A review of University of the Witwatersrand medical students' community-based health promotion service learning projects in South Africa

A dissertation submitted to the School of Public Health and Family Medicine, University of Cape Town, in partial fulfilment of the requirements for the degree of Master of Public Health. Cape Town

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Abstract

First and second year Graduate Entry Medical Programme (GEMP) students at the University of the Witwatersrand undertake community-based service learning (SL) projects. Working with trained facilitators, students are required to identify a priority health problem in the community, and then plan and implement an appropriate project to address the problem. At the end, group presentations are conducted for assessment.

The purpose of this study was to review past SL projects that have been implemented by GEMP 1 and 2 students, in order to inform the future planning and conduct of the SL programme in the faculty. A document review of all available Power Point presentations for projects implemented from 2006 – 2011 was undertaken employing content analysis.

Of approximately 286 projects completed, 183 documents were available for review. Of the implemented projects 38.8% were clinic-based and 28.4% done in the Inner City region of the City of Johannesburg municipality. The projects covered a wide-range of health issues employing mainly basic health promotion strategies such as health education and distribution of educational posters and pamphlets. Four themes on students' perceptions of the educational worth of the projects and one on the challenges experienced were identified: Theory comes alive; Improved knowledge and understanding; Appreciating the expanded role of a doctor; and Personal growth. Challenges experienced included administrative shortfalls, poor communication and facilitation, lack of students' participation in project selection and prioritization as well as limited time allocated to working on the projects. These findings indicate that future planning and coordination of these projects needs to address the identified loopholes based on students' concerns. It is recommended that more attention be paid to strengthening the administrative and supervision aspects, making efforts to involve students properly in project selection, improving communication between the University and the community facilitators as well as reviewing placement duration.

Keywords: Service Learning, Community-Based Education, Undergraduate Medical Education, Health Promotion, Content Analysis

PART A

STUDY PROTOCOL

A review of University of the Witwatersrand medical students' community-based health promotion service learning projects in South Africa

Proposal: January 2012

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Background

Community-based Education (CBE) has been defined by the World Health Organisation (1987) as 'a means of achieving educational relevance to community needs and, consequently, of implementing a community-oriented educational programme'. It involves the integration of education and productive work within the learning process and the participation of all those involved in the actual work. Furthermore, CBE is associated with efforts to involve students and educational institutions in national development and to combine theory with practice (WHO, 1978).

A concept closely related to CBE is that of Service Learning. As cited in HEQC (2004), Service Learning is defined as 'a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline and an enhanced sense of civic responsibility'.

These two pedagogical approaches have co-existed for many years in the training of health professionals in the Faculty of Health Sciences at the University of the Witwatersrand. However it was only in 2005 that the Public Health department formally introduced Service Learning in their curriculum. It is the platform on which medical students in the Faculty get to apply the principles of Primary Health Care (PHC) and Community Oriented Primary Care (COPC). After receiving the theoretical aspects of Health Promotion in Public Health lectures, medical students in their third and fourth year of study are divided into groups and allocated to communities in the Johannesburg City Metropolitan where they are required to undertake health promotion projects. Students, in collaboration with identified facilitators from different clinics in the communities, identify priority health needs for the communities.

Following this, the students are required to address the identified problem by implementing a sustainable project. Students are allocated six half days spread throughout the academic year, during which problem identification, project planning, implementation and evaluation are to be done. At the end of the year when the last phases of the projects have been executed, the students are expected to present their projects to fellow students, members of staff and invited community members. They are also requested to submit soft copies of the power-point presentations which include reflections on their personal and professional development in the learning process during all phases of their projects. Students are assessed during the presentations with the criteria focusing on the clarity of problem identification and prioritisation, clarity of the objectives, effectiveness of the activities, team work as well as students' reflections on personal and professional development.

1. Problem Statement

Over the past years, a large number of health promotion projects have been implemented by third and fourth year medical students in communities in the Johannesburg City Metro. However, an evaluation of these projects has not been carried out. This study therefore intends to evaluate the projects that have been undertaken and implemented in the communities.

2. Significance of the study

The topical of issues in Medical Education currently are amongst others, around the discourse of Social Accountability of Medical Schools, Community Engagement, Service Learning and Rural Training for Health Professionals. While the projects undertaken in communities by students from our Faculty can speak in many ways to the principles and values of such topics,

it is still not clear whether and how these projects benefit both the communities and the students. As the Faculty of Health Sciences is aiming towards embracing the concept of Social Responsibility and Accountability, it is critical that a proper evaluation of what has been happening and what is happening currently in terms of student community-based projects be carried out. Furthermore, while some students have reported anecdotally that they had great experiences and that they gained skills and knowledge, there is no evidence to support these reports. Finally, recommendations from the students about the conducting of the programme have never been systematically collated and acted upon.

3. Objectives

The objectives of this study are to:

- To describe and categorise the projects that have been implemented in communities by the students
- To identify the range of lessons the students learn and the skills they acquire while working on these projects
- To assess the extent of partnership development and community participation during the project cycle
- To assess the potential sustainability of the implemented projects
- To establish the students' perceptions of service learning based on their reflections of their experiences

4. Methods

a. Study design

This is a cross-sectional descriptive study employing qualitative and quantitative methods.

b. Methodology – data collection and analysis

The PowerPoint presentation documents submitted by the students in the past seven years (2005 - 2011) will be reviewed and analysed through a Content Analysis method.

In his overview of content analysis, Steve Stemler (2001) cites different authors who have defined content analysis as 'a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding'. Content analysis is also useful for examining trends and patterns in documents (Stemler 2001). "The most common notion in qualitative research is that a content analysis simply means doing a word-frequency count, however, it extends far beyond simple word counts, what makes the technique particularly rich and meaningful is its reliance on coding and categorizing of the data" (Stemler 2001).

Data collection: - The researcher will review each of the students' PowerPoint presentation documents using a guiding tool (Box 1) to aid data extraction. This tool will be used only as a guide and therefore data extraction will not be limited to its usage. Specifically, the researcher intends to extract data relating but not limited to:

- The approach taken to identify and prioritise community health needs
- Research methodology employed by students at different stages of the projects
- The categories of identified community health needs (medical/non-medical?)
- The location where projects were implemented

- Type of intervention/s implemented (medical/non-medical)
- Level and types of collaboration and partnerships formed during project processes; when in the project cycle were partnerships formed; specified contributions of partners
- Potential sustainability of implemented projects
- Skills acquired and knowledge gained by students while working on the projects
- Any other useful information i.e opportunities for interprofessional/interdisciplinary learning; reciprocal knowledge transfer

Qualitative analysis: - The students' reflections will be analysed by coding the themes that emerge in the reflections of their experiences.

Quantitative analysis: - counting and summarising of the different variables extracted (Box 1.) will be done.

Box 1. Data extraction guiding tool

1. Quantitative data to be extracted by the researcher

Approach taken to identify and prioritise the community health needs:

Previously decided upon by community facilitator	
Decided on-site between students and community facilitator	
Other	

Research methodology approaches employed:

Quantitative	
Qualitative	
None	

Identified health problem/s:

Specific disease (name)	
Element of PHC/ PHC service	
Environmental issues	
Socioeconomic issue	
Other (name)	

Location of project:

Health Facility-based (specify)	
Community-based (homes, schools, churches, NGO's, factories, etc.) - specify	

Type of intervention/s; approach:

Type	*Notes*
Preventive/Promotive	
Service provision/Curative	
Service provision (other)	
Education	
Advocacy	
Other (name)	

Collaboration/partnerships formed:

Intra-sectoral (name of sectors)	
Inter-sectoral (name of sectors)	
None	

2. Qualitative information reported by students (verbatim) or researcher (inference)

Potential sustainability:

Students:			
Researcher:	High:	Moderate :	Low/none:

Skills acquired:

Students:
Researcher:

Knowledge gained:

Students:
Researcher:

3. **Other useful information:**

Students:
Researcher:

c. Sample size

All the presentation documents that have been submitted from 2005 to 2011 will be reviewed and analysed. It is anticipated that 100 – 120 documents will be available for review.

d. Potential Bias

Selection bias: All available documents will be sampled, therefore there should be no selection bias.

