

THE PERCEPTIONS OF BASIC SCIENCE LECTURERS AT SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY ON THEIR NEED FOR HEALTH PROFESSIONS EDUCATOR DEVELOPMENT

by
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Research Assignment submitted in partial fulfilment of the
requirements for the degree of Masters of Philosophy in Health
Professions Education at the Faculty of Medicine and Health
Sciences, Stellenbosch University

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March 2018

DECLARATION

I, Melvin Megandran Govender, hereby declare that the work contained in this assignment is my original work and that I have not previously submitted it, in its entirety or in part, at any university for a degree.

Signed:

Date: March 2018

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ACKNOWLEDGEMENTS

I would like to thank the following persons:

- My supervisor Professor Julia Blitz and co-supervisor Ms Charmaine van der Merwe, for their continuous support, guidance and assistance during this research project.
- My Head of Department Professor Leon Hay, for affording me the necessary resources and time to complete this research project.
- My colleagues at SMU for supporting the research project
- Ms Nomsa Malete for her assistance with the interviews.
- My family for their motivation and support.
- God, for his grace and guidance throughout this journey.

ABSTRACT

Faculty development is an institutional imperative that aims to ensure that health professions educators are adequately equipped as educators in their profession. Institutions have thus developed and implemented faculty development programs to answer to this imperative. However, significant barriers exist that hinder teacher's participation in these initiatives. Evidence shows that the identification and introduction of means to overcome these barriers would increase their participation. Thus the aim of this study is to explore the perceptions of the basic and preclinical science teachers at the Sefako Makgatho Health Sciences University on their need for health professions educator development in order to identify barriers that are preventing them from participating in current faculty development initiatives.

The study design was interpretivist within a qualitative methodological framework. The study targeted the 102 basic and preclinical science teachers at the Sefako Makgatho Health Sciences University. Data collection was completed in two phases. Phase one adopted a self-administered questionnaire sent to all 102 prospective participants. In phase two, the responses to the questionnaire were analysed and used to purposively sample 13 participants for interviews.

A response rate of 43% was recorded for the questionnaire. The second phase findings revealed that teachers perceived a need for health professions educator development. However, the barriers of; misconceptions and beliefs with regards to funding, institutional support and their conceptions of teaching; perceived absence of an institutional faculty development plan; an institutional focus on research; and a lack of time and scheduling issues, are hindering their participation. Thus these identified barriers need to be overcome in order to increase their participation in future faculty development initiatives.

OPSOMMING

Die ontwikkeling van akademiese personeel is 'n institusionele imperatief wat daarop gemik is om te verseker dat opvoeders van gesondheidsberoepes voldoende toegerus is vir die verantwoordelikheid. Alhoewel instellings ontwikkelingsprogramme vir akademiese personeel ontwerp en geïmplementeer het, is daar struikelblokke wat deelname daaraan belemmer. Daar is aanduidings wat toon dat die identifisering en oorkoming van hierdie hindernisse deelname aan ontwikkelingsprogramme sal verhoog. Die doel van die studie is om die persepsies van onderwysers se behoefte aan verdere onderwysontwikkeling te ondersoek en dus hindernisse te identifiseer wat voorkom dat hulle deelneem aan bestaande institusionele ontwikkelings inisiatiewe.

Die studie-ontwerp was interpreterend binne 'n kwalitatiewe metodologiese raamwerk. Die studie het 102 akademiese in die basiese en prekliniese wetenskappe by SMU geteiken. Die insameling van data was in twee fases voltooi. Fase een het bestaan uit 'n self-gedadministreerde vraelys wat aan al 102 voornemende deelnemers gestuur is. In fase twee was die antwoorde op die vraelys geanaliseer en die analise gebruik om 13 deelnemers te identifiseer en vir onderhoude.

In die eerste fase het 43% van die voornemende akademiese in die vraelys voltooi. Die tweede fase het aan die lig gebring dat daar inderdaad 'n behoefte is aan verdere akademiese ontwikkeling, en dat daar inderdaad hindernisse is wat deelname aan die programme belemmer. Hierdie hindernisse sluit wanopvattinge rakende befondsing; institusionele ondersteuning en hul menings van onderrig; die indruk dat 'n institusionele akademiese ontwikkelingsplan, doelwitte en prioriteite afwesig is; 'n institusionele fokus op navorsing; en 'n gebrek aan tyd en skeduleringskwessies. Akademiese in die basiese en prekliniese wetenskappe by SMU besef verdere opvoedkundige ontwikkeling is belangrik, maar hul persepsie van hindernisse verhoed dat hulle deelneem. Die geïdentifiseerde hindernisse moet in ag geneem word vir toekomstige akademiese ontwikkelings inisiatiewe om hul deelname te verhoog.

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1. INTRODUCTION

Faculty development is vital for aligning institutions with the rapidly evolving health professions education landscape; significantly it has also been identified as one of the main challenges that face health professions education in Africa (Burdick, 2007). Faculty development has evolved to be broadly defined as a framework that is provided to faculty members to assist in responding to the challenges of their multiple roles and evolving responsibilities (Leslie *et al.*, 2013). In an African context where institutions are evolving at a slower pace with regards to faculty development as reported by Gukas (2007), the core and focus of these faculty development initiatives should be on strategies to improve teaching proficiency i.e. a focus on educational development of faculty.

The literature shows that significant barriers to faculty development exist and that the development of strategies to unpack and eliminate these barriers, increases the success of these initiatives (Skeff *et al.*, 1997; Ramani, 2006; Cooke *et al.*, 2006; McLean *et al.*, 2008). These barriers are not widely reported on, but the studies that have identified these barriers show that most of these barriers when unpacked take on the form of being mostly contextual and situational, and solutions are therefore not a one size fits all model (McLean *et al.*, 2008). It would therefore be necessary for institutions to explore and identify these barriers in their individual contexts so as to take them into consideration when planning and developing their faculty development initiatives. Thus the aim of this study is to explore the perceptions of the basic and pre-clinical science teachers at the Sefako Makgatho Health Sciences University (SMU) on their need for health professions educator development in order to identify barriers that are preventing them from participating in current faculty development initiatives. These findings will then be used to develop possible recommendations to increase their participation in future faculty development initiatives and thus direct the faculty development plan of the institution.

This research report is centred on the manuscript that has been prepared for submission to the *African Journal of Health Professions Education*. It commences with an extended review on the current literature around faculty development, with specific emphasis on the; need for, barriers to and strategies to overcome these barriers. The report then progresses to an extended methodology section, the manuscript and then

the closing comments and recommendations section, and ends with the reference list and pertinent addenda.

2. EXTENDED LITERATURE REVIEW

Health professions education has evolved significantly from the 1970's till today. This evolution can be described as a shift from a teacher centred, didactic, lecture based teaching to a more student centred, competency, integrated based model of teaching and learning (Crosby, 2000; Steinert, 2006). As this evolution has progressed the resultant changing roles and responsibilities of teachers has also evolved. Previously the 'good teacher' required expert content knowledge and the ability to transmit this knowledge to students (Wilkerson and Irby, 1998), however today's health professions educator is required to also be an information provider, a role model, a facilitator, an assessor, a planner and a resource developer (Crosby, 2000). As part of these changing roles and responsibilities teachers are also required to adopt a more transformative approach to teaching and learning (Kember, 1997). According to Slavich and Zimbardo (2012), a transformative approach involves "creating dynamic relationships between teachers, students and a shared body of knowledge to promote student learning and personal growth" which is achieved by "establishing a shared vision for a course, providing modelling and mastery experiences, challenging and encouraging students, personalizing attention and feedback, creating experiential lessons that transcend the boundaries of the classroom, and promoting ample opportunities for pre-reflection and reflection". This evolution of health professions education has thus resulted in teachers needing to acquire new skills for these evolved roles and responsibilities as well as for the way in which they approach their teaching (Benor, 2000). In order to help teachers to be successful in achieving these teaching aims faculty development is key (Wilkerson and Irby, 1998).

