where weaknesses are, what you have to do to **keep motivation up, keep people coming**. At the same time you have to implement certain strategies but then you’ve got to do so in a way that isn’t sort of authoritarian you know, so it just sort of gives you **tact** in dealing with people, I think which is important in Medicine specifically.”

The next student, while not on a committee, did have the chance to run a rural clinic, which forms the context of the next two quotes:

Q75: *Thuli* (Clinical): [S]ometimes you **deal with a lot of difficult students**, or you deal with **difficult doctors** but you learn how to kind of interact in that environment. So [you gain] a lot of **people skills** [and] lot of **communication skills**, [and] a lot of just **conflict resolution** as well.

Q76: *Thuli* (Clinical): “[A]nd then just on a leadership side, you learn how to meet people and how to **allow people to rely on you**, and how to handle the pressure, and how to handle that stress. And how to work with people, how to **build a team**, and how to drive people to a common goal.”

The following student, while not on a committee, nonetheless learned about management through “osmosis”.

Q77: *Miriam*: (Clinical): “I’ve also learnt a little bit about... **[system and people] management**. Even though I wasn’t [specifically] managing anything [at the clinic], I was just part of it, which I think is a big part of medicine that you don’t get taught at Medical School. It is **medical managing and people management**.”

Students also learned how to manage different **tasks**, which could make them more effective in their leadership roles:

Q 78: *Christina* (Committee): “[M]y **budgeting** skills were being formed; targeting **fundraising** to specific people who are likely to give me lots of money, I’m getting quite good at that now....[K]ind of **managing emails**, managing **meetings**, minutes, which are not actually miniscule skills which also a lot of doctors don’t have. Like, **minute taking** is actually a skill and it’s an important skill because otherwise how will you have any record of what decision was made?”

ii. Working effectively with others

Students valued the chance to learn to deal with other people.

Q79: *Gordon* (Committee): “So in general I actually like participating in SHAWCO. I feel like, well I’m **very socially awkward** so I feel like SHAWCO has **helped stream my mood**- like get it more normal around patients and stuff, and just also like I’ve become a little more patient. Now I can **tolerate other people** really well. It just helped me like just carry myself around like better around patients.”

Q80: *Simon* (Pre-clinical): “Yes, I, I really like the social aspect, and like, because I mean, in the future you’re work with people. **You might as well get used to working with people** now.”

The most commonly cited negative aspect of SHAWCO attendance was interpersonal conflict. However, students acknowledged the importance of developing people skills in a profession where they would be constantly interacting with many different people – both colleagues and patients. Therefore, they tried to overcome these conflicts, as they perceived the benefit of SHAWCO attendance to outweighed the discomfort of conflicts.

Q81: *Pocahontas* (Clinical): “[T]here was a period during my fourth year where I actually **stopped going to SHAWCO because of other people** who are attending the same clinic that I enjoyed attending...I found the interaction a bit strenuous and it hindered

me from going. **But I decided that was silly** and I still gained a lot from SHAWCO and I've found it meaningful enough to say 'well I can still get something positive out of this even if there is someone that I hate, perhaps I'm not best friends with'. It was good for me. It was a good challenge for me to be able to say '**look this is what life is going to be about, I need to learn how to work with a variety of people** and still get meaning out of my daily job'."

b. Personal development in relation to self

SHAWCO allowed the development of numerous aspects of self-management, such as improved time management and improved studying techniques. A recurrent theme mentioned in this area was the fact that peer mentoring was valuable in helping pre-clinical students manage life as a medical student. In this section we will focus on aspects of self-development that are unlikely or less likely to occur in the normal curriculum.

i. Resilience

Students spoke of how their SHAWCO experiences were preparing them to cope with the future, which they knew would be very challenging. Stated differently, their experiences were helping them become resilient. The concept of resilience relates to "the long-term ability of individuals to survive in and thrive on adversity" (Howe, Smajdor & Stöckl, 2012). SHAWCO allowed students to come to terms with the pressures of having to be accountable for their decisions, as shown under the *Accountability* section. Stress management is a key aspect of resilience, and various team members could help students learn to manage stress adaptively.

Q82: *Kurt* (Pre-clinical); "**Even the nurses**, I've learnt a lot from them as well, on just **how to handle stress**, when just being there and being calm, with all the patients, waiting. [T]here were nurses [at the one clinic] and they were just teaching us how to be calm. Sometimes I would try to find the BP cuff or something and I couldn't find it, and I'd **get a little annoyed**. **She'd say, 'stay calm'**. It was just **learning how to deal with stress as well**."

A feature specific to SHAWCO that was mentioned by pre-clinical students was that clinical students frequently offered pre-clinicals mentorship on how to handle specific stressors, and how to handle the life as a medical student in general.

Q83: *Julius* (Pre-clinical): “**I get social support there.** I could be struggling, under stress, hectic stress and not know what to do but with the higher years, the clinical years, the thirds, fourths and fifths, who have gone through it, I’d be like, ‘hey, **this is what I’m going through can you give me some advice,** so I can deal’? **Then they’ll give me advice,** no big deal, and I think...it helps me.”

Q84: *Audrey* (Pre-clinical): “I think we always say **they’re scarce,** like we never really see [the clinicals on campus]. It’s like, ‘oh, we’ve found one, wow’. So seeing **a sixth year who tells you it’s fine.** This is how you do it and **you’re going to be fine,** this is also helpful.”

Another way SHAWCO prepared students for the future was in generating awareness of the impact of sleep deprivation on a doctor’s life (some clinics return as late as midnight).

Q85: *Meredith* (Pre-clinical): “[Y]ou kind of find yourself **making compensations** but you work around SHAWCO... If it means that you **work a little bit later that night or you work a bit later the night before,** yes, I mean you wake up the next morning and you’re super tired and you walk into dissection and you **can see all the people who have been to SHAWCO because they all look like zombies. But that’s just part of the job.** I know when we are interns, it is going to be just as bad so...”

A marked way in which SHAWCO helped students was to expose them to the harsh realities of the lack of resources and the state of healthcare in South Africa, so that they did not have to navigate this ‘shock’ only after qualifying (further discussed in *Broadened perspectives,* below).

Q86: *George* (Clinical): “[H]ere at Medical School...we are **very much kept into a little bowl. Here you are safe,** this is the type of patients you see here, [whereas with] SHAWCO you kind of see what type of clinics are out there...[I]n your [Community Service] year you could really be put in a place with one room and five doctors and all the patients have to come through there and go through all the specialties from child birth to prostate

examinations. [SHAWCO has] **benefited me to work in an environment that is a bit more challenging**, that is **not this beautiful Out-Patient Department** building where you have separate rooms with doors and walls... Then just chatting to **other friends that studied medicine somewhere else** in the country, that don't have something like SHAWCO... They also experience this amazing [undergraduate] experience, and then **when they get out to internship or [Community Service] year they are quite shocked** to see [what it's really like out there].”

Q87: *Jeremy* (Pre-clinical): “SHAWCO kind of like, it **takes you back to reality**. Because I think we all have this romantic idea of what medicine is like. I'm a doctor, stethoscope, coat. It, it brings you back, you know? It, it, it takes away the romance, but it gives you the real stuff. **You get over the honeymoon phase** and you're like, okay this is Medicine. This is how it is. Because most of the time people leave here, go out into the real world, where there's chaos. Lack of resources. And they're like, **'oh my goodness! What have I done?** I should go back home and go and study something else. So now **SHAWCO is kind of like preparing us for that there'**.”

Dealing with challenging patient encounters has been mentioned before under '*How do students learn*', but this warrants revisiting here, since the repeated opportunities to deal with discomfort were identified as something that could make students more resilient in similar situations in future.