Reporter bias: The reports may tend to put a positive gloss on achievements. This will not be possible to control, so the findings of this study will have to be interpreted with caution.

Researcher bias: The researcher will work in close cooperation with an experienced member of the Centre for Health Science Education academic team to check and confirm the accuracy of quantitative data extraction from reports as well as the qualitative data analysis process.

e. Ethical considerations

This proposal will be submitted for review and ethical clearance requested from the Human Research and Ethics Committee of University of the Witwatersrand. Permission to access and use student data will be obtained from the Dean of the Faculty of Health Sciences.

While the researcher acknowledges the importance of obtaining approval from the students who conducted the projects, this unfortunately poses challenges at different levels:

- The researcher intends to review project reports for seven cohorts (2005 - 2011) of students, some of whom have already graduated
- For the students who are still registered, since they worked in groups on these projects, the researcher would have to get approval from each student. This will be attempted but it may not be possible in each case since the students are widely scattered throughout the Faculty's teaching platforms at any one time

However, it is the researcher's view that the ethical risk of using student data without their permission is out-weighed by the potential benefit of improving and strengthening service learning projects in the Faculty of Health Sciences.

Anonymity will be ensured by:

- Not disclosing students' names or any other personal identifiers in the reports, publications or presentations of this study. The results of the study will have no negative impact on the already qualified doctors and the students who are still in the system who worked on these projects
- The data from projects of all student cohorts will be analysed together so that findings from a particular year cannot be linked to students from that year
- Not reporting the names and locations of sites where projects where carried out

f. Reporting of findings

The primary output of this study will be a manuscript in the form of a journal article submitted to the University of Cape Town to fulfil the requirements for a Masters Degree in Public Health by the researcher.

The findings will be reported to:

- To the School of Public Health at the University of the Witwatersrand for the purposes of refining the programme, in particular, taking student perceptions and recommendations into account
- The article will be submitted for publication in the national and international literature

g. Study limitations

Since this study is not a comprehensive evaluation, the findings will be limited in addressing all the necessary factors around service learning and the worth of students' health promotion projects. However, the findings will help to identify weaknesses and strengths of the projects which will inform ways to improve these projects and make recommendations moving forward. In particular, student recommendations will be clarified so that these can be acted upon.

h. Time Frame

Month	**Jan 2012**	**Feb-Mar 2012**	**Feb-Mar 2012**	**Mar-Apr 2012**
Activity	• Submission for Ethics clearance • Literature review	• Data collection • Data analysis • Literature review	• Data collection • Data analysis	• Data analysis • Write-up and submission

i. Budget

Item	Printing and photocopying	Journal articles purchase	**Total = R650**
Amount	R300	R350	

The funds will be provided by the Centre for Health Science Education by agreement with the Director.

References:

HEQC. (2004). Quality Management of Service Learning Programmes: A good practice for Higher Education Institutions. South Africa

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PART B

LITERATURE REVIEW

Introduction

The focus of this literature review is to summarize and synthesize the ideas and arguments of other authors on the topic of service learning and the community-based projects that are done by health professional students, referred to as service learning projects. A brief background of community-based education and service learning and its relevance in the South African context will be given. This will be followed by a review of a few studies that have been done locally and internationally based on students' service learning projects. The entry point to the search strategy was the reference sections of seminal recent peer-reviewed journal articles on topics of service learning and community-based education of health professionals.

Background

Among the topical issues in medical and health professionals' education are the discourse of social accountability, community-based education, community engagement, service learning, and rural training of health professionals. The core principle that underlies all these educational strategies is that of ensuring an appropriately trained and skilled workforce to achieve the objective of good health outcomes (DOH HRH SA 2012). Training of healthcare professionals takes place in the context of a rapidly changing healthcare environment worldwide. Interactions between the two systems on which this training hangs - education and health, are complex (Frenk et al 2010). The complexity of this interaction deepens in countries like South Africa and many other developing countries where national health systems are weakened by numerous challenges and the educational systems are poor (Frenk et al 2010). Training of healthcare professionals in such countries needs to respond to meet the vast and complex healthcare and educational needs. Mennin and Petroni-Mennin (2006) have suggested that "the education of tomorrow's doctors requires teachers, students and health professionals across the full spectrum of care to understand health as a product of a

complex network in which it is not possible to tell whether one event is more important than another" (p. 90). In this regard, health educational institutions (HEIs) have been called to demonstrate their social responsibility and accountability through the calibre of graduates they produce - graduates who are prepared to practice in the rapidly changing healthcare environment and are able to meet the pressing healthcare needs of society (Boelen and Woollard 2009). "Graduates should be equipped to assess and respond to community needs in relation to service provision; understand the genetic, environmental and psychosocial causes of illness and diseases; and apply primary health care principles" (Naidu et al 2012).

Community-based Education (CBE) and Service Learning (SL)

Institutions of higher education are currently faced with many challenges, one of which is the need to demonstrate what students are learning and that learning is occurring (Moore & Lin, 2009). The call to higher education is to rethink and critically examine how community involvement can change the nature of faculty work, enhance student learning, better fulfil campus mission, and improve the quality of life in communities (Bringle and Hatcher 2009). This call resonates well with what the World Health Organisation in 1987 referred to as Community-based Education. CBE has been defined by the World Health Organisation (1987) as "a means of achieving educational relevance to community needs and, consequently, of implementing a community-oriented educational programme". It involves the integration of education and productive work within the learning process and the participation of all those involved in the actual work. Furthermore, CBE is associated with efforts to involve students and educational institutions in national development and to combine theory with practice (WHO, 1987). Following WHO's CBE definition and recommendations on how to foster it, many institutions training healthcare professionals worldwide adopted this method of training and some have come up with other expanded

definitions of CBE. For example Mennin and Petroni-Mennin (2006) refer to Community-Based Medical Education (CBME) which they say "is not about poor medicine/health care for poor people, and it is not about saving money: it is about engaging in a creative way with communities in the context of real health problems while at the same time learning essential attitudes and skills applicable in both hospital and community settings (p 91). In South Africa, education of health professionals using principles of community-based education is the recommended national policy (DOE 1997).

A pedagogical strategy closely related to CBE is that of service learning (SL), a core component of community engagement – defined by Bringle and Hatcher (in Bringle and Hatcher 2009) as: a course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline and an enhanced sense of civic responsibility (p. 38). Many institutions training health professionals, locally and internationally, have implemented SL in a range of the health disciplines they offer. The nature and structure of SL programs in higher education are set by the goals of community engagement and student learning (Moore and Lin 2009). According to Kerrigan and Sirkin in Bajracharya (2006) service learning:

-facilitates intellectual growth and develops critical thinking;

-improves student communication skills;

-helps students reframe and readdress real-life situations;

-examines students' connections to their community;

-provides students the opportunity to offer each other support and recognition;

-develops a sense of belonging among students;

-develops student recognition of themselves as change agents within the community;

-facilitates acknowledgment of community needs; and

-empowers students to recognize their strengths and skills (p.5).

The three main principles of SL are active learning, reciprocity and reflection (Moore and Lin 2009) and there are four phases of service learning: planning, action, reflection, and celebration (Greenberg in Bajracharya 2006). Ferrari and Cather (2002) suggest that service learning experiences enrich learning and enable the student to develop personally, socially, academically, and spiritually.

However, the conceptualization and implementation of SL as a beneficial pedagogy in higher education has not been without resistance from other academics (Vogelgesang and Astin 2000). It is noted that "at the institutional level, the most serious obstacle [to expanding and sustaining service programs] is faculty resistance to service learning. Faculty are reluctant to invest the extra time that teaching service learning courses entails, and many are skeptical of the educational value of service learning" (Gray et. al., in Vogelgesang and Astin 2000).

The philosophical and epistemological issues of SL as a pedagogical strategy are beyond the scope of this paper.

