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The Clinical Education Experience of Student-Physiotherapists within a Transformed Model of Healthcare

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ABSTRACT

Purpose: The democratisation of the health system was a cornerstone of post-apartheid South Africa. Primary healthcare (PHC) was adopted for increased access, broader participation, and equity in health. Hereafter, physiotherapy and other health sciences curricula, research function, and teaching staff would have to be re-oriented towards enabling implementation and sustainability of the new model. This is an important consideration for the design of clinical education programmes, a learning trajectory within professional curricula that is fundamental to the education, training, and professional socialisation of emerging healthcare personnel. This study explored how student-physiotherapists experienced clinical education practice within the model of PHC. **Methods:** The perspectives of students of a physiotherapy clinical education programme at a South African university were examined within a qualitative research framing. Forty-two final year student physiotherapists participated in the study. Employing narrative inquiry, data were produced through reflective journals and focus group interviews. Interviews were audio-taped and verbatim transcripts of the interviews were produced. Interview data and journal entries were analysed inductively using thematic coding and categorisation. **Results:** Broad themes that emerged included programme design, content, pedagogy, and assessments. Strong adherence to the medical model and under-emphasis of PHC as a guiding philosophy for curriculum development resulted in participants reporting they were under-prepared for autonomous practice within multidisciplinary teams and in contexts that were under-resourced and outside of hospital-based settings. **Conclusion:** To develop skilled and competent physiotherapists for a transformed model of healthcare practice in South Africa, the physiotherapy education programme needs to be grounded in principles of PHC.

INTRODUCTION

Clinical education is a complex activity fundamental to professional socialisation. Communication and interpersonal competencies, professional ethos, roles and responsibilities, and generic and discipline specific knowledge and skills are usually learned and assimilated in the practice context through experiential learning.[1] The interaction between the clinical educator and student is key to the process of professional socialisation and formation of a professional identity.[2] To be effective, clinical education requires a carefully designed programme with particular attention relating to the scope, sequencing, and the inclusion of disciplinary and transdisciplinary learning experiences.[3] These are important considerations as knowledge production in the workplace involves participation in communities of practice and engagement across a variety of practice contexts.[3] In addition, the policy for healthcare is essential in guiding the development of clinical education programmes and producing healthcare personnel with suitable competences towards achieving the intended vision and goals for the health system.

Apartheid was constituted as a state policy in South Africa from 1948-1994. It was characterised by disparities and divisions along racial classification and racial hierarchy with White privilege positioned at the apex.[4] Racial injustices and discrepancies were particularly prevalent in terms of access to healthcare and education. Healthcare provision for the majority non-white population was separate from and grossly inferior to that provided for the White minority and focused largely on curative medical

care.[5] The democratisation of the health system came into effect in 1997. Healthcare was restructured to provide an improved unified integrated healthcare service for all citizens with reduced disparities and inequities based on primary healthcare (PHC) principles.[6] Introduction of PHC was a means towards health equity resulting in broadened access to health service utilisation and provision in areas that were previously under-served or where healthcare services did not exist.[6] PHC engaged community and intersectoral participation with equal importance given to promotive, preventive, curative, and rehabilitation services within a multidisciplinary team approach.[6-7] Compulsory year-long community service for graduating healthcare workers was legislated by the Department of Health in 1998 to support the vision of PHC. Compulsory community service for all graduating physiotherapists was implemented from 2003.[8]

For physiotherapists, collaboration in a socially-based, client-centred model of healthcare is a radical change from treating patients within the medical model.[7] Some physiotherapy curricula, in Africa and elsewhere, have been criticised for their decontextualised practice of technical skills with the expectation that they will transfer into the context of the professional workplace and for the theory-practice gap between education and healthcare.[9-12] Similar tensions related to the alignment of physiotherapy curriculum and actual workplace practice is still identified in South Africa, and very little literature exists on South African physiotherapy curriculum development in response to a changed healthcare policy.

