Research
Article

STATUS OF UNDERGRADUATE COMMUNITY-BASED AND PUBLIC HEALTH PHYSIOTHERAPY EDUCATION IN SOUTH AFRICA

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ABSTRACT: *Curricula of health education institutions need to be periodically revised to be aligned with its context. This study explored the status of physiotherapy curricula in South Africa as point of departure for benchmarking by individual institutions.*

A document analysis was done of the university physiotherapy departments (N=8) in South Africa. Institutional ethical clearance and permission from the heads of departments were obtained. Content analysis was used to analyse the South African Qualifications Authority exit-level outcomes and the university study guides for community placements.

Most universities employed a form of service-learning, with interventions in a range of settings. Five themes emerged: practice of evidence-based physiotherapy, rendering physiotherapy services, acting professionally, communication, and collaboration. The country's priority conditions were addressed. Teaching-learning strategies included group activities (class or education sessions), community projects, home visits and portfolios of evidence. Personal and small-group reflections were prominent.

The undergraduate community physiotherapy curricula in South Africa address the health profile of the population and priorities in the health system to different degrees. The variation between universities should be interpreted with caution as the study guides only gave a limited snapshot into each institution's curriculum. However, findings suggest that each physiotherapy university department may have gaps in preparing physiotherapy undergraduate students for the needs of the South African population and expectations of the Government. Possible ways to share teaching-learning resources are recommended.

KEY WORDS: *EDUCATION, COMMUNITY, PUBLIC HEALTH, SERVICE LEARNING, DOCUMENT ANALYSIS.*

INTRODUCTION

All South African (SA) medical schools have undertaken major curriculum reform over the past 20 years (Burch 2007). However, published literature describing transformational curriculum changes and their educational impact is limited (Burch 2007). Information on publications regarding physiotherapy curricula is also scarce. Internationally two efforts towards physiotherapy curriculum frameworks were found; one developed in Europe (Broberg et al 2003) and the other in Canada (Darrah et al 2006). Broberg et al (2003) organised their framework along three aspects: content, student learning and the socio-cultural context. Darrah et al. (2006) developed the CORE (client-orientated research and evaluation) Model of Best Practice and Clinical Decision-making around four principles which are the integration of theory, clinical practice and research; client-orientation and concepts from the International Classification of Functioning, Disability and Health (ICF). Both of these models, although they incorporate contextual factors, have a clinical perspective that does not embrace public health or community development – two core issues relevant to the local context. Similarly, Stainsby and Bannigan (2011) identified skills for physiotherapy students working in community settings in the United Kingdom. The four skills sets - communication, function, assessment and treatment, coping in an uncontrolled environment and prioritisation - was limited to physiotherapy in home settings. Ramklass (2009a) asserts that in SA, physiotherapy education has "remained relatively static" since 1994. Education at one university investigated still did physiotherapy clinical training mainly in urban and institutionalised settings (Ramklass 2009b). The author also identified gaps in knowledge and skills around practice in resource-poor settings, language and cultural barriers, social responsibility, empathy, interpersonal relationships and administra-

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tion. Innovation at two other universities, however, did describe clinical learning in community settings (Futter 2003). Although in the one study students worked mainly at clinics during their service-learning placement and did domiciliary visits with community workers (Krause 2007). In comparison, the community-based placements addressed wider public health elements, such as the cultural determinants of health (Futter 2003).

The first step when reviewing curricula is to revisit the "problem" that the curriculum needs to address in terms of the health profile and policies of the country (Kern et al 2009). Owing to the dynamic nature of the health sector, curricula for the education of healthcare practitioners, including physiotherapists, need to be periodically reviewed for relevance and quality (Davenport et al 2009).

South African health policy environment

The health sector is a key player in the South African Government's strategy to fight poverty, discrimination and to build the nation (Democracy and Governance Human Science Research Council (HSRC) 2005) The vision for the health sector is "A Long and Healthy Life for All South Africans" (Department of Health 2009). The National Department of Health specifically agreed to improve life expectancy of South Africans, to curb child and maternal mortality, to decrease the burden of HIV and tuberculosis and to increase the effectiveness of the healthcare system, as part of the Presidency's Medium Term Strategic Framework (Department of Health 2012a).

