Article

# A model for community physiotherapy from the perspective of newly graduated physiotherapists as a guide to curriculum revision

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**Background.** Limitations in physiotherapy curricula have been reported. Work-based experiences, especially during compulsory community service, could inform curricula.
**Objective.** To develop a model of community service physiotherapy to guide curriculum reform.
**Methods**. In this appreciative inquiry, trained physiotherapy students conducted tele-interviews with newly graduated physiotherapists. Twelve recently graduated community-service physiotherapists – heterogeneous in gender, mother tongue, university attended and work setting – were purposively recruited. Two coders applied Tesch's coding technique to the transcripts; one did paper-based work and the other used AtlasTi software. Consensus was reached and a member check done.
**Results.** Four themes identified were: (*i*) the essence of community physiotherapy; (*ii*) the collaborative nature of community physiotherapy; (*iii*) prerequisites for a positive practice environment; and (*iv*) community physiotherapy as a gateway to personal growth and professional development. Physiotherapists consult clients from varied cultural backgrounds, ages and health and disease profiles. Health education is a key intervention, but clients emphasised therapeutic touch. Team work enhances services, especially within a context of poverty, and prevents isolation. New graduates have to deal with inefficient management, lack of transport, inadequate equipment and needs resilience. They want discipline-specific supervision.
**Conclusion.** Community physiotherapy makes specific demands, especially for novice therapists. Service-learning in authentic diverse contexts would foster professional development and cultural competence. Clinical competency should remain the backbone of the curriculum, complemented by competency in health education. Different ways of reflection would facilitate lifelong learning and growth in attributes such as resilience, which is necessary for dealing with sub-optimal practice environments.

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Local healthcare practices should underpin competency-based curricula, drawing from global knowledge and best practices. In spite of the emphasis on the interrelatedness of healthcare education and the healthcare environment, and on the social accountability of institutions, 'content, organisation, and delivery of health professional education have failed to serve the needs and interests of patients and populations'.[1] Notwithstanding curriculum changes in response to demands in the health sector, limitations in physiotherapy curricula have been reported.[2]

Work-based training assessments to guide the development or improvement of education programmes are uncommon, also in physiotherapy.[3] Integration of literature and policy documents or consulting with experts is used when developing entry-level programmes. However, newly graduated community-service physiotherapists would be a more appropriate source to determine enhancements needed in the undergraduate physiotherapy curriculum.

Compulsory community service as a strategy to improve staffing has been implemented in more than 70 countries.[4] Since the inception of compulsory community service in South Africa, the experience of a compulsory service year has been investigated in other professionals, such as dieticians,[5] speech-language therapists and audiologists[6,7] and physiotherapists.[2] Some findings from these studies included system and management deficiencies, such as the lack of profession-specific supervision, limitations due to language and cultural diversity, and skills not covered sufficiently during training. On the positive side, most of these young professionals felt that they had gained skills and confidence and had meaningfully contributed to healthcare. Recommendations from these studies focused on policy and management issues, and less on education, except for Ramklass's study.[2] This study was, however, limited to one education institution and one province. A further limitation of these studies is that they used research instruments with questions arranged along broad topics. With this approach participants may over-emphasise the constraints of their community-service experience, as was the case with speech-language therapists and audiologists in the study by Paterson, *et al*.[5] Only one concept in their model was positive, i.e. 'professional growth and improved service'. This concept had no explicit elements listed in the model's diagram. On the other hand, 14 elements were listed under 'obstructions and constraints' that led to 'stunted professional growth and poor services'.

The aim of our study was to explore the experiences of community-service physiotherapists during a compulsory community-service year in South Africa as a point of departure for curriculum reform, using an appreciative inquiry framework.[8] A principle of this stance is that words shape reality, and that a positive approach creates energy, compared with traditional ways of investigation with questions about needs/challenges. In contrast to deficit approaches, appreciative inquiry uses what is already working well for possible further improvement.

## Methods

### Study design

This study used a qualitative contextual exploratory design.

