

**THE ANALYSIS OF THE NEEDS OF FREE STATE EMERGENCY CARE
PRACTITIONERS WITH REGARD TO CONTINUOUS PROFESSIONAL
DEVELOPMENT**

by

Bradley Paul Sookram

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Study Leader: Ms C. van Wyk

DECLARATION

I hereby declare that the work submitted here is the result of my own independent investigation. Where help was sought, it was acknowledged. I further declare that this work is submitted for the first time at this university/faculty towards a Magister degree in Health Professions Education and that it has never been submitted to any other university/faculty for the purpose of obtaining a degree.

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Date

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DEDICATION

*I would like to dedicate this thesis to
my loving wife, Andrea Deborah Sookram,
my sons, Matthew and Joshua Sookram.
To every family member and friends thank you so much
for your love, prayers and support throughout my studies.*

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LIST OF ACRONYMS

ACA	Ambulance Care Assistant
ALS	Advanced Life Support
AEA	Ambulance Emergency Assistant
B.Tech. EMC	Bachelor Degree in Emergency Medical Care
BAA	Basic Ambulance Assistant
BLS	Basic Life Support
CCA	Critical Care Assistant
CEU	Continuing Education Unit
CEUs	Continuing Education Units
CPD	Continuing Professional Development
CPUT	Cape Peninsula of Technology
CME	Continuing Medical Education
DoH	Department of Health
DUT	Durban University of Technology
ECA	Emergency Care Assistant
ECT	Emergency Care Technician
ECQF	Emergency Care Qualifications Framework
EMC	Emergency Medical Care
EMS	Emergency Medical Service
EMSs	Emergency Medical Services
EMSA	Emergency Medical Society of South Africa
EMCP	Emergency Medical Care Practitioner
FSCoEC	Free State College of Emergency Care
FSDoH	Free State Department of Health
HPCSA	Health Professions Council of South Africa
HEI	Higher Education Institute
HE	Higher Education
HPE	Health Professions Education
PBoEC	Professional Board of Emergency Care
ICAM	Interactive Learning Communication and Management
PATC	Provincial Ambulance Training College

PG. Dip. HPE	Post Graduate Diploma in Health Professions Education
PD. EMC	Professional Degree Emergency Medical Care
NECET	National Emergency Care Education and Training
N. Dip EMC	National Diploma Emergency Medical Care
N.Dip. AET	National Diploma Ambulance Emergency Assistant
N.EMT	National Diploma Emergency Medical Technician
NQF	National Qualifications Framework
NRF	National Research Framework
PATC	Provincial Ambulance Training College
RSA	Republic of South Africa
SA	South Africa
SAQA	South African Qualifications Authority
UFS	University of the Free State
UJ	University of Johannesburg
USA	United States of America
WHO	World Health Organisation
WFME	World Federation Medical Education

SUMMARY

Key words: Continuing professional development, Emergency medical care practitioner, Health Professions Council of South Africa, continuing professional development regulations.

The Health Professions Council of South Africa (HPCSA) recognises and endorses continuing professional development as a means of ensuring best possible practice to the public. The lack of literature regarding continuing professional development for emergency medical care practitioners and the number of non-compliant emergency medical care practitioners, provided evidence for the need to investigate the possible needs faced by emergency medical care practitioners to be compliant to the HPCSA guidelines for continuing professional development in South Africa.

The overall goal of the study was to conduct an analysis of the needs of Free State emergency medical care practitioners with regard to continuous professional development.

A literature study was done to gain a deeper understanding of continuous professional development with reference to health professionals and specifically emergency medical care practitioners. A questionnaire was compiled considering some barriers that were identified which affected compliance with continuous professional development regulations. The questionnaire was compiled electronically and printed in a hard copy using the Evasys system. The target population was emergency medical care practitioners in the Free State province that were active and registered with the HPCSA.

The study revealed that resources, improved communication and access to continuous professional development activities were the main needs of emergency medical care practitioners. Although there were some limitations during this study, it was evident that continuous professional development accreditors, and continuous professional development service providers need to plan, organise and provide information in advance for emergency medical care practitioners to be able to attend continuous professional development activities. Addressing the needs of emergency medical care practitioners with regard to continuous professional development will contribute positively not only towards the workplace but to the community at large.

OPSOMMING

Sleuteltermes: Voortgesette professionele ontwikkeling, Noodgevalle mediese diens werkers, Gesondheidsberoepraad van Suid Afrika, voortgesette professionele ontwikkeling regulasies.

Die Gesondheidsberoepraad van Suid Afrika, herken en ondersteun voortgesette professionele ontwikkeling, as 'n manier van die beste moontlike diens aan die publiek. Die gebrek aan literatuur oor voortgesette professionele ontwikkeling vir noodgevalle mediese diens werkers, asook die aantal noodgevalle mediese diens werkers wat nie aan die voortgesette professionele ontwikkeling vereistes voldoen nie, is bewys dat daar 'n gaping is om moontlike behoeftes van noodgevalle mediese diens werkers te ondersoek, om uit te vind hoekom hulle nie aan die gesondheidsberoepraad van Suid Afrika se riglyne vir voortgesette professionele ontwikkeling voldoen nie.

Die doel van die studie was om 'n analise te doen oor die huidige behoeftes wat noodgevalle diens werkers in die Vrystaat provinsie het in verband met voortgesette professionele ontwikkeling.

'n Literatuur studie is gedoen om beter insig van voortgesette professionele ontwikkeling te kry met betrekking tot gesondheids werkers en veral noodgevalle mediese diens werkers in die Vrystaat. 'n Vraelys was saamgestel wat oorwegend hindernisse wat geïdentifiseer was in terme van die voldoening van voortgesette professionele ontwikkeling regulasies beïnvloed. Die vraelys was elektronies saamgestel met die gebruik van die Evasys sisteem en 'n harde kopie was gebruik. Die teiken populasie was aktief en geregistreerde noodgevalle mediese diens werkers in die Vrystaat

Hierdie studie het aan die lig gebring dat voortgesette professionele ontwikkeling bronne, verbeterde kommunikasie asook toegang tot voortgesette professionele ontwikkeling aktiwiteite die grootste behoeftes vir noodgevalle mediese diens werkers was. Alhoewel daar beperkinge was tydens hierdie studie, het dit geblyk dat geakkrediteerde voortgesette professionele ontwikkeling diens voorsieners en organisasies behoort goed georganiseerde vooruit beplande voortgesette professionele ontwikkeling aktiwiteite te voorsien wat betyds aan noodgevalle mediese diens werkers gekommunikeer word. Deur

die voortgesette professionele ontwikkeling behoeftes van noodgevalle mediese diens werkers aan te spreek, sal dit nie net hul werkplek positief beïnvloed nie, maar ook die gemeenskap.

THE ANALYSIS OF THE NEEDS OF FREE STATE EMERGENCY CARE PRACTITIONERS WITH REGARD TO CONTINUOUS PROFESSIONAL DEVELOPMENT

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

This research project presents an in-depth descriptive study to analyse the needs of emergency medical care practitioners in the Free State province to adhere to regulations of continued professional development, set out by the Health Professions Council of South Africa (HPCSA). Emergency medical care practitioners in this research are regarded as different levels of EMS practitioners that is registered with the HPCSA (Basic Ambulance Assistant, Ambulance Emergency Assistant, Critical Care Assistant, Emergency Care Technician, National Diploma Emergency Medical Care, B Tech EMC/ Professional Degree in Emergency Medical Care).

The HPCSA encourages continuous professional development accreditors and continuous professional development providers to provide continuous professional development activities for emergency medical care practitioners with the aim of updating new information, knowledge and skills. These continuous professional development activities would expand the competence and performances of the emergency medical care practitioner's care with patients (HPCSA 2009:4; HPCSA 2011:online).

The Department of Health (DoH) and the HPCSA play a major role in ensuring a well-regulated and optimal health system for all South Africans. The vision of the DoH is to provide a caring and humane society in which all South Africans have access to affordable and good quality health care (FSDoH 2015:online). Part of their mission is to improve access to health care for all and to improve the overall efficiency of the health care delivery system (RSA DPSA 1997:online).

The HPCSA recognises and endorses continuous professional development as a means of ensuring best possible practice to the public (HPCSA 2011:online). The guidelines are very clear in terms of the hierarchy of activities, the responsibilities of the health care professional and the roles of the accreditors. However, it seems that the HPCSA does not take note of the availability, appropriateness and cost involved in continuous professional development for health care professionals, especially in the pre-hospital environment. According to these guidelines, the appropriate professional board should conduct quality checks from time to time on the activities presented to their respective health professionals (HPCSA 2011:online). Since continuous professional development became compulsory for emergency medical care practitioners in 2007, it is becoming increasingly clear that its implementation will not proceed without teething problems.

The study can serve as a directive for the needs of Free State emergency medical care practitioners with regard to continuous professional development. This means that the findings of this study will not only contribute theoretically to the body of knowledge regarding emergency medical care practitioners but will suggest changes and amendments to be implemented in order to improve the urgent matter of satisfying the directives of the HPCSA with regard to continuous professional development. The findings signify benefits for the DoH as well as individual emergency medical care practitioners and ultimately the entire health care system in South Africa (SA).

Chapter 1 serves to orientate the reader to the study. It provides a comprehensive background and explains the approach to the research problem. This is followed by the problem statement, with reference to the research questions, the overall goal, aim and objectives of the study. These sections are followed by the demarcation of the study and an indication of the significance of the study. Thereafter, a brief overview of the research design and methods of investigation are presented. The chapter is concluded with an exposition of the subsequent chapters and a brief, summative conclusion.

1.2 BACKGROUND TO THE RESEARCH PROBLEM

Since January 2007, the HPCSA endorsed that all emergency medical care practitioners are required to obtain 30 continuous professional development points per year and five ethics points every two years in order to retain their registration. These continuous professional development points obtained would only be valid for a period of two years.

This stipulation requires emergency medical care practitioners to obtain 60 continuous professional development points without fail every two years (HPCSA 2011:online).

Emergency medical care practitioners have an option to receive their continuous professional development points through different levels depending on personal circumstances, using the hierarchy of the different learning activities. Level one activity is non-measurable, a level two activity has a formal outcome, and level three activities are formally structured with learning outcomes (HPCSA 2011:online).

If an audit is done by the HPCSA and the emergency medical care practitioner is found to be non-compliant, the emergency medical care practitioner can request for an extension in order to obtain his/her continuous professional development points. If the emergency medical care practitioner does not meet the requirements after the extension that is given by the HPCSA, they may be struck off the registration register (HPCSA 2011:online).

The introduction of continuous professional development for emergency medical care practitioners in SA is still in the infancy stage. The composition, structure and environment of emergency medical care practitioners are different to other health care practitioners and therefore the guidelines and principles of the current continuous professional development process applied to pre-hospital emergency medical care practitioners need to be reviewed with the aim of designing a continuous professional development programme that is appropriate specifically for the pre-hospital setting.