To be socially relevant, curriculum content has to be responsive to changes in practice patterns, evidence for practice, and other external and internal factors.[13] A range of curriculum models have been identified in the preparation of health science practitioners. The underlying ideologies of these models extend and translate into practitioner models.[14] The selected practitioner model and other factors guide the development and outcome of the clinical education programme. The apprenticeship and health professional practitioner models are associated with the traditional curriculum and the medical model.[14-15] Despite a transformed model of healthcare, these two practitioner models are still relevant to South African physiotherapy curricula because they are largely reflective of current South African practice.[16]

The medical model focuses largely on the care of the individual in hospital-based or institutionalise- based care settings. Historically, physiotherapy theory and practice both internationally and in South Africa is consistent with the “scientific” underpinnings of this model with students being socialised to this model through associated curriculum practices.[17] Less emphasis is given to behavioural and social health perspectives. In view of a changed model of healthcare delivery, there is little evidence that describes how South African physiotherapy curricula have prepared student physiotherapists for the changing ethos, new responsibilities, and roles that align to the changed policy. This has given rise to the following questions: How do South African student-physiotherapists experience clinical education practice within a transformed model of PHC? Why do they present these perspectives?

This paper derives from a larger case study of a South African physiotherapy academic department that explored the conceptions of practising physiotherapists, physiotherapy managers, and student physiotherapists and the physiotherapy curriculum in relation to a changed model of healthcare. The aim of this paper is to explore how student physiotherapists in South Africa experienced clinical education undertaken within a PHC system. The findings of this study are an important contribution to the development of physiotherapy curricula and the practice of physiotherapy with a view to improve services and health.

METHODS

This study was approved by the research administration of the University of Durban-Westville (ethical clearance number 03266A). The physiotherapy undergraduate program from a South African university was examined within a qualitative research framework employing narrative inquiry. All forms of narrative inquiry share the fundamental interest in making sense of experience and an interest in constructing and communicating meaning.[18] Narrative inquiry tends to be emancipatory, has the potential to construct caring communities through sharing stories, and requires collaboration, negotiation, and ethics of participation between the researcher and the narrator.[19,20] The lived experience of the narrator may be captured through journal records, interview transcripts, observation, story-telling, and other writing.[21]

This study was conceptualized and conducted by the researcher towards fulfilment of the requirements for a higher degree. The researcher facilitated all the focus groups whilst an independent consultant produced transcripts of the recorded interviews. The researcher also analysed the transcripts, and the analysis was checked for accuracy by an expert in curriculum development. During the period of data collection, the researcher was employed as a full-time lecturer in the physiotherapy programme and was not responsible for any academic teaching on the final year programme. The research participants were known to the researcher as the student-physiotherapists on the physiotherapy programme. However, it was explained to the participants

during data collection that the lecturer wore the hat of a researcher. Nevertheless, the researcher's role as a physiotherapy educator on the programme may have influenced the data collected.

Clinical education practice commences during the second level of the physiotherapy programme with increasing intensity until level four. Data were collected from final year student physiotherapists who rotated through three supervised clinical education blocks of six-week duration. The six-week elective block was characterised by less supervision and more autonomous practice. Students were assessed at the end of each block on the competencies achieved during the clinical placement. On completion of the degree programme, these students would comprise the second cohort of community-based physiotherapists within the PHC system.

Data were produced through in-depth focus-group interviews and reflective journals. Forty-two final year student physiotherapists participated on the study. The study was conducted at a historically disadvantaged institution that allowed the admission of largely non-white students. The cohort was comprised of 36 female students of which 11 were black, 17 Indian, two of mixed race, and six white. Of the six male students, two were Indian and four were black. Participants documented their conceptions of being a physiotherapist-in-training in a reflective journal assisted by guiding questions to prompt their reflections. In addition, two sets of semi-structured focus-group interviews were conducted, one before and the other after the elective clinical block. Focus-group discussions centred on the participants experience of the curriculum from first to fourth year, curriculum organisation and content, developing competencies for independent practice, skills for interpersonal communication, and preparation for the elective work experience.