### Sample

Physiotherapists who were in their year of compulsory community service, or had completed it in the preceding four years, were approached to take part in the study. A combination of sampling methods was used. Purposive sampling was employed where physiotherapists, known to the interviewers and who would be able to provide rich information, were recruited telephonically. In addition, snowball sampling led to four referrals. Heterogeneousness in terms of gender, mother tongue, university attended, work setting (urban or rural), including community settings, clinics, and hospitals (public or military), guided the choice of participants. The first 12 participants who were willing to participate were included. A further seven physiotherapists who had done their compulsory community service during 2011 and 2012 were asked to verify the model.

### Interview schedule

The four distinct steps of appreciative inquiry, e.g. describe, dream, desire and design,[8] guided the development of the interview schedule. The first interview question probed interviewees' highlights during their service year. The second question focused on desires for ideal physiotherapy service during such a year. The third inquired about recommendations for positive changes to reach a desired better future.

### Procedure

Interviews were conducted by three trained final-year physiotherapy students, after approval by the Faculty Ethics Committee (Reference: 26/09). They phoned each participant to explain the aim of the study, the format and the duration (approximately half an hour) of the interviews, and made an appointment for the next phone call. At the start of the second call the participant's rights were explained, e.g. that continuation of the interview implied informed consent. Participants were aware that the interviews were tape recorded, and that a second researcher was writing back-up notes. Voice recordings were transferred to a computer as Word Media Audio files. Accompanying software allowed verbatim transcription to a Microsoft Word (2010) document.

### Data analysis

Tesch's inductive, descriptive coding technique was applied to the interviews.[9] A psychology intern under supervision of a researcher with a PhD degree independently coded the transcripts. Six steps were followed: the coder independently obtained a sense of the whole by reading through the transcripts. Ideas that came to mind were jotted down. The coder then selected one interview and asked: 'What is this about?', thinking about the underlying meaning of the information. When the coder had completed this task for several respondents, a list was made of the topics. Similar topics were clustered together and formed into columns that were arranged into major topics, unique topics and 'leftovers'. The coder returned to the data with the list and tried out a preliminary organising scheme to see whether new categories and codes emerged. The coder found the most descriptive wording for the topics and turned them into categories, then endeavoured to reduce the number of categories by grouping together related topics. The data belonging to each category were assembled in one place and a preliminary analysis was performed.

In parallel, the interviewers did paper-based open coding of units of meaning (phrases/sentences/paragraphs), and 942 codes were generated. Codes with similar meanings were integrated and the number was reduced to 75. The text was read again before codes were synthesised into 18 categories and four overarching themes. These two phases were followed by a discussion between the principal researcher and the independent coder to reach consensus. The categories were organised along the four steps of the appreciative inquiry process. The final phase of the data analysis was to integrate information from the four phases into one model.

This qualitative research was made robust by attending to the aspects of trustworthiness. Although the study period was approximately six months, the principal investigator has more than 15 years of experience of community-based physiotherapy, both as a manager at national level and as an educator responsible for community-based education. This prolonged engagement in the field enhances the credibility of the study. In addition, the telephone conference and a consultation meeting to gain consensus on codes, categories and themes served as peer review. In a member check the model and discussion were verified by post-community service physiotherapists. A dense description of the methods and procedures enhances the dependability of the findings. The interviews were conducted in a language that interviewees understood, and they were allowed to change to a different language, also understood by the interviewer. Finally, various characteristics of the participants were described, making it possible for the reader to compare his/her context with that of this study to augment the transferability of findings.

## Results

The sample ($N$=15) consisted of five males and 10 females of whom two were black and 13 were

