

Micro, meso and macro issues emerging from focus group discussions: Contributions to a physiotherapy HIV curriculum

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Background. Physiotherapy in South Africa has not defined its contribution to the management of HIV. As part of developing an appropriate HIV/AIDS physiotherapy curriculum, focus group discussions (FGDs) with physiotherapy clinicians and educators were undertaken.

Objectives. To understand the perceptions and experiences of HIV management in refining an HIV physiotherapy curriculum.

Methods. Six focus groups chosen using purposive sampling ensured representation from experienced and newly qualified academics and clinicians. Interpretive content analysis strengthened the knowledge areas required in practice and attitudes based on the groups' experiences of HIV management. Concepts were identified, and de- and recontextualised to develop categories and themes.

Results and discussion. Five themes emerged: the need to include HIV in the physiotherapy curriculum; a physiotherapy-specific HIV curriculum; co-ordinated curriculum design; underlying concerns relating to HIV management and inclusion in the curriculum; and the need for professional development. Further analysis and abstraction highlighted micro, meso and macro issues. Micro issues included content, while meso-level concerns included perceived gaps in the curriculum and recommendations to respond to issues such as therapists' coping and burnout, therapists' attitude to HIV, and organisational problems threatening the application of knowledge regarding this condition. At a macro level, participants felt that the political nature of HIV and curriculum structure were problematic and that there was a need for continuous staff development.

Conclusion. A list of topics related to HIV, which tallied well with evidence in the literature and patients' clinical presentations, emerged. The need for a complex, well-designed programme for the physiotherapy management of HIV emerged and was informed by the difficulties experienced at the micro, meso and macro levels of the curriculum.

AJHPE 2013;5(2):56-62. DOI:10.7196/AJHPE.191

South Africa has a high HIV/AIDS prevalence, with a national provincial mean of 18.1% (range 15.4 - 20.9%) in adults aged 15 - 49 years, with an interdistrict range of 5.3 - 46%.^[1] Its high prevalence and progression to a chronic condition highlight the importance of its inclusion in all health professional education programmes, including physiotherapy. HIV/AIDS is a pervasive condition affecting most body systems. It therefore has implications for physiotherapy education and practice. Its chronic nature and relevance to physiotherapy, within the framework of rehabilitation, are related to the restoration of mobility and function.

Objectives

To develop an appropriate HIV/AIDS physiotherapy curriculum, an investigation of the interaction between HIV patients and physiotherapists, an assessment of patient problems, and an audit of the physiotherapy curricula of all the training institutions in South Africa was undertaken.^[2-4] The objective was to determine physiotherapists' perceptions of important HIV/AIDS curriculum topics to be included in undergraduate physiotherapy programmes. Shepard and Jensen's^[5] taxonomy of micro, meso and macro issues was used to guide the investigation and data analysis. The macro environment includes society, healthcare, higher education, and knowledge related to physiotherapy, and therefore deals with large-scale issues that influence the curriculum. Van den Akker^[6] defines the meso level as dealing with issues that affect curriculum implementation at an operational level (Fig. 1). The micro level addresses issues that effect students' clinical practice and reasoning, including curriculum content.

Methods

A qualitative methodology, i.e. focus group discussions (FGDs), was used to collect data. Clinicians and academics were purposively chosen to describe their knowledge, experience, beliefs and perception about HIV.^[7] The clinicians were from three departments in hospitals with high numbers of HIV-positive patients. Based on a curriculum audit done at 8 universities,^[4] one of the participating academic physiotherapy departments had an extensive HIV course. Departments two and three had courses outlined with moderate and limited content, respectively. Table 1 outlines the characteristics of the sample.

Sample and sampling

A total of 47 physiotherapists comprised academics and newly qualified and experienced clinicians, the focus group size ranging from 5 to 12 (Table 1).

The study was approved by the Human Research Ethics Committee, University of the Witwatersrand. Written permission was sought from the heads of the hospital departments and universities and all participants. Confidentiality was assured by all identifiers being excluded. Trustworthiness and transferability of the data were ensured by purposive sampling, consideration of the results of the preceding studies, data saturation and findings from the literature.^[4]

Development of the interview guide

A literature review and the three studies described above were used to develop the questions used in the focus groups. These were then sent to two physiotherapists with expertise in HIV for comment and validation.