This student reflects on test results that were unexpected and were taken badly by patients:

Q88: *Pocahontas* (Clinical): “I feel that after every not so good conversation I feel like the **next time I'll be able to handle a similar situation better**, and I **won't feel as uncomfortable about it.**”

ii. Self-awareness

Students were able to learn about how they reacted in different situations, how this could impact on patients, and where they might have to work on how they came across to patients.

- Q89: *Luther* (Pre-clinical): “[You try to make] sure that **how you carry yourself** and how you act, so that it **doesn’t come off in a bad way.**”
- Q90: *Maggie* (Committee): [Y]ou also learn that **when I’m tired and post-call** and at the SHAWCO clinic, actually sometimes **I’m not very nice to my patients and** that’s a personal flaw and **I need to work on that.**”
- Q91: *Arya* (Pre-clinical): “But coming from a confident person myself, I feel like you need to be able to be sensitive and **I am not necessarily sensitive in everything** and you need to **practice, like coming across in the right tone.**”
- Q92: *Miriam* (Clinical) “Yes, I have seen some bad role models but those are also good to see, because it **keeps you a bit more self-aware** and **you make sure you don’t pick up those traits because, usually, they aren’t intentional.** They’re from kind of being over-exposure, and a lack of self-awareness.

iii. Being comfortable with admitting one’s own limitations

As shown under the *Enabling learning environment* section, students were sometimes shamed for *not knowing* or making mistakes at the hospital (see Q40). Conversely, at SHAWCO, students could start to become more comfortable with the concept of admitting limitations and asking for help.

- Q93: *Lucy* (Pre-clinical): [W]here a fourth year **asking** a sixth year what they think and then asking the pharmacist and asking the doctor, and the patient.

Interviewer: “Does that give a message that it is actually okay to ask for help?”

Lucy: Completely, yes and it is just interesting to see that still, at fifth years, even if they are just asking a sixth year or a doctor or **doctors asking another doctor** what they think. I think this is very **interesting and encouraging.**”

- Q94: *Derrick* (Clinical): “[Y]ou see that **you can always tell a SHAWCO student** because one, they know what they doing, two when they don’t, **they’re so comfortable asking for help.** So you know that’s one thing I think I’ve learnt is we learn from each other.”

iv. Confidence

Confidence is seen here as “one’s belief in oneself”. Confidence-building was a recurrent theme in the SHAWCO experience (see also Q5).

Q95: *Aaron* (Clinical): “[Learning a skill] comes with time, practice, and practice. So the **number of patients I’ve seen over time**, it got better, in terms of engaging with patients, building a rapport, and going to... clinical exams, this **created more of my confidence**, my level went up because I’ve been in the situation and I’ve done it before, so those are the reasons I’ve [attended SHAWCO].”

Q96: *Pocahontas* (Clinical): “I think it has been good for me, just for my **personal confidence** if I’ve seen that I’ve made a diagnosis and a management plan, and then discuss it with a doctor, and the doctor agrees. I think it is just **good for my own confidence that I’m not constantly doubting myself.**”

Q97: *Morgan* (Pre-clinical): “... I learn from...myself. So, I quite surprise myself when it comes to like, doing things. Like **I learn that I have a lot more confidence than I actually do. I learn to trust in myself.**

v. Self-efficacy

A substantial benefit of SHAWCO attendance was the development of self-efficacy, or agency. This implies a state of feeling empowered to act in a given situation. Because of the enabling environment, students were more likely to actually “try something out”, which frequently had a positive outcome and encouraged students to “try something else” next time. The mere fact of SHAWCO’s existence also inspired students in that it was possible to act even in small ways to improve people’s lives significantly (see also Q66 and Q67). The sense of accountability towards patients and the potential consequences of *not* acting were also evident to students. The following student acts out of this sense of accountability, has a good response, and is thus empowered to act in a similar situation in future:

Q98: *Jetta* (Clinical): “I think, okay just relating to two cases I’ve had, **two cases of [domestic] violence**. They didn’t come in with a complaint of they have been beaten. They came in with another complaint but there was still evidence of [abuse]. I think, so in my head I’m, **I mean a part of me wanted to just focus on the medicine and not try and ask** about this. But, at the same time I was like, **that is exactly what you do at school. You should just run away**. So let me rather [deal with this]. Also the fact that SHAWCO does have that referral source for things like that, it is like something is here. That means something can be done. You try, I tried to speak to the patients and on both occasions **I actually got quite a good response**...They weren’t closed off. They actually wanted to talk...[If I had just walked] away, not really knowing what is going to go on, I mean they could go back to that same abusive situation. But, I think learning to, **for me to not run away from that situation will help me when I can actually do something [in future] far more than what I did that night.**”

This section has described the ways in which SHAWCO involvement contributes to enhancing students’ understanding of themselves and their abilities. It has also described how students learn to manage themselves and their lives better. It has touched on the ways in which SHAWCO exposure contributes to their resilience, one of which is through exposure to the harsh realities of South African healthcare. The next section will reflect on ways in which exposure to the SHAWCO setting enhances students’ understanding of the healthcare environment in SA.

4.4.5. Broadened perspectives

Several students experienced the SHAWCO environment as markedly different from their own, in terms of the environment on campus, in hospitals, or students' home environments and backgrounds. Students could truly understand how the social determinants of health in communities had a profound impact on health, and also on feasible management plans – exposure that they would not otherwise have had (see Q86 and Q87).

Several students, coming from suburban backgrounds, had never been in a township before.

Q99: *Meredith* (Pre-clinical): “When I first went on my first SHAWCO visit, this bus pulled up in the middle of this township and there were like **hard-core shacks all around**. I’ve never been in that situation before. This was completely foreign to me. ‘**Are we safe? What’s going to happen?**’ It is a completely different cultural and social experience that you never really get exposure to but it is very important because, **as doctors, we are going to be thrown into those situations so we need to be able to manage them** and deal with them... it is just a completely different exposure. That was really beneficial.”

Students spoke of their skewed perceptions of access to care, based on their own home circumstances.

Q100: *Pocahontas* (Pre-clinical): “Okay so this patient needs... to be referred here and here. **We think it is so easy, okay tomorrow you just get in your car**, drive there, you know, quickly need to see the doctor. It is going to take thirty minutes. But, **practically for a lot of people it is a lot harder**. They can’t just take **another day off work**, or now they need to get to a hospital on the other side of the peninsula. It is not that easy...So, **it has been very challenging for me to think about it in a practical manner** for patients to have limited resources, what is going to be the best way to manage this patient.

The social determinants of health also became abundantly apparent:

Q101: *Scarlett* (Committee): [B]ut actually having **to see a child that has been shot...** [the concept of social determinants of health] hits you. Or having a **patient say I've walked two kilometres** to come and see you today [is] a very humbling experience...even though you have to see twenty patients a night...**you see and treat every single one of them the same amount.**"

Q102: *Mundi* (Clinical): "[I]t helps you realise that **in terms of sanitation**, I don't think we're, we're doing a good job. Because that's the population that comes in... [T]hat's the part that really touched me at the time, was you have to be observant. [When the SHAWCO mobile trailer]...drives through, and when they **park in the middle [of the township]**. You look around and you actually see where um, where it's been parked, the **public toilets, you know, where the children are playing**. You see a **massive rat** running at the top, **dogs in the corner**, and then you put the pieces together with regards to how the patient then presents."

Students realised the impact of the social determinants of health on patient management options.