Participants for the focus-groups were grouped in accordance with their prescribed clinical education block groupings. Pre-elective focus group interviews were conducted at five clinical education sites and are referred to in the analysis as A1, B1, C1, D1 and E1. Post-elective focus group interviews were conducted at three clinical education sites and are referred to as A2, D2 and E2. All participants were involved in both pre- and post-elective focus groups and participated voluntarily. The number of participants that were present at each site determined the number of focus group interviews that were conducted at that site. The distribution of participants into smaller groups is indicated in the analysis as focus group one (FG1) or focus group 2 (FG2). Their allocation to the focus group was pre-determined by the clinical block placement only, presenting wide-ranging academic achievement within groups.

The reflective journals (29) were numbered for identification by the researcher and were collected from the participants after the final examination. The journals included, amongst other topics, reflections on being in the physiotherapy programme, the elective experience, and experiences of the final examination. Despite being provided with a guide for reflection, writing an autobiographical account proved difficult for a few participants who did not have experience of autobiographical, reflective writing. This difficulty was reported on in the reflective journals by five participants. Two English second language users documented their reflections in isiZulu, which were translated for analysis into English. The use of focus-group discussions and reflective journal entries to gather participant data attempted to reduce the distortions and limitations that could be produced by the use of one method only. Focus groups were used as a catalyst for the reflective journal entry and it provided an alternative medium to writing for participants who were not familiar with that tradition to communicate their experiences. Data triangulation accounts for limitations by comparing multiple data sources and employing multiple methods to enhance the credibility of results.[22]

All focus group interviews were audio - and video-taped. Verbatim transcripts of the interview data were generated at each stage. Transcripts were anonymised and face validity of the transcripts, through the process of member checking, was established.[23] Two student-physiotherapists from each focus group were randomly selected by the researcher to check the transcripts to establish credibility of the data. The process of selection involved placing names of students assigned to a particular focus group into a bag and withdrawing two random selections.

The primary aim of this research was to explore students' experience of the physiotherapy clinical education programme; therefore, the analysis was approached inductively.[24] The analysis strategy involved developing an organising system, segmenting the data, and making connections.[25] The transcripts and the diaries were coded using no predetermined thematic coding structure. Similar and opposing statements related to a particular conception or issue were grouped together. Noting patterns and themes, seeing plausibility, and clustering helped to make connections and generate subcategories and emergent themes. An understanding of the data were achieved by arranging a logical chain of evidence and developing conceptual coherence through comparison with referent constructs in the literature.[26] Coding of the transcripts and diaries and emerging groupings of data were perused by an expert in curriculum design to ensure trustworthiness of the process.

RESULTS

Key themes that emerged from the analysis were grouped in accordance to the following headings: design, content, pedagogy, and evaluation. In the following section, the text appearing before the actual data includes interpretations of the participants' perceptions and experience of the physiotherapy curriculum and contextual background information provided by the researcher. The quotes provide evidence for the categories and themes identified.

Design

Participants perceived the design of the clinical education programme to be more towards treatment of patient conditions rather than achieving holistic patient care. Clinical blocks were structured by grouping patients with similar medical conditions. Participants rotated through these blocks every six weeks in their final year and were required to develop competence in physiotherapy skills in relation to the presenting conditions. *"We go in there, for example, the ICU block. We look at the monitors; at the patient and what he presents with…we treat conditions"* (Student focus group interview: D1FG1).

"In the blocks we spend time with only one group of patients, for example, spinal patients. It would be better to be exposed to different conditions at the same time, not just one type of condition at a time" (Student focus group interview: B1FG1).

With the focus on improving physical function, participants perceived that there was under-emphasis of skill development in terms of social and psychological care despite the need for more holistic patient intervention. During their clinical blocks, participants felt inadequate in the psychological and social aspects of patient care and recognised the need for increased skill development in these areas (Student focus group interview: A2FG1, E2FG1).