Service learning in South Africa

The South African policy in higher education is urging tertiary institutions to become socially responsive in regard to community development, to produce new knowledge and graduates who are critical and responsive citizens (Alperstein 2007). The Department of Education White Paper No.3 of 1997 made a vital call for higher education institutions to transform higher education with the intention of broadening democratic participation, responsiveness to social challenges, and partnership-building (Erasmus 2009). In the introduction to the White Paper, the then minister of Education Professor Bengu states: "the higher education system must be transformed to redress past inequalities, to serve a new social order, to meet pressing national needs and to respond to new realities and opportunities" In this regard, the South

African higher education landscape has established the development of the pedagogy of service learning as a vital part of community engagement (Rowe 2011). Furthermore, community engagement in higher education is one of the key areas of quality management in the Higher Education Quality Committee's Framework for Institutional Audits and Criteria for Institutional Audits (HEQC 2004) - all universities in the country go through institutional auditing processes based on these tools. Having mentioned knowledge production and knowledge dissemination as the purpose of universities, Badat suggested that "the final, if somewhat newer but increasingly accepted, purpose of universities is to undertake *community engagement"* (Badat 2009 p. 5). As mentioned above, service learning is a core component of community engagement, hence universities are urged to undertake service learning as a pedagogical strategy.

Public Health, Primary Health Care and Service Learning

Beaglehole et al (2004) define Public Health (PH) as collective action for sustained population-wide health improvement. A concept which complements the PH paradigm to help facilitate the reduction of inequalities in health and improve overall health status of the population is that of Primary Health Care (PHC). PHC as an approach to health development involves the total reorientation of the health system. Its characteristics are: reorientation of the health services to enable secondary and tertiary care to support care at primary level; a more even distribution of health resources allocated to promotive, preventive and rehabilitative care; intersectoral coordination; and participation of the community (WHO 1987). The recent report of the Lancet Commissions on education of health professionals for the 21st century recommends that PHC training "be seamlessly integrated into the overall health system, including the academic system" (Frenk et al 2010, p.1940)

Developing a more equitable national health care system was a resolve central to the new democratic government's ambitious health and welfare policies in the Reconstruction and Development Program (Terreblanche in Benatar 2004). The government's commitment to integrating PHC into the health system is confirmed by its statement in the National Health Insurance in South Africa Policy Paper (2011) that "primary health care services will be re-engineered to focus mainly on health promotion, preventative care, whilst also ensuring that quality curative and rehabilitative services appropriate to this level of care are rendered" (p. 24).

While district-based PHC was established as part of the health reforms, community-engagement and service learning were established as part of higher education reform by the government for the post-apartheid South Africa. This is not surprising though, considering that the main components of SL overlap with some of the core principles of PHC (ie partnership with communities and collaboration with other stakeholders).

The role of student projects: Literature Review

In the year 2000, Vogelgesang and Astin had already noted a "mounting body of evidence documenting the efficacy of participating in service during the undergraduate years" (p. 25) and confirmed through their research the "belief that course-based service has benefits over and above those of "generic" community service" (p. 33). According to Moore and Lin (2009), benefits of SL for students are amongst others increased civic engagement, enhanced sense of purpose, greater feelings of fulfilment, nurturing of creativity, and promotion of problem-solving skills and social responsibility. Studies from universities that have incorporated students' service learning projects into their training programmes are either based on descriptions of their programmes or in some cases, evaluations of the programmes. Following is a review of few studies that have been done from different countries.

Kaufert and colleagues (1981) at the University of Manitoba, Canada, undertook a project to evaluate the Community Medicine student projects. This study was done two years after the new programme of 'student participation in projects related to community medicine' was implemented by the Department of Family Medicine. While the authors are not clear about the study method they employed, they found that the 156 projects they evaluated focused on a wide range of health problems or methods of service delivery. They conclude that while the objective is achieved of exposing and familiarizing the students with the application of community medicine principles to clinical medicine through these projects, the extent to which it would affect their future practice would require an analysis of their practice styles after they graduated.

In India, the researchers, Vaidya and Gothankar (2009) analysed feedback obtained from 169 students in the fourth and sixth semester at the end of their community-based projects. They issued a feedback form to the students consisting of close-ended and open-ended questions. The authors do not mention obtaining ethical clearance to conduct this study. They found that the project work helped the undergraduate students immensely in understanding the subject of Community Medicine thoroughly. Furthermore, they report that students understood the importance of correct and complete recording of data in the health information system, social stigma associated with certain diseases, communication skills in interview techniques, patient's knowledge, attitude, and practices towards certain infectious diseases, the lifestyle of people residing in the slums, and the care patients' received in the family setup (Vaidya and Gothankar 2009).

A descriptive study of the Community Health Fellowship Program in the USA was conducted by DeHaven (2011) and colleagues to provide an overview of the programme, describe the types of projects completed by the community health fellows from 2005 to 2009 and to assess the program's effectiveness from the perspective of fellows and community partners. The

results show that this programme which is developed to train medical students in community-based participatory research (CBPR), had 25 projects completed with 19 different community partners from 2005 to 2009. The fellows in the programme reported favourable attitudes (Wilcoxon signed-rank test, P <.05). ; using a 5-point Likert scale 1 = not favorable, 5 = very favorable) about the programme; their mentors; and their community projects; their research knowledge increased significantly in most areas, especially their ability to develop a succinct research question; familiarity with CBPR; and delivering a formal research presentation. Community partners reported favourable attitudes toward the fellows and the programme; about fellows' level of responsibility; level of cooperation; familiarity with the needs of the medically underserved; and knowledge of how to apply local solutions to health problems. The authors concluded that the programme has high favourability and support among fellows and community partners (DeHaven et al 2011).

Wee et al (2010) undertook a project to assess the pedagogical value of a student-led community-based experiential learning project called the Public Health Screening (PHS) run by medical and nursing students at a Singaporean University. The participation rate in this cross-sectional study employing a self-administered anonymised questionnaire was 93% for medical students and 100% for nursing students. Students also gave an overall score for their learning experience at the PHS. The study found that preclinical students and female students were each more likely than clinical students and male students respectively to feel that PHS had helped them to improve their communication skills, teamwork, ability to identify social issues, taking action, and gaining and applying their knowledge. Improved ability to interact with patients (β=1.64, 95%CI, 1.01-2.27), appreciation of challenges to healthcare faced by Singaporeans from lower income groups (β=0.93, 95%CI, 0.49-1.37), thinking of others (β=0.70, 95%CI, 0.04-1.37) and tolerance of different people (β =0.63, 95%CI, 0.17-1.10) were strongly associated with the overall rating score. The authors concluded that student-

organised community-based experiential learning projects have potential educational value for both medical and nursing students (Wee et al 2010).

Naidu et al (2012) evaluated the benefits and challenges of community placements of University of Cape Town medical students for students and community stakeholders using record reviews and key informant interviews. They reviewed and evaluated student projects according to the key themes of partnership development, community participation, stakeholder involvement, sustainability and the lessons and skills learnt by the students. The reported benefits to the students included greater knowledge, practical experience, teamwork opportunities, understanding of cultural needs/dynamics, personal fulfilment, and cultural exposure (Naidu et al 2012).

Competencies for CBE need to be considered highly by those implementing this method of education. Ladhani et al (2012) conducted a systematic review in order to identify and categorize CBE competencies implemented in nursing and medical schools to inform all stakeholders of health professionals' education. The authors searched electronic databases and carried out manual search of educational journals, restricting their search to original research, published in English language between January 2000 and December 2009. From the nineteen studies that matched their search criteria, they identified competencies which they categorised under six themes: Public Health; Cultural Competence; Leadership and Management; Community Development; Research; and Generic Competencies. They suggest that core competencies for CBE must be recognized and disseminated widely for its integration in health professionals' curriculum (Ladhani et al 2012).

Alperstein (2007) undertook a pilot project to explore the communities's perspectives with regard to the structure and design of community-based service learning curricula for medical

students at the University of Cape Town. The author interviewed the community organization where the students are placed for service learning using a 'free attitude' interview. Three main themes arose from the content analysis of the interview data: hosting of students is beneficial for the organization; community-based service learning curricula faces challenges; and clarifying the roles of the University and of the community [organisations] in community-based service learning. She then suggested that conducting a comprehensive evaluation and giving a voice to the communities partners is necessary to improve mutual benefits and learning (Alperstein 2007).