Q103: *Melanie* (Committee): "[W]e can spend hours and days **studying up on medication that's really near the bottom of the list** in what it takes to make a person healthy. There was this one person we had, [a] sugar diabetic and we were trying to [explain about] diet. You know, eat less bread, eat more meat and she says I can't really eat meat [because **I can't afford it**]. We're trying to tell her to eat less bread when that's all she can afford. [Or they should exercise more] and go [for] walk[s] but then **there's rabid dogs in the street or gangsters** that are going to kill them. You really **learn what it's like** out there in reality because **your life is very nice and it's very comfortable** and you don't know. "Having experienced the kinds of circumstances in which patients find themselves, several students experienced transformative processes in terms of their career plans.

Q104: *Neil* (Clinical): "Something else that **I didn't think I would learn from SHAWCO** actually was **what/where exactly I want to go with my life**. Like I had mentioned before, I've **never seen myself being an advocate for health** and/or promoting patient understanding and trying to empower patients. I never thought I would go that way in my career at all but **now, I don't see myself doing anything that doesn't include that** because you realise just how much knowledge you have and the

responsibility you have to share that knowledge. SHAWCO gives me a platform to start that now, and that's one of the things, I've learned at SHAWCO."

Q105: *Albert* (Pre-clinical): "Yes, I definitely think I would work in public. I didn't come in with that idea, before SHAWCO. **I thought I would want to work in private** but, like Luther said, after **seeing the need you can't really ignore it** because you want to help people and that is where you can make the biggest difference."

Q106: *George* (Clinical): "Initially I thought I worked so hard to get into Medicine, because [I didn't get in the first time]...So...I'll be twenty seven when I graduate, then finish all those years, and then I'll be thirty...So **I figured I would finish medicine and go straight to private**, because **I thought it was what was justified towards me**. But, since going to SHAWCO and just in general experiencing patients, I have realised the world is a much bigger place than that, and you can't just limit yourself to one area of Medicine...**SHAWCO has really helped me to get over my little private bubble.**"

This section has discussed students' perspectives about how others live and how these conditions impact on health and wellbeing. For some, these experiences had remarkable effects on students' career intentions, meaning that they started developing a new understanding of the type of practitioners they might become. This relates to professional identity development, discussed next.

4.4.6. Professional identity development

It has been argued that the big shift towards competency-based education and the assessment thereof has excluded the much less measurable, yet equally important concept of professional identity development (Jarvis-Selenger, Pratt & Regehr, 2012). This is a dynamic, evolving understanding of one's self and one's roles in relation to one's career. This implies gaining an understanding of what it means to *actually be* a person in a particular profession (i.e. the *roles* of the professional). This identity is constantly changing – a process of ongoing *becoming*.

At SHAWCO, students contribute directly to patient care, and have to be accountable for their decisions. These are responsibilities that also allow them to develop real insights into the roles they would need to fulfil in future – i.e. what it really means to *be* a doctor. As previously mentioned, students were also constantly and tacitly being socialised into the profession: through ongoing moments of *becoming*, effected by experiencing, observing and reflecting on all kinds of encounters with peers and professionals. SHAWCO, in addition, allowed them to actually practise “doctor roles”, which helped them understand that to be a doctor went beyond the need for mere medical knowledge and skills competencies (as illustrated in the *What do students learn* section above). This also helped them start shaping the kinds of doctors they wanted to be.

Q107: *Nelson* (Clinical): “For me it was more... being comfortable around the patient, like **trying to be the, the doctor role**. Like that time when you still felt like a student [you could] just be shy and stuff, [but at SHAWCO] **you had to find your voice** because you are the...the health professional in the room... So that’s a big thing for me.”

Interviewer: “Because you don’t get that kind of opportunity here?”

Mandela: “Not when there’s other senior doctors around. Then you’re still a shy medical student. **You’re not supposed to talk**. But then with there, you think okay, you are the person, you must do the talking.”

Q108: *Thuli* (Clinical): “So you get comfortable with um, close contact with patients, and **you get comfortable in the doctor’s shoes**, in that environment. So you feel a lot more comfortable. You **start finding what type of doctor you are**, and what actually works for you. That sometimes takes time, needs exposure, to all different types of patients and different types of scenarios. But **you can start finding your way**.”

Q109: *Jetta* (Clinical): “So I wanted to know more about **how it feels to be a doctor**. In clinical years I wanted to mostly see patients by myself, because if you are at school there is a doctor and there are students, so how you do things, or how you think you can be a doctor is, you, **you don’t find yourself there**. I think in **wanting to know if I can actually be the doctor that I think I can be** in terms of engaging with patients, I decided that I would like some one on one time.”

Q110: *Maggie* (Committee): “[D]efinitely what stands out [from my experiences at SHAWCO] is **I want to be a doctor that patients know by name**. I want them to say ‘I was treated by this doctor’ because **I think every patient deserves to be treated by a named person...**”

This section has showed how SHAWCO involvement nurtures professional identity development, giving opportunities to be ‘in the doctor’s shoes’ that students would not otherwise have. Despite the many benefits of SHAWCO clinics for students, some students experienced difficulties around their SHAWCO experiences, discussed next.

4.5. Difficulties experienced at SHAWCO

Despite the mostly positive experiences of SHAWCO, there were also negative experiences. Of note, though, is that, students found some of these issues to be largely beneficial to their personal growth (with particular emphasis on overcoming interpersonal conflict –see Q75 and Q81). In a hospital setting, students may *have* to interact with people with whom they do not get on, whereas at SHAWCO students could simply avoid people they disliked. However, students found such benefit in clinic attendance that they *chose* to persevere in spite of interpersonal conflicts with specific people attending the same clinics (see Q81).

Some students were frustrated by the resource-constraints at SHAWCO:

Q111: *George* (Clinical): “To write a referral letter where [a patient will] have to go to a clinic and possibly **wait in another long queue** and then their **evening at SHAWCO was actually wasted**. That is, it is a **thing to deal with**. The first couple of times we had to re-prescribe something was not fun. It kind of defeats the purpose of helping people.”

Students noted that their satisfaction with the learning experiences was dependent on the clinical or doctor doing the teaching.

Q112: *George* (Clinical): “We have had **doctors that are very slow** that once you have reported the examination back to them, want to do the whole exam themselves to check our findings and will then give you about an half an hour tut on the condition **while the patient is sitting there and just wants to go home**. Then we have had **other doctors that are so quick they just trust you and sign off without really looking**.”

While some pre-clinicals were unhappy with some clinicals, they were able to find pairings that did work well in the end.

Q113: *Meredith* (Pre-clinical): “I found that a person’s experience at SHAWCO is actually **so largely dependent on the clinical that you’re paired up with** and who you end up with. There are some clinicals, and I would hate to speak ill about any of them, but there are some clinicals that go there because they want the experience of being able to interact with patients. And **they are not very good at teaching or helping out**. Then there are other clinicals that are just so brilliant at teaching...[but] now I’ve found a clinic and a clinical that works so well for me. Now I go to that clinic and I work with that clinical on almost a regular basis because **I’ve found that that’s the relationship that I’m getting the most information out of**.

As shown previously (Q81), some students had had interpersonal conflicts through their involvement in SHAWCO – with peers and even with doctors, which at times put them off going to clinics.

Q114: *Neil* (Clinical): “But when I went there [initially], yes, **there was a lot of rift between the doctor, and me, which was kind, of weird**. Then I was like, I **didn’t really like it so much** and then I had to take a leave of absence that year **but when I came back again**, the second year, I actually enjoyed it a lot more and I was going with one of my friends, and he was really, keen on learning. He would drag the doctors and get them to teach us and that is when **I started to realise that I could learn something from it**.”

Sometimes students were frustrated with their inability to relate to patients.