"We don't really apply it [biopsychosocial approach] *because it is not stressed on us to do that. Most of our treatments are supposed to be geared towards function. We hardly know about the social and the psychological. We don't think along those lines"* (Student focus group interview: B1FG2).

Further, all participants reported that they worked in isolation of a multi-disciplinary healthcare team. There were no structured opportunities in the curriculum that allowed for the engagement of participants with other healthcare professionals either with regards to role definition or in terms of patient management.

"*We should have some back-ground on the other health professions so if you have a patient, you will know to what extent the OT* [occupational therapist] *will be involved in the rehab. We are not exposed to the other health sciences disciplines"* (Student focus group interview: B1FG1).

Participants perceived that prescribed clinical education sites were selected in accordance with the predominance of particular patient conditions at those sites. They reported that their prescribed clinical education experience was based on urban, resourced hospital-based settings under-emphasising clinical education in poorly resourced rural hospitals or at community settings, mobile clinics, primary healthcare clinics or home-based care programmes. Participants felt this experience limited their development of knowledge and skill acquisition in areas that were under-resourced.

"Community [physiotherapy] should be introduced at level 2 and it should be in a disadvantaged community where they really need health services not in semi-urban areas like we do this year. The department should organise 3-4 weeks of community practice in a rural area where we can really learn about community physiotherapy. It will also teach us how to be creative so that we can modify treatments in situations where there is no equipment" (Diary: 21).

Because there were few *suitable* clinical education sites identified that supported the ideology for this clinical education model, this translated into large clinical education groups, with fewer patients per student-physiotherapist.

"When it comes to exposure at clinical sites, the areas sometimes don't have enough patients and the exposure there is inadequate" (Student focus group interview: B1FG1).

Large clinical groups influenced the supervisor-student ratio and were widely perceived by participants to influence the quality of their learning. Each clinical group comprised 9-11 students per clinical educator. Participants claimed that the large clinical groups, particularly in the second and third year of the programme, limited the extent of individual supervision they received. This they suggest has affected their competent application of skills and techniques.

"I think second year clinicals are such a waste of time. We got left there, we did assessments on patients but because we were in big groups, we were unsupervised so we didn't know what we were doing" (Student focus group interview: E1FG1).

It was perceived that the clinical educator was unable to "*question or challenge each student adequately about theoretical and practical applications in conjunction with patient treatments"* (Diary: 15). The large numbers of students per group reduced the opportunities for individual feedback from clinical educators on observed practice sessions (Student focus group interview: D2FG1).

*"It prevented the supervisors from coming in, sitting with you and really honing in on your skills with you. There is no learning taking place in a group. Individual supervision is more beneficial" (*Student focus group interview: C1FG1).

Students felt that the design of this programme limited the development of actual workplace skills. The few selected patients allocated per student in the final year of study contrasted with the wards of patients that students had to manage when they experienced their elective clinical block. This required skills for time management and providing effective treatments in a shortened period of time that had not been acquired during clinical education practice (Student focus group interview: D2FG1). Further, skills for practice outside of hospital-based practice and in under-resourced settings were under-developed. Students suggested that the absence of clinical education in the first year of study was a disadvantage to their clinical experience (Diary: 3, Diary: 16, Diary: 17, Student focus group interview: A 1FG1, B1FG2, C1FG2). Participants felt that the condition-competency focus of this programme limited the development of actual workplace skills.

Content of Clinical Education

Two key issues that emerged from the analysis with regards to the content for clinical education were the theoretical preparation for clinical practice, and the contrast between sites used during clinical education and the 'actual' workplace experience. Participants perceived the opportunity to engage with an extensive and diverse range of patients presenting with varying medical conditions as a positive attribute of the clinical education programme (Student focus group interview: B1FG1). However the absence of theoretical knowledge before a clinical encounter at particular clinical sites and academic levels of study, were perceived as a negative attribute of the programme. Students described how the absence of theoretical preparation before a clinical encounter left them feeling frustrated, inadequate and incompetent. The second and third year clinical experience, in particular, were criticised by participants for the inappropriate selection of clinical sites and complex patient encounters with inadequate theoretical preparation on patient conditions, associated assessment techniques and patient management.