With regards to the implementation of CBE programmes, Mtshali (2009) undertook a study to analyse the implementation of community-based education in basic nursing education programmes in South Africa. Guided by Strauss and Corbin's (1990) grounded theory approach, she collected data by means of observation, interviews and document analysis. The findings of her study revealed that collaborative decision-making involving all stakeholders was crucial in particular during the curriculum planning phase. She further recommended that special criteria should be used when selecting community learning sites to ensure that the selected sites are able to facilitate the development of required graduate competencies. Mtshali's findings let her to conclude that "collaborative effort, true partnership between academic institutions and communities, as well as government support and involvement emerged as necessary conditions for the successful implementation of community-based education programmes" (Mtshali 2009 p. 25).

Hunt et al (2011) conducted a systematic review to 'understand the educational goals of projects described as "service learning" or "community-based medical education" and to learn how relationships between medical schools and community members are discussed in these projects'. Their review focused on US and Canadian medical students only, which

produced a total of 57 peer-reviewed articles (122 articles were excluded) for systematic qualitative content analysis. It is not clear whether the authors selected studies of a specific research methodology or not. The process for data collection and analysis, and the methods employed to ensure rigor of the findings, are clearly stated.

From this systematic review, the authors identified five main findings: "(1) Considerable heterogeneity existed across projects, (2) although medical schools aimed to improve the health of the community, they did not routinely involve community members in the identification of local health priorities, (3) educators were enthusiastic about community-based education as a method for teaching complicated ideas such as social determinants of health, (4) many authors emphasized community placements as being equivalent to traditional curricula, and (5) the articles did not emphasize the concept of reciprocal knowledge transfer." The authors found little emphasis on the reciprocal nature of partnerships between communities and medical schools (Hunt et al 2011).

Summary and conclusion

The reviewed studies are from different countries and cover a variety of issues around community-based service learning students' projects. Broad topics addressed in these studies include students' benefits; the pedagogical value; competencies; implementation issues; and importance of and need for community input in planning. Some studies are descriptive, whereby authors describe the nature of their service learning projects, while a few are evaluations of implemented projects. A variety of research methods and data collection techniques were employed in the studies – these include systematic reviews; grounded theory; content analysis; record reviews; interviews; observations and questionnaire administration. Generally, the results of the studies reveal that service learning projects are

favourable, benefiting both the students and the communities. There is however a dearth of studies reporting the challenges to both the students and institutions, associated with undertaking service learning project. Also as identified by Alperstein (2007), "the voice of the community is almost completely absent from service learning research (p. 60). Furthermore, as Kaufert and colleagues suggested in 1981, the extent to which students' participation in these projects would affect their future practice would require an analysis of their practice styles after they graduated.

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PART C

JOURNAL MANUSCRIPT

Title:
A review of University of the Witwatersrand medical students' community-based health promotion service-learning projects in South Africa

Authors: **Gaolatlhe Mothoagae; James Irlam; Detlef Prozesky; Tintswalo Hlungwani**

Abstract

First and second year Graduate Entry Medical Programme (GEMP) students at the University of the Witwatersrand undertake community-based service learning (SL) projects. Working with trained facilitators, students are required to identify a priority health problem in the community, and then plan and implement an appropriate project to address the problem. At the end, group presentations are conducted for assessment.

The purpose of this study was to review past SL projects that have been implemented by GEMP 1 and 2 students, in order to inform the future planning and conduct of the SL programme in the faculty. A document review of all available Power Point presentations for projects implemented from 2006 – 2011 was undertaken employing content analysis.

Of approximately 286 projects completed, 183 documents were available for review. Of the implemented projects 38.8% were clinic-based and 28.4% done in the Inner City region of the City of Johannesburg municipality. The projects covered a wide-range of health issues employing mainly basic health promotion strategies such as health education and distribution of educational posters and pamphlets. Four themes on students' perceptions of the educational worth of the projects and one on the challenges experienced were identified: Theory comes alive; Improved knowledge and understanding; Appreciating the expanded role of a doctor; and Personal growth. Challenges experienced included administrative shortfalls, poor communication and facilitation, lack of students' participation in project selection and prioritization as well as limited time allocated to working on the projects. These findings indicate that future planning and coordination of these projects needs to address the identified loopholes based on students' concerns. It is recommended that more attention be paid to strengthening the administrative and supervision aspects, making efforts to involve students properly in project selection, improving communication between the University and the community facilitators as well as reviewing placement duration.

Keywords: Service Learning, Community-Based Education, Undergraduate Medical Education, Health Promotion, Content Analysis

Introduction

In 2003, the Faculty of Health Sciences at the University of the Witwatersrand introduced the Graduate Entry Medical Programme (GEMP) which allowed graduate candidates into its existing undergraduate training programme of medical students. Graduate candidates join those who entered as school leavers in the third year of the six year MBBCh programme, and they progress together from GEMP 1 (3rd year) to GEMP 4 (6th year) of the programme. Four themes, namely Basic and Clinical Sciences, Personal and Professional Development, Patient-Doctor, and Community-Doctor, run throughout the four years of the GEMP programme (Hlungwani 2006).

The Faculty of Health Sciences' School of Public Health contributes to undergraduate teaching of Public Health to GEMP students through integrating theoretical elements and service learning (SL) projects based in communities. The basic building blocks of Public Health to which the students are exposed in this discipline are: Epidemiology and Biostatistics, Control of Communicable and non-Communicable Diseases, Occupational and Environmental Health, and Social and Behavioural Change.

The model of Community-based Education that was introduced in 2003 was modified to be in line with SL in 2005. It is the platform on which medical students in the Faculty get to apply the principles of Primary Health Care (PHC) and Public Health. After exposure to the theoretical aspects of Public Health in seminars, GEMP 1 and 2 students are divided into groups and allocated to communities in the City of Johannesburg (COJ) and Ekurhuleni

where they are required to undertake SL projects. Facilitators, who are also staff members in different clinics and environmental health offices, identify projects they are currently working on to place groups of students. It is expected that facilitators identify a list of potential projects and involve students in prioritisation and selection of the project to work on. Following this, the students are required to address the identified problem by implementing a sustainable project. The facilitators receive a 5-day training programme annually to build their capacity to support SL and health promotion.

Students are allocated six half-days spread throughout the academic year, during which problem identification, project planning, implementation and evaluation are to be done. At the end of the year, the students are expected to present their projects to fellow students, members of staff and invited community members. They are also requested to submit soft copies of their Power Point presentations, which include reflections on their personal and professional development in the learning process during all phases of their projects. Students are assessed during the presentations against the criteria of clarity of problem identification and prioritisation, clarity of the objectives, effectiveness of the activities, teamwork, and reflections on their personal and professional development. In addition, students are expected to complete peer evaluation forms.

Over the past years, a large number of health promotion projects have been implemented by students in communities in the Johannesburg City Metropolitan. However, an evaluation of these projects has not been carried out. The purpose of this study was to review past SL projects implemented by students, in order to inform the future planning and conduct of the SL programme in the faculty.

Literature review

One of the challenges faced by many institutions of higher education is the need to demonstrate what students are learning and that learning is occurring (Moore & Lin, 2009). A strategy that has been implemented to meet this challenge by some institutions locally and internationally is that of service learning – defined by Bringle and Hatcher (1996) as a course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline and an enhanced sense of civic responsibility.

SL as a pedagogical strategy has moved to the forefront of higher education in South Africa over the last decade. Some of its benefits for students are increased civic engagement, enhanced sense of purpose, greater feelings of fulfilment, nurturing of creativity, promotion of problem-solving skills, and social responsibility (Moore & Lin 2009). Medical students in a study by Naidu, Zweigenthal, Irlam, London, Keikelame, (2012) reported the benefits of community placements to include increased knowledge, practical experience, teamwork opportunity, deeper understanding of cultural needs/dynamics, personal fulfilment and cultural exposure.