Faculty development is thus viewed as an institutional imperative that provides teachers with opportunities to develop the necessary skills for their evolving practice and for the professionalisation of teaching (McLean *et al.*, 2008). These initiatives and opportunities are necessary because most teachers receive little or no training on how to be an effective teacher, as well as for their other roles and responsibilities (Srinivasan *et al.*, 2011). To compound this issue the qualifications required for appointment and promotion are generally attributed to discipline expertise as well as discipline specific research output (McLean *et al.*, 2008).

Many institutions have acknowledged this need for faculty development by developing and implementing faculty development programs, but for many institutions in Africa faculty development has been identified as one of the main issues facing health professions education (Burdick, 2007). The most common initiatives within these faculty development programs include formal offerings such as group workshops, post-graduate qualifications (diploma, masters and PhD level degrees), short courses, ad-hoc training sessions on specific topics and fellowships (Steinert, 2010). As can be seen there are a variety of methods that can be adopted to achieve faculty development goals. Developers of these initiatives are however encouraged to consider the many diverse factors such as context, individual needs of faculty, institutional needs and purpose amongst others when choosing from these methods (Steinert *et al.*, 2006, Ramani, 2006; McLean *et al.*, 2008; Leiff, 2010; Calkins *et al.*, 2012). McLean *et al* (2008) further suggested that “while the unique context of each institution will impact on how faculty development is managed, we believe that any faculty development programme should address both the professional (i.e. in the interest of the institution) and the personal (i.e. benefitting the individual) development of teachers”. Rubeck and Witzke (1998) have also suggested that a faculty development program should be developed to match a “school’s” culture so as to increase success. Further to this McLean *et al* (2008), further called for the design of faculty development programs to take a very systematic approach “to ensure that key elements such as purpose and need are addressed”. This is an important call as it espouses that faculty development is a structured and considered process that is driven by its purpose as well as the needs of both the institution and the individual teachers. Steinert *et al* (2016) highlighted in their 10 year update of faculty development initiatives that for positive outcomes “context is key”, by noting that faculty development programs that were developed to meet the needs of a specific group of teachers, in a particular context showed greater positive outcomes and participation by those teachers. Thus it can be seen that successful faculty development with positive outcomes and participation is dependent on contextual and situational factors, and that these factors need to be considered when undertaking faculty development.

The target of faculty development initiatives is the teachers, and their buy-in and participation is key to its success (Prebble, 2004; Ramani, 2006). Skeff *et al* (1997) in

a descriptive study identified three main barriers to faculty development viz. the paucity of research on what constitutes effective faculty development, the lack of institutional support, and the misconceptions and attitudes of teachers. A later exploratory study by Cooke *et al* (2006), shows that these main barriers are still relevant, as they identified academic recognition, funding, faculty development, time and institutional support as the main reported challenges to participation of teachers in faculty development. Each of these barriers can be categorised into one of the three main barriers identified by Skeff *et al* (1997). If teachers do not participate in faculty development initiatives it would be important to explore the reasons in order to identify the barriers that are preventing them from participating and develop mechanisms to overcome them (Cooke *et al.*, 2006; Skeff *et al.*, 1997). The literature also shows that many of these barriers can be overcome by unpacking them and then introducing specific enablers to these barriers (Skeff *et al.*, 1997; Steinert *et al.*, 2006, Cooke *et al.*, 2006; Ramani, 2006; McLean *et al.*, 2008; Leiff, 2010; Calkins *et al.*, 2012).

When unpacking these barriers in the context of this study, the barrier of a lack of institutional support is significant, contextual and situational and refers to both an institutional culture as well as appropriation of institutional resources. Many institutions still view research as a priority and thus the resources and the institutional culture generally favour this pillar of higher education, mainly due to the funding model where research generates significant funding (Ramani, 2006). The ability to easily quantify research output and excellence, has made it easier to reward and acknowledge this output and excellence by means of awards and promotion. This has resulted in academics favouring research over teaching (Ramani, 2006). This perceived imbalance results in a lack of motivation for participating in faculty development efforts and feeds into a negative attitude of teachers towards faculty development (Singh *et al.*, 2008).

A lack of personal motivation can also be attributed to teachers questioning participating in faculty development because they do not perceive a need to improve their teaching (Carrol, 1993). The literature shows that many teachers have significant misconceptions about their teaching that lead them to not want to take part in faculty development (Calkins *et al.*, 2012). These misconceptions are derived from their conceptions of teaching and learning, where teaching is seen as a process of transmission of knowledge rather than it being a transformative process (Kember,

1997). Understanding teaching as information transfer, leads to the notion that content expertise is all that is necessary for good teaching and results in a negative attitude towards faculty development (Calkins *et al.*, 2012). A change in these misconceptions and attitude is necessary for their participation and this change should be driven by an institutional culture that encourages a more evolved conception of teaching and learning (McLean *et al.*, 2008).

When we further unpack the misconceptions and attitudes of teachers about faculty development we see that there is an intimate link with the prevailing institutional culture. Thus in order to change the perceptions of teachers towards faculty development and promote participation, there has to be an appropriate institutional culture that promotes and thus encourages faculty development. They are unfortunately not mutually exclusive entities and should not be treated as such (Ramani, 2006; Steinert, 2000; Lieff, 2010). Because faculty development is an institutional imperative, institutions that want to drive a faculty development agenda need to create an institutional culture that promotes participation in faculty development (McLean *et al.*, 2008). Institutions need to put in place strategies that promote an institutional culture and thus enable faculty development. These strategies include promoting a culture that values teaching, rewards excellence in teaching, provides funding, recognises scholarship in teaching, promotes a mentorship program for teachers, and elevates teaching to the level of research (Ramani, 2006; Steinert *et al.*, 2006; Cooke *et al.*, 2006; Skeff *et al.*, 1997).

It can thus be seen from the literature presented that as part of the systematic development and planning of a faculty development program, consideration must be given to the barriers that exist to a faculty development program. The identification of these barriers, and the introduction of mechanisms to overcome them, will increase the participation of the teachers in these faculty development programs. McLean *et al.* (2008), used the following analogy in their guide to faculty development, when discussing successful faculty development practice; “Passengers embark on a journey for many different reasons (Fullan, 1993). If the destination is not advertised or is not suitable, few passengers will start the journey. If the journey changes *en route*, some will disembark along the way. To cater for all travellers, it is important to know who they are, where they want to go and why they are taking this particular excursion”. They continue with the analogy to justify a process of deriving purpose and need,

planning, evaluating and then determining satisfaction, and then starting again. The part of this process that is pertinent to this study is the determination of why the basic and preclinical science 'passengers' at SMU did not find the journey 'suitable' and thus did not get on board. As part of an evaluation of the current faculty development programme it would be necessary to explore their perceptions on faculty development to identify the barriers that are preventing them from participating and to then use these findings to inform future faculty development initiatives in order to ensure increased participation of the basic and preclinical science teachers.

3. RESEARCH QUESTION

What are the perceptions of the basic and preclinical science lecturers at SMU with regards to health professions educator development?

4. OBJECTIVES

- To ascertain if the basic and preclinical science lecturers believe that they are equipped to teach health professions students.
- To ascertain if the basic and preclinical science lecturers believe that they need health professions educator development.
- To identify barriers that they feel are preventing them from participating in available faculty development initiatives.

