Developing capability through peer-assisted learning activities among 4th-year medical students and community health workers in community settings

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Background. The Longitudinal Community Attachment programme for Students (L-CAS) is an activity by means of which each student is exposed to primary healthcare learning and practice in communities. Capability has been described as 'an integration of knowledge, skills, personal qualities and understanding used appropriately and effectively … but in response to new and changing circumstances'. Within this paradigm, peer-assisted learning (PAL) has been used to support the development of student capability during L-CAS activities.
Objective. To evaluate the impact of PAL sessions on student and community health worker (CHW) capability development.
Methods. Study participants comprised 4th-year medical students and CHWs. Student data were drawn from the rotation reflective reports (RRRs) and CHW data from semi-structured interviews.
Results. The main themes that emerged from the RRRs and interviews were the impact on the personal and professional development of participants; the creation of awareness and understanding of the context of the communities; relationship building; and the impact of peer learning activities on the knowledge, skills and attitudes of participants.
Conclusion. In the process of addressing the challenge of preparing capable professionals, PAL was found to be a very effective way of positioning peers in relation to each other as resources. PAL activities enhanced the abilities of students and CHWs to learn from experience and to achieve the goals of critical reflection and experiential learning.

The Longitudinal Community Attachment programme for Students (L-CAS) is an undergraduate education initiative of the School of Medicine, University of Pretoria (UP), South Africa (SA). By means of this programme each student is exposed to primary healthcare learning and practice. First initiated in 2008, L-CAS is a formal module (longitudinal community programme (LCP)) in the curriculum from years 1 to 4 across all MB ChB blocks. Through this programme students participate in ~13 000 community contacts per annum.

In keeping with health education reform, advocated by the 2010 Lancet Commission on the Education of Health Professionals for the 21st century, L-CAS brings together three intersecting educational dimensions, i.e. the importance of the learning setting (curriculum context), a capability approach to learning (the process), and the production of expert generalists (the outcome) (Fig. 1). Together, these are designed to ensure that health professionals are 'educated to mobilise knowledge and to engage in critical reasoning and ethical conduct so that they are competent to participate in patient- and population-centred health systems as members of locally responsive and globally connected teams'.[1]

Communities are the primary context of health. There is, therefore, a need for students to learn and practise primary healthcare in communities rather than in hospitals. Over the years, L-CAS has been adjusted and refined in response to changes within the primary care setting and the university. It started as a clinic visit programme (2008 - 2010). Subsequently, it developed into a community-orientated primary care approach to support primary care re-engineering in Tshwane District, where students were linked to community health workers (CHWs) in community ward-based outreach teams (WBOTs), accompanying them to schools, crèches, shelters and old-age facilities, and into people's homes.[2] In 2014, the School of Medicine, UP, discontinued home visits, restricting medical student community visits to clearly defined institutional learning platforms, such as health posts (where CHWs meet), paediatric institutions, district hospitals, old-age homes, interprofessional clinics, and shelters.
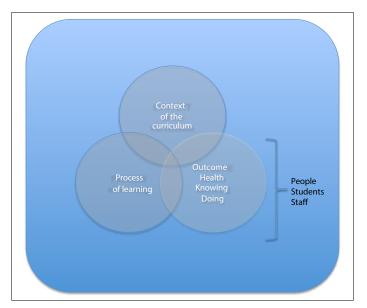

Fig. 1. Intersection of educational dimensions.

There is considerable literature on capability as an approach to human economic and social development, including education. In terms of the process of learning, Saunders and Hart[3] argue for the potential of the capability approach as 'a creative way for changing and evaluating curricula'.

For us, the project team, capability is relevant to both the what and the how of learning. Capability has been simply and precisely articulated by Stephenson and Weil,[4] as 'an integration of knowledge, skills, personal qualities and understanding used appropriately and effectively – not just in familiar and highly focused specialist contexts, but in response to new and changing circumstances'. Capability can be observed when 'people with justified confidence in their ability [t]ake effective and appropriate action; [e]xplain what they are about; [l]ive and work effectively with others; and continue to learn from their experiences as individuals and in association with others, in a diverse and changing society'. Capability not only involves skills, but also qualities, such as judgement and the commitment to learn from experience, as well as ethics, including the virtue of moral excellence through practical wisdom.