Hunt, Bonhan and Jones (2011) conducted a systematic review which aimed at understanding the educational goals of projects described as "service learning" or "community-based medical education" and to learn how relationships between medical schools and community members are discussed in these projects. Through a systematic qualitative content analysis, they identified five main findings:

1. *Considerable heterogeneity existed across projects,*

2. *Although medical schools aimed to improve the health of the community, they did not routinely involve community members in the identification of local health priorities,*
3. *Educators were enthusiastic about community-based education as a method for teaching complicated ideas such as social determinants of health,*
4. *Many authors emphasized community placements as being equivalent to traditional curricula, and*
5. *The articles did not emphasize the concept of reciprocal knowledge transfer* (p. 246)

Methods

A document review of past GEMP 1 and 2 students' Power Point presentations was undertaken through the content analysis method employing qualitative and quantitative techniques. The researcher designed a form to systematically extract data relating to the approach taken to identify and prioritise community health needs; the categories of project topics chosen according to broad health problems; the location where projects were implemented; types of interventions implemented; level and types of collaboration and partnerships formed during project processes; potential sustainability of implemented projects; and students' perceptions of the lessons learnt and the skills acquired (Appendix A).

Quantitative data were analysed through counting and summarising of the different variables extracted, while the students' qualitative reflections were analysed by coding the themes that emerged from their reflections about their experiences.

Ethics approval for this study was obtained from the ethics committees of the Universities of the Witwatersrand and Cape Town.

Results

A total of 183 projects were recorded from the available PowerPoint presentation documents out of approximately 286 projects completed during the years 2006 to 2011. The number of projects differed across the years with no documents available for 2009 as they had been misplaced (Figure 1).

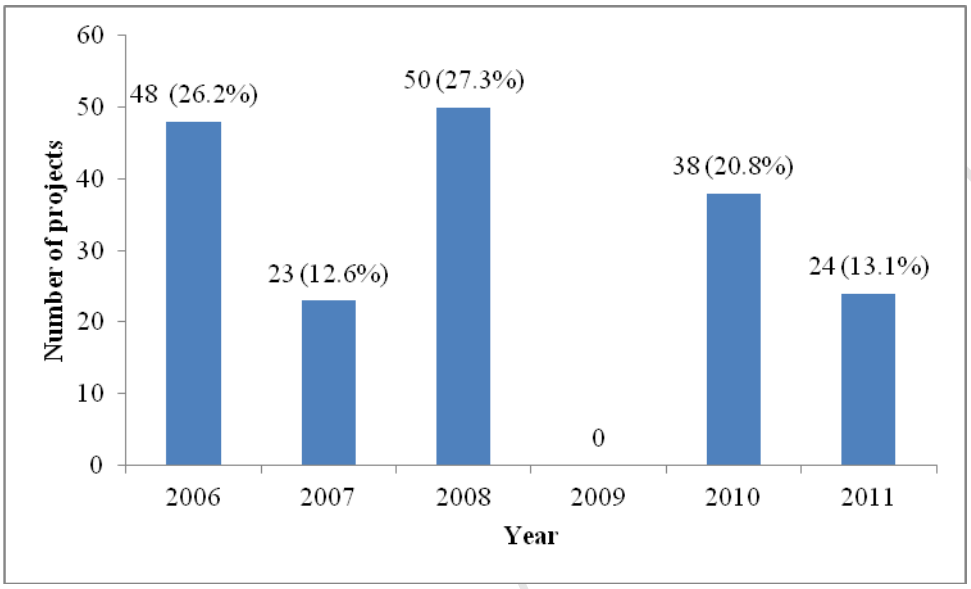

Figure 1: Numbers and percentages of service learning projects per year: 2006 – 2011
* 2009 documents missing

Over 1800 GEMP 1 and 2 students, working in 183 groups of 10 to 13 each, were involved in these projects, supervised by more than a hundred trained facilitators from the health and environmental health services of the COJ and Ekurhuleni. Below is a brief description of how the projects were identified, where they were implemented, their categories and the types of interventions employed:

Project identification: All the projects were identified and suggested to the students by the facilitators prior to meeting the group of students they would be faciltating.

Project locations: Most projects 172 (93.9%) were implemented in the City of Johannesburg municipality (Figure 2) with the Inner City region having the highest number - 52 (28.4%) of

projects implemented. More recently projects started being implemented in the Ekurhuleni municipality (2.7%) in 2010 and 2011, while a further 6 (3.2%) of the projects had no locations specified.

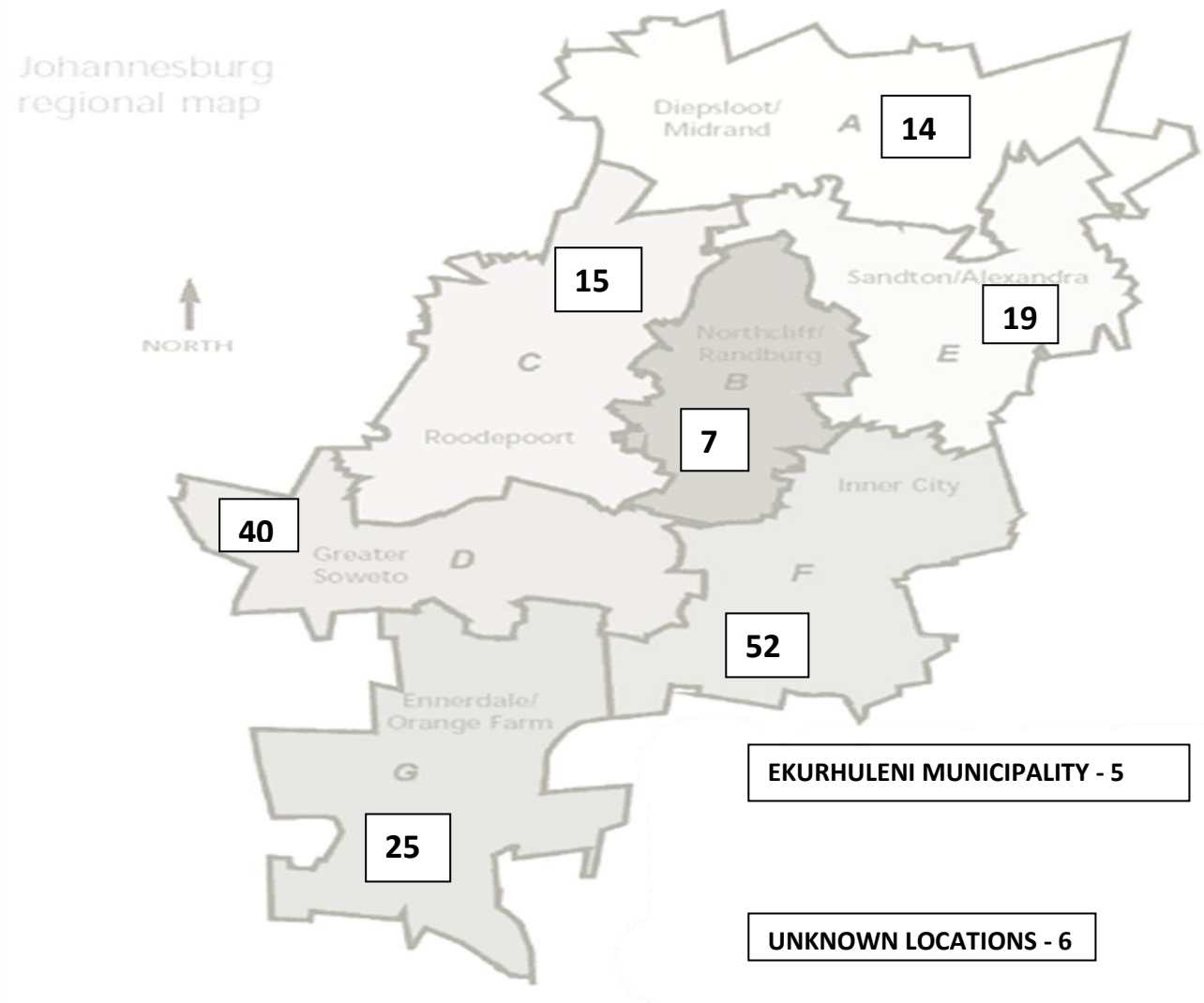

Figure 2. : Number of projects by location in the City of Johannesburg and Ekurhuleni municipalities: 2006 – 2011

Seventy one (38.8%) of the projects undertaken were implemented in Primary Health Care clinics, 53 (28.9%) directly in community settings (homes, fast food outlets, funeral parlours and old-age homes), 48 (26.2)% in schools and a few 11 (6.1%) in crèches (Figure 3).