These policies build on the three streams of the re-engineering of the primary health care system: (1) district clinical specialist teams; (2) strengthening of school health services; and (3) ward based primary healthcare teams (Department of Health 2012b; Department of Health Ministerial Task Team 2012). Although physiotherapists are not an integral part of this team, they play a role in building capacity in these teams, which include community health workers. (World Health Organization 2006). The gap in the provision of community health workers, a core member of the primary health care teams, is substantial (Department of Health 2011a). The implication of this under-provision is that other team members may have to step into areas of general competence needed by the team, such as epidemiological surveys, health promotion and prevention, palliative care, social mobilisation, linking resources with community needs, improvement of health outcomes and the celebration of team health days (Lehmann and Sanders 2007). In South Africa practitioners of traditional African medicine are also role players in providing health care (Health 2008a). Therefore, "a key professional competency is the ability to work with teams consisting largely of basic and ancillary health workers and supportive staff" (Frenk et al. 2010: 1 984). Another responsibility for health practitioners is therefore the transfer of skills to these cadres of workers (World Health Organization 2006; Department of Health 2011c).

Even in its guidelines for health establishments, the Department of Health emphasises public health (Department of Health 2011c). In this document "public health" is defined as follows:

"The Public Health domain" covers how health facilities should work with [non-governmental organisations] NGOs and other health care providers along with local communities and relevant sectors, to promote health, prevent illness and reduce further complications; and ensure that integrated and quality care is provided for their whole community, including during disasters" (Department of Health 2011b: 11).

Within the decentralised district health system, partnerships with community structures, such community-basedorganisations (CBOs), for mobilising community action and advocacy around health issues are, indeed, a recurrent theme (Department of Health 2004; 2005a; 2005b; 2007a). In addition, the Department of Health developed guidelines for the management of health services, including the use of technology in the delivery of healthcare services and mentorship (Department of Health 2011c; 2012c).

Health profile of the South African population

The health profile of the country is another driver of the curriculum (Kern et al. 2009). The quadruple burden of disease in SA (Groenewald et al. 2012) comprises (1) communicable, maternal and nutritional diseases; (2) HIV and tuberculosis (TB); (3) non-communicable diseases; and (4) injuries. The top ten risk factors of mortality directly relevant to physiotherapy are tobacco addition, lack of physical activity and hypertension and diabetes (as risk factors) (Groenewald et al. 2012). Other target groups that receive emphasis in the South African health policy environment are children, youth, women and people living with disability (Department of Health 2011a; 2012a; Health 2012b).

Aim of the study

The purpose of this article is to give an overview of education in community physiotherapy in South Africa – from study guides for community placements – as a guide for benchmarking by individual institutions. Another aim is to discuss how current health priorities discussed above, are reflected in these curricula.

METHODS

Research setting and population

SA has a three-tiered health system with healthcare services being rendered at primary, secondary and tertiary levels (Coovadia et al 2009), with some clinics and hospitals having additional outreach programmes. The training of health science students therefore needs to occur in different settings, including community-based organisations. In South Africa, eight city-based universities offer physiotherapy training as a four-year degree at Level 8 of the South African Qualifications Authority (SAQA): the University of the Cape Town, Free State, Kwa-Zulu Natal, Limpopo (Medunsa campus), Pretoria, Stellenbosch, Western Cape and Witwatersrand. Urban community-based training is accessible, but rural and remote placements have significant logistical and especially cost implications. Programmes need to comply with

the minimum standards set by both the relevant Quality Control Council's Standard Generating Bodies (SGBs) and the Health Professions Council of South Africa (HPCSA). All university departments that offered physiotherapy programmes were invited to participate in the study.

Research design

The research design for this study was a document analysis - a type of audit where documents are scoured to gain a clearer picture of a situation being investigated. The documents that were analysed were the SAQA Physiotherapy Qualifications document (2005) with institution's exit level outcomes and the study guides of community and/or physiotherapy placements (2008) at the identified training institutions.

Data collection strategies

The registered SAQA qualifications were downloaded from the National Qualifications Framework (NQF) website. To obtain the relevant study guides from the training institutions, an e-mail explaining the aim and procedure of this study was sent to the heads of the departments. Three types of documents were requested – the curriculum for community-based education; learning outcomes of syllabi preparing students for work in community and public health settings; and the learning outcomes for the placement(s) themselves. Follow-up e-mails were sent and telephone calls were made to the relevant individuals until at least one document had been received from each university.

Ethical considerations

The Ethics Committee of the Faculty of Health Sciences, University of Pretoria, approved the study (Ref 93/2008). Providing the requested documents implied informed consent to participate.