During 2009 and 2011, the Professional Board of Emergency Care (PBoEC) of the HPCSA conducted random audit checks for compliance on emergency medical care practitioners in the pre-hospital environment and frequently reported non-compliance. However, the causes of non-compliance in the Free State province have not been investigated and addressed. Therefore it is necessary to establish why there is a lack of compliance by emergency medical care practitioners with continuous professional development regulations.

1.3 PROBLEM STATEMENT AND RESEARCH QUESTIONS

In SA, continuous professional development for emergency medical care practitioners requires development. Pre-hospital care is an important part of the holistic management

of a patient. The need for competent, appropriately trained paramedics and pre-hospital practitioners at all the different levels has been universally recognised.

Continuous professional development has been a driving force behind the maintenance of skills and knowledge of physicians for many years. However, it is a new concept for emergency medical care practitioners in the pre-hospital environment. Currently the availability, appropriateness and affordability of an effective continuous professional development programme for emergency medical care practitioners in the Free State province seem to be problematic as emergency medical care practitioners struggle to comply with the requirements set by the HPCSA for continuous professional development.

Apart from the SA study by Pillay (2011:1-199) entitled: *A needs assessment for continuous professional development for South African advanced life support providers*, little is known about the challenges towards continuous professional development experienced by emergency medical care practitioners in the Free State province. Pillay (2011:5) focused his research on the need for continuous professional development regarding advanced life support providers in SA, while the current study focuses on the analysis of the needs of Free State emergency medical care practitioners.

Therefore, the problem that is to be addressed is to analyse the needs of emergency medical care practitioners in the Free State province with regard to continuous professional development.

In order to address the problem stated, the following research question was asked:

- 1) What are the needs of emergency medical care practitioners in the Free State regarding compliance with continuous professional development regulations?

The research study was sustained and completed based on the research question.

1.4 OVERALL GOAL, AIM AND OBJECTIVES OF THE STUDY

In this section the researcher will discuss the overall goal, aim and objectives of the study in detail.

1.4.1 Overall goal of the study

The overall goal of the study is to conduct an analysis of the needs of Free State emergency medical care practitioners with regard to continuous professional development. Research is needed to address the issues that influence continuous professional development activities for emergency medical care practitioners in the Free State province. Increased knowledge of their needs may serve to improve emergency medical care practitioners' confidence and interest in continuous professional development and to encourage them to become lifelong learners, in addition, it will be worthwhile to increase the accessibility of continuous professional development activities for all emergency medical care practitioners in order to comply with the specified and predetermined regulations.

1.4.2 Aim of the study

The aim of the study was to conduct an analysis of the needs of emergency medical care practitioners in the Free State province with regard to continuous professional development.

1.4.3 Objectives of the study

- To conceptualise and contextualise the requirements of emergency medical care practitioners for continuous professional development: to this objective, a literature study was completed.
- To gain a deeper understanding of the requirements of emergency medical care practitioners in order to comply with continuous professional development regulations in the Free State province: for this purpose, a questionnaire was used.

1.5 DEMARCATION OF THE FIELD AND THE SCOPE OF THE STUDY

The findings of this study may be applied by the HPCSA (PBoEC) continuous professional development committee, accredited service providers and continuous professional development service providers in the Free State province. The study fits into the field of Health Professions Education (HPE), and is aimed at analysing the needs of Free State

Emergency medical care practitioners with regard to continuous professional development, and therefore the study can be classified as being interdisciplinary.

In a personal context, the researcher of this study is a qualified Advanced Life Support (ALS) paramedic who obtained a National Diploma in Emergency Medical Care (N.Dip. EMC), as well as a Post-graduate Diploma in Health Professions Education (PG.Dip.HPE). He has been actively involved in coordinating the undergraduate training of emergency care technicians, ambulance emergency assistants as well as in continuous professional development activities in the Free State province since 2007. He has experience of state and private facilities and has, during his years of service, attended various continuous professional development activities which led to an interest in continuous professional development research.

The participants in this study are all emergency medical care practitioners both in the government and private sectors with different levels of qualification who were registered with the HPCSA for the year 2015. The participants completed a voluntary self-administered questionnaire which had been developed on the Evasys system.

The study was conducted in the Free State province using both private and government sectors, between July 2015 and January 2016, with the empirical phase from August 2015 to November 2015.

1.6 SIGNIFICANCE AND VALUE OF THE STUDY

In SA the HPCSA has made it mandatory for emergency medical care practitioners in the pre-hospital environment to attend continuous professional development activities and collect a specified number of points in a two year period. The benefit to the community is that emergency medical care practitioners stay up to date with current practice. At present, however, there is insufficient evidence of clear requirements with regard to obtaining continuous professional development for the various levels of emergency medical care practitioners. No existing literature related to the appropriateness, or cost effectiveness of the continuous professional development process for emergency medical care practitioners in the Free State province could be identified.

The study aims to analyse the challenges that Free State emergency medical care practitioners face in order to obtain continuous professional development points. The results of the study will be beneficial to the HPCSA and to those authorities who plan and present continuous professional development activities to emergency medical care practitioners in the Free State province, since the recommendations from this study could be used to make improvements to their services and possibly ensure improved accessibility and affordability of continuous professional development activities to emergency medical care practitioners. This in turn may assist emergency medical care practitioners in being compliant and remaining up to date with health care information and practices.

1.7 RESEARCH DESIGN OF THE STUDY AND METHODS OF INVESTIGATION

In this section the design of the study and methods of investigation will be discussed.

1.7.1 Research design of the study

A quantitative, in-depth descriptive study was done. Creswell (2003:21) describes quantitative research as the gathering of numerical data and then generalising it across a variety of people.

The quantitative design followed in this study is described in more detail in Chapter 3.

1.7.2 Methods of investigation

The methods used in this research consist in the first place of a literature study to gain a deeper understanding of continuous professional development with reference to health professionals (specifically emergency medical care practitioners) in the Free State. Salient points regarding the needs of emergency medical care practitioners became evident from the review of literature.

Thereafter a questionnaire was developed on the Evasys programme. Evasys is a web-based programme for the creation and distribution of surveys. There are three ways in which the questionnaire can be distributed (Electric paper n.d.:online):

- The hard copy method;
- The email method where the survey is accessed through a link sent by an e-mail and respondents complete and submit the questionnaire online; or
- The hybrid method where both electronic and hard copy questionnaires are used in the same study.

In this study the electronically developed questionnaire was printed out and the hard copy method applied. The completed hard copies of the questionnaire were scanned into the Evasys programme and the data was automatically captured on an Excel spreadsheet. There was no manual data capturing. The results were available immediately to the researcher.

Emergency medical care practitioners in the Free State, predominantly in the service of the DoH, have little or no access to the internet. A previous incident of satisfactory results was reported by a researcher from the HPE programme in 2014 who hand delivered questionnaires to participants in all the districts within the Free State. In view of this, the researcher hand delivered copies of the questionnaire to all the districts in the Free State and then hand collected them again after completion.

A detailed description of the study population, sampling methods, data collection and techniques, data analysis and reporting, and ethical considerations are provided in Chapter 3 which describes the research design and methodology. A schematic overview of the study is given in Figure 1.1.

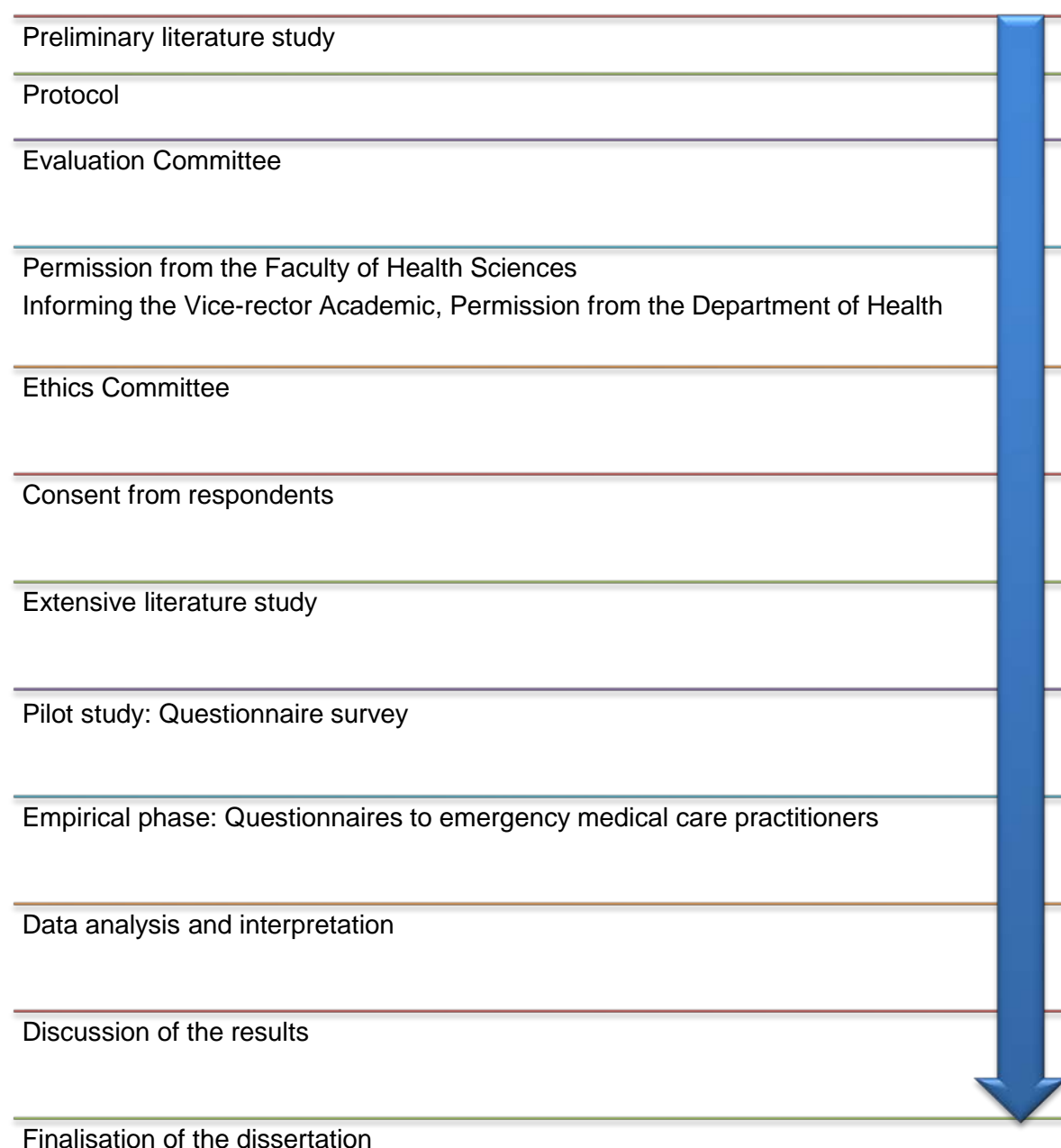


Figure 1.1 A Schematic overview of the study

1.8 IMPLEMENTATION OF THE FINDINGS

The research findings will be submitted to the attention of the HPCSA (PBoEC), Free State College of Emergency Care (FSCoEC) as well as the Higher Education Institutes (HEI) that are accredited continuous professional development providers.