Q115: *Pocahontas* (Clinical): “I think for me going to SHAWCO has highlighted my **inability to deal with a lot of sensitive situations**. I often feel, because I come from such a different background to a lot of the patients, **there is a lot that I can’t understand**. I often feel like I want to start a conversation, but I feel like I don’t even know where to start because I view things so differently. There is things that I can absolutely not understand. I found that very

challenging. **I felt that I haven't been able to provide them the right assistance.**

Q116: *Jetta* (Clinical): "...**I really like my interaction with patients.** Although, I do feel that **it is hindered** when I have to be with other students, and I'll have to teach people, because I had to step out at some point and like, I actually needed to talk to this patient by myself. So, I asked if we could, you know, leave the room.

The student later revisits this issue, so strongly does she feel about it:

Q117: *Jetta* (Clinical): "I think it is more our peers. **Sometimes it just doesn't work well.** I think for me it reminds me of the [crowded] school environment that I am running away from when I go to SHAWCO. I meet this sort of, it is the same environment...I removed myself from the place where I'm not going to work in this environment, I would rather go and be in that room by myself. It doesn't matter what the other people think. I wanted to be here to see patients, not for this. I can't work in this environment."

This section has alerted us to the fact that students have some difficult experiences at SHAWCO, giving a more balanced understanding of how students experience SHAWCO involvement. With insights into the ways in which students learn, the benefits of SHAWCO involvement to their development, and the difficulties experienced at SHAWCO, we now proceed to the discussion.

CHAPTER 5: Discussion

5.1 Analysis of results

This research set out to answer four questions, as part of exploring the suitability of SHAWCO clinics for possible integration into the UCT curriculum so as to enhance community-based education. In brief, SHAWCO did indeed benefit students' learning processes, it helped develop desired graduate attributes and impacted on students' personal development. Furthermore, this study has provided additional insights as to *how* students come to learn through their involvement in SHAWCO.

The SHAWCO experience conformed with many features of CBE, as outlined by Mennin & Mennin (2006), and enabled several of the touted benefits of CBE. For example, students felt they were becoming more prepared for “real world” medicine. They frequently enjoyed this setting more than hospital-based or medicine or classroom teaching (the latter especially notable in pre-clinical students). They were exposed to positive role-models, developed meaningful relationships with patients, and improved their understanding of the social determinants of health. Critical to the South African setting is the fact that SHAWCO evidently influenced career intentions, by exposing students to the dire need for primary care doctors in the public setting. SHAWCO also contributed to students' personal development, echoing the work of Worley et al. (2006). On paper, therefore, SHAWCO could serve as a platform to expand CBE at UCT. These are, however, all features of *any* CBE. The following sections will focus more on the particular features of the SHAWCO experience.

As expected, the learning at SHAWCO was experiential, active and student-centred, confirming the assumption made at the start of this study. What was central to the SHAWCO experience was the nature of patient encounters, *in a specific environment* – the real-life, unromanticised, grassroots setting of SHAWCO clinics, with all their attendant resource-constraints. SHAWCO involvement was shown to support and enrich the formal curriculum, but it also took students beyond its boundaries; giving opportunities that may not be found in the normal curriculum or hospital setting. The most prominent five key features that differ from the norm are discussed here.

SHAWCO offered an **enabling learning environment**. The voluntary nature of SHAWCO attendance for most students and all staff contributed to creating this. SHAWCO offered an environment of patient and supportive preceptorship, where almost everyone—peers and clinicians alike—was willing to teach, and moreover, *wanted* to teach. Enthusiasm of teachers

is critical in the learning process, and the type of learning environment they create is also important (Canon & Newble, 2000). SHAWCO was seen as a place where it was safe to make mistakes and then try again, without fear of being scolded or belittled. Students thus learned because they *wanted* to learn, not because they were afraid of the consequences of *not knowing*, a finding echoing those of Cilliers, Schurwith & van der Vleuten, (2012) (further discussed under *Motivation* below).

While it is known that peer-teaching occurs at SRCs (Simpson & Long, 2006), this study offers new insights into the *nature* of the **peer-assisted learning** process at an SRC. In the formal curriculum, peer teaching is usually sporadic and often not formalized, whereas the main teaching workforce at SHAWCO *is* the students themselves (peers). This probably contributed to the safe nature of the learning environment, as students have been shown to feel safer in confessing ignorance to peers than to faculty (Bulte, Betts, Garner & Durning, 2007). This student-led, ‘peers with patience’ teaching ethos set up an enabling learning environment, which benefitted those being taught (usually pre-clinicals) and those doing the teaching (mainly clinicals).

Those being taught found peer teaching to be exceptional in that it was pitched at the right level, by someone with inside knowledge of the formal curriculum. A recurrent theme in the data was that clinical students would find out ‘where’ pre-clinicals were in their learning and tailor their teaching accordingly. Clinical students could also push pre-clinicals out of their comfort zones in a supportive way, that was not intimidating or unduly pressured, echoing the work of Topping (2005). They exploited the *zone of proximal development*—the distance between what is already known, and what has yet to be learned— while providing scaffolding, in the Vygotskian model (ten Cate & Durning, 2007). It is asserted that “near peers may sense this zone of proximal development much more easily than content experts, who may not always understand the cognitive problems student experience when processing new information” (ten Cate & Durning, 2007:549).

The concept of the scaffolding of learning features in Vermunt’s model of “shared guidance”, a concept incorporated in turn in the model of learning-oriented teaching (LOT) described by ten Cate, Snell, Mann & Vermunt (2004). Shared guidance lies between full external guidance (entirely teacher-centred) and full internal guidance (entirely student-centred). It involves “an awareness of what students know.... a dialogue with students... and an adapting of the teaching” (ten Cate et al., 2004:224). This was informally in effect at SHAWCO clinics, and as such junior students could learn more effectively, with just the right amount of input.

SHAWCO also provided a unique intersection between pre-clinical and clinical students, which was critical to the process of learning through **mentorship**. This kind of interaction with senior students was described by pre-clinicals as being a rare occurrence in the normal course of the curriculum. This had benefits to pre-clinical students' personal development (discussed below), but it also developed two of the three components of learning in the ten Cate et al. LOT model (2002) – these being the cognitive component (*what* to learn) and the metacognitive component (*how* to learn – the final, *affective* component is discussed below). Clinical students constantly gave tips on what was truly worth learning in terms of assessment and patient care; and also gave advice on how to learn (e.g. acronyms).

Although it can be an effective tool, as shown in the introduction, students have also been shown to have mixed feelings about PAL, depending on the level of skill and knowledge of the peer doing the teaching (Bulte et al., 2007). While some students did report dissatisfaction with their peer teachers at SHAWCO, the overwhelming feeling was one of satisfaction with peer teaching and role-modelling. This was taken one step further: several junior students were *in awe* of their senior peers. Most literature to date has focused on formalized and compulsory PAL, whereas this study describes *voluntary* engagement with PAL, which may contribute unique qualities to the experience of PAL in this setting. For example, some pre-clinical students paired up with seniors that they *chose*, individuals whom they considered as the best teachers. It was reported that, where long-term dyads were established, clinical students came to learn what “their own” pre-clinicals were capable of, and used that to determine where to pitch their teaching. This could imply that a student's specific learning needs and/ or style(s) are being matched. This, in turn, may have more particular benefits to their learning as well as their personal development.

Students doing the teaching also benefitted from this process, echoing other findings (Sobral, 2002; Topping, 2005). They stipulated that having to elucidate and simplify concepts improved their own learning. It also bolstered feelings of competence and self-esteem, which encouraged them to learn more. These findings confirm existing findings (ten Cate & Durning, 2007).

For pre-clinicals, SHAWCO also offered the benefit of **early patient exposure**. Students found this beneficial insofar as it made their undergraduate experience more rewarding. This motivated them to learn better, and even impacted positively on their mental health. Other benefits to learning included contextualizing of the curriculum and honing of clinical skills. They valued putting human faces to clinical problems, which improved their understanding of how illness affects patients and helped them integrate biomedical and social science learning.