DATA ANALYSIS PROCEDURES

Qualitative content analysis was applied to manifest content of the texts (Graneheim and Lundman 2004). The unit of analysis was all the documents in each category (SAQA and study guides) from one university. Words, phrases, sentences or paragraphs "containing aspects related to each other through their content and context" (Graneheim and Lundman 2004: 106) were handled as meaning units for coding purposes. A first round of paper-based open coding was done. The list of codes were subsequently abstracted into categories and linked into themes. A second round of coding was done using AtlasTi 6.2 software. Frequency counts were done in Microsoft Excel (Version 2003).

RESULTS

Description of the sample

The officially registered SAQA physiotherapy qualifications at the time of the study were used. Of these registered, seven were dated 2009 and one was dated 2006. Six universities submitted study guides, one submitted the syllabus of a module and one sent topics of a module.

Document analysis of the SAQA programme registration documents

National Qualification Framework (NRF) sub fields

The sub fields selected by the physiotherapy university departments for registration of their qualifications (n=8) are indicated in **Table 1**. The highest number of universities (n=3) were registered in the field traditionally associated with the rehabilitation component of comprehensive healthcare, and two in curative health. Two selected a field in the preventative extreme of the comprehensive health care continuum, with one selecting a pure science sub field.

Table 1. NQF sub field in which the qualifications were registered (N=8)

NQF Sub Field	Frequency
Rehabilitative Health/Services	3
Curative Health	2
Promotive Health and Developmental Services	1
Preventive Health	1
Physical Sciences	1

SAQA exit level outcomes

The main themes or competencies, which emerged from the analysis of the exit-level outcomes of the qualifications as registered with SAQA, are listed in the first columns of **Table 2** and **Table 3**. The number of analysed meaning units

Table 2. The distribution of themes (competencies) of the SAQA exit-level outcomes for the registered undergraduate physiotherapy qualification by university (N=8)

Theme (Competency)	Number of coded meaning units by University								Total no. of meaning units
	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	
Render a physiotherapy service	1	2	10	4	3	4	8	2	34
Act professionally	2	1	3	1	2	3	3	1	16
Communicate and collaborate	1	1	4	2	2	1	1	1	13
Practice evidence based	-	2	1	2	1	1	2	2	11
Totals	4	6	18	9	8	9	14	6	74

Table 3. Categories and themes (competencies) for the SAQA exit-levels outcomes for the registered undergraduate physiotherapy qualifications (N=8)

Theme competency	Categories
Act professionally	- Attributes: Caring, ethical, autonomous, socially responsive, flexible, innovative, life-long learner and leader; critical and creative thinker and problem-solver - Scope and realities of the profession and relevant laws and policies adhered to - Self- and peer-review
Communicate and Collaborate	- Multidisciplinary team work - Health education provision - Written and verbal communication - Client-centred approach
Render a physiotherapy service	- Community needs addressed - Comprehensive services provided: preventive, promotive, curative and rehabilitative - Families, groups, societies and the broader population served - Staff developed - Systems thinking
Practice evidence based	- Scientific evidence appraised, used and developed

Table 4. Summary of the categories and themes in the outcomes for study guides (N=8)

		University								
Theme	**Category (Topics)**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**No. of universities**
Foundational Principles	Determinants of health		X	X	X	X	X		X	6
	Disability theory	X	X	X	X	X	X			6
	Social responsibility	X		X			X			3
	The rehabilitation process				X	X			X	3
	Asset-based approach		X		X					2
	Bio-psychosocial model				X		X			2
	Community development			X		X				2
	Introduction to population health			X						1
	Participatory models					X				1
Health system and policies	Health-care system/ District health	X	X	X		X	X			5
	Levels of care	X	X	X	X					4
	Laws, acts, policies	X		X	X					3
	Welfare policy (e.g. grants)					X			X	2
	Inter-sectoral collaboration							X		1
Health education and promotion	Adult education skills/ Skills transfer			X	X	X		X		4
	Health education	X	X	X		X				4
	Screening		X			X			X	3
Management	Evaluation		X	X		X		X		4
	Assess the environment		X	X						2
	Planning and organising programmes and projects			X					X	2
	Outcome measures in public health					X			X	2
	Information technology						X			1

Not included: Reflection, Communication skills, Group dynamics, Time management, Cultural and gender sensitivity, Ethical and Professional conduct and interdisciplinary collaboration

Table 5. Distribution of setting and the themes (teaching-learning setting and type of target group) by category specified in community/public health study guides, by university (N=8)