The researcher hopes to present the findings of this study at conferences as well as seminars for emergency medical care.

1.9 ARRANGEMENT OF THE REPORT

This section of the study provides a brief summary and an outline of the study.

In Chapter 1, **Orientation to the study**, a brief introduction to and background of the study are provided, and the research problem as well as the research question are stated. The overall goal, aim and objectives are given and the research design and methods employed are briefly discussed to give the reader an overview of what is contained in the report. It further demarcates the field of the study and the envisaged significance and value of the outcome for Health Sciences Education. This is followed by a brief description of the research design and methods of investigation used, and ends with a schematic overview of the study and arrangement of the report.

Chapter 2, **Continuous professional development for emergency medical care practitioners**, examines continuous professional development from an international and national perspective. This chapter will serve as the theoretical framework for the study.

In Chapter 3, **Research design and methodology**, the research design and the methods applied are described in detail. The data collecting methods and data analysis are discussed.

Chapter 4, **Results and findings of the questionnaire survey**, presents the results and findings of the questionnaire as data collecting method employed in the study.

In Chapter 5, **Description and discussion of the results of the questionnaire survey**, the results of the survey will be discussed as final outcome of the study.

Chapter 6, **Conclusion, recommendations and limitations**, consists of an overview of the study, the conclusion reached, while the recommendations and the limitations of the study are brought to the attention of the reader.

1.10 CONCLUSION

The first chapter aimed at providing the reader with an orientation regarding an analysis of the needs of Free State emergency medical care practitioners with regard to continuous professional development. It provided an overview of the research that was undertaken as a whole. As a next step, Chapter 2, entitled **Continuous professional development for emergency medical care practitioners**, will report on the study of relevant literature.

CHAPTER 2

CONTINUOUS PROFESSIONAL DEVELOPMENT FOR EMERGENCY MEDICAL CARE PRACTITIONERS

2.1 INTRODUCTION

The role and level of education of emergency medical care practitioner vary from country to country (Vincent-Lambert 2011:2). These factors posed a challenge for the effective implementation of continuous professional development, and consequently led to a high rate of non-compliant emergency medical care practitioner. Strategies such as educating emergency medical care practitioners about how to comply was implemented by the HPCSA, but compliance did not seem to improve (HPCSA 2010:2). This necessitated further investigation into possible problems that hinder compliance to continuous professional development.

In this chapter the history of Emergency Medical Services (EMSs) will be discussed. This is done to understand current challenges to implementing an effective continuous professional development programme. The importance of continuous professional development for emergency medical care practitioners will be examined. A literature study was executed to explore and compare the South African perspective on continuous professional development to an international perspective. Barriers and challenges, both in general and specifically with regard to emergency medical care practitioners, will be discussed.

Refer to Figure 2.1 for a schematic overview of the different aspects that will be discussed. CPD - Continuous professional development. EMS - Emergency medical services. The arrows indicate the process of review.

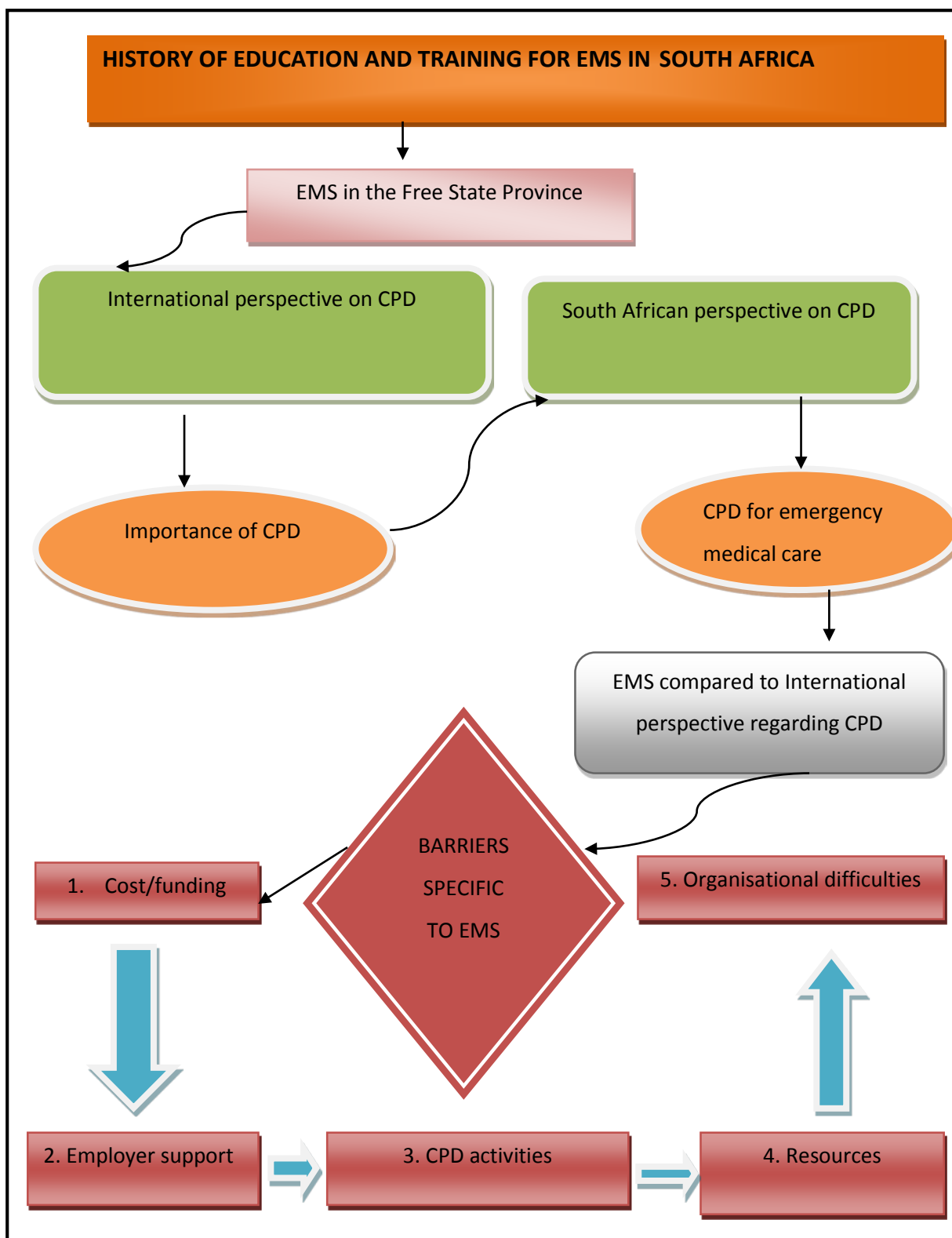


Figure 2.1 A schematic overview of the different aspects that will be discussed

2.2 HISTORY OF EDUCATION AND TRAINING FOR EMERGENCY MEDICAL SERVICES IN SOUTH AFRICA

Before 1980 there were no Emergency Medical Service (EMS) professional qualifications or an EMS professional board. The EMS training varied from province to province (MacFarlane, van Loggerenberg & Kloeck 2005:145-148). A number of short courses were standardised in 1985 including Basic Ambulance Assistant (BAA), Ambulance Emergency Assistant (AEA) and Critical Care Assistant (CCA) (HPCSA 1999:a, b & c).

The BAA course training comprises 160 hours of lectures and simulations. Candidates for the AEA course, also referred to as intermediate life support practitioners, should have a minimum of 1000 hours of practical experience as a BAA and they should also pass an entrance exam to be eligible to attend the course. This course consists of 470 hours of training that includes 240 hours of lectures and 230 hours of experiential learning. The CCA candidates must complete a 1000 hour course to qualify to attempt the entrance exams, in addition to previously having obtained BAA and AEA qualifications. To arrive at this level of qualification usually takes up to four years (RSA NECET Policy 2013:1).

These short courses were offered as a form of internal training by the Provincial Ambulance Training Colleges (PATC). The short courses focused specifically on clinical skills training. The three levels of training for emergency medical care practitioners in short courses are not National Qualifications Framework (NQF) rated but are now governed by the HPCSA (RSA NECET Policy 2013:1).

The first Higher Education (HE) qualification was introduced in 1987 as a three-year National Diploma in Ambulance and Emergency Technology (N.Dip.AET). From 2003 the Bachelor of Technology Degree could then be obtained by completing an additional two-year qualification (RSA NECET Policy 2013:1).

Although the tertiary qualifications had been established, the three-year diploma in HE would take some time to address the immediate needs of the public. This resulted in short courses being offered in conjunction with the HE courses (RSA NECET Policy 2013:1).

As for most newly developed professions, there was no “master plan” to guide the profession systematically. Although during the last 30 years there had been many well organised private institutions offering short courses in Emergency Medical Care (EMC) for the pre-hospital environment, there was an absence of a structured education system. As a result, this led to inconsistencies amongst the various curriculums and difficulties in bridging from one level of education to another (Vincent-Lambert 2011:4). The reasons are as follows:

- “The structure of the short courses could not be aligned to the National Qualifications Framework (NQF).
- The academic structure of the short course was not South African Qualifications Authority (SAQA) compliant.
- The knowledge gap between short courses (which are non-credit bearing) and the HE qualifications grew significantly (Vincent-Lambert 2011:5)”.

The National Emergency Care Education and Training (NECET) draft policy number seven aimed at facilitating the alignment of education and training within the EMS environment with the current legislations and the national training needs in order to provide a high quality health care service to the community (RSA NECET policy 2013:1).

The PBoEC is in the process of introducing a three- tier education and training system. This would allow emergency medical care practitioner to progress in a career path. This three-tier Emergency Care Qualifications Framework (ECQF) is aligned with the NQF (RSA NECET policy 2013:2).

The Emergency Care Assistant (ECA) course, which is currently not yet SAQA accredited, is a one-year national certificate awaiting approval by the HPCSA. The Emergency Care Assistant (ECT) (240 credits) which is at present (late 2015) being quality assessed by the HPCSA is proposed as a two-year national certificate. Currently there is no EMS College in SA that is accredited to present the three-tier system as proposed by HE.

At present the Professional Degree in Emergency Medical Care (PD. EMC) (four year programme) is offered only at the Durban University of Technology (DUT), Cape Peninsula University of Technology (CPUT) and University of Johannesburg (UJ). Master’s and Doctoral programmes were introduced for tertiary care practitioner graduates at DUT,

CPUT and UJ. Recently the HPCSA began to change the framework of education in the emergency medical services. This step intended to eliminate short courses (MacFarlane, Van Loggerenburg & Kloeck 2005:145-148). Figure 2.2 presents a schematic overview of the educational development of EMS since 1980 up to the present.