Particularly valuable benefits included socialisation into the profession through exposure to role models, the development of graduate attributes, and the development of non-analytical thinking (pattern recognition – a skill employed by expert clinicians (Elstein & Schwatz, 2002) SHAWCO exposure also facilitated personal and interpersonal development and influenced career intentions. These benefits are in keeping with findings reported elsewhere (Dornan, 2006; Gordon, Hazlett, ten Cate, Mann, Kilminster, Prince, O’Driscoll et al., 2000). Students learned from their own interactions with patients, but the main factor unique to SHAWCO was the opportunity to also learn through observation – sitting in on consultations and repeatedly observing peer, doctor and patient interactions in an intimate setting. This was especially powerful, as it allowed them to learn and reflect on the nuances of communicating through *behaviour*; (both a patient’s and their own) and to realise just how important this could be for good patient care. Indeed, students did more than just observe, they *witnessed*. Davenport (2000) describes observing as seeing a *case or condition*; whereas witnessing involves seeing a *human being*, or “an engagement with the event that *observe* lacks” (p.316). “Witnessing” as such can provide transformative learning opportunities not found in the biomedical model.

Students **learn in many different ways** at SHAWCO. Some of these have been represented in the literature on SRCs – all of which function in underprivileged areas. Separating learning at SRCs from CBE in general, there is the fact that those who run clinics learn through performing their administrative tasks; they also learn to problem-solve in creative ways when faced with constrained resources. (Meah, et al., 2009). The focus of this section, however, will be on select ways of learning that have not yet been described, or have been described in less detail in existing research.

Accountability was a major factor influencing students’ learning. In the normal curriculum, students are essentially only truly accountable ‘to’ assessments. At SHAWCO, however, students are accountable to each other, and most importantly, *to patients*. This sense of responsibility played an enormous part in facilitating learning at SHAWCO, as it forced students to face up to and manage challenges that that could easily have been avoided in the hospital setting. This could perhaps have been expected in the case of senior students, however it was seen in pre-clinicals as well.

At hospitals there are many layers of safety netting: interns, registrars, consultants; other people’s clerking notes in patients’ folders; interpreters, etcetera. At SHAWCO, this sense of accountability made it more likely that students would forge ahead through uncomfortable situations, which contributed to their personal growth. Accountability motivated students to practice more and learn more effectively (*Motivation* is discussed further below). It also

made students “reach into places they didn’t know they had” (see Q30) to come up with their own solutions and in so doing built up their self-efficacy, thereby further enhancing personal growth (see below).

SHAWCO also influenced students’ learning by enhancing their **motivation**. From a goal-orientation point of view, SHAWCO facilitated a *learning* or *mastery* goal orientation, where learning happens for learning’s sake (a more adaptive and successful learning orientation), rather than a *performance* orientation, where the end-goal of learning is to demonstrate competence in comparison with others (e.g. only to pass a test), which is seen as a less-adaptive goal orientation (DeShon & Gillespie, 2005). This *learning* goal orientation is clearly facilitated by both the enabling learning environment and sense of accountability that is uniquely “SHAWCO”.

Interest in what they were being exposed to also motivated students to engage in activities and to learn at SHAWCO. In motivational science terms, *situational interest* has been shown to facilitate intrinsic interest, which enhances learning, cognitive engagement and higher levels of achievement (Pintrich, 2003). Essentially, students learn for the joy of learning, and not for externally motivated reasons such as assessments.

Emotional engagement emerged as an important influence on learning. Many students used emotional concepts to describe their SHAWCO experiences. In general, SHAWCO induced positive emotions, including feelings of empowerment, self-efficacy, inspiration, excitement and even “love”. A sense of belonging and inspiration was also evident. Students also described moments of anxiety, dislike and discomfort, but their sense of accountability towards colleagues and patients made it more likely that students would actually forge ahead through these difficult feelings, rather than choose the easier option of avoiding them. Students recognized that even negative emotions actually *enhanced* the learning process. This offered opportunities for transformative learning. The importance of emotional engagement in learning has been highlighted (Gravett, 2011 Canon & Newble, 2000). Eriksen (1984:51) emphasises that “students *learn what they care about* and remember what they understand”. Pekrun (2012) affirms this, but notes that both positive *and* negative emotion can have both facilitatory and inhibitory effects on learning.

An interesting and unanticipated finding was the repeated use of the word “hope”. Students felt that they gave patients hope; that they had newfound hope that the healthcare system could be improved, and that they now had hope that even the smallest contributions to health care could make a big difference. The concept of “hope” “may be construed as a belief that a different future is possible” (McDougall, Holden, & Danaher, 2012:59). Van Heertem (2006), contemplating Freire’s *pedagogy of hope*, posits the “centrality of hope and

love as necessary facets of a pedagogy that could overcome the injustices and inequalities of the past and present". He further states that educators "must help people recognize...their position as subjects in history with the power to change it" (p.46).

SHAWCO involvement proved to provide many opportunities for the development of **desirable graduate attributes**. However, the most compelling role developed at SHAWCO was patient *advocacy*. Students developed entirely transformed understandings of their roles in patient care. Advocacy and health promotion became valued and prioritised, aspects they felt were not fully emphasized in hospital medicine. These new understandings were in part facilitated by student autonomy and self-efficacy, planting little seedlings of ways in which students could take these roles forward. Advocacy for patients also influenced students' social accountability, since it became clear that, in advocating healthcare for all, it was implied that clinicians should stay and work in the public sector. SHAWCO exposure made students feel compelled to contribute, with several expressing transformed career intentions (for example specialist to primary care physician; private sector to public sector).

The role of *communicator* featured frequently, the predominant features thereof being non-verbal communication and practising Afrikaans and Xhosa with patients (an opportunity not on offer in the curriculum for pre-clinical students). Clinical students do have the opportunity to communicate with patients in the hospital, but they noted that it was easier to "get away" with not doing so because they could, for example, "cheat" by checking other people's clerking notes.

The role of *collaborator* was also developed in ways not on offer in the formal curriculum. Students were exposed to, and taught by, members of the team that they would not ordinarily encounter; for example pharmacists, health and rehabilitation professionals (e.g. occupational therapists) and social workers. Students duly learned the roles and importance of these other team members.

Engagement with patients and role models allowed students to develop their *professional behaviour*, for example, bedside manner and ethical practice. In addition, students could see the *effect* that even the smallest acts of professionalism had on patient care.

It was not surprising that leadership and management skills were evident in Steering Committee members, but of note is that students *not* in formal leadership roles also learned to lead and manage systems and people, just by attending clinics – a finding not clearly reported in the SRC literature. Marked resource-constraints also inspired adaptability and creativity in managing situations, affirming other findings (Meah et al., 2009). The ability to "work with what you have" is highly relevant to the severely constrained SA context.

From the results it is clear that students experienced numerous benefits to their **personal development**. They developed numerous life-skills through SHAWCO, for example time-management, conflict management and confidence. The focus of this section, however, is the development of *resilience* in the face of adversity. While the findings relating to resilience were not that prominent, this does point to a potentially vital contribution that SRC-based learning can make in resource-constrained environments, that has not yet been well described.

Indeed, **resilience** in Medicine is gaining traction, given the well-known stressors of the field. It can be defined as the ability to flexibly adapt to adverse circumstances, survive them, and even thrive in the face of challenge (Howe, Smajdor & Stöckl, 2012). While resilience has clear benefits to personal wellbeing, it also has implications for the healthcare system, as resilience can help prevent healthcare worker attrition (Howe, et al., 2012). Resilience in the South African context is of crucial importance, especially for junior doctors, whose working conditions have been described as inhumane and even criminal (Erasmus, 2012).