		University Physiotherapy Department								
Theme	**Category**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Frequency**
Settings	Community settings									
	- Homes of clients	X	X	X						3
	- Schools	X		X					X	3
	- Workplace/Factories	X		X					X	3
	- Clinics	X		X						2
	- Homes for the elderly	X		X						2
	- Rural/Urban	X		X						2
Target groups	Clients with									
	- Older age			X		X		X	X	4
	- Disability	X						X		2
	- Disability, Sport	X								1
	- Hypertension	X								1
	- Mental illness					X				1
	- Tuberculosis	X								1
	- HIV	X								1
	Total:	11	1	7	0	2	0	2	3	

Table 6. Types of teaching-learning strategies by university (N=8)

University	Learning strategy
1	Spend 8 h with a person with disabilities (minimum of three to four visits) Service learning block at community health centre and old age homes (Three days clinical block per student group of three to four students)
2	Case report of a client at home, Health talk, Screening of children/babies and addressing problems, portfolio
3	Small group discussions, Home visits, Service learning projects
4	Lectures, Small group discussions, Problem-based learning using simple paper cases, Projects during field trips
5	Not explicit
6	Not explicit
7	Lectures, Group-work, Presentations, Site visits
8	Home visits, Factory visit, Personal strength, weakness, opportunity and threat analysis, Screening for participation in group classes, Information session, Service learning projects, Portfolio Facilitation session About time management in different community areas Ethical issues around disability grants

that contributed to each theme is given in columns according to university, with the total number of meaning units supporting each theme or competency in the last column of Table 2. The categories that made up each theme are listed in the second column of Table 2.

Document analysis of study guides of community placements

A summary of the findings from the study guides are presented in **Table 4-6**. Table 4 highlights the categories and themes according to university with the summed totals. In table 5, the teaching and learning settings and type of patients (by age group and condition) treated by students that were explicitly mentioned in the study guides are summarised. Table 6 lists the teaching and learning strategies employed at each university.

DISCUSSION

Findings from this study give an overview of education in community physiotherapy in South Africa in terms of topics dealt with in the undergraduate community physiotherapy curricula and teaching-learning strategies followed to develop five exit level competencies: to deliver a physiotherapy service, to act professionally, to collaborate, communicate and to practice according to scientific evidence. Four themes emerged from study guides namely foundational topics, such as the determinants of health; the health system – specifically district health – and policies; health education and promotion, and the management of physiotherapy services.

National Qualifications Framework (NQF) sub fields

Programmes were registered in five different fields of the NQF. The NQF sub field that each institution selected for registration of the respective qualifications may signify the underlying philosophy of each course. Only two institutions selected a field in the preventative extreme of the comprehensive health care continuum. This continuum stretches from health protection and health promotion at one end, to cure, as well as rehabilitation and palliative care, at the other. As physiotherapy's scope covers the full spectrum of comprehensive health care and in light of the quadruple burden of disease in SA, the finding shows the difference in focus of universities while complying with the core prescriptions of the HPCSA (2003).

Exit-level and community block outcomes

The topics under the theme "foundational principles" are related to the philosophy and perspectives that guide physiotherapy interventions. For example, not only are interventions that address disablement (impairments, activity and participation limitations) important (e.g. "the rehabilitation process,"), but also attending to the factors that cause dysfunction in the first place ("determinants of health," "biopsychosocial model"). Having a preventative stance implies moving beyond the individual patient to integration back into the community which they form a part of ("Public Health"). The themes in this topic imply attention to physiotherapist and community strengths and facilitators ("asset-based approach"). The topics also speak to the fact that physiotherapy is not only about disease, but also about uplifting communities ("community development"), working with clients and not for them ("participatory models") and tackling inequities in the service ("social responsibility") and human right issues ("disability theory").

Secondly, the theme "health system and policies" dealt with understanding the healthcare system ("levels of care," "inter-sectoral collaboration)" and the policies and acts guiding practice ("laws, policies," and "welfare policy"). Skills to educate patients about their health ("adult education skills/skills transfer, "health education" and identifying risk factors ("screening") were dealt with under the theme "health education and promotion". Finally, the theme "management" addressed the issue of strategically providing and organising physiotherapy services ("assess the environment," "planning and organising programmes and projects") and measuring their effect at population level ("outcome measures in public health"). The "management" theme also dealt with the use of information technology when providing services.