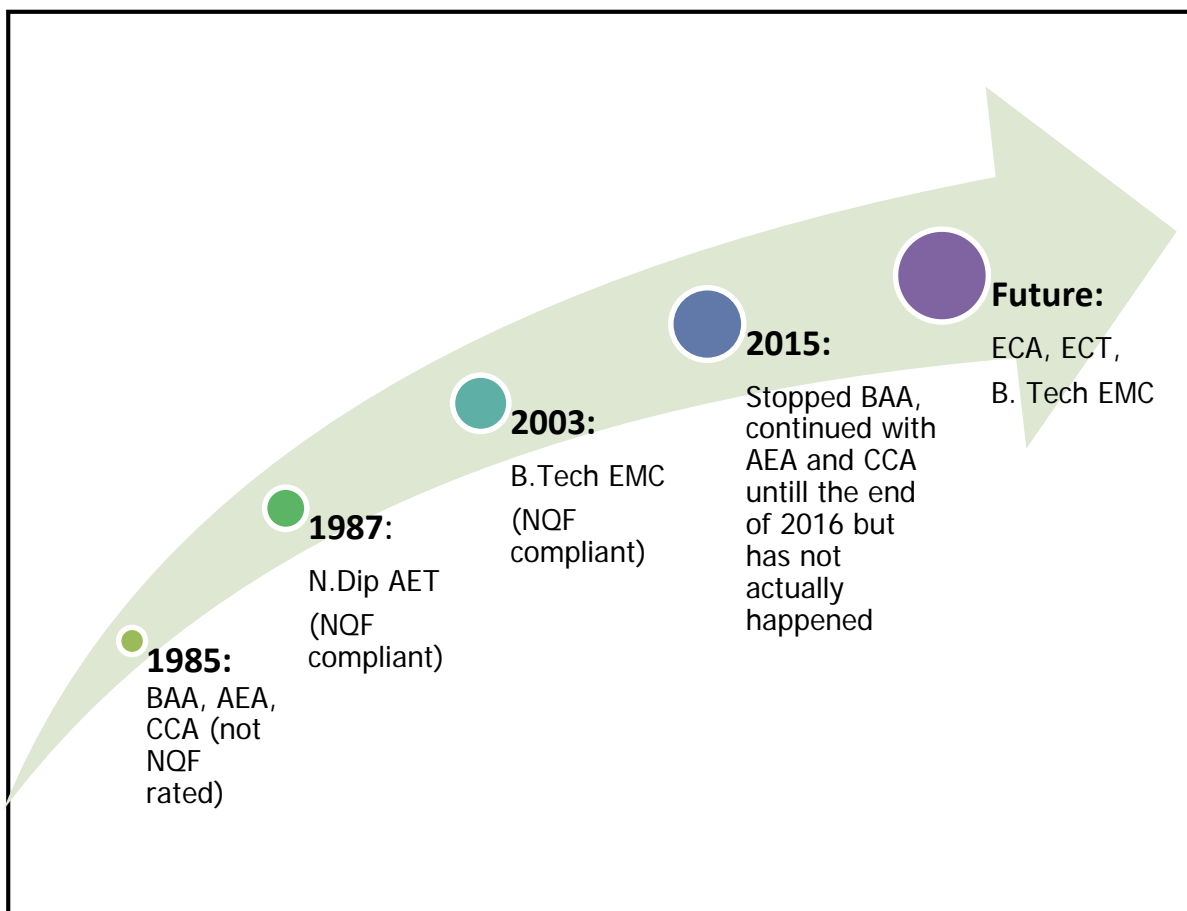


Figure 2.2: A schematic overview of the educational development of EMS since 1980 up to the present

2.2.1 Emergency medical services in the Free State province

Emergency medical services in the Free State province are divided into five districts (refer to Figure 2.3) namely: Motheo, Xhariep, Thabo Mofutsanyane, Lejweleputswa and Fezile Dabi. The EMSs in all districts use a four shifts system. Each shift works a cycle, which comprises of two days and two nights followed by four days off.

The higher qualified emergency medical care practitioners are allocated equally between these respective shifts to ensure the availability of scarce skills within each shift.

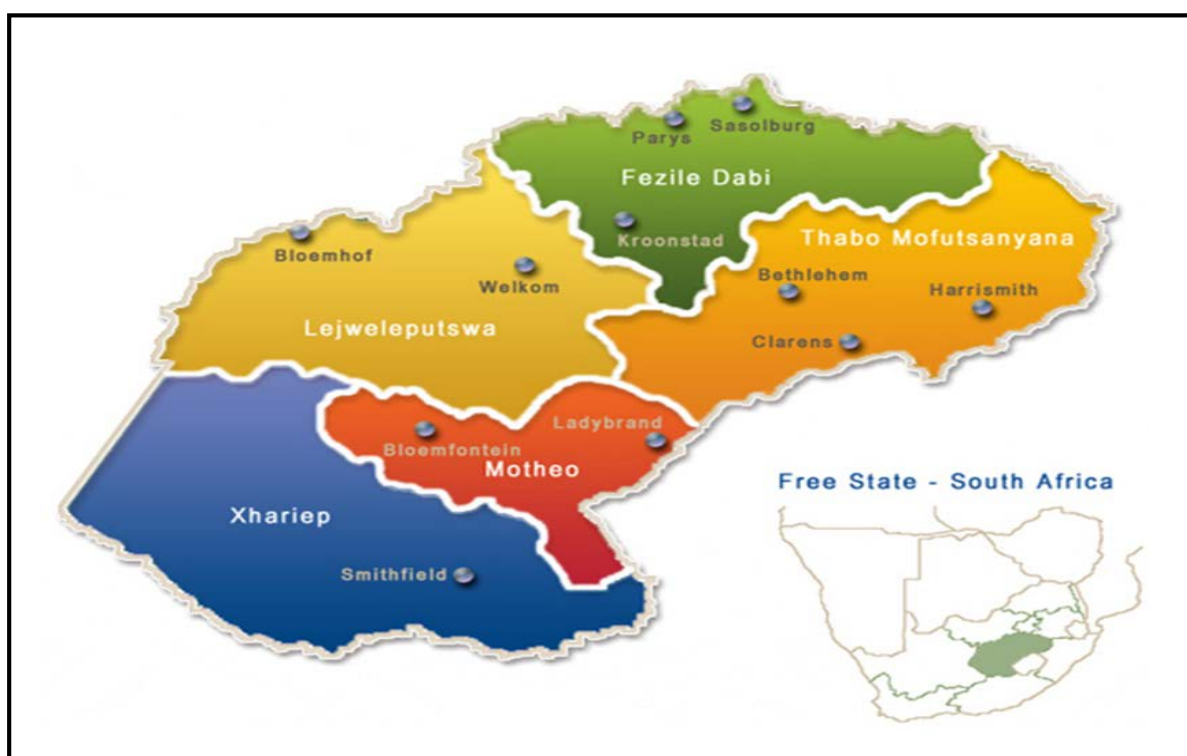


Figure 2.3: A schematic presentation of the Free State districts

A detailed summary of all emergency medical care practitioners in the government sector can be seen in Table 2.1. There are currently in 2016, 1340 BAA practitioners, 152 AEA practitioners, 40 ECT practitioners and 21 ALS practitioners in the Free State.

Table 2.1: Emergency medical care practitioners per district in the Free State province (Towa 2015:Personal communication)

Regions	BAA	AEA	ECT	ALS
Thabo Mofutsanyane	398	28	13	4
Xhariep	162	28	4	0
Lejweleputswa	283	38	9	4
Manguang/ Motheo	252	30	6	13
Fezile Dabi	245	28	8	1
Total	1340	152	40	22

The private sector has bases in three districts in the Free State province namely in Motheo, Thabo Mofutsanyane and Lejweleputswa (refer to Figure 2.3). Emergency

medical care practitioners in the private sector work on a similar shift system based on a 12 hour rotation, however their time slots may differ. There are currently 36 BAA, 28 AEA and 12 ALS (refer to Table 2.2).

Table 2.2: Emergency medical care practitioners in the private ambulance service in the Free State province (van Vliet 2015:Personal communication)

Private	BLS	AEA	ECT	ALS
Free State	36	28	0	12
Total	36	28	0	12

Education and training in the medical environment are changing rapidly; therefore it is important for emergency medical care practitioners to stay up to date with new knowledge and skills. Emergency medical care practitioners from both the private and government sector in EMS in the Free State province should therefore participate in continuous professional development.

The following section addresses continuous professional development for EMS.

2.3 AN INTERNATIONAL PERSPECTIVE ON CONTINUOUS PROFESSIONAL DEVELOPEMENT

Continuous professional development is a method in which health care practitioners maintain and expand their standards of practice by developing their knowledge and skills (Hakim 2008:online). In the year 2000 the World Health Organization (WHO) aimed for "Health for all" which eventually led to the Alma Ata declaration in 1978 (Castleman 2007:2). The aim of medical education changed to the production of medical practitioners who would promote 'health for all' in favour of the continuation of lifelong learning (WFME 2015:09).

Health care practitioners who need to provide quality patient care in a constantly changing environment must dedicate themselves to become lifelong learners (Giri, Frankel, Tulenko, Puckett, Bailey & Ross 2012:1). Continuing professional development aims at maintaining and developing competencies in knowledge, skills and attitudes of

practitioners according to the changing needs of the community and the environment. For health care professionals to practice medicine appropriately throughout their professional career, a practitioner needs to remain up to date with the current best practice (WFME 2003:6).

The World Federation for Medical Education (WFME) which is a global academic organisation was concerned about the education and training of medical learners and medical doctors at different levels. A task force was established by the WFME to standardise continuous professional development. According to the WFME (2003:online) a task force recommended the following:

- “Doctors are obliged to attend continuous professional development to maintain and develop their competencies to meet the patients’ and community’s needs.
- Continuous professional development must be structured to the needs of the doctor; therefore a needs assessment would form part of the planning for continuous professional development activities.
- Continuous professional development should have a variety of learning methods, with the emphasis of having self-directed and active learning.
- The purpose of continuous professional development must be to enhance professionalism and to provide personal development for doctors”.

Internationally, continuous professional development formed part of a formal course, workshops and symposiums over the past years. It was funded by medical schools at little or no cost to the learners who attended the continuous professional development activities. However, as the demand for continuous professional development for health care professionals increased, the fees for the continuous professional development programmes likewise increased significantly (Silva, Buhler, Maillet, Maisonneuve, Miller, Negri & Stonier 2012:225).

In the United States of America (USA) the funding for and commercial support of such programmes reached a peak in 2007, totalling 58.5% of Continued Medical Education (CME) provider income of \$ US 2.3 billion. The use of e-learning over the internet attracted the most participants, drawing 40% of medical practitioners and 56% of non-medical practitioners. The use of the internet for e-learning grew significantly in the USA (Silva *et al.* 2012:227).

2.3.1 The importance of continuous professional development

Medical research continually leads to improved diagnostic tools, new treatments and improved prognoses. In the European Union, continuous medical education is therefore mandatory for any health care practitioner to meet the needs of patients and the society (Silva *et al.* 2012:227).

According to Khan (2010:online), "the rate and magnitude of change is such that the contents of texts books are out of date at the time of publication. Probably half of what you know is no longer true but what troubles me more is that I don't know which half it is".