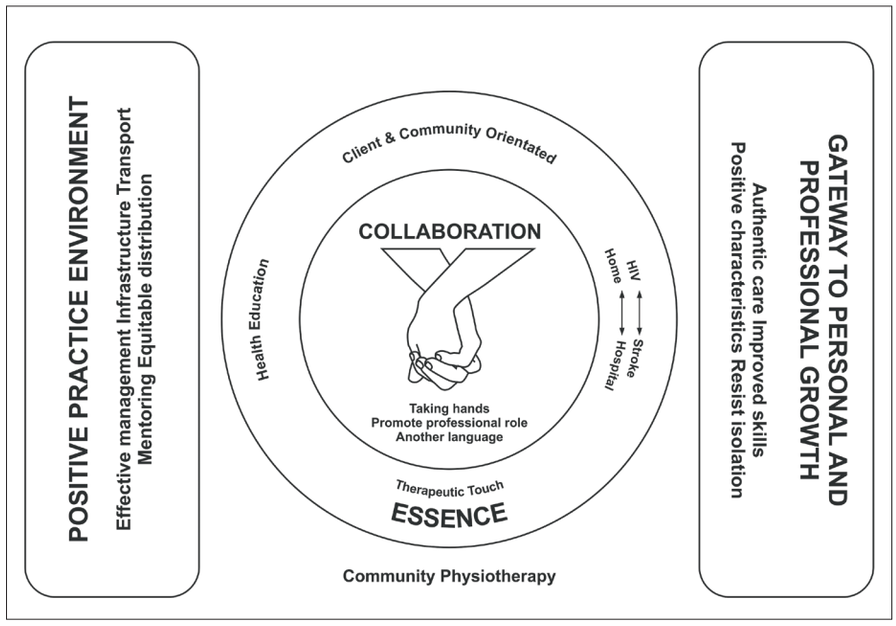


*Fig. 1. A community physiotherapy model.*

white. Two were graduates from the University of Cape Town, two from the University of the Free State and 11 from the University of Pretoria. Six of the participants had done their community service year in 2008, six in 2007, two in 2006 and one in 2005. The seven who participated in the member-check process agreed with the model and provided further examples supporting the themes in the model. They were from the Eastern Cape (*n*=1), Gauteng

**Table 1. Themes. Appreciating and envisioning/dreaming: overview of categories and sub-categories reflecting physiotherapists' experiences**

| Category | Sub-category |
|---|---|
| Physiotherapists expressed a sense of appreciation in terms of service delivery, productivity and unique contributing factors when working in a community setting | The most satisfying experience when working as a community physiotherapist<br>• Service delivery (in community and solving individual problems; sense of appreciation by members)<br>• Making a difference<br>• Community engagement and forming relationships<br>• 'Experiencing a community culture'<br>The productivity of community physiotherapists<br>• Ownership of physiotherapy<br>• Being part of a team (with community caregivers and within a multi-disciplinary team)<br>The unique contribution of the physiotherapist to bettering the patients' wellbeing<br>• Education programmes informing the community<br>• Adequate communication structures<br>• Support structures |
| Physiotherapists' envisioned a need to better contribute to the wellbeing of community members by improving the compulsory community year, which includes the need for a better educational process, clearer identification of possible contributing factors (of the physiotherapist) and possibilities of improvement within the community | Dream for ideal future community physiotherapy<br>• Improved structures<br>• Communication<br>• Management<br>• Supervision<br>• Transport<br>• Consulting rooms<br>• Better distribution and allocation<br>• Funds<br>• Physiotherapists (in specific areas)<br>• Education programmes for communities |

**Table 2. Theme. Design/co-constructing: overview of categories and sub-categories reflecting physiotherapists' experiences of their community year from an appreciative-inquiry stance**

| Category | Sub-category |
|---|---|
| Physiotherapists voiced their concern with regard to the community year, which included a variety of challenges and identified important factors to consider to establish a valued-based, efficient community service | Challenges identified that might hinder the establishment of a valued-based community physiotherapy service<br>• Staff motivation<br>• Payment structure (community and public)<br>• Collaboration with important stakeholders<br>• Language barriers<br>Important factors to consider to establish a valued-based community physiotherapy service:<br>• Procedures<br>• Continuous training programmes<br>• Collaboration with<br>• Community caregivers<br>• Multi-disciplinary team member involvement<br>• Non-government officials<br>• Multi-targeted target population (focusing more on the less fortunate)<br>• Management and supervision structure<br>• Distribution of funds<br>Ensuring efficient community physiotherapy service<br>• In collaboration with the multi-professional team and patients<br>• Assessment and re-assessment<br>• Mobile units (and transport)<br>• Support groups |