In the SAQA qualification documents of the universities the cross-field outcomes therefore received much attention. These are general competencies to prepare students for the challenges of the work environment, such as being able to work in teams and to be able to communicate – important themes in current curriculum frameworks (Shilton et al. 2008; Therapy Project 2008; Barry et al. 2009; Lin et al. 2009; Verma et al. 2009; National Physiotherapy Advice Committee 2010; Grace and Trede 2011;

Table 7. Summary of roles and attributes for medical doctors/physiotherapists internationally

Boelen[a] [c. 1996]	CanMEDS (2005)	GMC (2009)[c]	Frenk et al.(2010)[d]	CSP[e]	WCPT (2012)	RSA (2009)[f]
- Care provider - Communicator - Community leader - Decision-maker - Manager	- Medical expert - Communicator - Collaborator - Health Advocate - Professional - Scholar - Manager	- Practitioner - Professional - Scholar and scientist	- Expert (Information Skills) - Professional (Socialisation, values) - Change agent (leadership attributes)	- Putting patient/ population needs at the centre - Supporting - Educating - Leading - Managing - Researching	-Public health strategies - Supervising and delegating to others - Leading - Managing - Teaching - Developing and implementing health policy, - Research - Advocating for patients/clients and for health	- Clinical practitioner - Understand foundational principles - Render a physiotherapy service - Work within the health system and policies - Communicate and collaborate - Manage - Act professionally - Practice evidence-based physiotherapy – - Manage

[a] Five-star doctor; [c] Tomorrow's doctor [d] Chartered Society for Physiotherapy: Outcomes and objectives of education; [e] Generic behaviours; [f] Clinical functions were not specifically coded

Maeshiro et al. 2011; Basu and Roberts 2012; Pellegrino and Hilton 2012; Voogt and Roblin 2012).

Although the professional physiotherapy-specific competencies cannot be overemphasised, the study shows that physiotherapy educators have embraced the notion of educating well-rounded reflective professionals. The competency outcomes found in this study encompass the roles, outcomes, domains and behaviours identified by organisations internationally (See Table 7).

For example, attention had already been drawn in the Flexner report of 1910 to the fact that medical doctors need to be more than clinicians to make an impact on health care in societies (Flexner 1990). In response to the multi-faceted nature of healthcare the World Health Organization (WHO) formulated five roles for the medical doctor (World Health Organization 1996: 08). These roles were care provider, communicator, community leader, decision maker and manager.

Table 7 gives a summary of the further development of similar roles. The CanMEDS model (Frank and Danoff 2007) made the health advocacy role (previously included in the communicator role) and that of a professional and scholar explicit. The UK General Medical Council (United Kingdom) (2009) and Frenk et al. (2010) each simplified the roles to three, with the last of the three emphasising the role as change agent. The Chartered Society of Physiotherapy (c.2012) in turn determined the objectives of education of physiotherapy undergraduates and the World Confederation for Physical Therapy (World Confederation for Physical Therapy 2011) generic behaviours. An essential competency as part of the communicator role is that of cultural competency, especially if the diversity in the student and client profiles is taken into account (Das 2005).

Similar themes can be found in curricula from Canada (University of British Colombia Department of Physiotherapy n.d.), Nigeria (Medical Rehabilitation Therapists (Registration) Board of Nigeria n.d.), and Ethiopia (Gondor University Department of Physiotherapy n.d.).

Alignment with the policy environment and health profile of the South African population

Almost all of the universities indicated that they address the social determinants of health, the district health system and health education in their curricula. These themes are aligned with the country's vision to alleviate poverty and improve the life-expectancy of its people (Department of Health 2002; 2004; The Presidency RSA 2008; Department of Health 2009; The Presidency RSA 2010; Department of Health 2012c). A focus on health education and health promotion is the case in physiotherapy education in both developed and developing countries. For example, in the UK health promotion and the theme of 'staying healthy' are embedded in the final year of the curriculum (Chartered Society of Physiotherapy c.2012). Within this theme, students learn how to safely prescribe, implement and monitor physical activity programmes in order to address obesity, to help prevent ill health and falls in the elderly, and to improve the health of people with learning disabilities and mental health issues.