Resilience can be developed in undergraduate environments. A positively experienced learning climate contributes to resilience to (and recovery from) burnout in medical students; as does the level of perceived support (Dyrbye, 2010). SHAWCO contributed to both. Pre-clinical students were explicitly mentored and supported by clinicals, who helped them deal with specific problems, as well as give insights on how to navigate through the stresses of life as a medical student in general. Many mentorship programmes are formalized at universities, but little evidence could be found on the more organic, *ad hoc* mentorship of the kind seen at SHAWCO, where students have the opportunity to self-select trusted mentors with whom they may have built a relationship over time.

Van Dinther et al. (2011) states that a strong sense of **self-efficacy, or agency**, also contributes to resilience, as this enables “feelings of tranquillity” (p. 96) and the capacity to persevere in the face of adversity. Gecas (1989), citing Kohn, states that “the greater the freedom experienced on the job and the more complex and challenging the work, the more likely is the worker to value...self-direction, to be intellectually more flexible, and to have greater "self-efficacy" (p.303).As illustrated above, both flexibility and adaptability are key to developing resilience. The opportunity for autonomy at SHAWCO supports the development of self-efficacy, as students see that they are able to manipulate their environment. This has implications for the much called-for development of “change agents” who can lead efforts to improve healthcare in the 21st century (Frenk, et al., 2010).

The nature of the SHAWCO experience is indeed complex and challenging, but there is usually much support on offer. The challenge-support environment echoes a model

conceived by Bower, Diehr, Morzinski & Simpson, (1998). An adapted version of their model is shown below, in Figure 2.

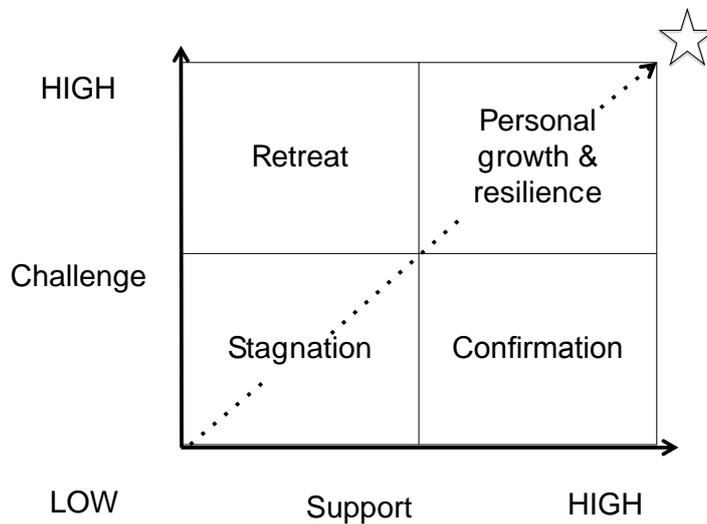


Figure 2. *The challenge-support model of personal growth. Adapted from Bower, Diehr, Morzinski & Simpson, (1998).*

Personal growth occurs in situations where there is high challenge and high support. SHAWCO can be seen to support and facilitate personal growth in this way.

Students were also able to start developing their **professional identities**. Identifying with the roles of a medical professional at a personal and communal level enhances professionalism in practice. Professionalism is a major current theme in Health Professions Education, given the widespread assertion that unprofessional behaviour is on the rise (West & Shanafelt, 2007). This is evidenced by the numerous competency frameworks that include professionalism as key tenets in the training of doctors (ACGME, 1999, CanMEDS, 2005).

Students develop an evolving understanding of their roles as their student careers progress. According to Jarvis-Selenger et al.(2012), professional identity is developed as students face crises, where their current understanding of the world does not allow for them to manage the problem at hand, thereby forcing them to adapt (comparable with Mezirow's "disorienting dilemmas" (1981). As has been illustrated, students are constantly facing challenges at

SHAWCO. These challenges can be seen as ‘mini-crises’, albeit ones that occur in a safe, supportive environment– the ‘SHAWCO incubator’.

Recent literature has begun focusing on the processes of **‘being and becoming’** in the development of professional identity (van Schalkwyk, Bezuidenhout & de Villiers, 2014). The concept of ‘being’ is a binary one – for example, one either *is* a doctor or one *isn’t*. ‘Becoming’, on the other hand, confers many shades and stages in between two states of being; and highlights the fact that one is constantly developing new identities (Gilbert; 2004.) Identity development is a process whereby people integrate their experiences, roles and statuses into a coherent understanding of self (Jarvis-Selenger, et al., 2012).

Professional identities are understandings of the self in relation to one’s profession. Identities are constantly evolving– for example, from junior student to senior student; intern to registrar, etc. They are formed in relation to communities of practice, which are groups who share a profession. Role-modelling is critical to professional identity development (Murinson, Klick, Haythornthwaite, Shochet, Levine & Wright; West & Shanafelt, 2007), as has been evident in this project. Bleakley & Bligh (2008), however, suggests that this traditional vehicle of forming a professional identity, through role-modelling, merely induces “selfsame recognition” (p.100), the danger of which is the development of a self-serving cabal of professionals. He argues that identity is in fact developed through understanding *difference* from self. He refers to the value of developing deep relationships with patients, where through understanding “the patient as ‘other,’ the student sees what is different or absent from his or her own world and, paradoxically, it is in this gap, this silence, that identity is constructed” (p.100). As illustrated, SHAWCO created many opportunities for experiencing “difference”.

SHAWCO offered such opportunities for deep interactions with patients, over which students felt a sense of ownership. Students could truly understand patients’ health beliefs and the different ways in which they experienced illness. This could, perhaps, be extrapolated not only to differences between people, but also differences in environment. Students gave many examples of how their SHAWCO experience disrupted their pre-conceived views of healthcare and, indeed, their world-views. Broadened perspectives caused intersections of personal and professional identities that enhanced feelings of social justice. Not only did students understand the social determinants of health, some were actually inspired to *do something* about them, which informed transformations in some of their career intentions. This, again, could have a potentially profound impact in the development of a new kind of medical practitioner: the socially accountable *change agent* (Boelen & Woollard, 2009; Frank, 2012; Frenk, et al., 2010).

Finally, it is also contended that “becoming” is contingent upon “a will to speak’ [since] unless the student develops her (or his) voice and has a willingness to speak, her (or his) becoming may be unduly limited” (Barnett, 2009:435). This process of “finding your voice” was explicitly mentioned by one student, who stated that this was in fact tacitly discouraged in the hospital environment.

These sections have focused on the unique features of SHAWCO clinics, and have thereby offered new insights to the SRC literature. They have demonstrated that SRCs demonstrate many of the characteristics of CBE platforms. SHAWCO clinics create an enabling learning environment; the likes of which may not be seen in large hospitals. These clinics exploit the benefits of PAL both in terms of direct instruction and in terms of mentorship. It has been shown that pre-clinical students benefit markedly from early patient contact offered at SHAWCO clinics, echoing the findings of Clark, et al., (2009). These opportunities are not available in the usual curriculum. This section has also offered new insights into how students learn at SRCs, with a particular emphasis on accountability and emotional engagement. It has also been shown that SHAWCO involvement can aid the development of important graduate attributes and can significantly enhance personal growth and professional identity development. These findings have significant implications for practice, but should also be interpreted in light of the study limitations. These factors will be considered next.

5.2. Limitations

This study interviewed *volunteers who volunteered*, which might reflect a particular sub-group of SHAWCO attendees who could be more engaged in the process of volunteerism, thereby benefitting more from the SHAWCO environment than others. The findings reported here may thus well not represent the benefits attendant on SRC involvement more generally. In this regard, it would be intemperate to interpret these findings as meaning that SRC involvement will be of benefit to all students and therefore be made compulsory.