"We didn't know what to do with stroke patients. We are learning about strokes now in fourth year. After four weeks the external examiner would come along for the evaluation and we had no idea what we were doing" (Student focus group interview: E1FG1).

The experience was described as *"scary because people's lives were in our hands and I felt really lost not really knowing what to do"* (Diary: 3).

Participants were concerned about the mismatch, first between the prescribed sites for clinical education and the sites encountered during the elective block, and second between the prescribed clinical education sites and community placement sites where they would be positioned as community service practitioners on graduating from the physiotherapy programme. Participants felt under-prepared for working in community, under-resourced settings because of the absence of skill development through the clinical education programme for work in these settings.

"The problem is that most of the things that I learnt on at physiotherapy school, for example, electrotherapy…in the hospitals that I'm likely to work at there are no such machines. I will have to use just my hands for treatment. There are not enough hospital beds so patients just lie on a mat on the floor. I will have to figure out for myself how to get the patient up for walking because it's different from what we've learnt in the classroom and during clinicals" (Student focus group interview: A1FG1).

Participants were particularly dissatisfied with the under-emphasis and limited exposure to poorly resourced and rural-based sites within the curriculum for community physiotherapy practice. They expressed the value of working within an under-served area. However the nature of this experience was limited as most prescribed community sites within the curriculum were largely urban-based and institutionalised, *"In our community block we go to hospital…that's not community. Community is actually going out and doing home visits…"* (Student focus group interview: C1FG1). Participants reflected that they had some experience of providing a service in an under-served area.

"We did go to an under-developed township where we were physically teaching mothers how to cope with their cerebral palsy kids. That was community work, going into some set-up where there was nothing and building something" (Student focus group interview: C1FG1).

However, they claimed that, *"we were not prepared for the real community stuff, for real outreach. Our community block during clinicals is institutionalised"* (Student focus group interview: A2FG1, E2FG1). This absence limited the development of skill for interpersonal relationships particularly in relation to cultural norms and traditions that were significant for community interactions, *"It would help if we could have lectures on how to incorporate the different cultures; different races…the approach to different religions"* (Student focus group interview: E1FG1).

Participants also recognised the need for acquiring administrative and managerial skills. These skills were necessary as students proceeded from being recent graduates into community service physiotherapists who would be responsible for managing physiotherapy departments.

"I feel that we should be given lectures on administration because we are going to be running a department. We have to buy equipment. We have to prioritise. We don't know which one to do first" (Student focus group interview: A2FG1).

Pedagogy during Clinical Education

From the analysis of participant data relating to pedagogy in the clinical environment, a key issue that emerged was the power of the clinical educator. This was evidenced through the dominance of the clinical reasoning process and the use of particular teaching strategies. Learning the skill of clinical reasoning was perceived to be limited in comparison to the emphasis placed on developing competence to enable physical function (Student focus group interview: A2FG1, Diary: 21). Participants suggested that their learning approach and clinical judgements were sometimes silenced by the dominance of the clinical reasoning process of the clinical educator. It also highlighted participant perception of the rigidity of clinical educators who were all academic physiotherapists compared to the flexibility that clinical physiotherapists displayed during the elective block experience.

"Sometimes what we get taught at varsity doesn't work on the patient. So you find that you add your own modifications and then when the exams come, they (the clinical educators) *ask you, 'What is this? Is this what you're taught?' You answer, 'No Mrs So and So, but it works for this patient.' Then they ask you about the physiological basis for what you are doing. I may not know the physiological basis but it's safe and it's working for the patient. That's the difference between academics and clinicians"* (Student focus group interview: D1FG1).

"If we figure out an assessment for a patient, the examiners correct you. There is no time that you are given something right, especially for assessments" (Student focus group interview: D1FG1).