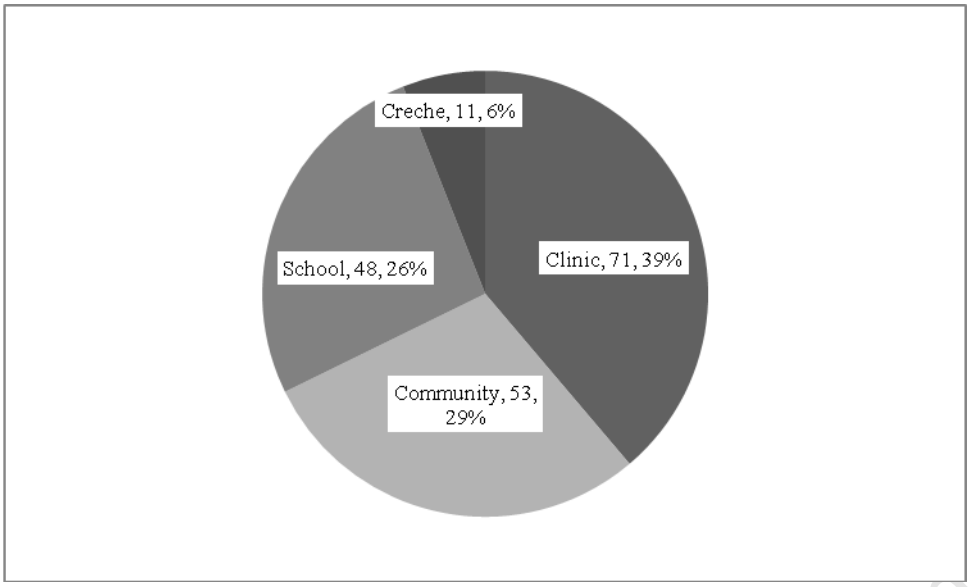

Figure 3: Service learning project locations: 2006 - 2011

Project categories: Clinic-based projects fell under the categories of Chronic Diseases, Child Health, Communicable Diseases, Mental Health, Women's Health and PHC Services.

Community-based projects were those related to issues of Environmental Health, Food Health, General Hygiene, Nutrition, Occupational Health and Safety as well as Youth Health. Table 1 shows the project categories and examples of topics covered under each category. The projects are each coded by the project category abbreviation, project number, and year in which the project was undertaken e.g. ComD1, 2010 is from Communicable Disease project number 1 of the year 2010.

Table 1: Service learning project topics by category: 2006 - 2011

Project category	N	%	Examples of project topics
CLINIC-BASED PROJECTS			
Communicable Diseases (ComD)	43	23.5	HIV/AIDS awareness, XDR TB awareness campaign, Risk factors for STD re-infection
Child Health (CH)	23	12.6	Immunization coverage, Oral rehydration, Growth monitoring, Measles awareness, Diarrhoea, Gastroenteritis
Chronic Diseases (CD)	15	8.2	Diabetes management, Hypertension awareness, Education on diseases of lifestyle, Chronic illnesses support group
Women's Health (WH)	9	5.0	Reproductive health education, Cervical cancer awareness, Women's health promotion project
Primary Health Care (PHC)	5	2.7	Marketing of an underutilised facility, Establishing youth-friendly services at a clinic, Enhancing efficiency at a clinic
Mental Health (MH)	3	1.6	Riverlea mental health project, Community mental health project, Mental health at Bophelong clinic
COMMUNITY-BASED PROJECTS			
Youth Health (YH)	28	15.3	Teenage pregnancy, Drug and substance abuse, Peer group counselling, Youth empowerment, Effects of hubbly bubbly smoking
Environmental Health (ENV)	25	13.7	Waste management, Illegal dumping, Rat infestation, Recycling campaign, Illegal cement factory, Healthy informal dwellings
Nutrition (NUT)	10	5.5	Malnutrition in children, Child development and nutrition education, Food garden initiative project, Nutritional education project
General Hygiene (GH)	9	5.0	Hand-washing project, Toilet clean-up campaign, Sanitation and hygiene in primary schools
Food Hygiene (FH)	8	4.4	Food fortification project, Informal food traders, Food safety at Ivory Park, Food hygiene for food vendors, Food safety and hygiene at schools
Occupational Health and Safety (OHS)	4	2.2	Chemical safety project, Thela panel beaters project, Pesticides education project, Protective clothing project
Other (OT)	1	0.5	School library transformation
Total	**183**	**100**	

Types of interventions: The interventions employed by the projects were broadly categorised as educational or 'hands on'. More than 90% of the reported interventions were educational,

where the students organised health promotion days at clinics, schools and crèches to share information on different health topics with the community. Health education was delivered through designing posters and pamphlets informed by the results of surveys which students conducted prior to project implementation. Some groups created educational videos, presented health education workshops, talks, plays and demonstrations, and one group published information in local newspapers.

Under the 'hands on' category, the students got involved in different forms of activity in clinics and community organizations to provide services. Examples of the services provided included screening for TB; glucose monitoring, weight check and foot inspections; painting crèches; cleaning campaigns at schools; and starting vegetable gardens for schools and clinics. Other creative services provided by the students include creating a virtual Road to Health Card; designing clinic referral forms; developing immunization monitoring system for school teachers; creating information holders that could be attached to the chairs at the clinic; and turning an unused classroom at a school into a youth-friendly space to be used for school health promotion activities.

Partnerships formed: Fifty-six (30.6%) groups reported on partnerships they formed with non-governmental organizations and private companies such as Salvation Army, Directly Observed Treatment Short-course (DOTS) supporters, Men As Partners, Love Life, Cooperative for Assistance and Relief Everywhere (CARE), Mondi Recycling Company, Pikitup Waste Management Company and a media company. Details on the extent of partnerships formed were lacking, but in most cases these organizations were involved in sponsoring the materials that students needed for their projects.

Project sustainability: Fifty-one **(**27.8%) groups commented on the sustainability of their projects. Their comments on this aspect were very brief and lacked detail with comments

such as "concerned about sustainability" (NUT1, 2010), "some aspects are sustainable" (CD1, 2008), and "wanted to ensure continuity" (NUT2, 2007). They mostly thought of sustainability as a challenge due to the limited time allocated for them to work on these projects.

Students' perceptions

The students' reflections revealed their insights into what they perceived to be the educational worth in terms of the knowledge they gained, the skills they acquired, and attitudinal changes that occurred while working on the projects. Four themes relating to these issues, and one relating to the challenges they experienced came out of their reflections and are described below, namely: Theory comes alive; Improved knowledge and understanding; Appreciating the expanded role of a doctor; Personal growth; and Challenges experienced.

Theory comes alive

The students reported that it was through participating in these projects that their understanding of previously learnt concepts was enhanced through the practical application of theory: *Being able to apply what we learnt practically has certainly enhanced our understanding of the bio-mechanical models of disease* (ComD1, 2010). They further commented on how clarification of the different themes of the academic programme occurred through this experience when concepts started falling into place: ...*the 'community-doctor' theme sessions, and the message that they conveyed to us, also started to fall into place* (GH1, 2006). Furthermore, as some students put it, by…*placing concepts we have learned in theory within the context of the community reality* (GH2, 2006), they continued to see the relevance of the theory they had learnt. This led to them starting to appreciate their

participation in these projects: *We appreciate the fact that we were given an opportunity to apply the skill and knowledge that we have learnt throughout GEMP 1* (ComD1, 2006).