Equally well-presented in South African outcomes is the evaluation of programmes which links with improved effectiveness of the the health care system (Department of Health 2007). However, the level of attention that three streams of re-engineered primary health care receive is not clear (Department of Health 2008a; 2012d; Department of Health Ministerial Task Team 2012). One may be skeptical as no-one explicitly referred to work with mid-level workers, volunteers and practitioners of traditional African medicine. As only one university indicated schools as a setting of education, it appears as if school health has not been embraced. The rest of the themes, such as community development and social responsibility, were explicitly addressed by less than half of the universities. Another apparent neglected field is that of e-Health (Department of Health 2012e)

Physiotherapists are skilled to address the quadruple burden of disease in the RSA, however, priority conditions have been mentioned explicitly only in the minority of the education institutions. Paradoxically to the Government's focus on child and youth health (The Presidency Rsa 2009; The Presidency Rsa and The United Nations Children's Fund 2009; Department of Health 2012a; 2012d), the majority of study guides were explicit about services to older clients.

All the settings were outside of hospitals, like at clients' homes, industry and community institutions (homes for the elderly). Less than half of the institutions specified home visits as a learning opportunity during the community/ public health placement.

TEACHING-LEARNING STRATEGIES

Learning opportunities

Those universities whose documents included learning strategies tend to use authentic problem-orientated stimuli to facilitate learning, ranging from paper-cases to treatment of real patients during home-visits (Donaghy and Morss 2007; Bowe et al 2009). Experiential learning, with site visits, projects such as screening, field work and service learning, was common. These approaches are fundamental components for developing complex competencies, such as those indicated in the learning outcomes (Frantz and Rhoda 2007; Rodger et al. 2008; Adam et al 2013).

Educators, indeed, endorse service learning for teaching complicated ideas such as the social determinants of health and to develop civic-minded graduates (Hatcher and Erasmus 2008; Hunt, Bonham and Jones 2011). The andragogy has been useful in teaching preventative medicine, promoting wellness and public health (Buckner et al. 2010; Chastonay et al. 2012). The reciprocal relationship between learning and service benefits the clients through increased access to health care (Jimenez et al. 2008).

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 personal values and civic responsibility." (Bringle and Hatcher 2009:38).

Examples of reflexive activities utilised in these South African universities are assignments like presentations, individual reflection on one's own strengths and weaknesses, reflection in small groups and discussions about ethical issues (Eyler 2002). A portfolio (used by two institutions) is particularly useful, when combined with feedback, to demonstrate professional development (Mori, Batty and Brooks 2008; Buckley et al. 2009).

LIMITATIONS OF THE RESEARCH

A limitation of the study is that the study guides were used as a proxy for the full curriculum and were possibly not a true representation of the curriculum. The findings are not a comprehensive view of the universities' education standards in terms of community and public health physiotherapy, as no university's full curriculum was available for the document analysis. One reason may be that the timing of the request was not quite convenient, as people were scaling down at the end of the academic year. Also exit-level competencies are broadly stated and do not reflect detailed elements, such as the type of healthcare workers seen as part of the health care team.

Findings from the study-guide document analysis must therefore be interpreted with caution, as the documents that were analysed provided only a snapshot of the curriculum. Outcomes not listed by certain universities may well be covered in other blocks or modules. Clinical competencies were also excluded from the document analysis.

The document analysis included only documents from the final two years of the four-year degrees. However, a systematic review of clinical- and community-based education of medical students found that early exposure – within the first two years of study – had a range of benefits similar to Futter's (2003) findings (Dornan et al. 2006). These benefits included improved motivation, professional development, confidence and communication when interacting with patients, as well as clinical skills. Students better understood the structure and function of the healthcare system and the role of preventative care.

IMPLICATIONS FOR PRACTICE

Despite progress towards community-based education, each of the universities has gaps in their community/public health curricula that need to be reviewed against the health policies and priorities in the country. The special interest group for public health of the South African Society of Physiotherapy (SASP) has been slow to come off the ground. Academics need to drive this initiative. Forming a virtual community of practice using a social media platform like Google groups may be a viable option. Resources, such as case studies, can be shared via this platform. Due to the interdisciplinary nature of public health, linking with multidisciplinary groups, such as the recently launched Rural Rehab South Africa (RuRaSa) (www.ruralrehab.co.za/) is recommended.

Recently qualified physiotherapists are a rich source of information about the realities of community service in South Africa that should be tapped. Incorporating these physiotherapists' experiences of community physiotherapy would further contribute to authentic educational experiences. For example, they need to develop resiliency during their studies to deal with sub optimal practice environments in the public sector (Mostert-Wentzel, Frantz and van Rooijen 2013). A Delphi study with clinicians, managers and academics identified that the clinician role stays central even in community work. Professionalism, communication and collaboration, inquiry-led practice, clinical prevention and health promotion, population health and management and leadership are essential complementary elements in community physiotherapy (Mostert-Wentzel 2013).

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