A few participants criticised the "verbal" teaching method that was used by clinical supervisors during the supervision sessions rather than a practical demonstration or a "hands-on" approach. *"Show corrections to techniques on the patient using hands-on skills rather than verbal corrections"* (Diary: 11). *"You hardly see them doing hands-on or showing you how to do this or that. You have nothing to fall back on or visualise or try out because you have never seen them do it"* (Student focus group interview: D1FG1).

Practical demonstrations by supervisors were thought to assist with integrating the theoretical with the practical (Student focus group interview: C1FG1). Participants suggested that hospital-based clinicians were more valuable than the academic physiotherapists as clinical educators because they were *"more hands-on; more in touch, and they were there all the time"* (Student focus group interview: D1FG1). More supervision was desired with some participants citing group discussions around patient management valuable (Student focus group interview: C1FG1, E1FG1) whilst others preferred individual teaching time with the supervisor (Student focus group interview: C1FG1, Diary: 15).

End of Block Assessment

Participants perceived the assessment of clinical practice to be product oriented with considerable focus placed on the end of block assessment. This influenced participant learning through the clinical block,*"...get into this mode where all you can see is scoring 50% to pass. You reach a point where you neglect the finer aspects because all you want to do is pass"* (Student focus group: D1FG1). Participants suggested that learning through the block would improve if the summative clinical block evaluation was changed to formative assessment where the end of block mark should be calculated by the summation of various assessment marks that are acquired throughout the block.

"Wouldn't continuous evaluation be better than a final end of block evaluation? If we get evaluated at the end of the first week and we didn't know anything, at least we know that we would have at least five other chances of improving" (Student focus group interview: C1FG1). Inclusion of a clinical physiotherapist from the clinical site during the clinical examination was suggested to balance the academic and clinical expectations of the assessment (Student focus group interview: B1FG1).

DISCUSSION

The aim of this study was to explore how South African student physiotherapists experienced clinical education undertaken within a PHC model. The emphasis of the PHC policy is to shift from the curative and urban-centred health system to one based on a comprehensive healthcare approach.[5] An evaluation of the clinical education experiences of student physiotherapists at this South African university indicates that they were under-prepared for clinical practice undertaken within a PHC model. Participants suggested that the curriculum has made insufficient shifts away from a curative, urban-centred model of healthcare. Further, there was an absence of strategies and systems within the curriculum to align with the goals of PHC. Supporting theoretical and practical preparation for clinical education was not based on the PHC model.

The findings of this study indicate that the design of the physiotherapy clinical education curriculum experienced by South African student-physiotherapists focused largely on achieving condition-competency. This was achieved by groups of student-physiotherapists rotating through prescribed 6-week duration clinical education blocks which were largely urban and hospital-centred presenting a dominance of particular patient conditions. Assessment and treatment of patients emphasised the curative aspect of care rather than a more comprehensive approach required for PHC. Participants perceived that practice at urban, resourced institutions limited the development of knowledge and skill that are acquired from working within teams at under-developed, community-based settings, and the acquisition of skills for interdisciplinary training and interaction. These skills are fundamental to comprehensive PHC. Participants suggested that the selection of community- based sites in particular, and their experience of physiotherapy community practice, were mismatched to the expectations of the healthcare system within a model of PHC. The curriculum's selective response to PHC highlights a narrow view of community-based outreach suggesting a superficial adherence to policy.[27]