While capability incorporates notions of competence, the capability approach to learning makes competence a dynamic rather than a static state of being. Therefore, it combines the ability to perform effectively at any one point in time (competence) with an individual's capacity to envisage and realise their own and others' potential to do and be in the future (capability) (Fig. 2). It includes ongoing reflection and adaptation of action with the view to constant improvement.[5]

Within this paradigm of learning, to be capable in the community-orientated primary care (COPC) context, peer-assisted learning (PAL) has been used to support the development of student capability during L-CAS activities. PAL is known to contribute to a number of essential competencies, including communication, learning transfer, teamwork, self-confidence, and reciprocal and effective practice.[6-8] Research also shows that PAL provides a safe and alternative way of learning, motivates ongoing learning and helps to prepare clinicians for their future roles as educators and mentors.[9]

PAL is also an essential route to developing CHW competency. Given their current and potentially significant future contribution to primary health, it is a way of enhancing their ability to deliver quality community-based primary healthcare.[10-12]

Throughout the evolution of L-CAS practice, the focus of learning content has been on primary health, with special attention to health and disease prevention, early detection and management, and their relation to both the social determinants of health and best healthcare practice, as articulated in the principles of COPC.[13]

Reflection is an essential part of capability that involves understanding the self, others and situations to prepare and plan future action.[14] As one of the L-CAS deliverables, medical students are required to submit a rotation reflective report (RRR) after each community visit. It is structured to guide students through a process of reflection that focuses on the assessment and plan for the person with whom they are interacting, their most significant learning experiences, the learning that still needs to take place, and the resources needed to accomplish the learning.

Objective

The objective of this study was to evaluate the impact of PAL sessions on student and CHW capability development. The article focuses specifically on students' professional and personal development and their perceptions of behaviour change that resulted from new knowledge, skills and attitudes learnt during the PAL sessions.

Methods

The study was conducted with two groups of participants:
- the entire 2015 4th-year medical student cohort (*N*=242)
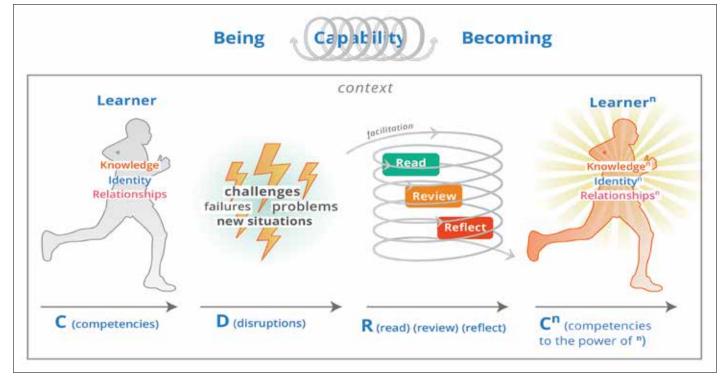- all CHWs (*n*=50) of three purposefully selected WBOTs. Two WBOTs

Fig. 2. The capability approach to learning.

had minimal reported problems and were known to be student friendly, and one WBOT was known to have problems with student visits and organisation.

All respondents in both groups agreed to participate in the study, with the exception of one CHW.

Student data were drawn from the RRRs. CHW data were generated through semi-structured interviews conducted by trained independent interviewers from the same culture and language backgrounds as the CHWs.

The researchers individually scrutinised the data for themes and then compared their findings until consensus and saturation were reached. Anonymised quotations were identified to support or substantiate each theme.

Results and discussion

The main themes that emerged from the RRRs and interviews are presented and discussed, and supported by quotes from the students and CHWs.

Impact of PAL on personal development

The strength of any activity lies in the development of the participants to become more capable. If one can challenge anyone to change, you have had an impact on the person. Both the medical students and the CHWs said they experienced personal growth through their interaction with each other. CHWs reported direct personal health benefits from PAL. CHWs felt their own lifestyles and habits improved and they could apply new knowledge to their own families and in the community:

'To try to live a healthy lifestyle and to promote a healthy lifestyle to my friends and family.' (CHW-S11)

In some, illnesses and problems were discovered or diagnosed and could be addressed:

'… I once felt sick and went to the clinic but the information I got regarding hypertension was not helpful but after the sessions I know what I need to reduce to get my blood pressure to the correct level.' (CHW-D2)

Some of the medical students also saw the value and impact of the principles of primary care.