CBE should involve collaborations with community-based organisations, and this study did not explore the full extent to which this occurs at SHAWCO clinics. Thus, it cannot be claimed that SHAWCO clinics *fully* represent the CBE model.

The study did not look at the influence of the *number* of clinics attended on the perceived benefits of SHAWCO. It stands to reason that more exposure creates cumulative benefits,

but it is not clear from the data available whether repeated exposure is *necessary* before a given benefit is attained. This warrants further research.

As the researcher, I believe strongly in the benefits of SHAWCO, and most of the students interviewed know me to be a proponent of SHAWCO. This could have affected the students' decisions to get involved with the study (i.e. those with negative perceptions may have been under-represented) and their responses. Indeed, the generally positive experiences reported by respondents across a large number of interviews could be interpreted to support this possibility. Some negative perceptions were raised, reflecting a more balanced and valid data set. However, these findings would need to be tested across broader cohorts of respondents, for example, surveys of all SHAWCO participants and participants of SRCs at other institutions, to help determine how general the positive experiences are.

My inexperience as a focus group interviewer meant that I did not probe more deeply into some key factors that were mentioned, thereby losing opportunities for unpacking potentially valuable data; for example, how students coped with difficult situations. However, as a SHAWCO "insider" I was able to pick up on some subtleties of the SHAWCO process that may not have been the case had the interviewer been an outsider.

5.3. Recommendations and implications for practice

The findings of this study provide strong evidence that SHAWCO clinics could be used as a CBE experience in the curriculum (even in light of the fact that the study did not explore the community collaboration aspect of CBE). However, this should not be taken to imply that SHAWCO should be formalised into the curriculum. Robbing SHAWCO of its voluntary nature would compromise the very essence that is the rich SHAWCO experience.

Nonetheless, some students, who only started attending SHAWCO in their clinical years, expressed the wish that they had started earlier. Given the extensive benefits of SHAWCO to pre-clinical students in particular, it may be worth considering making just one visit compulsory in first year, for example, when students are chiefly exposed to densely academic subjects that do not speak to the practice of Medicine (e.g. Chemistry and Physics). Students could then decide whether they would want to continue with SHAWCO visits thereafter. This would have to be carefully constructed and properly evaluated; perhaps with reflective journals or formal debriefing for students. Such techniques have already been successfully applied at one SRC (Clark et al., 2003).

Seeing as the vast majority of teaching is done by clinical students, the findings suggest that clinical students would benefit greatly from being afforded the opportunity to learn how to teach in a clinical setting, i.e. that we should “teach the teachers”. In addition, seeing that another major role of clinical students is as mentors, it would be beneficial to offer basic training on mentorship skills to senior students. Such training could be added to the repertoire of workshops already on offer for SHAWCO students (e.g. HIV testing workshops). Control of the workshops could be ceded to students over time. A precedent for this approach exists: this has worked well in a Pap smear workshop I oversee, where I did the initial training; the subsequent workshop used the first cohort of trained students to train others, and so on, such that the workforce of trainers has expanded manifold (Gordon, 2014).

5.4. Recommendations for future research

One tantalising finding is the impact that SHAWCO has on career intentions in the short term. While this study showed that SHAWCO had influenced some students’ career *intentions*, it would be critical to determine whether this does in fact follow through to an actual career path. Of note is that while many students mentioned an intention to “give back” to the public service for a time, many stated that they would ultimately want to end up in private practice. Moreover, many stated that they would want to specialise, despite acknowledging the need for primary care physicians. In order that we might influence this in some way, the reasons underlying this should be explored (e.g. is this due to the Faculty culture, and should students have exposure to more primary care physicians?)

Some students alluded to reasons that they did not attend SHAWCO as much as they would have liked (for example the need to study or interpersonal conflicts). Given the fact that students do know the value of SHAWCO through the student grapevine, it may be useful to determine on a deeper level why those who do not attend do not go, or do not return. It may also be of value to determine the reasons why some volunteers go over and above the norm, through attending clinics every week, or committing to leadership roles, so that this drive might be developed in other students. It may also be important to determine whether being a more involved member of SHAWCO is predictive of career paths in the public sector, primary care and/or in leadership roles.

This research has shown the value of experiencing difficult situations at SHAWCO. Understanding how students cope with these situations, including whether students’

wellbeing is compromised by such exposure, would allow the design of curriculum interventions to exploit such learning while providing adequate support for students.

The focus of this study was on medical students, yet there are several other disciplines whose students attend SHAWCO and their experiences of SHAWCO should be explored as well.

While various valuable characteristics of volunteer clinicians were highlighted by respondents, the characteristics of teachers and mentors valued by students were not systematically researched here. These would be important to delineate if training of student and clinician teachers on how to maximize teaching opportunities at SHAWCO is to be offered. The study has also not addressed any volunteer clinician or other professionals' experiences. Another broader focus could be volunteer professionals' reasons for attending clinics, and whether clinic attendance benefits them in any way. Should this be the case, these benefits could be used to 'advertise' SHAWCO as a worthwhile endeavour, in the name of recruitment (a constant struggle for students).

5.5. Conclusion

This study has demonstrated that SHAWCO clinic involvement unequivocally adds value of a kind sorely needed in South African medical education. The nature of the extreme setting of the clinics and the various challenges posed by the real responsibility for patient care can facilitate transformative learning experiences, the likes of which would be unlikely to occur in the normal curriculum. These experiences also threw into sharp relief the need for primary care doctors in the public service, and as such affected many students' career intentions. The conundrum for curriculum planners, however, is that to formalise SHAWCO clinics into the curriculum would rob them of the very essence that makes them so valuable. The challenge for the future, therefore, is to learn how to maximise this experience for as many students as possible without destroying this central aspect of the experience in the process.

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APPENDIX A: PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM

TITLE OF THE RESEARCH PROJECT: Students' perceptions os attending a student-run night-time volunteer clinics in underserved areas: why do they go, and how does attendance impact on their learning and personal development?

REFERENCE NUMBER: 375/2013

PRINCIPAL INVESTIGATOR: Dr Chivaugn Gordon

ADDRESS: Department of Obstetrics & Gynaecology, H 55.10, Old Main Building Groote Schuur Hospital, Main Road, Observatory, 7935.

CONTACT NUMBER: (w) 021 4066175; (c) 083 774 9269

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the principal investigator (Dr Chivaugn Gordon) any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committees at both Stellenbosch and UCT Universities** and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?

The Health Professions Council of South Africa has declared that Health Science Faculties in the country must expose students to more primary care, community-based teaching and learning. They conduct audits of all the universities, and at the last UCT audit, they found that UCT has too little primary care exposure for students. Our Faculty is trying to roll out more primary care sites, but the Cape Town Metropole is relatively small, and there are

relatively few facilities that can be used for this purpose. Having attended SHAWCO clinics myself as a student and then as a doctor, I realised that SHAWCO clinics might be one avenue to explore for primary care teaching and learning.

Over the past few years, there has been more of an attempt made to consider students' opinions about aspects of their learning. Consequently, it is pertinent to understand what students think about SHAWCO clinics before any formal decisions can be made about their potential use in the undergraduate curriculum.

Why have you been invited to participate?

You have been invited to participate from the pool of students attending SHAWCO because:

1. You have attended SHAWCO at least twice before in your student career **OR**
2. You are a member of the Steering Committee or in another SHAWCO leadership role

Procedures

Should you accept the invitation to join this study, you will be asked to participate in a one off focus group with 7 other students. A focus group is a facilitator- guided discussion with a group of people. Three focus groups will be held with second year students, another three groups with 5th year students, and finally, one group with SHAWCO steering committee members from any year.