As health care professionals, we have an obligation to keep up to date with skills and knowledge. The integrity of our profession is based on the enthusiasm of health care professionals to embrace up to date skills, knowledge and work experience. All health care professionals need to keep up to date by expanding their knowledge to practice efficiently in the modern health care system. This can be done by education and training, using information technology, participating in professional activities and self-directed learning (RCGP 2010:online).

Schostak, Davis, Hanson, Schostak, Brown, Driscoll, Starke and Jenkins (2010:online) paints the following picture: "health care professionals are accountable through clinical governance to maintain their standards and performance". As health care professionals we need to be confident to embrace a culture of lifelong learning. Therefore, continuous professional development should be going further than the acquisition of knowledge and the intention is to impact on performance.

Continuous professional development do not only improve the health care professionals themselves, but is also beneficial for the workplace and especially the community (Khan 2010:online). The author also points out that continuous professional development is an investment towards acceleration in one's career. It helps health care practitioners to expand their professional success and career opportunities; builds up confidence and reinforces their professional credibility for greater responsibilities. Continuous professional development will assist emergency medical care practitioners to undertake new challenges and to deal with change by continuously updating their knowledge and

skills. With continuous professional development the emergency medical care practitioner will be able to identify the gaps in his knowledge and skills. It will make working life more fascinating and can considerably increase work satisfaction (Khan 2010:online).

Continuous professional development will increase staff potential by associating learning to action and using theory in practice. The staff morale will be better and a driven workforce will bring new confidence to the workplace. This will help health care practitioners focus more on their achievements (Khan 2010:online). Moreover, continuous professional development contributes to improve patient care and aims to deliver high quality patient care to the community (Strake & Wade 2005:14).

2.3.2 Continuous professional development learning opportunities

The World Federation Medical Education (WFME) (2003:13) states that continuous professional development must be based decisively on science and practical evidence. Health care professionals will be able to draw data from evolving scientific evidence to improve their practice. Therefore there should ideally be a variety of continuous professional development activities available, for example workshops, seminars (face-to-face or online), journal clubs, and case presentation meetings to obtain continuous professional development points.

2.3.2.1 *Workshops, seminars (face-to-face or online) and conferences*

Continuous professional development points can be attained through attending seminars, workshops or conferences. Workshops and seminars are planned activities which can be continuous professional development accredited. Normally these events are scheduled for one to two hours, half days or even full days in the case of workshops. These are also the most common forms of continuous professional development activities available.

Kanamu (2014:online citing Newby 2003:6) states that "by going to conferences one may happen to hear about an area he or she is interested in". The cited author continues to reflect on a general opinion amongst the professional bodies that conferences can help to gain new skills or knowledge of a particular area of interest or work. In SA, there is known conference for emergency medical care practitioners (Emergency Medicine Society

of South Africa (EMSA), Emergency Care Society of South Africa and Trauma Society of South Africa).

2.3.2.2 *The use of scientific journals and books*

Accessing and studying scientific publication can contribute to CPD. Marusic and Marusic (2009:online) indicate that provable and valid knowledge can be gained by scientific journals. This can be proven by:

- “Providing a basis of unpretentious knowledge;
- Having key constituents of the educational system;
- Part of the medical paternity; and
- Adds to the overall health and safety in everyday life”.

All the latest research and up to date knowledge in various health professions fields are published in scientific journals. It is therefore regarded as a main component in the educational system (Castleman 2007:199). Articles in scientific journals are valuable resources to obtain new knowledge and therefore to stay up to date. Scientific journals are commonly held in libraries of academic institutions. In addition to this journals can be subscribed to (in hard copy or electronic copy) and will then be available in health professionals’ practices. At present there are also an increasing number of journals published as open access and therefore readily available.

Moon (1999:34) highlights that reading journals could develop critical thinking, reflective thinking, linking theory to practice, integrate new theory with old concepts and encourage exploration of new concepts. Several studies conclude that reading is a valuable continuous professional development method (Armstrong, Johnston, Bridges & Gessner 2003:25).

Journal clubs and small study groups that take place through discussions, sharing experiences and challenges have proved to be constructive learning methods (Merriam & Caffarella 1999:70). If these activities can be accredited for continuous professional development it will greatly assist emergency health care practitioners to obtain continuous professional development points on a regular basis. The major benefit of reading

scientific journals lies in it being available in the practitioners' practice and therefore it eliminates the cost of travel and taking additional time off work.

2.3.2.3 *The use of the internet*

Another resource consists of making use of the internet to obtain up to date knowledge in a specific field of practice. The internet has become a commonly used means of finding information and obtaining general knowledge (Leu n.d.:online). In order to stay up to date, health care professionals therefore need to be computer literate and be able to communicate using the World Wide Web (Leu n.d.:online). In many working environments, the use of the internet has become imperative to achieve certain work functions. Internet reading is viewed as a new form of literacy skill which holds significant benefits for education.

According to the WFME (2015:38), health care professionals should have access to the internet for self-directed learning. Information technology would enable health care professionals to learn, communicate with their colleagues, and gain access to information in respect of research and practice management.

Learning in specialist areas can be extended by using web-based learning to those learners who are unable to undertake traditional studying. Therefore, this would encourage a variety of skills and knowledge for health care workers to build upon (Biggs 2003:309).

Before the internet existed, research was conducted by consulting a set of encyclopaedias or paying a visit to the library. We are now living in the 21st century where information can be easily accessed via the computer. There are many places where one may obtain access to the internet, for example internet cafés, libraries, coffee shops and even from cell phones.

On the World Wide Web, you can find virtually any information or topic you are searching for. The internet is a major source for scholarly journals, articles, theses and online books, amongst others. There are different search engines one can use, for example Google, Bing, Yahoo (Henderson 2005:1). The internet has become so popular that we

eventually need to pose the question: should this not be more readily available in all workplaces in SA?

2.3.2.4 *Participating in formal degrees*

Formal training can be a way of improving theoretical and practical skills (Verhaest & Omey 2013:638). Formal training makes it easier for employers to train their employees on the job and improves the effectiveness of skills development and retention (Verhaest & Omey 2013:638). Formal training is regarded as a powerful method of training to retain skills, improve work performance and plays a major part in developing new and advanced skills (Kanamun 2014:online).

According to Lim and Yang (2006:4), distance learning will be valuable if medical professionals are very busy in their health care practice. It will be an advantage to use the World Wide Web to receive continuous professional development effectively. Medical professionals will be able to plan their continuous professional development and afford themselves an opportunity for lifelong learning. Distance learning provides flexibility, access and is cost effective for health care professionals. Higher education institutions are increasing their activities and broadening their chances for learners around the world by making operative use of the new technologies which are rapidly emerging (Quality Assurance Agency for Higher Education 1999:online).

Distance learning opportunities or online programmes could contribute to a more efficient and manageable way to maintain continuous professional development for emergency medical care practitioners, especially those who are stationed in rural areas.

2.4 A SOUTH AFRICAN PERSPECTIVE OF CONTINUOUS PROFESSIONAL DEVELOPMENT

The Health Professions Act, 1974 (No. 56 of 1974) endorses continuous professional development as a means of maintaining and keeping professional competence for medical practitioners in SA up to date. This ensures that the public interest will always be protected and promoted. Continuous professional development therefore addresses the health priorities and emerging health needs of the country (HPCSA 2009:4). Therefore, it is compulsory for all health care practitioners who are registered with the HPCSA to

engage with continuous professional development activities relevant to their field of practice.

The emergency medical care practitioner falls under the jurisdiction of the PBoEC. In terms of the Health Professions Act, 1974 regulation 75 of 16 January 1998, all health care practitioners must accumulate 30 continuing education units (CEUs) every year and five ethics CEUs (on human rights and medical law) every two years in order to retain their registration with the HPCSA (HPCSA 2011:online). The HPCSA (PBoEC) conducts random audit checks for compliance on emergency medical care practitioners annually and has frequently identified non-compliance, but has not investigated and addressed the causes of non-compliance.

There are three different levels of learning activities for continuous professional development. These will be discussed below:

- **Level one continuous professional development activities:** These are continuous professional development activities which have no measurable outcomes. These continuous professional development activities are presented once only and do not have a measurable outcome. The Continuing Education Unit (CEU) is allocated according to time, for example; one CEU per hour to a maximum of eight CEUs per day (HPCSA 2011:online). These are continuous professional development outcomes that do not necessarily constitute a full year of earned CEUs. These level one continuous professional development activities can be achieved by attending workshops or seminars (face-to-face or online) that are specifically arranged. The majority of the continuous professional development activities that are presented at the FSCoEC in the Free State province are level one continuous professional development events.
- **Level two continuous professional development activities:** These continuous professional development activities have a measureable outcome but do not constitute a full year of earned CEUs. These activities include education, training, research and publications (HPCSA 2011:online) and are deemed continuous professional development activities that have a formal structured outcome (HPCSA 2011:online) (Table 2.3).

Table 2.3: Number of CEUs earned per level two continuous professional development activities (Reproduced directly from HPCSA 2011:online)

	Continuous professional development activities	Number of CEUs
a	Principal author of a peer reviewed publication or chapter in a book	15 CEUs
b	Co-author of a peer reviewed publication or chapter in a book	5 CEUs
c	Review of an article/chapter in a book/journal	3 CEUs
d	All presenters/authors of a paper/poster at a congress/refresher course	10 CEUs
e	All co-presenters/co-authors of a paper/poster at a congress/refresher course	5 CEUs
f	All presenters of accredited short courses	10 CEUs
g	All co-presenters of accredited short courses	5 CEUs
h	Interactive skills workshop with an evaluation of the outcome	10 CEUs per presenter 5 CEUs per participant
i	Multiple Choice Questionnaires in journals, including electronic journals with a pass rate of 70%	3 CEUs per questionnaire
j	Guest/occasional lecturer at an accredited institution	3 CEUs per lecture
k	Health personnel who supervise undergraduates/interns/postgraduates in clinical/technical training in collaboration with an accredited training institution on a regular basis during the academic year (if not in the job description)	2 CEUs per student (max 16 CEUs per calendar year)
l	Part time or external examiner of Master and Doctoral thesis on completion (5 CEUs per thesis)	5 CEUs per thesis
m	Dedicated workshops, lectures/ seminars on ethics (excluding general presentations with so-called component on ethics)	2 CEUs per hour

	Continuous professional development activities	Number of CEUs
n	Single modules of Master's degrees with part time enrolment for study for non-degree purposes	5 CEUs on completion of module
o	Professional interest groups (this includes journal clubs if compliant with the criteria) that are formally constituted and present a regularly recurring programme that extends for one year with a minimum of 6 meetings per year. (Up to 3 CEUs per attendee per meeting). These activities are ongoing or have a measurable outcome that is assessed according to criteria determined by the group, which may be interdisciplinary.	3 CEUs per attendee per meeting

- **Level three continuous professional development activities:** These continuous professional development activities have a formally structured learning outcome and are conducted by accredited training institutions. After completion of the activities the practitioners will earn 30 CEUs (HPCSA 2011:online). The emergency medical care practitioner can use any of the learning activity methods as long as these practitioners earn the required CEU points as stipulated by the HPCSA.