Table 1. Focus group sample

Institution (n)	Participants	
	Institution (n)	Experience (years) mean (±SD)
Hospital physiotherapy departments (3)	Hospital 1 (12)	3.3 (±2.8)
	Hospital 2 (8)	5.8 (±4.1)
	Hospital 3 (5)	1.9 (±1.1)
Academic institutions (3)	Institution 1 (5)	11.9 (±6.2)
	Institution 2 (10)	8.2 (±6.6)
	Institution 3 (7)	14.5 (±13.5)

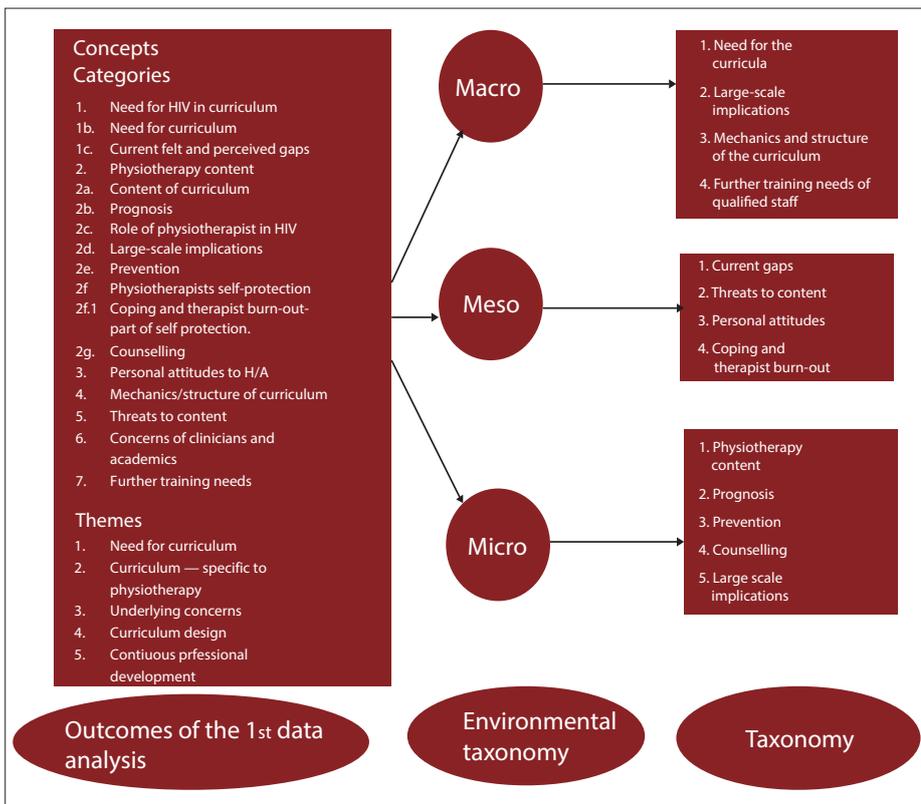


Fig. 1. Schematic presentation of HIV curricula taxonomy.

Data collection

In an initial pilot study two observers critiqued the way in which the FGDs were conducted and suggested 4 further questions and clarification of another. The results were used in the study. The discussions were audio recorded and transcribed verbatim by a professional transcriber.

Data analysis process

An interpretive content analysis using a constant comparison method was utilised to analyse the data.^[8] The transcribed data were analysed vertically and concepts were identified separately.^[9] After examination of the data, similar concepts were tallied around one phenomenon, i.e. categorised. Transcribed data were inspected in

repeated rounds to tally similar concepts, ensure that no concepts were missed and identify new categories where necessary. The concepts of the first author and an independent researcher for all six sites as shown in Table 1 (attained a mean of 90% (SD ±2) (range 86 - 92%). Two experienced researchers were given the list of concepts and asked to provide a separate list of categories for comparison. Eleven of the 17 categories were congruent. Some of those not congruent were reworded or amalgamated with other categories. Once the categories were finalised, axial coding was done.^[10] The first author (HM), together with another qualitative researcher, discussed the links and the contextual associations of the categories. The categories were ranked and

linkages identified. Member checking was done to ensure accuracy by sending the transcribed scripts with the concepts identified^[11] to the clinical and academic groups involved.