5. EXTENDED METHODOLOGY

STUDY DESIGN

The study design was interpretivist within a qualitative methodological framework (Henning *et al.*, 2004). Savenye and Robinson (1996, pp 1046), state that a qualitative methodology involves the collection of highly detailed, rich descriptions of human behaviours and opinions. It further recognises the perspective that humans construct their own reality, and an understanding of what they do may be based on why they believe they do it. Further to this the choice of an interpretivist paradigm was because it allowed one to be able to depend on the “participants’ views of the situation being studied” (Creswell, 2003, pp8) to derive insight into the phenomena in question.

STUDY POPULATION AND SAMPLING

The study population consisted of all 102 full time basic and preclinical science teachers in the School of Medicine and the School of Science and Technology at SMU. These teachers were from the departments of Biochemistry, Biology, Chemistry, Computer Science, Human Anatomy, Human Physiology, Language Proficiency, Mathematics and Applied Mathematics, Medical Physics, Physics, Psychology and Statistics and Operations Research. The research participants included all academic ranks viz. Junior lecturer, Lecturer, Senior Lecturer, Associate Professor and Professor, irrespective of years of experience. Only academic staff that were full-time employees were recruited for the study. Part-time/contract academic staff were excluded from the study due to the temporary nature of their employment, and the probability that they might not be available for both phases of the data collection of the study.

DATA COLLECTION

The data collection was completed in two phases.

Prior to data collection in the first phase and only once ethical approval was granted by Stellenbosch University, permission was sought from the Vice Chancellor and the respective Deans of the School of Medicine and of the School of Science and Technology of SMU to carry out the study. Once permission was granted from these

stakeholders, participants were identified via the office of the Dean of both of the Schools involved.

Phase 1:

This phase involved all 102 participants who were requested to complete and return a short questionnaire as well as informed consent (Addendum 1 and 2). The questionnaire and informed consent forms were hand delivered to the participants. The choice of a questionnaire for data collection in the first phase was multi-fold. Firstly the questionnaire was a cost effective manner to collect the required cross-sectional data from the large number of participants. The participants could also complete the questionnaire in their own time but within the prescribed due date. It was also necessary for participants to check their personal records for specific information (qualifications and dates completed as well as number of years of service to SMU), so the questionnaire allowed them the space and time to do so (Maree *et al.*, 2007). Participants were allowed seven working days to complete the questionnaire. The questionnaires were anonymised (participants were assigned a unique study code and each questionnaire was labelled with a unique code). The code-participant database was created on Microsoft Excel. The code-participant database was password protected and only accessible by the principal researcher. The need for identification of participants by the principal researcher was for the purposes of the second phase of data collection i.e. the face to face interviews.

The questionnaire requested the following information; age, gender, department, academic rank, teaching experience in years, years of service at SMU, highest qualification and possession and description of any educational qualifications.

The participants were also requested to answer the following two questions with a YES/NO:

1. Do you believe that you are adequately equipped to teach/train health professions students?
2. Do you believe that you need further educational development to enhance your current teaching practice?

Phase 2:

Based on their responses to the Phase 1 questionnaire, participants were stratified into the following five groups:

Table 1: Basis of stratification of the five groups

	Educational qualification	Believe that they are adequately equipped to teach health professions students		Believe that they need further educational development		Number of Participants (Number Interviewed)
		YES	NO	YES	NO	
Group 1	YES	X		X		6 (2)
Group 2	YES	X			X	6 (2)
Group 3	NO	X		X		14 (3)
Group 4	NO	X			X	5 (3)
Group 5	NO		X	X		13 (3)

In total thirteen participants were purposively sampled from these five groups for individual interviews, this type of sampling was adopted to maximize the spread of age, rank and type of educational qualifications (Henning *et al.*, 2004). Each of these participants were issued with a participant interview number (PIN). Their quoted responses in the results section of the manuscript make reference to their respective PIN to maintain confidentiality.

The choice of face to face interviews was to provide insight into the participants' personal perspectives and relevant experiences (Crabtree and Miller., 1999). The interviews also allowed for the collection of rich descriptive data that helped to

understand the participants' construction of knowledge and social reality as was required by the interpretivist paradigm (Maree *et al.*, 2007). The interviews were conducted by an independent interviewer who was not involved in the research. This was done to eliminate the possibility of the principal researcher affecting the responses of the participants (this being mainly due to the study participants being colleagues). The interviewees were asked an exploratory question that was based on their response in the questionnaire i.e. "Based on your response in the questionnaire that you believe that you are (equipped/not equipped) to teach health professions students, tell me about the activities that you have engaged in or are engaging in to strengthen your teaching practice". This question was then followed up with prompts that intended to elicit a deeper understanding of their responses.

The interviews were audio recorded, and audio files were stored in a password protected folder on the principal researcher's personal computer, and a back-up of the recordings was stored on a password protected USB flash drive in the principal researcher's personal safe. The audio recordings were transcribed and anonymised by an independent transcription company. The transcripts were made available to the participants for member checking, and the member checked transcripts were then analysed to ensure trustworthiness of the data.

DATA ANALYSIS

The qualitative analysis took the form of a thematic analysis using an inductive, iterative approach (Braun and Clark, 2006), specifically identifying barriers to the participants' involvement in faculty development and the strengthening of their teaching practice (French *et al.*, 2012). Responses were coded and indexed, thereby deriving themes, and then defining these themes. These findings were then reported as defined themes illustrated as vivid and/or compelling extract samples (Vaismoradi *et al.* 2013). In the discussion, the defined themes were compared to existing literature from other settings to determine the generalisability and transferability of the findings.

6. THE MANUSCRIPT

[Prepared for publication in *African Journal of Health Professions Education*]

TITLE

The perceptions of the basic and pre-clinical science lecturers at Sefako Makgatho Health Sciences University on their need for health professions educator development.

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ABSTRACT

Background

Faculty development is an institutional imperative that aims to ensure that health professions educators are adequately equipped as educators in their profession. Institutions have thus developed and implemented faculty development programs but barriers exist that hinder participation in them. Evidence shows that the identification and overcoming of these barriers would act to increase participation.

Objectives

To explore the perceptions of teachers on their need for health professions educator development in order to identify barriers that are preventing them from participating in current faculty development initiatives.

Methods

The study design was interpretivist within a qualitative methodological framework. One hundred and two basic and preclinical science teachers were identified to potentially participate in this study. Phase one of data collection involved a self-administered questionnaire that was sent to all participants. In phase two, the responses to the questionnaire were analysed and used to purposively sample 13 participants for individual interviews.

Results

A response rate of 43% was recorded for the questionnaire. The second phase findings revealed that teachers perceived a need for further educational development. However, the barriers of; misconceptions and beliefs with regards to funding, institutional support and their conceptions of teaching; perceived absence of an institutional faculty development plan; an institutional focus on research; and a lack of time and scheduling issues, hinder their participation.

Conclusion

Basic and preclinical science teachers at SMU want further educational development, however the perceived barriers prevent them from participating. These identified barriers need to be overcome in order to increase their participation in future faculty development initiatives.

INTRODUCTION

There has been a major global pedagogical shift in medical education in the past half a century. This shift has been described as a move away from a teacher centred, didactic, lecture based teaching to a more student centred, competency, integrated based model of teaching.^[1] It has been reported that Africa at large has unfortunately not kept pace with this shift due to socioeconomic and political instability, failure to rapidly overcome the enervated change in substituting the old curriculum and redefining the goals of medical education.^[2]

This pedagogical shift has also resulted in significant complex demands placed on health professions educators with regards to their teaching and other evolving academic responsibilities.^[3] These demands require the acquisition and development of skills which are not universally innate to the profession or to the qualifications required for appointment and promotion.^[4] This has necessitated the development and implementation of comprehensive faculty development programs by institutions to assist these health professions educators with their educational development as well as other responsibilities.^[5] However Burdick has identified faculty development as one of the main challenges that face health professions education in Africa.^[6]

The Sefako Makgatho Health Sciences University (SMU) has endeavoured to provide faculty development opportunities to their teachers in the form of a short course in health professions education as well as funding for educational development and research. There was a perceived lack of interest and participation in these faculty development initiatives by the basic and preclinical science teachers. The literature identifies three main barriers to faculty development viz. lack of institutional support, the misconceptions and attitudes of teachers and the paucity of research on what constitutes effective faculty development.^[7] These barriers have also been shown to be largely contextual and based on institutional culture.^[4] Thus this study was undertaken to explore the perceptions of the basic and preclinical science teachers at SMU on their need for health professions educator development in order to identify barriers that are preventing them from participating in current faculty development initiatives. The identification of these barriers may indicate suggestions for overcoming them and thus increasing their participation in future faculty development initiatives.