Impact of PAL on professional development

Students presenting information to the CHWs, led to knowledge sharing with the community:

'What we learn from the students we can teach the community so that they know how to prevent certain illnesses.' (CHW-D7)

CHWs described a perceived improvement in lifestyle, health promotion, screening and prevention of diseases in the community:

'We take services to their door and they benefit from our health talks.' (CHW-S22)

This, however, was not always successful. CHWs reported that some community members did not trust CHW competency:

'They didn't benefit much from the sessions because they feel as though the information we give them is lies. They want us to be accompanied by the students.' (CHW-S10)

Most CHWs felt that their knowledge and various practical and communication skills improved as a result of the PAL sessions:

'I know how to check diabetes and blood pressure. I can do pregnancy tests and screen TB and HIV.' (CHW-S19)

'I have more confidence when I do my work and I fear nothing.' (CHW-S6)

'… it gave me the ability to express myself easier because I had more skills.' (CHW-D5)

'My listening skill has improved a lot as a result of these sessions.' (CHW-P2) 'The session expanded my vocabulary when it comes to health terms.' (CHW-P5)

Creating awareness and understanding

As a health professional, greater understanding of the context of the person with whom you deal leads to greater capability, because it improves your understanding of where the person comes from and enables you to negotiate an appropriate management plan.

Many of our students are far removed from the daily realities of the majority of our patients. It is very important for the learning programme that students gain understanding and knowledge of the patient context.

As CHWs are from that community, they represent the patients that WBOTs and students serve. Students were able to recognise the value of this in their interactions with CHWs:

'You get to really interact with the CHWs and they have so much to teach you about the people's culture and why people do the things they do.' (STD-32)

From their responses, it was apparent that PAL created awareness of the social gap between the students and the people they are seeing:

'I learned a lot about walking in the shoes of those that are less fortunate than me.' (STD-22)

They learnt about the importance of social issues in healthcare:

'As medical practitioners we are very much focused on the discovery of pathology and disease. Sometimes it's more a social thing than a medical thing.' (STD-19)

They were made acutely aware of the linguistic and conceptual issues of translating biomedical ideas into everyday intelligible language:

'I think these visits have helped us to become aware of the fact that our patients will not always understand exactly what we are saying and will require us to be able to simplify concepts for their understanding.' (STD-1)

Language and culture form an integral part of the context of a person. Although all of the CHWs understand English, they felt that when students explained something in their language, they could understand better:

'I liked that there is not only white students, because the black students used a language that we can understand better.' (CHW-S1)

They appreciated students' efforts to speak and learn their language. It created a sense of being respected:

'… they respect our culture. They were actually interested in learning our languages.' (CHW-S5)

They also felt they benefited from peer language learning:

'… we sometimes teach each other words (medical terms) in different languages. They teach us Afrikaans and we teach them Sepedi.' (CHW-P8)

Interaction with a traditional healer was a culturally enriching experience for both sets of learners:

'… it showed ways in which traditional and Western medicine can work together.' (CHW-P3)

Building relationships to develop capability and enhance learning

Relationships are one of the three essential components of learning in the capability model. As professionals, the backbone of our interactions with patients and colleagues is our interpersonal relationships. With enough time spent together, relationships and even friendships can be formed. Good relationships are also an integral part of developing capability and being an effective peer learner.