Themes were identified from the categories. The literature on curriculum design was used to further analyse the emerging themes. These themes were then assessed to determine whether they belonged to a micro, meso or macro environment,^[5] and are discussed as such.

This study ensured transferability by obtaining samples from different settings. Credibility was achieved through engagement in the FGDs, utilisation of the information from preceding studies, peer examination of the conduct of the initial FGDs, subsequent peer review and criticism allowing for improvement and clarity in the next FGDs. A rigorous process of content analysis, with several layers of abstraction and member checking by peers and participants, added to the credibility of the study.

Results and discussion

Figs 1, 2 and 3 are a schematic presentation of all the findings. Further abstraction revealed how the specific content identified could be linked to the taxonomy of educational knowledge. Figs 2 and 3 relate to knowledge, attitude, practice and skills, and examples are given in Tables 2 - 4, representing the micro, meso and macro levels, respectively. Using further abstraction the researchers could link the specific course content proposed to curriculum input as well as the broader curricular issues that are illuminated by applying the micro, meso and macro taxonomy, as shown in Fig. 1.

For example, where participants expressed knowledge gaps in areas such as neurology, when to exercise, implications for exercise and the need for emotional support, further analysis was undertaken. In the first analysis these aspects were grouped under 'needs', as shown at the micro level. Successive analyses separated the 'needs' relating to knowledge and other categories, such as coping, and further abstraction was done.^[5] In addition, the information elicited was compared with patient needs from the previous study⁴ as well as the literature, and omissions were identified. Figs 2 and 3 show the results of this process.

Physiotherapy course content at the various levels

Micro level

The micro level 'Physiotherapy content needs' showed a wide range of topics under 5 main themes, i.e. factual knowledge and information, application of knowledge, skills, thinking skills and application, information analysis and

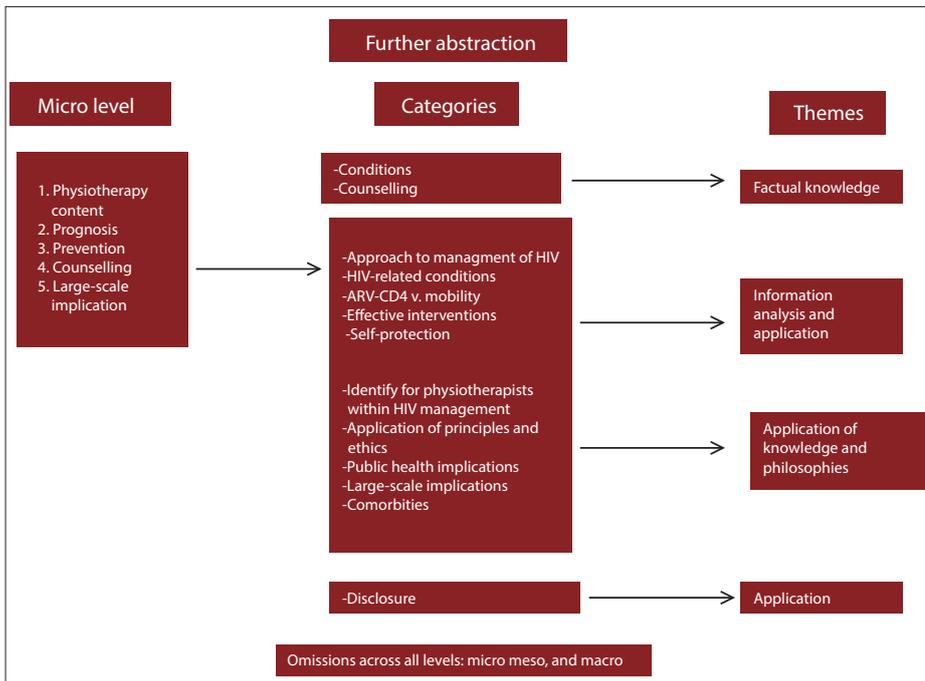


Fig. 2. Micro level. Results of secondary analysis.