The findings of this study indicate that a traditional curriculum model underpinned the development of the physiotherapy clinical education programme. It is perceived that the curriculum did not respond adequately to the change in contexts of practice, for example, preparation for practice in under-developed communities, and for working in teams within a comprehensive model of care. Traditional, discipline-based academic knowledge is increasingly perceived as unable to address issues of importance to South African society, with strategic issues not explicitly reflected in undergraduate curricula.[3] Approximately five years after the introduction of PHC, student physiotherapists in a community setting continued to manage their clients according to the medical model and were unaware of the factors that influenced the community and how these differences impacted on the health of disabled people.[16] Similarly in this study, neglect of contextual issues, such as broadening access to physiotherapy services in under-resourced communities, incorporating knowledge into the curriculum relating to cultural norms and traditions, and psychological and social issues and its influence on health limited the development of broader skills for holistic practice. To enable the PHC philosophy, undergraduate and postgraduate health science curricula should focus more strongly on practical PHC whilst providing adequate orientation, training, support, and mentorship to students fulfilling their community service requirement.[28] Consideration of contextual influences on health creates the opportunity of transforming patient care from an approach that is narrow and technocratic to one that demonstrates more caring and is appropriate and responsive to the needs of the recipient community. Further, engagement in multidisciplinary teams develops instrumental, communicative, and transformative learning that is generated in cross-professional partnerships.[29]

The findings of this study indicate that the physiotherapy curriculum experienced by South African student-physiotherapists focused on the mastery of content and skills which influenced the shaping of the pedagogy more towards a master-apprentice orientation with over-reliance on the power of the lecturer in the teaching and learning environment. In addition, the asymmetrical relationship between the student and clinical educator, underpinned by relations of power, prevented the development of critical thinking skills and reflection, as alternate points of view were perceived to be ignored through the control of the clinical educator's clinical reasoning process. Critical thinking skills and reflection are important characteristics for the physiotherapy profession and are essential for the development of autonomous, independent, and collaborative practice.[30] The learning environment was a source of tension for students created by clinical education tasks being mal-aligned to their level of professional maturity. Incongruence between the level of learning tasks and inadequate theoretical preparation, summative assessment, and absence of active teaching approaches did not support deep approaches to learning. The findings from this study recommend demonstrations of patient management, discussions, feedback and formative assessment as key factors in creating an optimal learning environment for clinical education assisting with blurring the theory-practice gap.[31]

Reflecting on their experiences, participants untangled the strengths and weaknesses of the clinical education programme and their own strengths and weaknesses as practitioners in relation to the demands of a changed healthcare system and socio-political environment. The limitations of this study relate to the position of the researcher in the research process - being at the same time both the lecturer and the researcher. Participants were eager to have someone listen to their experiences and they were at the same time afraid of the political issues surrounding disclosure, despite being given a pledge of confidentiality. The limitations of using recall data through focus groups and journal entries are acknowledged. Determining the accuracy of the recollection and identifying distortions are difficult. This was addressed in the study by probing during the focus-group discussions to improve clarity of the responses and through data comparison between the focus group discussions and the reflective journal entries.

Clinical education curricula require regular review for development. The factors influencing the outcome of a clinical education programme are multiple. This study presented the first opportunity for student-physiotherapists at this South African university to give voice to their experiences in the clinical education environment and the factors that influence it. The study findings highlight the need for frequent, collaborative dialogue with a wider selection of representatives from the departments of health and higher education, work-based physiotherapy managers and clinical educators, and practitioners from the health sciences professions to evaluate and inform the development of clinical education in relation to the national goals for health and higher education. The voice of student and community physiotherapists should be central to these engagements.

CONCLUSION

This study indicates that in the absence of curriculum shifts from a curative, hospital-centred approach of healthcare towards a more comprehensive PHC model, student-physiotherapists were under-prepared for the complex tasks, broadened roles, and responsibilities associated with a transforming healthcare system in South Africa. The narrow focus of the clinical education programme experienced by student-physiotherapists tended to respond to practice imperatives rather than positioning itself in the wider context of socio-political transformation. The design of clinical education programmes should be underpinned by the knowledge and skills required for workplace tasks. Most physiotherapy programmes deliver key elements of inter-professional practice, including preparation for employment.[1] The curriculum experienced in this study may be an example of how the cultural domain of universities in South Africa have remained uncontested post democracy with no concomitant shifts in values and beliefs reflected in university curricula.[32] Physiotherapy education in South Africa requires a new practitioner model supported by a curriculum design that is critical and integrative of contextual factors influencing practice whilst also reflecting the values and beliefs of a transforming society and healthcare policy.

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