Improved knowledge and understanding

The students' involvement in the projects and their exposure to the communities helped them to develop improved understanding of concepts like community health: *Community health is of essential importance. It makes no sense to just treat the symptoms if you cannot eradicate the cause* (GH1, 2006). They were also made more aware of the issues and the extent of the challenges that these communities face. This awareness enabled them to start thinking of strategies that might be effective in addressing some of the challenges: *Engaging in this project made us realize how much more work needs to be done in our communities, in terms of educating people and touching base with the real issues they face. The problems faced by these youngsters should be tackled from a holistic point - that is not just at school but even addressing issues pertaining to activities they are engaging in outside of school* (YH1, 2011).

Working in the communities made the students more aware of the cultural differences that exist within and between the communities, and the students themselves: ...*the differences between the culture of Alexandra township as compared to the culture of medical school, and also highlighted the cultural differences between people* (CH, 2011). Getting to see and know more about the context of the community members' lives through engaging the community was found beneficial by some students. From this experience, they shared the perception that they learned to identify not only the needs, but also the strengths of community life which they referred to as 'community bond'. The students attributed some of the success of their project to this existing community cohesion as it enabled them to get hold of their project partners from the community when they needed them: *Engaging with the community proved*

to be a very worthwhile and beneficial aspect of our project. By travelling through the area in which the clinic is situated we were able to see more of the support group members' contexts. We could better appreciate the hardships they faced. While we only saw the exterior in many regards, they taught us a little bit about their contexts. We were able to see the strength of the community-bond. For example the day we gave the presentation there was a mix-up and the whole group apart from an old lady had left. We spoke to her and she got out her cell phone and had all the member's cell numbers. She quickly got hold of them and we were able to proceed as planned - just a bit behind schedule (ComD1, 2010).

Getting a better understanding of the public health needs and challenges of the country's health system was another benefit reported by some students: *We were also able to better contextualise the health care system in South Africa and better understand the challenges that are present there and what we will be exposed to in a greater extent later on* (ComD1, 2010). The challenges they referred to include the increased burden on the health system due to the prevalence of chronic diseases in the country: ...*burden of patients with chronic disease on the health care system* (CD1, 2007) and the impact of treatment non-compliance on the healthcare system: ...*increased awareness about the extent of tuberculosis ravaging our country as well as the number of patients who are non-compliant* (ComD1, 2008).

Participating in projects involving some specific health conditions enabled students to gain a better understanding of those conditions. In the process of gathering and preparing information for the intervention phase of the projects, most of which involved health education presentations, the students got to expand their theoretical knowledge. They report having started to appreciate the importance of theory and the perception that they also learned to share medical information effectively with those not in the medical profession: *We gave a short presentation on HIV and this challenged us to make sure that all that we knew about the virus and the disease and what we told the group members was accurate. It drove us to*

appreciate the importance of knowing our theory, of putting it into application and of communicating it effectively to non-medical personnel (ComD1, 2010*).* Increased understanding of other diseases addressed in the projects is exemplified by quotes such as: *true scope of diabetes - difficulties in actually tackling the issue, difficulty in promoting lifestyle change* (CD1, 2007) and: *we personally grew and gained knowledge about MDR/XDR-TB in researching and conducting the project and we can apply this knowledge to future patient care, both individual patients and community* (ComD1, 2008).

Appreciating the expanded role of a doctor

The students' comments revealed that they started realising the other roles of a doctor when they participated in the projects. Patient education was one: *Education forms a large part of the interaction between a community and the doctor which services it. We are not doctors yet, but we've realised what impact education can have on a community* (GH1, 2006). Another was community outreach: *Part of our duties as future Health care workers is to reach out to the communities and to help improve their standards of life in all aspects. I feel that this project has done exactly that* (WH1, 2007). They further commented that: *The role of the practitioner extends beyond treating illness. Health promotion and education is just as important* (ENV1, 2006), and that: *Being a doctor does not end in the hospital or consultation room* (GH1, 2008).

Personal growth

It was also through these projects that the students got an opportunity to interact with each other on a different level. They developed interpersonal skills, teamwork, delegation and

conflict resolution skills: *We learnt a lot in this regard. Our group is a mix of very different people and we were challenged in our dealings with each other. Being 'in the field' proved to be very different to being at Med School. The environment was different and the nature of our interpersonal dealing changed - we were put in closer and prolonged contact and thus there was more interaction and potential for conflict. So all-in-all, we have matured as individuals. We have been exposed to various challenges and we have been able to overcome them. Some were more difficult than others, but we are pleased with the progress we have made (*ComD1, 2010).

Challenges experienced

The students reported some issues with which they were not pleased regarding the running of the projects. Mostly, they complained about the administrative shortfalls from the University in terms of transport arrangements which compromised their safety: *We had to go by ourselves with own cars and concerns were raised about safety* (ENV2, 2006). The issues of poor communication and facilitation were also raised as barriers to proper implementation of projects: *Unfortunately, due to our facilitators not being able to attend to us, our last two visits led to nought, as we could not walk around Berea without supervision* (ENV3, 2006). Another reported limiting factor was that of difficulty in getting financial sponsorships for projects: *We discovered that initially we had very ambitious plans, we realised that we were limited by many factors eg. financial resources, time limits* (YH1, 2010).

Of major concern to the students was the time allocated to working on the projects. They reported that due to the very limited time allocated, they were not able to follow up well enough to ensure sustainability of the projects: *No time for follow-up, sustainability* (ENV3, 2006). Some students were also not happy that the projects were chosen for them and they therefore had little or no input in the project selection phase: *Topic was chosen for us, every*

idea was denied (CH1, 2011). This limited the flexibility and creativity which they would have preferred to introduce into the project work*: The project was not very flexible with regards to creativity and fun interventions as it was a set project* (ComD2, 2010).

Discussion

The GEMP strives to expose students to aspects of community-based healthcare practice, including skills necessary to function optimally within rural and urban community settings (Hlungwani 2006). The results of this study reveal that a wide range of community-based health problems were addressed through basic health promotion strategies, in clinics and various other community settings. Through their reflections on their experiences of participating in the projects, most of the student groups reported a range of benefits as well as some challenges pertaining to the coordination of the projects.

The majority of the projects were undertaken in the communities and facilities in the City of Johannesburg as compared to the Ekurhuleni municipality. While the School of Public Health has a Memorandum of Understanding with the Gauteng Department of Health, their strongest partnership pertaining to the running of the projects has been with City of Johannesburg. Recently, the School has started increasing the number of sites by sending students to the Ekurhuleni municipality as well.

A fairly good balance of number of projects implemented in clinics, community settings and schools points to the fact that all students are exposed to the both the personal health projects which are clinic-based as well as environmental health projects with are community- and school-based. Students rotate between these over GEMP 1 and 2 years.

All of the communities where the projects were implemented were disadvantaged, characterized by high levels of poverty, unemployment, drug abuse and high HIV/AIDS prevalence. It is therefore not surprising that the highest proportion of implemented projects fell within the Communicable Diseases category, particularly dealing with TB- and HIV-related topics. Environmental Health and Youth Health categories were the second highest group of identified problems in the communities.

All the project topics were identified by the facilitators prior to meeting students, who were then required to select one. The students viewed this as a factor limiting their flexibility and creativity. Jones and Hsu-Hage (1999), when describing third-year medical students' health promotion projects at Monash University also reported this issue - they attributed the increased acceptance of projects by their students to the amount of control that the students had over their choice of topic. It is possible that the facilitators find it more beneficial to let students address issues that they (facilitators) deem more urgent than let students decide on the priority issue. This tendency could also be an attempt to buy time given the limited time that the facilitators get to meet with the students due to the small number of site visits.

While a range of intervention strategies was employed in the projects, the majority of student groups intervened through basic health promotion strategies including organising health promotion days at clinics and in communities and doing health education. A few groups however were able to expand their skills through implementing innovative projects.

A few student groups commented on the sustainability of the implemented projects, the general view being that ensuring sustainability of the projects was a challenge. This issue was linked to the time allocated to students to undertake the projects. The students reported that the allocated six-half days spread throughout the year the year were not adequate for these projects. Naidu et al (2012) also found time constraints to be one of the perceived challenges

faced by their students, some of whom recommended that more time be allocated to the Public Health block. The authors suggest that "the limited time spent in the community mitigates against substantive research and sustainable health promotion interventions, which limit the benefits to communities" (Naidu et al 2012, p 6).