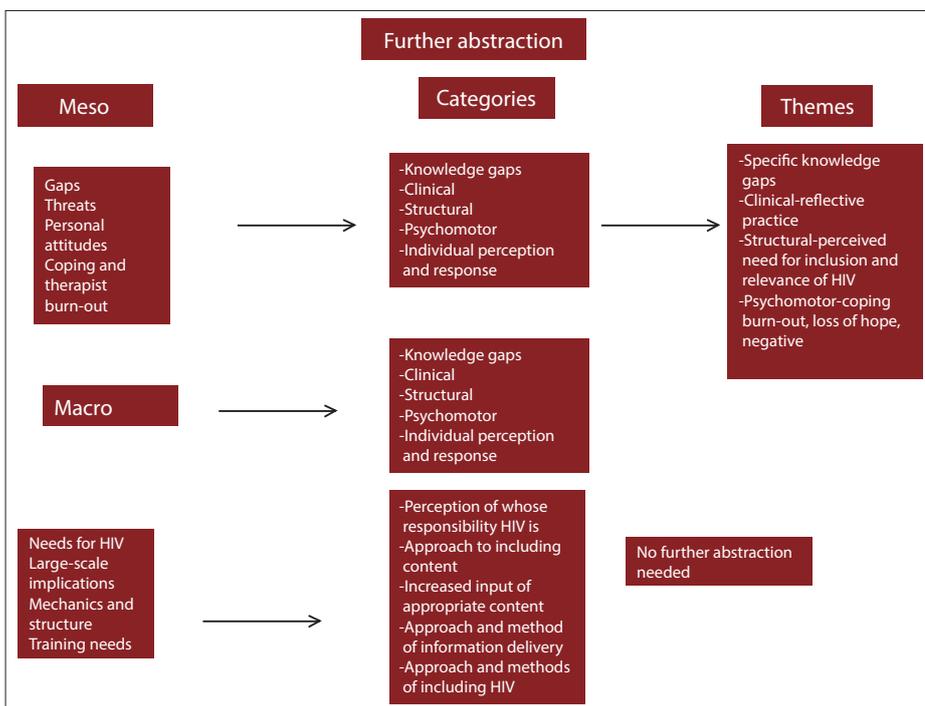


Fig. 3. Meso and macro levels. Results of secondary analysis.

application. Table 2 outlines these micro-level needs for one theme for physiotherapy content.

Remaining themes. Under the theme application, categorised under treatment approaches, were: physiotherapy management, concepts such as the relationship between CD4 counts v. mobility/function, effective physiotherapy interventions, when to exercise,

dealing with general weakness, self-protection, and counselling.

Knowledge application and philosophy included the role of physiotherapy in HIV and the need for inclusion of physiotherapy-related management principles.

Information analysis and application of understanding included aspects such as HIV

aetiology and prognosis, medical treatment, prognostic information and changes, understanding overall management, treatment, ARV therapy and its secondary complications, and public health implications, e.g. prevention efforts and community implications for HIV. Although the pathology concerning physiotherapists was elicited from the literature, the FGDs highlighted how pathology specifically interplays with HIV and issues specifically related to this condition, such as recurrence of illness, HIV staging in relation to physiotherapy, disclosure, case variation and comorbidities. A quote from one of the participants illustrates some of the difficulties: ‘There’s such emphasis on strokes and on paraplegia and all of that, and you come here and so many of the patients you see have peripheral neuropathies ... transverse myelitis and painful feet, peripheral neuropathy ... myopathy.’

Topics that emerged from the FGDs were similar to those described in the literature,^[12-14] i.e. physiotherapy content, prognosis, prevention, counselling and large-scale implications of HIV. The FGDs highlighted the need for factual knowledge on pathology and management of impairments and understanding HIV presentation, particularly its episodic nature, how ARVs affect presentation and staging, as well as disclosure issues. These were considered to be gaps in the curriculum that complicate the application of HIV knowledge.

Clinical therapists explained how poor disclosure made it difficult to tackle real issues if the patient was unwilling to openly discuss their HIV status,^[15] as stated here: ‘The difficult part is that often the patient himself doesn’t know that he’s positive. They often find that out ... when he’s already in hospital and you’re not supposed to talk about it. But it’s a policy, a national issue. I haven’t come up with a plan to help tackle it. At this juncture we are a bit under pressure to follow regulations.’

The ‘state of non-disclosure may instil the fear of being infected into physiotherapists.’^[16] Physiotherapists’ responses to HIV should be enhanced by more sensitive training/practice, and some of these issues were evident in the meso-level concerns.