**Table 3. Quotations in support of the categories of the themes 'The essence of community physiotherapy' and 'The collaborative nature of community physiotherapy'**

| Theme | Category | Quotations |
|---|---|---|
| The essence of community physiotherapy | • Principle: client and community orientated<br>• Improved accessibility<br>• Focus on health education and counselling<br>• Variety of<br>  • clients<br>  • conditions<br>  • settings<br>  • Underlying poverty | • You mustn't just think of physiotherapy when you're in a community here; you must think more widely; what life skills can you give to them. There are a lot of possibilities in that area and working in a disciplinary group … it uplifts the community, because there's a lot of poverty and that's the main issue<br>• You really have to consider the patient's needs before you can actually … treat the patient well<br>• Community outreaches and speeches to schools … group classes … educating<br>• Through the education programme you get possible … solutions, and you know people can treat themselves [in future] if they have a problem<br>• We found a lot … of neurological patients [who] didn't know how to use crutches or didn't know how to use their wheelchairs correctly<br>• Disability … orthopaedics … diabetes … high blood pressure … arthritis … the elderly …<br>• We were involved in home visits … clinics … schools … community health centres hospitals<br>• You got to consider the [vital] factors like money, and the person being the only breadwinner, and like they can't take a day's rest, or else they don't get money |
| The collaborative nature of community physiotherapy | • Taking hands<br>• Ignorance about physiotherapy role<br>• Language a common barrier<br>• Preventing professional isolation | • Physiotherapy [as] one professional group is not going to solve a community's problems; just because there're different scopes of problems and you need different people to solve those problems at different levels<br>• The community health workers, they basically indicated vulnerable populations<br>• So a lot of collaboration has to be done in the community; it's not just one profession that can meet the needs of the community … We collaborated a lot with the people-with-disabilities organisations.<br>• The people are … very grateful and willing to come … to the clinic. To make it … easier for them, well, we all go as a rehab[ilitation] team. So that's quite productive, and everyone sees all the patients there at the same time<br>• You know a lot of people still don't understand the differen[ce] between physiotherapy and occupational therapy<br>• [T]he language barrier – even though in the hospital you are provided with interpreters – was difficult |

(*n*=4), KwaZulu-Natal (*n*=1) and North-West (*n*=1). One male took part in the member check.

Categories and sub-categories according to the appreciative inquiry framework are set out in Tables 1 and 2. Tables 3 - 5 contain quotations supporting the final four themes included in the model (Fig. 1).

## Discussion

With the aim of informing the undergraduate physiotherapy curriculum, the study explored the experiences of newly graduated physiotherapists during a compulsory community-service year. The findings were integrated into a four-part model: (*i*) the essence of community physiotherapy; (*ii*) the collaborative nature of community physiotherapy; (*iii*) prerequisites for a positive practice environment; and (*iv*) community physiotherapy as a gateway to personal growth and professional development. The model is discussed in relation to the studies referred to in the introduction. A description of limitations of the study is followed by implications for the curriculum.

### The essence of community physiotherapy

Compulsory community service in physiotherapy provides comprehensive care in a variety of settings, from homes, clinics and schools to hospitals. In addition, a wide spectrum of conditions is treated, from HIV to pregnancy – over the lifespan of clients. Community physiotherapists act as generalists, treating conditions that reflect the country's quadruple burden of disease. They perform common community physiotherapy services. Health education and promotion are prioritised in line with global and national policies.

Clients experience the services as beneficial. Therapeutic touch, for example, is used – also by other therapists.[10] Physiotherapists reported that services are orientated towards the needs of clients. In community-service physiotherapy, the holistic team addresses broader issues than physical health – specifically poverty. Where speech-and-language therapy professionals felt that contextual issues, such as poverty, fell outside their scope of practice,[7] physiotherapists acknowledged that these have to be dealt with by the healthcare team.

### The collaborative nature of community physiotherapy

Panellists were of the opinion that collaboration, the backbone of community physiotherapy, is impaired as a result of the lack of awareness about physiotherapy's role in patient care and public health. Doctors and members of target communities, among others, are ignorant about physiotherapy and other professions.[5] The inability to understand or speak the language of