METHODS

Research Ethics

Ethical clearance for this study was received from the Stellenbosch University Health Research Ethics Committee (S17/03/058) and permission to conduct research was obtained from the Sefako Makgatho Health Sciences University Research Ethics Committee.

Research Setting

The Sefako Makgatho Health Sciences University is located in Pretoria, South Africa. The institution is comprised of five schools (Medicine, Oral Health, Health Care Sciences, Pharmacy and Science and Technology). Each of these schools are comprised of discipline specific departments. The institution offers undergraduate and postgraduate qualifications and training in a wide variety of health professions including medicine, nursing science, dentistry and physiotherapy.

Study Design

The study design was interpretivist within a qualitative methodological framework.^[8]

Study Population

All 102 full time basic and preclinical science teachers in the School of Medicine and the School of Science and Technology at SMU were invited to participate in the study. These departments included Biochemistry, Biology, Chemistry, Computer Science, Human Anatomy, Human Physiology, Language Proficiency, Mathematics and Applied Mathematics, Medical Physics, Physics, Psychology and Statistics and Operations Research.

Data Collection

The data collection was completed in two phases.

Phase 1:

This phase involved all 102 participants who were requested to complete and return a short questionnaire. The questionnaire requested the following; age, gender, department, academic rank, teaching experience in years, years of service at SMU, highest qualification and possession and description of any educational qualifications.

The participants were also requested to answer the following two questions with a YES/NO:

1. Do you believe that you are adequately equipped to teach/train health professions students?
2. Do you believe that you need further educational development to enhance your current teaching practice?

Phase 2:

Based on their responses to the Phase 1 questionnaire, participants were stratified into the following five groups:

Table 1: Basis of stratification of the five groups

	Educational qualification	Believe that they are adequately equipped to teach health professions students		Believe that they need further educational development		Number of Participants (Number Interviewed)
		YES	NO	YES	NO	
Group 1	YES	X		X		6 (2)
Group 2	YES	X			X	6 (2)
Group 3	NO	X		X		14 (3)
Group 4	NO	X			X	5 (3)
Group 5	NO		X	X		13 (3)

In total thirteen participants were purposively sampled from these five groups for individual interviews. This was to ensure that group participants represented diversity with regards to age, rank, experience, highest qualification and discipline of the population. Each participant was issued with a participant interview number (PIN). Their quoted responses in the results section make reference to their respective PIN to maintain confidentiality. The interviews were

conducted by an independent interviewer who was not involved in the research. The interviewees were asked an exploratory question that was based on their response in the questionnaire i.e. “Based on your response in the questionnaire that you believe that you are (equipped/not equipped) to teach health professions students, tell me about the activities that you have engaged in or are engaging in to strengthen your teaching practice”. This question was then followed up with prompts that intended to elicit a deeper understanding of their responses. The interviews were audio-recorded and transcribed verbatim. The transcripts were made available to the participants for member checking, and the member checked transcripts were then analysed thematically using an inductive, iterative approach,^[9] specifically identifying barriers to the participants involvement in faculty development and their thoughts on strengthening their teaching practice.^[10] Responses were coded and indexed, thereby deriving themes, and these identified themes were defined. These findings are reported as defined themes illustrated with vivid and/or compelling extract samples.^[11]

RESULTS

Participation

Fifty-seven of the 102 potential participants returned their questionnaires. Thirteen declined to participate in the study, resulting in a final participant number of 44 (43% response rate).

Perceived need for educational development

There was a notable perceived need for educational development. Participant 11 indicated this need by stating that; *‘If we can have workshops to help us in order to keep up with the times because things are changing all the time’*. Participant 3 further added a need for educational development by saying; *‘I would like to become more proficient especially for health sciences education because my approach to education is a very general one’*. As the interviews progressed and the perceptions were being probed by the prompts, for some of the participants who indicated in their questionnaires that they felt equipped and did not need educational development, there was a self-realisation that there was a need for educational development.

The only participants who indicated that they do not need educational development were those who already had formal educational qualifications and training. Participant 9 stated that further development is not necessary because they ‘already have the necessary training’. Further to this participant 6 found no need to participate in educational development because due to their educational qualification, they feel that they have enough knowledge to ‘self-develop’. It was

also observed that the participants with educational qualifications had advanced conceptions of teaching and learning. Participants 6 and 7 respectively stated that they adopt student centred activities. Further to this participants 5 and 9 spoke about promoting an integrated model of teaching and learning.

Identified themes:

Theme 1: Misconceptions

There were three different misconceptions that were identified under this theme.

Misconception A: What educational development is

There was a misconception regarding educational development, and it was understood to mean the general career development and not specifically related to educational competency. Participant 4 responded as follows, when asked about opportunities provided by the institution for educational development; *'...they do encourage people to further their studies, to do their PhD's'*. This misconception was exemplified by responses in the questionnaire to the possession and description of educational qualifications, where respondents referred to academic qualifications.

Misconception B: Lack of institutional funding for educational qualifications

All participants had at minimum a Master's degree in their specific disciplines. Participants expressed the impression that the institution will not offer financial support, incentives and/or recognition of a qualification that would be deemed at the same level (Masters) or lower (Diploma) for their educational development. This was a previous policy of the institution and it appears that participants are not aware of the policy change. This has created a misconception that the institution would not support their efforts for educational development through a postgraduate qualification. Participant 8 responded; *'I do not think so'*, when asked if he thought the institution will fund an educational qualification. Participant 1 spoke to the lack of recognition and incentives by the institution for educational qualifications by saying; *'...give them the acknowledgement and give them the support that they need and the incentive, because if you finish a degree here you get an incentive, but not if it's a degree less than what you have'*.

Misconception C: Educational qualifications are not necessary to teach

A misconception exists that educational qualifications are not necessary to teach with a belief that development in the form of workshops are necessary but a teaching qualification is not necessary. Participants 2, 1 and 4 respectively responded:

'...training and workshops can help me to become a good teacher but a teaching qualification, I don't think it will make any difference'

'I don't think you have to have a higher education diploma or a degree to be able to teach. I think a lot of us do a fairly adequate job by past experiences, we learn on the go'

'I do not think there is a need to actually go for educational development. Yes, it could help but we can still do it without even that (sic) educational certificate or background'

An identified reason as to why it is not necessary was the perception that an educational qualification is theoretical and provides no practical assistance to enhance teaching practice. Participant 1 responded that: *'...teaching is not a theoretical thing'* and in reference to an MPhil in health professions education, the participant responded *'...I think it's more theory based and I'm more of a practical kind of person'* and participant 2 felt similarly by saying; *'I say its theory based, not something I'm interested in'*.