Physiotherapists wish to play an active part in the management of patients with HIV/AIDS and indicated the need for the curriculum to clearly define the role of the therapist in HIV management, including specific roles in a rehabilitative versus palliative setting and acute versus chronic patient management. Furthermore, clinicians needed clarity on the principles governing treatment of HIV patients and effective evidence-based

Table 2. Micro level needs, Part 1: Physiotherapy content

Physiotherapy content knowledge	Categories	Themes	Quotations
<ul style="list-style-type: none"> • Episodic nature/recurrence of illness • Approach – good nutrition, good drugs and mobility • Pathology and patient staging – relation to physiotherapy • ARVs – implication, application, effectiveness/non-effectiveness, role, mechanisms, complications and programmes • Disclosure issues (challenge laws and charters) <p>Omissions</p> <p>Determinants of HIV disease and relationship to virology and HIV prevalence</p> <ul style="list-style-type: none"> • HIV staging and classification in SA • Activity, limitations, and participation restrictions • HIV management approaches 	<ul style="list-style-type: none"> • Approach to management of HIV 	<ul style="list-style-type: none"> • Factual knowledge and information • Application of knowledge 	<p>‘We spend so much time with the patients ... we’re not, ... , equipped to be able to say, ok, you’re HIV positive, ... May be it’s because we don’t have this knowledge or we’re not confident enough to say: from here, with a CD4 count of less than 10, you may not have very long to live.’</p>
<ul style="list-style-type: none"> • Case variation and common medical problems, e.g. psychiatric conditions, neurological conditions (stroke, peripheral neuropathy), input into specific areas such as orthopaedics, chest conditions, co-incident co-morbidities, depth of common conditions <p>Omissions</p> <p>Common impairments such as pain, energy drive, dyspnoea, spectrum of mental effects, body mass, voice and speech functions</p> <p>How HIV causes impairment</p> <ul style="list-style-type: none"> • HIV implications for physiotherapy and disease aetiology, physiotherapy-specific input • What is the practical approach to the HIV patient? • Managing the very ill 	<ul style="list-style-type: none"> • Conditions associated with HIV 	<ul style="list-style-type: none"> • Factual knowledge and information • Application of knowledge 	<p>‘I think it’s so vast and that it actually connects with so many other conditions that we could integrate it. HIV is part of everything because HIV affects your pathology, your recovery, your rehab, whatever.’</p>

Table 3. Meso level: Gaps perceived in the current curriculum

Concepts	Category	Theme	Quotations
<ul style="list-style-type: none"> • Clinical picture • No practical application • Lack of clear picture of HIV staging • Need for numbers to quantify problem • Contact with HIV-positive teachers 	Clinical	Gaps perceived in the current curriculum	‘I think the most important thing is the number of patients we see because that will determine its importance.’
<ul style="list-style-type: none"> • Fragmented approach to HIV input (especially in adults) 	Structural		‘When we were students and we did human behavioural sciences in sociology in first year, we did do quite a lot on HIV socio-economic implications, etc., etc. So I just felt that because we weren’t in the situation we didn’t realise the prevalence of HIV in South Africa and things like that. I mean, we had just come out of school, we were still in our own – you know, getting out of the home kind of thing, and getting into reality. So, I mean, the implications didn’t really hit home until we got here.’
<p>Part of self-protection</p> <ul style="list-style-type: none"> • Loss of hope • Loss of morale • Effect of HIV on personal level 	Psycho-motor needs	Coping and therapist burn-out	‘Suffering is a huge issue out here. We watch caregivers suffer as they try cope with their daughter who is going to die before them.’
<ul style="list-style-type: none"> • Staff overload • Other health workers • Physiotherapists 	Structural effects		