Most of the student groups reported a wide range of benefits. Students were expected to implement what they had learnt theoretically when implementing projects. They were brought face to face with reality and had to cope under those circumstances. Other studies on student projects have also found that students benefited from participating in the projects (van Deventer & Sondzaba, 2012; Naidu et al 2012; Borges & Hartung, 2007; Jones & Hsu-Hage, 1999). The students' reflections revealed a broadening and improvement of their knowledge and understanding of communities and cultures, public health systems and their challenges, as well as some of the specific health conditions that they addressed through their projects. Moreover the students felt that the projects enabled them to link theory and practice as they were able to understand the themes they were taught in the GEMP better, and came to understand other roles of the doctor in community health. Other skills that students reported they had gained included communication, delegation, teamwork and conflict resolution skills. Teamwork was the skill most reported with most of the students viewing it as challenging yet rewarding.

The students reported some challenges pertaining to the coordination of the projects, most of which were administrative. Transport to get to the sites, communications between the University and the hosting sites as well as poor availability of supervisors were some of the challenges reported. Joffee and Farrant (1989) suggest that the projects are "expensive in staff time" and this implies that more time is needed to find enough good projects and committed facilitators, as well as for making proper arrangement for the logistics. Finding the time to do all these may be a real challenge for the coordinator of the SL programme, hence, the

disadvantages of such a programme "can best be expressed in terms of the opportunity costs of the time spent" (Joffee and Farrant 1989, p 39).

Limitations of this review arise from the fact that it was based on secondary data in the form of students' PowerPoint presentation documents of their projects. The quality of data was therefore compromised as most of the data were in point form, including the students' reflections. Some groups had also chosen to include more pictures and less text on their documents, leading to very limited data available to be extracted. In addition, not all documents from previous years were available for analysis, and all the 2009 presentations and some from other years had been misplaced. Furthermore, this review was limited to students' perceptions only and did not elicit supervisors', community members' and assessors' perceptions.

Conclusion

This first review of the GEMP 1 and 2 service learning projects has shown that the projects to a large extent aligned with the basic principles of service learning in Bringle and Hatcher's definition of service learning (1996): These are 'course-based and credit bearing' projects, involving students' participation in 'an organised service activity that meets identified community needs'. Furthermore, the students 'reflect in a service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline and an enhanced sense of civic responsibility'. It can thus be concluded that the students have benefited from participating in the projects by gaining some knowledge and skills, however as Kaufert et al. (1981) concluded in their study, "the extent to which it will benefit their practice will require an analysis of their practice styles after they graduate" (p. 522).

The findings of this study will be discussed with the convenors of the service learning projects in order to inform the future planning and coordination of these projects. It is

recommended that more attention be paid to strengthening the administration of the projects and improving student supervision and facilitation. Efforts should be made to involve students in project identification and prioritization while planning for more projects in the future. Furthermore, communication between the University and the community facilitators needs to be improved. Lastly, since the limited time allocated for the projects affects many aspects of the project cycle, it is recommended that placement duration be reviewed.

Further research to investigate how these projects benefit the communities needs to be undertaken through a follow-up study involving community members. Also, as the philosophy of the GEMP programme has been stated as "to produce graduate doctors that are responsive to the health needs of the community and able to work in and improve the health care system through education, research and active participation in health care development of the community" (Hlungwani 2006, p.1) it is desirable that the future practice styles of graduate doctors who participated in the projects be investigated by following a cohort or more of GEMP graduates. Then, and only then, would it be possible to say whether or not the programme has produced graduate doctors described by the philosophy of the GEMP.

Acknowledgements

We would like to thank the School of Public Health, University of the Witwatersrand for availing the students' Power Point presentation documents.

Declaration of interest

The authors report no conflict of interest.

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PART D

APPENDICES

- Data extraction form
- University of Cape Town Ethics approval letter
- University of the Witwatersrand Ethics approval letter
- Instructions for authors

APPENDIX A

Data extraction guiding tool

4. Quantitative data to be extracted by the researcher

Approach taken to identify and prioritise the community health needs:

Previously decided upon by community facilitator	
Decided on-site between students and community facilitator	
Other	

Research methodology approaches employed:

Quantitative	
Qualitative	
None	

Identified health problem/s:

Specific disease (name)	
Element of PHC/ PHC service	
Environmental issues	
Socioeconomic issue	
Other (name)	

Location of project:

Health Facility-based (specify)	
Community-based (homes, schools, churches, NGO's, factories, etc.) - specify	

Type of intervention/s; approach:

Type	*Notes*
Preventive/Promotive	
Service provision/Curative	
Service provision (other)	
Education	
Advocacy	
Other (name)	

Collaboration/partnerships formed:

Intra-sectoral (name of sectors)	
Inter-sectoral (name of sectors)	
None	

5. Qualitative information reported by students (verbatim) or researcher (inference)

Potential sustainability:

Students:			
Researcher:	High:	Moderate :	Low/none:

Skills acquired:

Students:
Researcher:

Knowledge gained:

Students:
Researcher:

6. **Other useful information:**

Students:
Researcher:

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: [illegible]

30 January 2013

HREC REF: 029/2012

Ms G Mothoagae
C/o Dr J Irlam & Prof D [illegible]
P O Box 1016
[illegible]

Dear Ms Mothoagae

PROJECT TITLE: A REVIEW OF THE UNIVERSITY OF THE WITWATERSRAND MEDICAL STUDENTS' COMMUNITY-BASED HEALTH PROMOTION SERVICE LEARNING PROJECTS IN SOUTH AFRICA

Thank you for your letter to the Faculty of Health Sciences Human Research Ethics Committee dated 23 January 2013.

The HREC notes and approves the change of the study title as mentioned above.

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

Please quote the REC. REF in all your correspondence.

Yours sincerely

PROFESSOR MARC BLOCKMAN
CHAIRPERSON, FHS human research ethics committee

[illegible]

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Miss Goalatlhe Mothoagae

CLEARANCE CERTIFICATE	M111146
PROJECT	An Evaluation of Medical Students' Public Health Community-Based Project 2005-2011
INVESTIGATORS	Miss Goalatlhe Mothoagae.
DEPARTMENT	School of Public Health
DATE CONSIDERED	25/11/2011
M1111460DECISION OF THE COMMITTEE*	Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 03/02/2012 **CHAIRPERSON** .....
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable
cc: Supervisor :

DECLARATION OF INVESTIGATOR(S)
To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...

Journal of Interprofessional Care

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All references cited in the text should be listed in alphabetical order in the reference section at the end of the manuscript text. All citations in the text should include the author last name and the year of publication e.g. (Smith, 2008) or “Smith (2008) demonstrated the importance of…” For a work by two authors, both authors are listed in the signal phrase or in the parentheses each time the work is cited. Use the word “and” between the authors’ names within the text and use “&” in the parentheses. For a work by three to five authors, list all the authors the first time the source is cited, and use only the first author’s last name followed by “et al.” in subsequent citations. For a work by six or more authors, use the first author’s name followed by et al. for all citations. Below are some examples; please refer to the website listed above for further instructions.

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Farrell, B., Pottie, K., Woodend, K., Yao, V., Dolovich, L., Kennie, N., & Sellors, C. (2010). Shifts in expectations: Evaluating physicians' perceptions as pharmacists become integrated into family practice. *Journal of Interprofessional Care*, *24*(1), 80-89.

Books:

Jelphs, K., & Dickinson, H. (2008). *Working in Teams*. Bristol: Policy Press.

Book Chapters:

Wee, B. & Goldsmith, J. (2008). Preparing facilitators for interprofessional learning. In E. Howkins & J. Bray (Eds.), *Preparing for Interprofessional Teaching: Theory and Practice* (pp. 55-68). Abingdon: Radcliffe Publishing.
Websites:
Health Canada. (2009). *Interprofessional education for collaborative patient-centred practice*. Retrieved from http://www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/index_e.html.

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