2.4.1 Providers of continuous professional development

Service providers are any institutions or organisations that meet the requirements and have been approved by the accreditor to present learning activities (HPCSA 2011:online). In the Free State province the FSCoEC is a known service provider for EMS regarding continuous professional development (cf. 2.5.1).

2.4.2 Accreditors for continuous professional development

The Professional Board appoints accreditors which are groups or institutions that meet the requirements set by the HPCSA Continuous Professional Development Committee. The accreditor's role is to approve or review applications for continuous professional development activities. The accreditors monitor the continuous professional development activities provided by these groups or institutions by ensuring that the activities are

compliant with the rules and regulations set by the HPCSA Continuous Professional Development Committee. The accreditors are obliged to follow the criteria and guidelines for accreditors set out by the HPCSA Continuous Professional Development Committee. These documents guide the accreditors to standardise the process for accreditation (HPCSA 2011:online).

2.4.3 Recording of continuous professional development activities (portfolios)

According to Castleman (2007:19 quoting Clyne 1995:147), "portfolios are important in continuous professional development because they enable learning through self-analysis by processing evidence on activities which the health care practitioner attended. A portfolio should include a copy of the certificate of attendance". In SA, the HPCSA requires all health care professionals to record their own learning activities by using the official HPCSA individual continuous professional development activity record. This record needs to be submitted should the HPCSA select the professional for an audit (HPCSA 2011:online).

2.4.4 Non-compliance

The HPCSA conducts regular randomised audits for emergency medical care practitioners (HPCSA 2011:online). The person that is being audited must supply proof of documents of the required CEUs obtained in the form of certificates and a portfolio.

The continuous professional development section at the HPCSA will request the emergency medical care practitioner to forward his portfolio of evidence on continuous professional development activities attended. If the emergency medical care practitioner is non-compliant, or does not meet the requirements for continuous professional development, the emergency medical care practitioner may request for an extension. The continuous professional development section may then afford the practitioner a further six months in order to become compliant (HPCSA 2011:online).

After six months the continuous professional development section may again audit those emergency medical care practitioners who were non-compliant. Should the emergency medical care practitioner still not be able to submit his portfolio of evidence, a registered letter will be sent to inform him/her that if the portfolio is not received within 21 days the

emergency medical care practitioner will be suspended from the register in term of section 19A(1)(d) (HPCSA 2011:online). The emergency medical care practitioner will be notified that he/she will no longer be able to practice in the medical environment in SA.

Botha (2012:13) seriously voices the appeal as follows:

“Improved continuous professional development compliance in the emergency care profession demands a call for action! We need to do things differently. Our dismal compliance rates begs the question, why are there so few providers offering continuous professional development suitable for EMS providers? Perhaps the time has come to force and regulate this more, to oblige existing providers of EMS training to also offer free/nominal chargers continuous professional development activities. Moreover, professionals need to take a more proactive role in determining their own needs and developing their own solutions for continued learning. Portfolios, meetings and case reviews represent a few ways providers can initiate continuous professional development activity easily in their own environments. Our professional status depends on the degree to which most of us heed this call to action. Encourage and support the providers in your own community, arrange your own continuous professional development as per the HPCSA guidelines 2011, and share your experiences ideas and successes. We need to completely rethink continuous professional development and stop blaming others, but rather develop our own continuous professional development programmes, that suit and serve us best”.

2.5 CONTINUOUS PROFESSIONAL DEVELOPMENT FOR EMERGENCY MEDICAL CARE PRACTITIONER IN THE FREE STATE PROVINCE

In the Free State province, the FSCoEC is a service provider which is accredited by the University of Johannesburg (UJ) to present continuous professional development activities. Continuous professional development activities are scheduled on a weekly basis in Bloemfontein at the FSCoEC in face-to-face seminars on different topics. Lectures are mostly presented by the FSCoEC lecturers and is hosted at the College in Bloemfontein. These continuous professional development activities are all level one activities which are normally presented in five hours that are equal to five CEU points. The continuous professional development activity that is presented weekly is not repeated within one year. Therefore if an emergency medical care practitioner is working on that particular

day when the continuous professional development topic is presented, the chances of that topic being repeated are virtually none. Of concern is that some scheduled continuous professional development activities are cancelled due to a shortage of lecturers at the college or poor attendance by emergency medical care practitioners.

The FSCoEC management informs the provincial skills committee of the proposed dates of the continuous professional development activities. The role of the provincial skills committee is to inform the district managers of the dates of continuous professional development that are presented at the college. This is commonly done via e-mail. The district manager then informs the emergency medical care practitioners of the availability of continuous professional development activities. It is unclear how the information regarding the events and dates of on these continuous professional development activities are brought forward from their district managers to the emergency medical care practitioners.

At present there seems to be no usage of journal clubs or small group discussions at the stations in the districts of the Free State province, nor is there any at the FSCoEC. Scientific journals are available at various academic libraries situated in the larger districts. There are journals which has a specific focus on EMS, but to date these journals do not seem to be accessible or available in the various EMS stations. It should probably be noted that access to these journals (either in hard copy or electronically) is very expensive.

The private sector is only invited for certain continuous professional development activities that are presented at the college. However, emergency medical care practitioners do have an opportunity to attend continuous professional development activities which are offered occasionally in private hospitals in Bloemfontein. Important to note is that most of the continuous professional development activities that are offered for the private sector are not always related to EMS.

2.5.1 Continuous professional development in South Africa compared to an international perspective

In view of the scant information that is available on continuous professional development specifically for EMS, examples of the continuous professional development requirements in other health professions internationally, such as nursing, are used in this section.

Pre-hospital care of a trauma patient should remain the same, regardless of the country. This, however is not the case, as patients in developing countries such as Ghana who do not have access to formal emergency care systems, are transported to hospital in taxis and buses (Robbins, Fasche & Farhamm 2005:17). In America, Dr E Dalton in 1869 organised an emergency medical service initiated at the Bellevue hospital in New York. This service was exceptional because not only were the transport team members well qualified, but the transport, which at that time was a carriage, was specifically designed to be lightweight and had a movable floor to receive the injured patient (Robbins, Fasche & Farhamm 2005:17). To improve our standards, it is therefore important to learn from each other and to benchmark new knowledge and skills.

In the USA, nurses are required to obtain continuous professional development practice in contact hours that accumulate to a unit measurement of 60 minutes. This must be a formal activity which may be either a clinical or educational experience. In 56% of the other states in America health care practitioners are required to provide evidence of participating in continuous professional development activities for them to renew their licence to practice (De Silets & Dickerson 2010:101). This is similar to the requirements for health care professionals in SA (cf. 2.4).

In China the Ministry of Health published a policy in 2000 that made it mandatory to receive continuous nursing education (Xiao 2006:217). Their policy specifies two categories in which the health care practitioner can earn credits:

- “In category one, the nurses can gain one credit for every three hours of national level activities or for every six hours of attending provincial level activities.
- In category two the nurses participate in approved health care organisation- based activities (which are onsite activities). The onsite activities which are between one and two hours can only award 0.3-0.5 type two credits. The nurses must obtain

25 credits that consist of three to ten type one and 15–22 type two credits annually for them to re-register after two years (Xiao 2006:217)".

In Greece continuous professional development has gained support; they have operative ways for ensuring personal and professional development. Greece recognises continuous professional development as an essential role for meeting the health service delivery needs and the need for lifelong learning for health care practitioners. Continuous professional development is centralised and is a directive of the labour force employment organisations (Yfantis 2010:193-200).

In Kenya, nurses participate in continuous professional development activities that are directed by the Nursing Council of Kenya. Their guideline, issued in 2008 for continuous professional development, acknowledged the importance of continuous professional development for nurses (Nursing Council of Kenya Guidelines for continuing professional development 2008:3). The guidelines require that nurses in Kenya must obtain a minimum of 20 hours for continuous professional development activities per year in order for them to renew their license to practice. Organisations have to provide continuous professional development activities in support of the nursing staff to be compliant. However, nurses also remain accountable to look for continuous professional development activities and to ensure that lifelong learning takes place (Nursing Council of Kenya Guidelines for continuing professional development 2008:3).

2.6 BARRIERS FOR COMPLYING WITH CONTINUOUS PROFESSIONAL DEVELOPMENT REGULATIONS

Continuous professional development has become part of the professional life for many SA emergency medical care practitioners in order to improve their knowledge and their skills in the challenge to meet the ever-changing environment in which they are practicing in.

The most frequent barriers recorded were cost, time and access to continuous professional development activities (Friedman & Philips 2001:7). According to Friedman and Philips (2001:7), although some organisations were willing to fund continuous professional development activities, a number of factors were identified as barriers towards continuous professional development participation. The barriers that will be

discussed are organisational structures, cost or funding, resources, education and training, employer support and continuous professional development activities.

2.6.1 Funding for continuous professional development activities

According to Davids (2006:37 citing Nolan 1995), the lack of finance and study leave given by the employer affects participation in continuous professional development. Although employers deem it important that their employees attend continuous professional development activities, there are often constraints on the training budget (Davids 2006:37 citing Nolan 1995).

According to Henwood, Yelder and Flinton (2004:254) health care professionals expect that the continuous professional development activities be funded by their employers. The authors continue their argument by stating that health care professionals who cannot afford continuous professional development fees or those who do not have transport to attend continuous professional development events would be greatly assisted if their employers were to become financially involved. In contrast to this Kanamu (2014:online quoting Castel, Adrian-Harris, Holloway & Racer 1997:260) argues that individuals should be held accountable for funding their own continuous professional development.

Health care professionals who do not live near a major city could experience transport and accommodation challenges which could greatly increase the cost of attending continuous professional development activities (Henwood *et al.* 2004:254). According to the WFME (2003:14), continuous professional development must be accepted as an essential part of medical practice that reflects in budgets, resource allocations and time schedules. Health care professionals, in association with appropriate stakeholders, should arrange continuous professional development activities and form a system to finance and sustain continuous professional development in reply to the needs that had been identified by their employees (WFME 2003:14).

2.6.2 Employers' support for continuous professional development activities

Employers have a strong influence in the attendance of continuous professional development activities. Their support for continuous professional development participation is essential as their staff should acquire the knowledge and skills to improve

patient care (Henwood *et al.* 2004:254). According to the Royal College of Nursing (2007:4) the employers' support to meet the regulatory boards' requirement is essential in order to satisfy the continuing demand for appropriately skilled health care workers. They can do this by planning a professional development appraisal system in which the practitioners can be motivated to learn. Employers can provide time for the professionals to attend continuous professional development activities. In this way, they will ensure that the professionals' learning needs are met (Royal College of Nursing 2007:4).