Table 4. Macro level: Mechanics/structure of curriculum

Concept	Category	Theme	Quotations
<ul style="list-style-type: none"> • Stand-alone initial phase/ microbiology, clinical sciences • Co-ordinated input • Integrated approach • Focus on principles 	Approach to content	Mechanics/ structure of curriculum	‘You do not teach the treatment of diseases but rather the principles applied to the management of conditions.’ ‘I wanted to say it’s actually very difficult to make it a subject on its own because it’s actually duplicating – it should be incorporated in each specific field.’
<ul style="list-style-type: none"> • Increased HIV content • Increased depth and breadth • Comprehensive input • Avoid repetition 	Content related		‘So I think it’s quite a holistic approach, but it’s on a basic level, it’s not too involved ...’ ‘... but I also think we should concentrate more on diverse things, like, we’re now getting more patients on ARVs, so what now? I think that’s where we should be focusing on ...’
<ul style="list-style-type: none"> • Evidence based • Active learning • Problem-solving approach • Lecturers to have relaxed attitudes to HIV • Teaching methods – ward rounds, interactive, lively 	Approach and methods		‘They have to read the evidence of the article content and the article has to have relevance to the patient. So you know, make them active learners.’ ‘We bring them to the water, now they must drink.’

physiotherapy interventions. The application of rehabilitation models, principles and ethics in the management of HIV/AIDS is also an important aspect of defining HIV rehabilitation.^[17] One recently qualified participant said: ‘Uhm, the way that I treat my patients is, I tell the truth as much as I possibly can. I talk about the side effects, I talk about everything and I think if everybody was trained in that, if the physio sees a patient and thinks ag, this patient had a stroke, they’re a goner, and I can’t be bothered ...’

This information points to the need for a comprehensive approach to the management of HIV patients, including prevention, treatment and a professional and an empathetic disposition towards people with HIV/AIDS. Counselling was also seen as important for comprehensive patient management, but was absent. The benefits have been well documented in the literature^[18] (Tables 2 - 4).

Other missing components were the determinants of HIV disease, staging of HIV, physiotherapy management approaches, and a patient screening system. The effect of HIV on body systems and their interplay must also be included in the curriculum, e.g. the effect of HIV on both the pulmonary and haematological systems and its contribution to dyspnoea (Tables 2 - 4).

Some academics mentioned the need to include the effect of exercise on HIV, and clinicians felt that a clearer position and guiding principles on implementation programmes for exercise and

function were needed. There was an unclear link to clinical reasoning in areas such as function and mobilisation: ‘Yes I have seen that people with a CD4 of 150 are non-functional and others with a CD4 of 2 are up and about.’ Understanding the true prognosis of HIV was seen as an important prerequisite to managing HIV, as it has profound effects on the attitudes and affective consequences experienced by therapists.

Meso level

Meso-level issues can potentially affect the implementation of a curriculum if not carefully incorporated at the planning stage. Four themes emerged that were directly related to gaps in the curriculum: issues related to personnel, i.e. coping and burn-out; perception; attitude; and structural threats. Table 3 describes one section of the content. Other themes under the meso level are outlined below.

Remaining themes. Personal attitudes to HIV/AIDS: clinicians and academics admitted their knowledge gaps regarding HIV and its prognosis, with the predominant perception of HIV being a death sentence. Some academics perceived the inclusion of HIV/AIDS as a threat and as interference in their undergraduate training programme.

Structural and organisational threats, e.g. in one academic institution medical personnel – not physiotherapists – determined the HIV content for the physiotherapy curriculum. In addition,

clinicians found clinical decision-making difficult because of high HIV patient loads. With such large numbers of HIV patients, ethical issues and value judgements presented problems that can be addressed in the curriculum.

Under the theme current gaps in knowledge, some practitioners thought that topics such as HIV staging were theoretical and not practical. One clinician said: ‘HIV is so all-encompassing, it takes bits and pieces from so many different areas of physiotherapy: from neurology, the respiratory, when you get patients who end up with TB signs, all sorts of things. To draw everything together would be useful.’

On a personal level, coping and therapist burn-out were experienced with both psychomotor and affective effects, i.e. loss of hope and morale, physiotherapy worthiness, and the effects of HIV. The lack of clarity of the physiotherapist’s role seems to result in a dilemma where practitioners question the extent of their patient management. Clarity of roles is important for professionals’ ability to advocate and place themselves in the management continuum of a condition as well as having the confidence to market their professional contribution.^[17] Puckree *et al.*^[19] suggested more practical education on the physiotherapist’s role and clinical practice on how to handle patients with HIV. The episodic nature of HIV requires that the therapist is aware of this constant flux and its effect on their management roles.^[20]

Finally, the application of appropriate attitudes and behaviours included counselling, disclosure and clinical decision making. Table 2 shows how personal attitudes play an important role in determining the management of persons living with HIV/AIDS. Therapists battle with their own perceptions of HIV being a death sentence, with being judgemental and with their own beliefs regarding HIV. The perception was that lecturers exhibit their personal attitudes in the way they teach the subject. 'I think a lot of the time we actually get taught in a way that [whispers] [name] is HIV positive. You know, like, if we just get told a bit more positively ... [clinician].'