Associated with this theme was the misconception that content knowledge is the most important factor that determines and allows you to be a good teacher. Participants 1 and 4 respectively responded;

'I also have to be very knowledgeable with what I am teaching. It is all about mastering what you are teaching'

'I feel that knowledge, vast knowledge on what you are teaching is the most important thing'

Theme 2: Lack of an institutional drive for faculty development

There was a perceived lack of an institutional drive for educational development. Participant 4 stated that the institution *'...can do more to encourage people to do this kind of (sic) diplomas or qualifications'*. There also exists a lack of awareness of educational development initiatives offered by the institution. Participant 3 reported not being aware of the offerings of the educational unit at the institution; *'I don't know if the CAE presents any courses for educational development'*. The general perception is that the institution is not doing enough with regards to

educational development. Participant 5 responded; *'I think that the university is not doing enough'*, when asked about opportunities for educational development. Participant 13 felt that the teachers have no say on educational development by stating that; *'No one is listening to the academic staff'*. Further to this participant 3 implied a lack of an institutional faculty development plan, goals and priorities by stating that; *'There's definitely a gap at this institution, because if educational development is not synchronised, then everyone does their own thing'*.

Theme 3: Focus on research

Participant 13 responded that the institutional focus is on research; *'In this institution most people were more likely to do research'*. There was also a sense that the institutional rewards, recognition, funding opportunities and criteria for promotion are based on research, thus the participants focus their efforts on discipline specific research. Participant 10 shared this notion by stating that the core focus of the university support is *'on content and research and not teaching'*.

Theme 4: Lack of time and scheduling issues

There was a general view of a lack of time to participate in educational development initiatives, participant 12 stated, *'I have never had time to attend them unfortunately'*. They were discouraged from taking part as it would increase the physical and mental strain on them due to current workloads.

Scheduling of the educational development initiatives also prevented them from participating as they were unable to extricate themselves from their teaching obligations. Participant 1 and 2 respectively shared their views by responding; *'They just pick a day and say it's on this day in this board room from 8 until 4, but if I have class in the middle of the day obviously my students come first and the short courses offered will still run over six weeks, I don't have that free six weeks to be able to run to a short course'* and *'I would gladly like to engage, to attend, but my schedule does not allow'*.

DISCUSSION

Faculty development is an institutional imperative but has been identified as one of the main challenges that face health professions education in Africa.^[6] Therefore this study explored the perceptions of the basic and preclinical science lecturers at SMU on their need for further educational development. This was done with the aim of identifying their barriers to faculty development and using the insight gained to try to overcome these barriers and increase their participation in future faculty development initiatives. The overall perceptions of the staff are consistent with two of the three main barriers as identified by Skeff *et al*, viz. a lack of institutional support as well as the misconceptions and beliefs of the teachers and will thus be the focus of the discussion.^[7]

The misconceptions and beliefs identified in this study, reflect on the wide range of perceptions in the literature, where many are contextual and situational in nature.^[4] In this study teachers indicated that they need educational development but the barriers that they put forward play a significant role in preventing them from participating.

An interesting finding was the significant number of teachers that had a misconception of what ‘educational development’ actually meant. It was thought by them as something that refers to their overall career development and not specifically to teaching. These findings are similar to that of a study by Steinert *et al*, which points to a general lack of awareness of what educational development actually is. The other situational misconception that emerged was misinformation on the funding opportunities available for their educational development.^[3] This misconception resulted in the belief that there is a lack of institutional support for faculty development with a false perception about the institutional goals and priorities with regards to faculty development. This misconception was augmented by their belief that the university did not have a faculty development plan and that the university has a core research focus. The institution however does have in place funding opportunities, rewards and incentives for educational development but participants are unaware of them and this was therefore expressed as a significant barrier.

These misconceptions and beliefs result in the development and perpetuation of an institutional culture that does not promote faculty development. Bligh stated that; “faculty development programmes are an outward sign of the inner faith that institutions have in their workforce”^[12], thus the promotion and marketing of the institution’s faculty development plan and funding opportunities, would be a favourable starting point to changing the current perceptions,

misconceptions and institutional culture to favour faculty development. The reported lack of awareness, and institutional misconceptions can possibly be attributed to a lack of communication and misinformation between stakeholders, which has been shown to be a major contributing barrier to teachers' misconceptions about faculty development. ^[13]

Another major misconception that was found was the belief that a teacher does not require an educational qualification to teach, further to this is that content knowledge is the most important factor for teaching competence. These are common misconceptions that are reported in other studies of this type. ^{[7][14]} This belief has also been shown to contribute to an institutional culture that will not favour faculty development and also significantly diminish the likelihood of participation. ^[7] These types of misconceptions perpetuate into a self-belief of teaching expertise due to content expertise and results in a negative attitude towards faculty development. ^[15] A change in these misconceptions and attitude is necessary for faculty development success. This change needs to be driven as part of an institutional faculty development plan to be more successful. ^[16] It is thus important for these false perceptions and misconceptions to be responded to in order to negate their effects. This can be done by creating awareness of the importance and benefits of faculty development and needs to form part of the faculty development plan. Skeff *et al* report that changing the attitudes of teachers towards faculty development is the most difficult part of faculty development. ^[7] Further to this, teachers need to be motivated and the beneficial significant positive effects of faculty development on teaching competencies need to be reinforced and that this should be an important goal of the faculty development plan. ^[17]

This study has also shown that there is a perception that the institution's focus was on research and not teaching, and thus the participants focus matched this perception. It has been shown that it is important for the success and increased participation of teachers in faculty development for the status of teaching to be elevated to be equivalent to research. ^[15] This again requires significant effort by the institution to promote a teaching and thus faculty development culture. Linked to this barrier is the lack of time to get involved in faculty development initiatives which is a frequently reported barrier. ^{[3][7]} This logistical barrier needs to be taken into account when planning faculty development initiatives to ensure that scheduling conflicts are minimised. It has also been shown that if the institutional culture promotes faculty development and espouses the benefits of faculty development as well as rewards teaching excellence then teachers are more likely to find the necessary time to take part in faculty development initiatives. ^[16]

The findings of this study are significant, and demonstrate the importance of exploring the perceptions of teachers on faculty development. There are however a few identified limitations of these findings. The first limitation is the style in which the interviews were conducted. The independent interviewer may not have probed fully for positive responses and rather keyed in on the negative responses. The participants thus identified the interview as an opportunity to vent institutional frustrations. Another limitation was that some teachers misunderstood the concept of educational development, and thus provided perceptions based on this misconception, and were thus irrelevant to the objectives of the study. A final limitation was the significant misinformation and lack of awareness of the participants with regards to and about faculty development at the institution, which resulted in the interviews not being able to elicit a deeper insight.

CONCLUSION

The findings of this study show that there is a perceived need amongst staff for their educational development but the barriers of their misconceptions and beliefs and the prevailing institutional culture play a major role in hindering their participation in faculty development initiatives. It would thus be important for the institution to ensure that these identified barriers are taken into consideration in the development and promotion of future faculty development initiatives to ensure the increased participation of the basic and preclinical science teachers. Strategies should include better communication with teachers on the institutions faculty development plan and about the enablers that are currently in place to assist the plan. An important strategy would also be to address the identified barriers with a faculty development awareness program.

ACKNOWLEDGEMENTS

The authors would like to acknowledge the colleagues that participated in this study for their time and valuable insight and the contribution of the independent interviewer Ms Nomsa Malete.

CONFLICT OF INTEREST

None

AUTHOR CONTRIBUTIONS

All authors contributed significantly to the conceptualisation, design, analysis and critical revision of the manuscript.

FUNDING SOURCES

The research was funded by the Sefako Makgatho Health Sciences University Teaching Development Grant.

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7. CLOSING COMMENTS AND RECOMMENDATIONS

This research assignment has explored the perceptions of the basic and pre-clinical science lecturers at SMU on their need for educational development with the aim of identifying barriers that are hindering them from participating in current faculty development initiatives. The assignment has been presented in the format of a research article, and also includes an extended literature review to supplement the introduction to the article and provide a basis for the research question.