Moynagh (2013:online) states that there are seven ways in which organisations can provide support for continuous professional development activities:

- "The managers must buy in from the start. Practitioners will take self-development seriously if they are supported by their managers throughout the year and are rewarded through an appraisal system.
- Connecting the professional's development to the individual's role at work. This will serve to encourage the staff members to identify the challenges that they face in their work environment and to use continuous professional development activities to overcome them. The professionals will be more committed if they are developed in the relevant roles in their daily functions as well as in their future career path.
- Professionals should share the knowledge and skills they have learnt. This could be done by having meetings on a weekly or monthly basis. Professionals are further motivated when they learn from each other.
- Give the professional a choice on how to learn. Allow them to identify their own priorities in achieving their continuous professional development points rather than supplying activities which are redundant. The employer needs to focus on what works for his employees regarding continuous professional development activities. If the platform for continuous professional development activities already exists, plan, manage and create opportunities for the professionals to attend.
- Organisations can encourage regular continuous professional development activities by offering different options of attending or participating in these activities. A reminder could be sent to the professionals on the continuous professional development activities as well as a register to log the activities that they have undertaken.

- Having workshops will assist professionals to develop a simple methodology – this can be done by recording how continuous professional development activities changed their practice. Evaluate the results to assess how far continuous professional development contributes towards the organisation. Emphasis on the learning outcomes, rather than the learning activities, will make the continuous professional development exercise more purposeful and will ensure that the organisation will benefit.
- Recognising good quality of formal and informal continuous professional development. This could be done by an appraisal system or by giving an award for outstanding continuous professional development achievement”.

Moreover, the employer should ideally encourage health care professionals by providing them time off to attend continuous professional development activities especially if they are working on a shift system (WFME 2003:16).

Without the support of the employer, it would be virtually impossible for emergency medical care practitioners to attend continuous professional development activities because of the financial expense to register for the continuous professional development event. Some continuous professional development events require emergency medical care practitioners to pay a fee as part of registration even before they attend a continuous professional development event. Not all continuous professional development activities, especially in the private sector, are free in the Free State province.

2.6.3 Availability of resources

According to Ndege and Kioko (2006:43) the barriers for rural workers include the distance from education facilities, work schedules, inaccessibility of conferences, lack of transport and finance, and staff replacement. Some health care workers work in rural areas where resources are either not available or non-existent. This jeopardises their engagement with continuous professional development activities and affects the quality of service delivery. Continuous professional development activities must be provided in areas that are conducive to effective learning (WFME 2003:18).

Most continuous professional development activities need a certain amount of funding and material aids to be effective. With financial aid these continuous professional

development activities will be able to finance logistical resources. This could include transportation to the venue of the continuous professional development activity, purchasing materials to use during the training and paying for the accommodation of the participants (Selemani-Meke 2011:48).

Computers in the 21st century have consistently assisted in solving problems that mankind faces. In the past few years technology has evolved so much that a computer can be carried in a human palm. Today, computers are people's daily companions. Technology has now become an essential part of every profession, including research (Cooper 2006:2). In research, technology has opened up new opportunities on data management in order to produce valuable information and knowledge. Almost all academic research is available online. Computers can save enormous amounts of information. Learners are able to quickly and efficiently search for information if needed, making it easier to retrieve the information than with paper storage. Researchers can take computers anywhere, in general making it easier to conduct research and collect data (Plomp & Pelgrum 1991:254).

2.6.4 Organisational difficulties

In order for continuous professional development to have the desired effect, continuous professional development must be part of an integral organisational strategy (Dearnly & Matthew 2007:6). According to Dearnly and Matthew (2007:6) continuous professional development should be considered as an investment in the skills and knowledge of the practitioners. The practitioners' needs should be addressed. Learning should be evaluated to gauge the effectiveness of the continuous professional development activities.

However, some organisations continue to believe that continuous professional development is a cost rather than an investment (Kanam 2014:online). Botes (2013:34) draws on Mash & Blitz-Lindeque (2006) to list the following definite aspects to be heeded in the planning and implementation of continuous professional development activities for health care workers:

- "Ascertaining the needs of attendees and selecting the topics.
- Determining the layout of delivery.

- Having opportunities for reflection.
- Selecting the idyllic content expert.
- Choosing the appropriate date and venue.
- Reservation of audio-visual/ simulation equipment that is required.
- Organising suitable catering.
- Timely accreditation for continuous professional development and guidelines that is followed by the HPCSA.
- Sending out invitations on time.
- Attendance registers recording all important information.
- Receiving feedback on continuous professional development activities presented”.

Responsibilities regarding the organisational structure of continuous professional development lie within the specific professional organisation (WFME 2003:21). These organisations must take responsibility in terms of leadership and organisation and evaluate these aspects on a regular basis to determine whether the mission and outcome of continuous professional development activities as defined by each professional body have been achieved (WFME 2003:21).

2.7 A FREE STATE PERSPECTIVE REGARDING CONTINUOUS PROFESSIONAL DEVELOPMENT

Botes (2013:75-79) conducted a study entitled "*A Free State perspective which reflects on the factors that influences further education opportunities*". He indicates the following factors that influence usage of further education opportunities for general practitioners in the Free State province:

- “They found it difficult to apply for study leave and attend courses.
- Physicians found it very difficult to leave their practices unattended and found it difficult to locate locums.
- Access to electronic resources and technologies and lack of connectivity was a challenge.
- They do not have time away from their practice/hospital.
- Continuous professional development courses were commonly far away from where they worked.
- Courses were only presented in Bloemfontein.

- The courses were too long.
- Even though multiple advertising sources are used general practitioners indicated that they were not aware of the courses presented.
- They were informed too late regarding the continuous professional development event which made it difficult to plan for replacements (Botes 2013:75-79)".

To address the factors that influence usage of further education opportunities for general practitioners Botes (2013:79) suggests the following considerations: organise shorter day courses, present them through a rotation system systematically through the five districts in the Free State province, schedule regular visits of specialists to the districts, and facilitate the use of modern continuous professional development technologies.

Although these findings were of a general practitioner's view in the Free State province regarding continuous professional development, the situation seems very similar to the EMS events that are presented in the FSCoEC in Bloemfontein.

2.8 CONCLUSION

Chapter 2 provided a literature study. The researcher focused on an international perspective on continuous professional development as well as a South African perspective on continuous professional development and the concepts of continuous professional development. This provides the context of the challenges of the situation in SA and specifically the Free State province in which emergency medical health practitioners have to ply their trade.

In Chapter 3 the research aim and methodology for the study will be discussed.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter provides a theoretical perspective on the research design and methodology used to analyse the needs of Free State emergency medical care practitioners with regard to continuous professional development. Thereafter, a detailed description will follow of the process that was applied in sample selection, the pilot study, the data collection and data analysis process. This chapter will conclude by discussing the reliability and validity of, as well as the ethical considerations applicable to this study.

3.2 THEORETICAL PERSPECTIVES ON THE RESEARCH DESIGN

A research design is defined as a plan, structure and a strategy of obtaining answers to the research question or problems (Kumar 2005:95). The research design has two main functions. Firstly, it concerns the identification or development of procedures and logistical arrangements that are required to conduct a study. Secondly, it affirms the importance of quality in the procedures followed that will ensure the validity, objectivity and accuracy of the study and its findings (Kumar 2005:95).

The research design in this study is a quantitative descriptive study. Information was collected in order to analyse the needs of Free State emergency medical care practitioners with regard to continuous professional development. Creswell (2003:21) notes that a research design can either consist of a quantitative, qualitative or a mixed method approach. Quantitative research focuses on the collection of numerical data and by generalising it across various groups of people (de Vos, Strydom, Fouche, Delport 2011:63). The objective of quantitative research is to develop mathematical models, theories or hypotheses pertaining to phenomena. Quantitative research is objective and only seeks a precise measurement and analysis of the target concepts to answer the inquiry (Creswell 2003:6). The design method of the current study was primarily quantitative in nature although a few open-ended questions were included with a view to

enabling participants to express their views regarding continuous professional development challenges.

The quantitative approach enabled the researcher to generate large amounts of data within a short period of time, in this way facilitating the execution of the study within a set time frame. This increased the immediacy and reliability of the results.

3.3 RESEARCH METHODS

The research methods which form the basis of the study comprise of a literature study while the empirical phase of the study consisted of a questionnaire to conduct a survey.

In this section each method will be detailed and described.

3.3.1 Literature study

The aim of a literature study is to conceptualise and contextualise a research problem and locate it in a body of theory. It also serves to put the researcher's efforts into perspective, situating the topic in a larger knowledge pool, thus creating a foundation based on existing, and related knowledge (De Vos *et al* 2011:134-135).

According to Babbie and Mouton (2001:87) a literature overview is not a collection of texts, but a body of accumulated scholarship. A researcher should be able to learn from other scholars; how they theorised on and conceptualised issues, and what tools they used.

The National Research Framework (NRF) database was consulted in addition to the Sciences Direct database available through the library of the University of the Free State (UFS). Attention was given to books and journals through the library website and Google Scholar was also consulted. The above provided the necessary background and context for the stated problem. It also formed the basis and rationale for the development of the questionnaire to be used in this study.

3.3.2 The questionnaire

According to Goddard and Melville (2001:47), a questionnaire can be considered as a list of questions that participants are requested to answer; this would typically include open-ended and closed questions.

Bowling (2002:258) defines a structured questionnaire as a collection of standardised questions and scales that are represented to all participants in the same way and argues that the main advantage of using a structured questionnaire is the ability to collect unambiguous answers. However, one disadvantage is that not all of the relevant factors may be covered by the set (pre-coded) questions; and that participants may be forced to select an option that does not fully reflect their opinion on the matter at hand. It is for this reason that some open-ended questions were added to the questionnaire in this study.

Goddard and Mellville (2001:48) propose the following criteria for a good questionnaire:

- “The questionnaire is completed and contains all the data that is required.
- The questionnaire is brief and does not abuse the respondent’s time or concentration.
- Only relevant questions are asked.
- The instructions are unambiguous.
- Is compiled with precise, clear, comprehensive and understandable questions.
- The questions are not leading nor do they suggest answers.
- It mostly uses closed questions.
- The instrument is reliable”.

In the following section, important aspects of the questionnaire will be examined. These aspects include the advantages and disadvantages of a questionnaire, variations in terms of question formulations and variations in terms of distribution of the questionnaires.

3.3.2.1 *Advantages and disadvantages of questionnaire surveys*

A questionnaire can be applied in a variety of survey situations. Certain advantages and disadvantages of using a questionnaire in a study are always present. The advantages of using a questionnaire commonly include:

- The answers are gathered in a standardised way, so the questionnaire is predominantly unbiased.
- It is relatively quick to collect information using a questionnaire.
- Information can be collected from a large portion of a group (Carter & Williamson 1996).

In this study the researcher used a questionnaire because the majority of the target population is employed according to a shift system. It would be difficult to get hold of these participants at the same time in order to use another research method. The researcher of this study had a positive response rate using the questionnaire method with a large population.