All studies on the inclusion of HIV in the curriculum have shown that training diminishes negative attitudes, enhances willingness to treat, promotes appropriate practice behaviour and contributes towards becoming a more patient-centred health provider.^[21-23] Therefore, the macro-level effect on an HIV curriculum is important as it may help to obtain a better understanding of the condition, how to implement training and how to solve some of the attitudinal problems.

Macro level

Four themes emerged here: curriculum structure; whether it should include large-scale implications; need for an HIV curriculum; and continuous training and development.

Table 4 outlines one of the macro-level themes and categories.

Macro-level issues include society, the healthcare environment, the higher education system and the knowledge related to physiotherapy, therefore dealing with large-scale implications influencing a curriculum.^[5] Participants supported an integrated, evidence-based curriculum. A mixed position was evident in 'how to' include HIV in the curriculum and 'how much' information there should be. One of the supporting views for an integrated topic is: 'When it stood on its own, I didn't understand the connections with the physiotherapy profession. I mean it was, like, Greek [clinician].'

The pervasive nature of HIV, which affects all body systems, supports its integration into all topics of the curriculum and not being a 'stand-alone' topic. Newly qualified clinicians were surprised at how many patients were HIV positive, irrespective of diagnosis, and emphasised the need to integrate HIV into all fields being taught. No literature could be identified that describes the advantages or disadvantages of integrating a pervasive condition into an educational curriculum. However, the complexity of HIV/AIDS has been recognised through the need to address its social, biological and ethical perspectives.^[23] HIV is transcendent in that it affects all aspects of human life, requiring a comprehensive approach. However, participants cautioned on the danger of 'overkill': 'Careful about overkill. You mustn't be repeating the same thing ...'. While an academic said, 'I wanted to say it's actually very difficult to make it a subject on its own because it's actually duplicating – it should be incorporated in each specific field.'

Reservations with regard to overloading of the physiotherapy curriculum are not surprising as this is an expected reaction to change. Jones *et al.*,^[24] in assessing the response to curricular change in medical schools, reported that change is compromised by resistance to change and the need for a high degree of autonomy among faculty members. Nevertheless, results show that efforts are being made to include HIV in all universities represented in these focus groups.^[2] Two other themes emerged relating to the perception of HIV management as a political issue and that it should be left to education authorities.

Much animated debate took place in all 6 groups on whether there was a need to include HIV in the curriculum, with one group proposing that the physiotherapy curriculum was not responding to the clinical setting:

'There are so many different presentations that often they come up with the strangest, newest, weirdest presentations that are unbelievable.' Generally, political desirability and the obligation to be informed about HIV were important reasons given for curricular inclusion of HIV, supported by the following quotes by academics: 'I think it's actually expected of us ... it's a political issue'. 'My opinion, I don't think it must be in the curriculum. Not necessarily in the curriculum but I think it must be part of the Department of Education's something?' A position such as this does not give the impression of developing curriculum programmes that respond to changes in a macro environment. Some participants strongly supported the inclusion of large-scale implications and called for better co-ordination of content.

Practitioners and academic staff established a link between their role as therapists and the impact of managing HIV, but seemed to be in a state of confusion about how to implement this. The foregoing may be attributed to some physiotherapists having little understanding of social determinants and being entrenched in the medical model of management. HIV/AIDS profoundly affects the entire individual and is complex, is stigmatised and has socio-economic implications. It therefore calls for professionals, including physiotherapists, to fully embrace a biopsychosocial paradigm for managing these patients.^[25,26]

Conclusion

A central theme emerging from the FGDs is that clinicians and academics felt it was important to include HIV/AIDS into the physiotherapy curriculum. There were, however, two strongly non-aligned views: those who felt it was important to limit the role to traditional training, and the opposing view of a professional trained within an environmentally and politically sensitive context.