PAL is a well-described tool to enhance self-development and relationship building. With PAL, the curriculum extends beyond prescribed work to include language, cross-cultural learning and ethics. Furthermore, literature reports on the benefits of peer learning in terms of creating a sense of closeness and co-operation as individuals encourage and facilitate each other's development.[6]

CHWs seemed to have enjoyed these repeated interactions and learning opportunities. Because students were friendly and open, CHWs felt free to ask questions and felt as though they were part of the learning process:

'I formed a relationship with them and felt free to ask questions. They were not intimidating and they spoke in simple English. We felt part of a team because they can also learn something from us.' (CHW-S5)

'… some of them come back to work at the clinic and I am able to ask them anything because they are friendly.' (CHW-D7)

It is important to note that relationships need to be honed and developed, and often there are challenges that need to be addressed to facilitate relationship formation and learning. These challenges can include logistics, such as student numbers and continuity:

'No, there is no relationship between us because they come in large numbers. I don't feel part of the learning process because they are there for a short period of time.' (CHW-S27)

Peer learning experience

Students prepared and presented topics related to their blocks. However, they also had to address topics and learning needs communicated by team leaders and CHWs. This was particularly significant, given the limited and varying training that CHWs undergo before they commence their work in the households. The students' role was therefore to enhance and expand CHW knowledge and skill to equip them adequately for their work.

The experience of peer learning was novel to students, as their only previous experience was a 2-hour introductory training session.

Students were surprised about their own teaching skills, their enjoyment of the sessions, and the participation and interaction of the CHWs:

'We made our session very interactive … to get a basic understanding of their knowledge. To our surprise they knew quite a lot.' (STD-27)

Most students understood that CHWs learnt more when the presentation was creative and entertaining:

'Yes, it was so much fun. Some students would do role-plays, it makes the content more understandable than when they are just standing in front

and talking. They also leave us with pictures and information of what they were presenting.' (CHW-P8)

CHWs were encouraged to participate actively and share their knowledge with the students. In this way, true reciprocal learning took place and collaboration was honed:

'I asked questions and would not be satisfied if I left without clarity.' (CHW-S24)

'When some of the information we were taught was inaccurate, I was able to make corrections to the students.' (CHW-D9)

'… by informing the students about the challenges we experience in the community.' (CHW-P8)

CHWs had much to offer in terms of experience, knowledge and skills. A study looking at the impact of CHWs on patients with diabetes mellitus showed an improvement in patient knowledge and behaviour when they were in contact with a CHW.[12,15] Most students found CHWs to be worthy PAL partners, noting the value of the contribution they made to their communities and to their own learning:

'They clearly were of benefit to the community, but while so they also benefited us by making us do research and revise sections of work.' (STD-38)

This was especially so in terms of student understanding of non-academic aspects of medicine:

'It was so lovely to see how passionate they are about taking care of the people and trying their best to make a difference in their lives.' (STD-31)

Some students, however, didn't realise that PAL provided them with an opportunity for reciprocal learning:

'This [peer learning] wasn't applicable to our visits as we were the ones teaching the CHWs.' (STD-12)

Conclusion and take-home message

Consolidation of knowledge and cognitive development is enhanced when you teach someone else that which you have only recently learnt. It may, therefore, be a positive experience to entrust intermediate trainees with teaching responsibilities, as it may also accelerate their own learning.[6,9]

By interacting with CHWs, through the methodology of PAL, students were provided with an alternative contextual learning opportunity without having to do home visits. CHWs formed a direct link between students and the community. The PAL interactions impacted on a professional and personal level on the students and the CHWs.

The findings give some insight into the value and challenges of PAL activity to support capability. They also highlight the need to deepen and expand participants' awareness of capability as a learning approach to self-development, personal awareness and understanding, and perceptions of acquiring new knowledge, skills and attitudes.

Capability is an approach to learning that enables people at all levels of qualification and practice to be competent in unpredictable circumstances in an on-going and cumulative way. As Lizzio and Wilson[16] observe, '… professional or work-place relevant learning is rarely developed through formal or didactic means, but in informal, reflective and interactive episodic contexts'. In the process of addressing the challenge of preparing competent professionals, students need to be involved in activities that enhance their ability to learn in context and from experience. PAL positions peers in relation to each other as learning resources and support.[6] It also aids

collaborative practice, an essential part of capability in holistic, patient-centred healthcare.

PAL activities furthermore provided students the opportunity to experience collaborative practice within the COPC context, where teamwork is integral to individual and family health. Students had the opportunity to form a better understanding of the scope of practice, challenges and opportunities for the CHWs, and how they can support and empower them to make a difference within their communities. Although they did not go to people's homes, they could obain a better understanding of the context of patient and community life through the eyes and experiences of the CHWs.

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