The focus group discussion will be guided by me, Dr Chivaugn Gordon. You will be given the opportunity to ask any questions about the research that you might have before the discussion begins. You will then be guided through a series of questions about your thoughts and views on SHAWCO clinic attendance. You may elect not to answer any of the questions asked.

You will not be asked to share any knowledge that you are not comfortable sharing.

The discussion will take place in the medical school and no one but the people who take part in the focus group and me will be present during this discussion. The discussion will be tape-recorded, and the tapes will be sent to a transcription company to be typed up so that I can analyse the data. A pseudonym (false name) will be allocated to you when the discussion is typed up- i.e. your own name will not appear anywhere on the transcripts. Once the discussion has been typed up, I will give each of you a copy, in order for you to ensure that your comments were correctly transcribed, and for any modifications you would like to make.

You will be given one week during which you can comment on the transcripts. You will be required to hand them back to me once that week is over.

The tapes and transcripts will be kept under lock and key. The information recorded is confidential from anyone not in your individual focus group and I alone will have access to the tapes once they have been transcribed. I intend to publish the study findings. Once the study is over and published, the transcripts and recordings will be destroyed.

Will you benefit from taking part in this research?

There will be no immediate direct benefit to you, but your participation will help us understand whether SHAWCO clinics may or may not be of value in terms of future changes to the Health Sciences curriculum. Your participation could therefore improve the undergraduate experience of future colleagues, which could translate into improved healthcare for future patients.

Are there in risks involved in your taking part in this research?

I do not anticipate any risks to you in this type of research project. However, remember that your comments are not confidential from your focus group members. I will ask you and others in the group not to talk to people outside the group about what was said in the group. I will, in other words, ask each of you to keep what was said in the group confidential. You should know, however, that we cannot stop or prevent participants who were in the group from sharing things that should be confidential.

Will you be paid to take part in this study and are there any costs involved?

No, you will not be paid to take part in the study but your transport and meal costs will be covered for your study visit. There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?

- You can contact Dr Gordon on 083 774 9269 if you have any further queries or encounter any problems.

- You can contact the Health Research Ethics Committee at 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.
- You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I agree to take part in a research study entitled: Students' perceptions of attending student-run, night-time volunteer clinics in underserved areas: why do they go?

I declare that:

- I have read this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.

Signed at (*place*) on (*date*) 2005.

.....
Signature of participant

.....
Signature of witness

Declaration by investigator

I (*name*) declare that:

- I explained the information in this document to
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above.

Signed at (*place*) on (*date*) 2005.

.....
Signature of investigator

.....
Signature of witness

Contact details: Stellenbosch Human Research Ethics Committee

For general enquiries, please contact Elvira Rohland on rdsdinfo@sun.ac.za.

Tel: 021 938 9677

Fax: 021 938 9855

Postal address: PO Box 19063, Tygerberg, 7505, Cape Town, South Africa

Physical address: Francie van Zijlrylaan, Parow, 7500, Cape Town, South Africa

Contact details: UCT Human Research Ethics Committee

For general enquiries, please contact Lamees Emjedi

Postal address: Groote Schuur Hospital, Private Bag, Observatory, 7937

Physical address: Room: E52.23, Old Main Building, Groote Schuur Hospital

Tel: 021 406 6338

Fax: 021 406 6411

APPENDIX B: FOCUS GROUP QUESTIONS FOR SHAWCO STUDENTS

1. People go to SHAWCO for various reasons. Why do you go?
2. How do you fit SHAWCO in with your studies and other activities?
3. What kind of things do you learn at SHAWCO?
4. How do you learn them?
5. Do you think you learn things other than pure medical knowledge or clinical skills at SHAWCO clinics?
6. Do you get any teaching at SHAWCO? If so, from whom?
7. Do you learn from your peers?
8. Has SHAWCO changed your perspective of health care in Cape Town, and if so, how?
9. Do you have any thoughts on what kind of medicine you would like to practice one day?
10. Have you thought of *where* you'd like to practice?

APPENDIX C: ETHICS PERMISSION LETTER FROM THE UNIVERSITY OF CAPE TOWN

UNIVERSITY OF CAPE TOWN



Faculty of Health Sciences
Human Research Ethics Committee
Room E52-24 Groote Schuur Hospital Old Main Building
Observatory 7925
Telephone [021] 406 6338 • Facsimile [021] 406 6411
e-mail: shuretta.thomas@uct.ac.za
Website: www.health.uct.ac.za/research/humanethics/forms

19 September 2013

HREC REF: 375/2013

Dr C Gordon
c/o Prof J Bezuidenhout
Obstetrics & Gynaecology
H-Floor, OMB

Dear Dr Gordon

PROJECT TITLE: STUDENTS' PERCEPTIONS OF ATTENDING STUDENT-RUN, NIGHT-TIME VOLUNTEER CLINICS IN UNDERSERVED AREAS: WHY DO THEY GO, AND HOW DOES ATTENDANCE IMPACT ON THEM?

Thank you for your letter to the Faculty of Health Sciences Human Research Ethics Committee dated 18 September 2013.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

Approval is granted for one year until the 30th September 2014

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: www.health.uct.ac.za/research/humanethics/forms)

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please quote the HREC. REF in all your correspondence.

Yours sincerely

PROFESSOR M BLOCKMAN
CHAIRPERSON, FHS HUMAN ETHICS

Federal Wide Assurance Number: FWA00001637.

Institutional Review Board (IRB) number: IRB00001938

This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP) and Declaration of Helsinki guidelines.

The Human Research Ethics Committee granting this approval is in compliance with the ICH Harmonised Tripartite Guidelines E6: Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95) and FDA Code Federal Regulation Part 50, 56 and 312.

s.thomas

APPENDIX D: ETHICS PERMISSION LETTER FROM THE UNIVERSITY OF STELLENBOSCH



UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvermoë • your knowledge partner

Approval Notice New Application

10-May-2013
GORDON, Chivaugn

Ethics Reference #: S13/03/055

Title: Students perceptions of attending student-run , night-time volunteer clinics in underserved areas: why do they go , and does attendance impact on their learning and personal development?

Dear Dr Chivaugn GORDON,

The New Application received on 02-Apr-2013, was reviewed by members of Health Research Ethics Committee 1 via Expedited review procedures on 02-May-2013 and was approved.

Please note the following information about your approved research protocol:

Protocol Approval Period: 02-May-2013 - 02-May-2014

Please remember to use your **protocol number** (S13/03/055) on any documents or correspondence with the HREC concerning your research protocol.

Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review:

Please note a template of the progress report is obtainable on www.sun.ac.za/rds and should be submitted to the Committee before the year has expired. The Committee will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Translation of the consent document to the language applicable to the study participants should be submitted.

Federal Wide Assurance Number: 00001372

Institutional Review Board (IRB) Number: IRB0005239

The Health Research Ethics Committee complies with the SA National Health Act No.61 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 Part 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

Provincial and City of Cape Town Approval

Please note that for research at a primary or secondary healthcare facility permission must still be obtained from the relevant authorities (Western Cape Department of Health and/or City Health) to conduct the research as stated in the protocol. Contact persons are Ms Claudette Abrahams at Western Cape Department of Health (healthres@pgwc.gov.za Tel: +27 21 483 9907) and Dr Helene Visser at City Health (Helene.Visser@capetown.gov.za Tel: +27 21 400 3981). Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and documents please visit: www.sun.ac.za/rds

If you have any questions or need further assistance, please contact the HREC office at 0219389657.

Included Documents:

DEC LETTERS
SYNOPSIS
PROTOCOL
APPLIC FORM
CHECKLIST
CV GORDON
IC FORM
QUEST
CV SUP
RESEARCH ACCESS