**Table 4. Quotations in support of the categories of the theme 'Prerequisites for a positive practice environment'**

| Theme | Category | Quotation |
|---|---|---|
| Prerequisites for a positive practice environment | • Effective management<br>• Basic infra-structure<br>• Accessibility of services<br>• Discipline-specific supervision and mentoring<br>• Equitable distribution of therapists | • Because at the moment [recommendations] usually [travel] only from top to bottom, and from bottom only to middle management [level] [Recommendations] never reach top management with your needs<br>• Well, number one, the clinics are badly run, staffed, and stocked, as such. So walk[ing frames] and crutches … are just not available. … and also patients can't get transported<br>• There is corruption. Lots of the funds don't get channelled to the right places. Like the hospital takes a lot of the funds and – the people of the community – it doesn't really reach them<br>• We wanted to start [new services], but the region and the managers, they didn't want us to<br>• You must have the basic things like hot packs, interferential [machines], and also … posters in the community's mother tongue<br>• I would think a … computer admin[istrative] system that logs patient [visits]<br>• Physio[therapist]s that went to Limpopo … [were] sent on courses that the Government paid for, but the people that were put in [Johannesburg] Gen[eral] and Bara[gwanath] hospitals weren't even allowed leave [for courses]. So it is unequal<br>• A work area that is big enough to either see a group of people to give group classes, or just have a plinth … to see individual patients. It's just the space is very small; they give you … this corner where only one patient can fit in<br>• I would recommend mobile units<br>• Vehicles that can travel … dirt and gravel roads because a lot of the times we couldn't get to clinics due to a car that just couldn't handle the roads<br>• More supervision … I would have liked<br>• I think in some areas you have an over saturation of community physiotherapists and in some areas you don't; and it's all … mediated by the government, where they put their people, so I think, if they could just better distribute the people |

the communities where the community-service physiotherapists are placed also hinders collaboration, as voiced in similar studies.[7] To overcome this barrier, physiotherapists should learn some phrases in the local language and work with interpreters.

## A positive practice environment

The panel identified factors that need to be in place to facilitate a positive working experience in the community setting.[11] These factors include effective management, sufficient infrastructure, equitable distribution of physiotherapists between different areas, and the availability of transport to health professionals and clients. Findings from community medical doctors, dentists, speech-language-and-hearing therapy professionals and dieticians correspond.[7]

As part of a positive working environment the community-service physiotherapists voiced a need for discipline-specific supervision and mentoring. Again, this longing for professional support is not uncommon among health professionals.[6] A mentoring programme is indeed a pivotal component in continuous learning.

## Community physiotherapy as a gateway to personal growth and professional development

According to the panel, several factors contribute to the growing sense of being a professional physiotherapist. One factor is positive feedback from clients who see the physiotherapist as a helpful, significant team member. Becoming familiar with clients' living conditions during home visits also facilitates appropriate, insightful and authentic intervention, another hallmark of professionalism.

On the path to increased professionalism, personal characteristics such as resilience, creativity and perseverance assist in overcoming difficult demands and conditions. Responsibilities are initially challenging, but skills improve gradually.[7] The five-stage model of the acquisition of mature skills succinctly explains the progression from being a rule-dependent novice to an expert who can draw on a collection of distinguishable situations and solutions.[12] During compulsory community service, improved functioning as a professional therapist is also reinforced through teamwork. Other team members are a resource and prevent professional isolation, and discussions improve clinical decision making.

However, not everyone enjoys the compulsory service year. Only 35% of rehabilitation therapists who did compulsory community service in KwaZulu-Natal during 2005 would choose to apply for work in the public sector.[6] Nevertheless, the compulsory community-service year had had a positive influence on a majority of physiotherapy graduates' views of community work and a keener sense of social responsibility.[13]

## Limitations

Even though this study contributes to the relative under-representation of research about health sciences education in Africa, the findings can cautiously be generalised only to compulsory community-service physiotherapy in South Africa. However, implications for the curriculum would be relevant to allied health educators, not only in developing countries, but also where practitioners work in taxing circumstances, such as deep rural and remote healthcare services, i.e. Scotland, Canada and Australia, or in the public sector in general.