The study has shown that the basic and preclinical science teachers at SMU recognise a need for health profession educator development. They however are not participating in the current faculty development initiatives mainly due to their misconceptions and what they perceive to be the prevalent institutional culture that does not promote faculty development. When their misconceptions are unpacked, it shows that these misconceptions are mostly due to misinformation and miscommunication. Further misconceptions are due to their conceptions of teaching and learning which in this group are fairly diverse.

The diversity of conceptions needs to be taken into consideration when developing future faculty development initiatives. These wide ranging conceptions will require an individualised approach. A possible strategy would be to embark on an institutional health professions education awareness drive, and also perform a needs analysis for these teachers to determine their requirements. The institutional health professions education awareness drive would also act to alleviate the many misconceptions that have been created by misinformation. It is also recommended that a tiered approach to faculty development is employed. This approach would involve multiple initiatives with different offerings which are implemented to answer to the common identified needs of individuals who are grouped together. If initiatives are designed to answer to these needs, more teachers would find a need to partake. Grouping them together would allow them to grow together and possibly promote the formation of a community of practice. The formation of a community of practice would then allow the institutional culture to be developed to promote a faculty development and health professions education agenda.

It is interesting to note that although the literature shows that many of the barriers are contextual and situational, when they are categorised, they comfortably fit into those

main barriers that are identified in the literature. It thus shows that although institutions are diverse on many levels, much of the findings generated in this study and that is present in the literature is possibly transferable and generalizable to other similar contexts and situations. With regards to the institution, as much as these findings were derived from a specific group of teachers at SMU, much of it is transferable and generalizable to the other teachers at SMU. This is due to the fact that many of the identified barriers were institutional issues.

The findings of the study highlight the importance of conducting research of this type because it has achieved its aim by showing that the perceptions of teachers play an important role in determining their willingness and motivation to participate in faculty development initiatives. It has also highlighted the importance of dealing with misinformation and misconceptions, so as to not allow them to perpetuate into false beliefs and attitudes that do not favour faculty development and/or have a negative impact on institutional culture. This study has also opened up other possible avenues/ideas for further research and contemplation. These include the investigation of possible strategies that will develop an institutional culture that promotes faculty development and teaching and learning.

On personal reflection of this study, it has helped me to develop a better understanding of my colleagues' attitudes and beliefs with regards to health professions education and faculty development. Both of which I have identified to be fields in which I want to pursue scholarship and excellence. The main reason for this is that it finds resonance with the central tenet of my life philosophy, which is to *'be the change that you would like to see in the world'*. I realise how important becoming a transformative teacher is to the current situation that we find ourselves in at higher education institutions and to the current students who sit in our classes. We have to be able to inspire them, to motivate them, to develop them to think critically and most importantly for them to be the change agents that we require in society. This is only possible through effective faculty development.

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9. ADDENDA

- 9.1. Participant Questionnaire**
- 9.2. Participant Information Leaflet and Consent Form**
- 9.3. Participant Interview Schedule**
- 9.4. Extract from a Transcription of a Participant**
- 9.5. *African Journal of Health Professions Education* Author Guidelines**

9.1. Participant Questionnaire

THE PERCEPTIONS OF BASIC SCIENCE LECTURERS AT SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY ON THEIR NEED FOR HEALTH PROFESSIONS EDUCATOR DEVELOPMENT

Melvin Govender

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X 4972

079 590 4853

BMS: 4th Floor, N411

QUESTIONNAIRE #: _____

1. SOCIO-DEMOGRAPHIC DETAILS

- 1.1. Department/Discipline:
- 1.2. Age:
- 1.3. Gender:

2. ACADEMIC PROFILE

2.1. Experience

2.1.1. Teaching experience (in years):

2.1.2. Number of years in service at

Medunsa/UL (Medunsa Campus)/SMU:

2.1.3. Academic Rank (Junior Lecturer, Lecturer, Senior Lecturer, Associate Professor, Professor):

2.1.4. What is your highest academic qualification?

3. EDUCATIONAL QUALIFICATIONS

3.1. Do you have any formal educational training or qualifications

(eg. Diploma in Education/Higher education/Health sciences education/Health professions education and/or a Masters in Education/Higher education/Health sciences education/Health professions education)

YES NO

3.1.1. If YES to 3.1. please describe the training and/or qualification that you have

4. PERCIEVED READINESS AND NEED

4.1. Do you believe that you are adequately equipped to teach/train health professions students?

YES NO

4.2. Do you believe that you need further educational development to enhance your current teaching practice?

YES NO

END OF QUESTIONNAIRE

“BE THE CHANGE YOU WANT TO SEE IN THE WORLD”-Mahatma Gandhi

9.2. Participant Information Leaflet and Consent Form

PARTICIPANT INFORMATION LEAFLET

TITLE:

THE PERCEPTIONS OF BASIC SCIENCE LECTURERS AT SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY ON THEIR NEED FOR HEALTH PROFESSIONS EDUCATOR DEVELOPMENT

ETHICS REFERENCE NUMBER: S17/03/058

PRINCIPAL INVESTIGATOR: Dr Melvin M Govender

ADDRESS:

Department of Physiology

Sefako Makgatho Health Sciences University

P.O. Box 130

Medunsa

0204

Dear Colleague

My name is Dr Melvin Govender and I am a senior lecturer in the Department of Physiology at SMU. I am currently completing a Masters in Philosophy (Health Professions Education) at the Stellenbosch University. As partial fulfilment of the MPhil in Health Professions Education I need to complete a research project. I would thus like to invite you to participate in this research project that aims to explore the perspectives of the basic science lecturers at SMU with regards to their professional educational development.

Please take some time to read the information presented here, which will explain the details of this project and contact me if you require further explanation or clarification of any aspect of the study. Also, your participation is **entirely voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committee (HREC) at Stellenbosch University** and will be conducted according to accepted and applicable National and International ethical guidelines and principles, including those of the international Declaration of Helsinki October 2008.

STUDY BACKGROUND

Health professions education has undergone a major pedagogical shift in the past half a century. This has resulted in a need for staff development, specifically educational development in order for staff to be equipped with the necessary skills to ensure the appropriate levels of education and training of health professions students are achieved.

Thus this study will be undertaken to explore the perspectives of the basic science lecturers at SMU with regards to their professional educational development.

OBJECTIVES OF THE STUDY

- To establish the educational qualifications of the basic science lecturers at the SMU.
- To ascertain if these lecturers believe that they are equipped to teach health professions students.
- To explore the perceptions of these lecturers on their need for further educational development.

STUDY PURPOSE

The findings of the study form part of an ad-hoc needs analysis for staff development. It will inform SMU management structures as to the current perceptions of staff on educational development as well as provide an overview of their current educational profile.

This study will also allow staff an important opportunity to introspect and reflect on their current teaching and learning practices as well as beliefs. It is hoped that this study will promote current health professions education trends by exposing the participants to it and thus stimulating their interest in the field of health professions education.

STUDY PROCESS

Step 1: An appointment will be made with each of participant before the study commences in order to obtain consent and to provide necessary background.

Step 2: Willing participants will then be handed a questionnaire, which will need to be completed within 7 working days of receipt.

Step 3: Purposively sampled participants will then be approached for face to face interviews.

Step 4: The interview will be held in the departmental boardroom and is expected to last an hour. The interview will be audio-recorded. You will not be remunerated for participation in this study. After the interview is completed, your participation in the study is complete.

Step 4: The data will then be anonymised, analysed, and presented as an assignment that will be submitted for examination.

Step 5: It is envisioned that the data acquired from the study will be published in a peer reviewed academic journal. The findings of the study will also be presented to the management structures at SMU for their consideration.