The complexity of shared experiences, opinions, misconceptions and gaps in knowledge of both clinicians and academics revealed the need for a complex well-designed programme for the physiotherapy management of HIV. Some of the difficulties experienced revealed a range of meso- and macro-level issues that may affect the content and implementation of a curriculum in which the management of HIV is fully integrated into all fields. These FGDs elicited contextually specific input that added to the information obtained from the literature and an evidence-based patient profile. The list of topics that emerged was taken to the next level of validation for a contextually informed HIV curriculum tested for consensus using a Delphi technique.

Acknowledgement. We gratefully acknowledge financial assistance from the Medical Research Council of South Africa (MRC) and the Carnegie Trust Fund.

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Appendix. Implications from 3 studies and a literature review informing key concepts and questions for the focus group discussion

Key findings/conclusions	Concept	Questions
<ul style="list-style-type: none"> • Dynamics and determinants of the pandemic 	<ul style="list-style-type: none"> • Physiotherapists' role in patient management • Preventive measures 	<ul style="list-style-type: none"> • What preventive measures are taught?
<ul style="list-style-type: none"> • Low referral status to physiotherapy by health workers and medical practitioners • Knowledge gaps among qualified physiotherapists 	<ul style="list-style-type: none"> • Physiotherapists' role in education 	<ul style="list-style-type: none"> • What do you think the physiotherapists' role is in HIV management?
<ul style="list-style-type: none"> • Patients' age range, and marital and employment status. Impact of these factors on their support structures 	<ul style="list-style-type: none"> • Physiotherapists' role in patient management • Socio- economic implications 	<ul style="list-style-type: none"> • Should large-scale implications of HIV disease be included in physiotherapy education and practice?
<ul style="list-style-type: none"> • Pervasive nature of HIV – impact on all key body systems (pathophysiology) and problems (impairments) manifesting at impairment level – voice and speech functions, haematological, respiratory, digestive, metabolic, endocrine and musculoskeletal • Subsequent association between impairments and activity limitations 	<ul style="list-style-type: none"> • Depth and breadth of input 	<ul style="list-style-type: none"> • Should HIV be taught on its own within physiotherapy curriculum? • Should HIV stand alone? • What considerations determine the depth and breadth of and input on HIV? • Are there any specific areas that should be taught that therapists are likely to encounter and treat in HIV-positive patients?
<ul style="list-style-type: none"> • Deficiencies in professionalism or HIV knowledge that should be addressed in the curriculum^[21] 	<ul style="list-style-type: none"> • Current deficiencies • Level and type of integration, • HIV as 'stand alone' 	<ul style="list-style-type: none"> • Should HIV be integrated into other areas such as paediatrics, neurology, orthopaedics, public health and the community?
<ul style="list-style-type: none"> • Basics of philosophy, goals, coursework, clinical experiences and evaluation processes influence the curriculum^[5] 	<ul style="list-style-type: none"> • Beliefs, values, practices 	<ul style="list-style-type: none"> • What beliefs, values, and practices are important for the delivery of prevention, treatment and care?
<ul style="list-style-type: none"> • Physiotherapy philosophy promotes well-being through holistic healthcare as part of the multi-disciplinary team. Through these efforts it contributes to a comprehensive healthcare delivery system. Association between impairments, and activity limitations, e.g. muscle strength affecting one's activity level 	<ul style="list-style-type: none"> • Underlying treatment principles 	<ul style="list-style-type: none"> • What principles have you identified as being important for delivering prevention, treatment and care in HIV, specifically for physiotherapists?
<ul style="list-style-type: none"> • Basics of philosophy, goals, coursework, clinical experiences and evaluation processes influence curriculum. It must respond to current physiotherapy developments, changing environment and human healthcare needs 	<ul style="list-style-type: none"> • Curriculum content 	<ul style="list-style-type: none"> • Are there any specific areas that should be taught that therapists are likely to encounter and treat in HIV-positive patients?
<ul style="list-style-type: none"> • Teaching methods need due consideration^[5] • A factor that was pertinent to students' attitudes to HIV included personally knowing someone who is HIV positive^[21] • Problem-based learning models^[23] 	<ul style="list-style-type: none"> • Teaching methods 	<ul style="list-style-type: none"> • What methods of teaching could be utilised?