**Table 5. Quotations in support of the categories of the theme 'Community physiotherapy as a gateway to personal growth and professional development'**

| Theme | Category | Quotation |
|---|---|---|
| Community physiotherapy as a gateway to personal growth and professional development | • Identify formation strengthened by positive client feedback<br>• An acquired taste<br>• Demands and difficult conditions harnessed by positive personal characteristics<br>• Gradual improvement in skills<br>• Familiarity with clients' living conditions facilitates appropriate, insightful intervention | • The people are very grateful<br>• We can actually make a difference … We … offer health services [to those] that can't really afford it<br>• We make a huge impact; … you learn from the patients<br>• So I find that very exciting: the challenges that you are faced with<br>• There was no highlight! I didn't enjoy it at all!<br>• I'd have to say ... I think if you're really motivated, you can really make it awesome<br>• You get thrown into the deep end and … that is quite exciting; learning to find your feet and having to start – you know – use everything you've got. But still, it's always unpredictable, always having to adapt and change and there's always a challenge. So that was definitely very nice<br>• Focusing on what your goal is for that specific time and … even if there are bad moments. Just keep on going ahead, you know, and pick up and go again<br>• The thing is that when we were at [university], we thought of physiotherapy in some way, but when you start to see the physiotherapy [in the] real world, I think that is a bigger challenge<br>• I think … it's a year that you gain a lot of experience<br>• The positive thing that I have learned about the community is responsibility … I feel like I had a leap in my life<br>• You [can]'t rely on … resources, so you use what you have, and you are lots more innovative<br>• How to treat patients, how to communicate with patients; what works best, what doesn't work. As you progress through the year, you get better and better at what you do. So in the beginning it's a bit of a struggle<br>• The fact that you get to see the environment the people live in, and therefore you have better insight into exactly, the home environment, and … the living setting of the person<br>• Getting to know the people, seeing … the cultures and leaning the different [languages] |

### Implications for the curriculum

First, to be prepared for the nature of community-service physiotherapy, undergraduate physiotherapists must be exposed to a complex healthcare environment, in different settings, treating common conditions and risk factors contributing to the local burden of disease. A thorough understanding of social justice and the determinants of health, including poverty, is essential.

Hands-on clinical skills in physiotherapy were highlighted as being important. These clinical skills should therefore not be neglected in the quest for producing health promoters, however important the latter role.

Second, the collaborative nature of community physiotherapy implies that students must be exposed to interprofessional teams, as well as to role players in other sectors than health, such as organisations for disabled people. Because collaboration requires knowledge of the roles of colleagues, graduates must be comfortable with promoting their profession. Working with different cadres of workers is another essential collaboration skill.

Cultural proficiency is also essential for collaboration in community-service physiotherapy. Incorporating a local language in the undergraduate curriculum has the potential of improved collaboration with clients and staff. Equally important is training in cultural competence and awareness of the social determinants of health to shape interventions.

Third, to foster a positive work environment, new graduates should set out to find a mentor, even in the absence of a formal mentoring system. Students should, for example, be familiar with systems that are already in place, such as the South African Society of Physiotherapy 'buddy' system, where qualified physiotherapists are paired with new graduates, even if only via telephone. Comparable studies, mentioned above, make recommendations for better management to improve the practice environment during compulsory community service. While instilling sound management and leadership principles in students, they should be prepared for far less than optimal working circumstances.

Fourth, therefore, undergraduate education should foster resilience as part of professional development. Resilience is the ability to remain positive despite adversity. Howe, *et al.*[14] suggest various strategies to facilitate resilience in undergraduate students, which range from goal setting, problem solving, work-life balance to reflection on practice and their own values and priorities.

Service-learning as an experiential andragogy is valuable for professional development and cultural competence. Service-learning placements can

also contribute to better understanding of health disparities and the interrelatedness between health and poverty. In service-learning students deal with real community needs in a reciprocal relationship. Reflection, an essential element of service-learning, can take on different forms, such journal discussions, small group discussions that include community members, visual and oral presentations and even creative fine art artefacts. In this way the attribute of life-long learning is fostered.

Although these topics are common in health sciences education, uptake into curricula has been variable. All physiotherapy university departments in South Africa have gaps in their community and public health curricula.[15]

## Conclusion

This exploration contributes to the clarification of the essence and collaborative nature of physiotherapy in public health, the prerequisites for such physiotherapy, and the contribution to the professional development and personal growth of newly qualified physiotherapists. Reflection incorporated into service-learning clinical placements could contribute to prepare students for real-life work settings. The intention of the study was to derive implications for the curriculum from the participants' narratives about the community-service year. Further studies could investigate training needs more explicitly.

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