ETHICAL CONSIDERATIONS

- Confirmation of ethical approval from the Stellenbosch University Research Ethics Committee as well Sefako Makgatho Health Science University Research Ethics Committee, as well an approval letter from the university management will be available on request.
- No reward will be given to those who participate.
- Findings of this study may be published and/or presented at/in national/international journals and/or conferences, but at no stage will individual responses be disclosed.

CONTACT INFORMATION

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If you are willing to participate in this study please sign the attached Declaration of Consent and hand it back to me.

Yours sincerely

Dr Melvin M. Govender

Declaration by participant

By signing below, I agree to take part in a research study entitled: **THE PERCEPTIONS OF BASIC SCIENCE LECTURERS AT SEFAKO MAKGATHO HEALTH SCIENCES UNIVERSITY ON THEIR NEED FOR HEALTH PROFESSIONS EDUCATOR DEVELOPMENT**

I declare that:

- I have read the attached information leaflet and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) On (*date*) 2017.

.....

Signature of participant

9.3. Participant Interview Schedule

Interview Schedule

Purpose and Instruction

In the research information leaflet provided to you, it was indicated that the principal researcher Dr Melvin M Govender is undertaking this research project as partial fulfilment of an MPhil in Health Professions Education at Stellenbosch University.

You have consented to this interview, and are reminded that you may withdraw from this research at any point.

I would like to reiterate that the purpose of this interview is to explore your perceptions on your need for further educational development.

You are also reminded that all the information obtained in this interview is strictly for research purposes, and your confidentiality will be assured at every step. Your name will not be made available in any form during the reporting of the findings.

Before we start with the interview, do you have any questions?

I would also like to request that the interview is audio recorded, as it will help the principal researcher to listen to the interview and for him to make a transcript of the interview for data analysis. Are you okay with the interview being audio-recorded?

Interview Questions and Prompts

1. Based on your response in the questionnaire that you believe that you are equipped to teach health professions students, tell me about the activities that you have you engaged in or are engaging in to strengthen your teaching practice?"
Or
Based on your response in the questionnaire that you believe that you are not equipped to teach health professions students, tell me about the activities that you have you engaged in or are engaging in to strengthen your teaching practice?
2. Regarding these activities, do you feel that they have strengthened your teaching practice and how?
3. Do you feel you need to do more to strengthen your teaching practice?
If Yes: What do you feel you need to do more of to strengthen your teaching practice?
If No: What makes you feel that you do not need to strengthen your teaching practice further?
4. Do you feel that you need any special skills to teach health professions students?
5. Do you feel that the university offers you enough opportunities for your educational development?

9.4. Extract from a Transcription of a Participant

- Participant Yeah something like that then and think about it in a physiological way.
- Researcher You don't think they.
- Participant Yes and another psychological way to measure it yeah. So that's uh that way you can already get them to understand where you are going, what's the problem with psychological assessment why do we need to make sure that it's reliable and valid because it's not a physical thing that that's all.
- Researcher Mmm.
- Participant So I like for them to go and think about a problem without consulting anything so when we start discussing it again it makes a bit more sense why we have to study discussing things and then they really enjoy.
- Researcher Oh so you put in a practical component in it?
- Participant Yes I really try to do that.
- Researcher all right so you put in a practical component
- Participant Yes
- Researcher So as they should be thinking of clinical things.
- Participant Oh yes.
- Researcher Like blood pressures and x rays.
- Participant It's a it's a very useful for them to think in that way uh because it's something that they know how to measure physiological changes.
- Researcher Mmm.
- Participant And it helps me to contrast like how do you measure something that is in there and you you don't have an instrument.
- Researcher [Giggles] establish something that could be wrong.
- Participant Yah so its good too, especially those within with uh health sciences background measures stuff on humans all the time.
- Researcher Mmm mmm.
- Participant That background makes it easier for them to explain the issues of psychological assessment and why we do certain things.
- Researcher So you say are they in the same class, they they?
- Participant Yes.
- Researcher They are in the same space.

9.5. *African Journal of Health Professions Education* Author Guidelines

Author Guidelines

Please view the [Author Tutorial](#) for guidance on how to submit on Editorial Manager.

To submit a manuscript, please proceed to the AJHPE Editorial Manager website:
www.editorialmanager.com/ajhpe

To access and submit an article already in production, please see the guidelines [here](#).

Author Guidelines

Please take the time to familiarise yourself with the policies and processes below. If you still have any questions, please do not hesitate to ask our editorial staff (tel.: +27 (0)21 532 1281, email: submissions@hmpg.co.za).

Authorship

Named authors must consent to publication. Authorship should be based on: (i) substantial contribution to conceptualisation, design, analysis and interpretation of data; (ii) drafting or critical revision of important scientific content; or (iii) approval of the version to be published. These conditions must all be met for an individual to be included as an author (uniform requirements for manuscripts submitted to biomedical journals; refer to www.icmje.org)

If authors' names are added or deleted after submission of an article, or the order of the names is changed, all authors must agree to this in writing.

Please note that co-authors will be requested to verify their contribution upon submission. Non-verification may lead to delays in the processing of submissions.

Author contributions should be listed/described in the manuscript.

Conflicts of interest

Conflicts of interest can derive from any kind of relationship or association that may influence authors' or reviewers' opinions about the subject matter of a paper. The existence of a conflict – whether actual, perceived or potential – does not preclude publication of an article. However, we aim to ensure that, in such cases, readers have all the information they need to enable them to make an informed assessment about a publication's message and conclusions. We require that both authors and reviewers declare all sources of support for their research, any personal or financial relationships (including honoraria, speaking fees, gifts received, etc) with relevant individuals or organisations connected to the topic of the paper, and any association with a product or subject that may constitute a real, perceived or potential conflict of interest. If you are unsure whether a specific relationship constitutes a conflict, please contact the editorial team for advice. If a conflict remains undisclosed and is later brought to the attention of the editorial team, it will be considered a serious issue prompting an investigation with the possibility of retraction.

Research ethics committee approval

Authors must provide evidence of Research Ethics Committee approval of the research where relevant. Ensure the correct, full ethics committee name and reference number is included in the manuscript.

If the study was carried out using data from provincial healthcare facilities, or required active data collection through facility visits or staff interviews, approval should be sought from the relevant provincial authorities. For South African authors, please refer to the guidelines for submission to the [National Health Research Database](#). Research involving human subjects must be conducted according to the principles outlined in the Declaration of Helsinki. Please refer to the National Department of Health's guideline on [Ethics in Health research: principles, processes and structures](#) to ensure that the appropriate requirements for conducting research have been met, and that the HPCSA's [General Ethical Guidelines for Health Researchers](#) have been adhered to.

Protection of rights to privacy

Research Participants

Information that would enable identification of individual research participants should not be published in written descriptions, photographs, radiographs and pedigrees unless the information is essential for scientific purposes and the patient (or parent or guardian) has given informed written consent for publication and distribution. We further recommend that the published article is disseminated not only to the involved researchers but also to the patients/participants from whom the data was drawn. Refer to [Protection of Research Participants](#). The signed consent form should be submitted with the manuscript to enable verification by the editorial team.

Other individuals

Any individual who is identifiable in an image must provide written agreement that the image may be used in that context in the *AJHPE*.

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Manuscript preparation

Preparing an article for anonymous review

To ensure a fair and unbiased review process, all submissions are to include an anonymised version of the manuscript. The exceptions to this requirement are Correspondence, Book reviews and Obituary submissions.

Submitting a manuscript that needs additional blinding can slow down your review process, so please be sure to follow these simple guidelines as much as possible:

- An anonymous version should not contain any author, affiliation or particular institutional details that will enable identification.
- Please remove title page, acknowledgements, contact details, funding grants to a named person, and any running headers of author names.
- Mask self-citations by referring to your own work in third person.

General article format/layout

Submitted manuscripts that are not in the correct format specified in these guidelines will be returned to the author(s) for correction prior to being sent for review, which will delay publication.

General:

- Manuscripts must be written in UK English (this includes spelling).
- The manuscript must be in Microsoft Word or RTF document format. Text must be 1.5 line spaced, in 12-point Times New Roman font, and contain no unnecessary formatting (such as text in boxes). Pages and lines should be numbered consecutively.
- Please make your article concise, even if it is below the word limit.
- Qualifications, **full** affiliation (department, school/faculty, institution, city, country) and contact details of ALL authors must be provided in the manuscript and in the online submission process.
- Include sections on Acknowledgements, Conflict of Interest, Author Contributions and Funding sources. If none is applicable, please state 'none'.
- Abbreviations should be spelt out when first used and thereafter used consistently, e.g. 'intravenous (IV)' or 'Department of Health (DoH)'.
- Numbers should be written as grouped per thousand-units, i.e. 4 000, 22 160.
- Quotes should be placed in single quotation marks: i.e. The respondent stated: '...'
- Round brackets (parentheses) should be used, as opposed to square brackets, which are reserved for denoting concentrations or insertions in direct quotes.

If you wish material to be in a box, simply indicate this in the text. You may use the table format –this is the *only* exception. Please DO NOT use fill, format lines and so on.

Preparation notes by article type

Research

Guideline word limit: 3 000 words (excluding abstract and bibliography)

Research articles describe the background, methods, results and conclusions of an original research study. The article should contain the following sections: introduction, methods, results, discussion and conclusion, and should include a structured abstract (see below). The introduction should be concise – no more than three paragraphs – on the background to the research question, and must include references to other relevant published studies that clearly lay out the rationale for conducting the study.

Some common reasons for conducting a study are: to fill a gap in the literature, a logical extension of previous work, or to answer an important question. If other papers related to the same study have been published previously, please make sure to refer to them specifically. Describe the study methods in as much detail as possible so that others would be able to replicate the study should they need to. Where appropriate, sample size calculations should be included to demonstrate that the study is not underpowered. Results should describe the study sample as well as the findings from the study itself, but all interpretation of findings must be kept in the discussion section. The conclusion should briefly summarise the main message of the paper and provide recommendations for further study.

- May include up to 6 illustrations or tables.
- A max of 20 - 25 references

Structured abstract

- This should be no more than 250 words, with the following recommended headings:
 - **Background:** why the study is being done and how it relates to other published work.
 - **Objectives:** what the study intends to find out
 - **Methods:** must include study design, number of participants, description of the research tools/instruments, any specific analyses that were done on the data.
 - **Results:** first sentence must be brief population and sample description; outline the results according to the methods described. Primary outcomes must be described first, even if they are not the most significant findings of the study.
 - **Conclusion:** must be supported by the data, include recommendations for further study/actions.
- Please ensure that the structured abstract is complete, accurate and clear and has been approved by all authors. It should be able to be intelligible to the reader without referral to the main body of the article.
- Do not include any references in the abstracts.

Tables

- Tables should be constructed carefully and simply for intelligible data representation. Unnecessarily complicated tables are strongly discouraged.
- Large tables will generally not be accepted for publication in their entirety. Please consider shortening and using the text to highlight specific important sections, or offer a large table as an addendum to the publication, but available in full on request from the author.
- Embed/include each table in the manuscript Word file - do not provide separately as supplementary files.
- Number each table in Arabic numerals (Table 1, Table 2, etc.) consecutively as they are referred to in the text.
- Tables must be cell-based (i.e. not constructed with text boxes or tabs) and editable.
- Ensure each table has a concise title and column headings, and include units where necessary.
- Footnotes must be indicated with consecutive use of the following symbols: * † ‡ § ¶ || then ** †† ‡‡ etc.

Do not: Use [Enter] within a row to make 'new rows':

Rather:

Each row of data must have its own proper row:

Do not: use separate columns for n and %:

Rather:

Combine into one column, n (%):

Do not: have overlapping categories, e.g.:

Rather:

Use <> symbols or numbers that don't overlap:

References

NB: Only complete, correctly formatted reference lists in Vancouver style will be accepted. If reference manager software is used, the reference list and citations in text are to be unformatted to plain text before submitting..

- Authors must verify references from original sources.
- Citations should be inserted in the text as superscript numbers between square brackets, e.g. These regulations are endorsed by the World Health Organization,^[2] and others.^[3,4-6]
- All references should be listed at the end of the article in numerical order of appearance in the Vancouver style (not alphabetical order).
- Approved abbreviations of journal titles must be used; see the [List of Journals in Index Medicus](#).
- Names and initials of all authors should be given; if there are more than six authors, the first three names should be given followed by et al.
- Volume and issue numbers should be given.
- First and last page, in full, should be given e.g.: 1215-1217 **not** 1215-17.
- Wherever possible, references must be accompanied by a digital object identifier (DOI) link). Authors are encouraged to use the DOI lookup service offered by [CrossRef](#):
 - On the Crossref homepage, paste the article title into the 'Metadata search' box.
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 - Provide as follows, e.g.: <https://doi.org/10.7196/07294.937.98x>

Some examples:

- *Journal references:* Price NC, Jacobs NN, Roberts DA, et al. Importance of asking about glaucoma. *Stat Med* 1998;289(1):350-355. <http://dx.doi.org/10.1000/hgjr.182>
- *Book references:* Jeffcoate N. Principles of Gynaecology. 4th ed. London: Butterworth, 1975:96-101.
- *Chapter/section in a book:* Weinstein L, Swartz MN. Pathogenic Properties of Invading Microorganisms. In: Sodeman WA, Sodeman WA, eds. Pathologic Physiology: Mechanisms of Disease. Philadelphia: WB Saunders, 1974:457-472.
- *Internet references:* World Health Organization. The World Health Report 2002 - Reducing Risks, Promoting Healthy Life. Geneva: WHO, 2002. <http://www.who.int/whr/2002> (accessed 16 January 2010).
- Legal references
- Government Gazettes:

National Department of Health, South Africa. National Policy for Health Act, 1990 (Act No. 116 of 1990). Free primary health care services. Government Gazette No. 17507:1514. 1996.

In this example, 17507 is the Gazette Number. This is followed by :1514 - this is the notice number in this Gazette.

- Provincial Gazettes:

Gauteng Province, South Africa; Department of Agriculture, Conservation, Environment and Land Affairs. Publication of the Gauteng health care waste management draft regulations. Gauteng Provincial Gazette No. 373:3003, 2003.

- Acts:

South Africa. National Health Act No. 61 of 2003.

- Regulations to an Act:

South Africa. National Health Act of 2003. Regulations: Rendering of clinical forensic medicine services. Government Gazette No. 35099, 2012. (Published under Government Notice R176).

- Bills:

South Africa. Traditional Health Practitioners Bill, No. B66B-2003, 2006.

- Green/white papers:

South Africa. Department of Health Green Paper: National Health Insurance in South Africa. 2011.

- Case law:

Rex v Jopp and Another 1949 (4) SA 11 (N)

Rex v Jopp and Another: Name of the parties concerned

1949: Date of decision (or when the case was heard)

(4): Volume number

SA: SA Law Reports

11: Page or section number

(N): In this case Natal - where the case was heard. Similarly, (C) would indicate Cape, (G) Gauteng, and so on.

NOTE: no . after the v

- *Other references (e.g. reports) should follow the same format: Author(s). Title. Publisher place: Publisher name, year; pages.*
- Cited manuscripts that have been accepted but not yet published can be included as references followed by '(in press)'.
- Unpublished observations and personal communications in the text must **not** appear in the reference list. The full name of the source person must be provided for personal communications e.g. '(Prof. Michael Jones, personal communication)'.