Some disadvantages of a questionnaire include:

- Respondents may feel temporarily confused by a question and only realise later that they in fact knew the answer to the question.
- The questionnaires are rigid and therefore it is not possible to clarify any points that participants might misinterpret.
- The participants could answer the questions hurriedly if the questionnaire takes too long to complete. Asking too many questions should be avoided.
- The participants may be reluctant to answer the questions. They may not want to disclose information or they might think they will not benefit from answering the questions (Carter & Williamson 1996).

In this study emergency medical care practitioners were given three days to complete the questionnaire. The practitioners were invited to participate in the pilot study at the FSCoEC. The questionnaire was piloted before the final questionnaire was sent out to the participants. In the pilot study emergency medical care practitioners were asked to record the time and to indicate if some of the questions were unclear. The emergency

medical care practitioners that piloted the study indicated that the questionnaire took an average of 15 minutes to complete. Some of the questions were reformulated into layman terms so that the participants would understand the questions. The five point likert scale in the pilot study was changed because the participants were not familiar on how to answer this type of questions, therefore a three point likert scale was used in the final questionnaire. The final questionnaire in this study was six pages.

3.3.2.2 Types of questions used in questionnaire surveys

Closed, open-ended and scale type questions are some of the types of questions that may be used in questionnaire research. Each type will be described in further detail now.

Closed questions

A closed question offers a pre-determined set of answers from which the participants has to choose. These questions offer the participant an opportunity to select one or more choices from a number provided. The disadvantages are that the responses are limited to the stated alternative. Therefore, participants cannot express their own judgement. The advantage of a closed question is that it provides the participants with a clear understanding of the question as it cancels out the possibility of misinterpretation to a great extent. The questions can be answered within the framework that is provided. Also, it is easier to code and statistically analyse these type of questions (Maree & Pietersen 2007:161).

Open-ended questions

The participants are given an opportunity to express their views and ideas in the open space provided. An open-ended question provides the researcher with an opportunity to assess how the participant thinks and feels about the questions. An open-ended question allows the participants to qualify and clarify responses and creates the opportunity for unanticipated findings to be discovered (Neuman 2006:287).

Scale questions

This type of question consists of multiple choices. The answer categories are designed in such a way that the participants select a certain point on a scale. A scale question is useful for obtaining information about non-specific and more subjective aspects (De Vos *et al.* 2011:200).

3.3.2.3 Questionnaire distribution

There are several ways in which questionnaires may be distributed to collect the data, as will be explained in the following discussion.

Mailed questionnaire

According to Grinnel and Urau (2008:288-291) a mailed questionnaire is sent by mail in the expectation that the participant will read the instructions, then answer the questions provided and return it to the researcher. The mail questionnaire has certain limitations. The response rates are very low (Rossouw 2003:129). There is no control that ensures the intended person in the household will complete the questionnaire. The lack of access to mail delivery is also a serious disadvantage (De Vos *et al.* 2011:187).

Telephonic questionnaire

Maree and Pietersen (2007:157) explain that in this type of questionnaire the participants are phoned by the researcher who asks the questions and records the answers. A telephonic questionnaire is a more structured type of interview that is scheduled. There are certain advantages using a telephone questionnaire. The participants have an opportunity to clarify questions that are not clear. The data is gathered quickly by the researcher. The disadvantage of a telephone questionnaire is that it is very expensive, especially if it entails one or more long distance calls. The major limitation of a telephone questionnaire is that not everyone has a telephone (De Vos *et al.* 2011:187).

Self-administered /individually administered questionnaire

In this method the questionnaires are hand delivered to the participants who complete the questionnaire on their own, but the researcher is available to clarify if any problems are experienced. The researcher limits his own contribution to completing the questionnaire to the utter minimum. The researcher remains in the venue and may encourage the participants to expand their contribution (De Vos *et al.* 2011:188-189).

Group-administered questionnaire

In this method the participants that are present in a group complete the questionnaire on their own. Each participant receives the same incentives and completes their own questionnaire without discussing the questions within the group. Sometimes the researcher will have a discussion with the whole group and after the discussion the researcher or one person from the group will complete the questionnaire according to what the group stated. The researcher is always present at the venue for this method of data collection and can clarify any uncertainties. The advantage of this method is that all the participants complete the questionnaire at the same time. The disadvantage of this method is to obtain a suitable venue, time and the challenge of expecting all the participants to attend at the same time (De Vos *et al.* 2011:189).

Electronic questionnaire

According to Grinnell and Unrau (2008:298) there are three types of electronic surveys. The first type is an email survey where the researcher sends an email, attaching the questionnaire for the participant to complete. The second type is a web-based survey that requires the participant to complete the questionnaire online through the website. A third method is the use of a computerised interactive voice response system that relies on automated telephone calls. Another type of electric data collection is when the researcher conducts an interview and records the participants' responses on an electronic database. The researcher enters the data for the participants using a laptop or desktop computer (De Vos *et al.* 2011:189). The advantage of this type of method is that the data is directly entered into a database. This limits mistakes and this type of method is paperless.

The major disadvantage of the electronic questionnaire method is that some participants are unfamiliar with a computer; also, many people who may be in the prospective target population do not have computers or do not have access to the internet (Grinnel & Unrau 2008:300).

Questionnaires delivered by hand

Some researchers deliver questionnaires by hand. This allows the participants to complete the questionnaire in their own time. The researcher then collects the completed questionnaire at a later stage. It is important that the participants are aware of the time of collection. There is a high response rate of completed questionnaires because it allows the participants time to complete the questionnaire and does not inconvenience the participants. It is feasible to leave the questionnaire in a mailbox for the participants to pick up and drop again in the same box once they have completed the questionnaire (De Vos *et al.* 2011:188).

The researcher in this study used this type of method because previous experience by a researcher from the HPE programme indicated a very high response rate with respondents similar to the participants in this study.

3.3.2.4 *The questionnaire survey as used in the current study*

The questionnaire was quantitative in nature with closed-ended, open-ended and scale-like questions. The open-ended questions were analysed using codes and categories. The questionnaire was designed electronically on the Evasys program. The questionnaire had a unique bar code linking it to the current study.

The Evasys program is a web-based survey used for creating and allotting surveys (Electric paper n.d.:online). In this study the researcher used a hard copy questionnaire and scanned it at the Evasys scan station which is located at the UFS. Hard copy questionnaires were printed for distribution.

The questionnaire mainly consisted of three sections: demographic details of the participants, availability and level of participation in continuous professional development activities, and barriers encountered complying with continuous professional development

regulations. Some sections of the questionnaire included open-ended questions allowing the participant to express his/her views and opinions. Sections B and C also incorporated scale questions. The questions were designed to address the objectives set for this study.

The sections were laid out as follows:

- **Section 1: The personal and professional profile** asked questions regarding the participants' age, gender, home language, ethnic group, qualifications and employment profile.
- **Section 2: The availability of and the level of participation in continuous professional development of the activity** revolved around the participant's exposure, involvement, methods and knowledge of continuous professional development activities in the Free State province.
- **Section 3: Barriers encountered complying with continuous professional development regulations** consisted mostly of scaled questions regarding the obstacles that participants faced regarding continuous professional development activities. The section was concluded with an open-ended question regarding any other aspects required to facilitate obtaining continuous professional development points.

3.3.3 Sample selection

A sample is defined as components or a subsection of a population that is considered for actual inclusion in a study, or can be seen as a subsection of the amount drawn from a population in which the researcher is interested (De Vos *et al.* 2011:223).

In this study purposive sampling was used to choose the sample population. Purposive sampling is also known as selective sampling and relies on the judgements that are made by the researcher when selecting the population that needs to be studied (De Vos *et al.* 2011:232). The purpose of this sample was to focus on a particular group or population in the Free State province that met the criteria of this study to answer the research questions. In this case the sample was purposefully selected as 261 of the 1630 emergency medical care practitioners registered with the HPCSA and stationed in the Free

State across all five districts. The sample was large enough to be representative of the target population of emergency medical care practitioners.

During the questionnaire distribution across the five districts convenience sampling deemed appropriate. Convenience sampling is a type of non-probability sampling where respondents are those who are easily available (De Vos *et al.* 2011:232). The distribution of the questionnaire occurred at a specific time. The questionnaires were distributed across the five districts in the Free State province and those emergency medical care practitioners that were present at that time participated in the study.

3.3.3.1 *Target population*

A target population consists of a group of individuals who possesses and shares certain specified characteristics (De Vos *et al.* 2011:223).

In this study, the target population consisted of emergency medical care practitioners in the Free State province who were registered with the HPCSA at the time of the study. These individuals were employed on different levels according to their qualifications in both the government and private sector. The different levels of qualifications were BAA, AEA, CCA, ECT, N. Dip EMC, B.Tech. EMC. There were 1630 emergency medical care practitioners (1554 from the state sector and 76 from the private sector) registered with the HPCSA at the time of the study (Refer to Chapter 2 for more detailed information of the current emergency medical care practitioner cohort working in the Free State province).

3.3.3.2 *Description of the sample population*

A sample population is a collection of possible participants with whom the researcher intends to simplify the outcomes of the study (Salkind 2000:86).

All the participants were registered with the HPCSA. This included practitioners with different levels of qualifications, namely the BAA, AEA, CCA, N.Dip. EMC and B.Tech. EMC. Male and female persons from the different ethnic groups Black, White, Coloured and Indian participated in the study. The sample population in this study included the

emergency medical care practitioners who were available at the station in the district at the time of data collection.

3.3.3.3 Sample size

Neuman (2003:232) states that the larger the population, the smaller the percentage of that population the sample needs to be. However, larger samples will enable the researcher to draw more representatives and more accurate conclusions. The sample size then constitutes the number of participants who were asked to take part in the study. In view of the target population being large, it was decided to select a sample of 16% of the target population. This constituted 261 emergency medical care practitioners.

3.3.4 Pilot study

According to Barker (2003:327), a pilot study can be defined as a method for the testing and authenticating of a tool by administering it to a small portion of the group of participants from the anticipated test population. It is important that any new questionnaire be carefully pilot tested before the final main investigation. This will guarantee that errors are corrected immediately (De Vos *et al.* 2011:195). Babbie (2004:256) recommends that the participants complete the questionnaire and then read through it, scanning for errors. The pilot study achieves two objectives: firstly, it helps to improve the face and content validity of the tool being used, and secondly it provides an estimate of how long the questionnaire takes to be completed (De Vos *et al.* 2011:195).

A pilot study was done to ensure that the questions are clear and not biased, the questionnaire was well-structured and to determine the time needed for completion. To achieve this, a copy of the information letter, consent form and a hard copy of the questionnaire was hand delivered to three emergency medical care practitioners in the government sector and to three emergency medical care practitioners in the private sector who met the same criteria as those in the target population. The emergency medical care practitioners were informed that the completed questionnaires will be collected within three days. They were asked to write down the time spent in completing the questionnaire and also to comment on any questions which may be ambiguous or unclear.

After collecting the questionnaires used in the pilot study, the responses and comments of the candidates were considered and changes were made to the questionnaire. For example, in Section C, question 4.1, some of the emergency medical care practitioners did not understand certain words, for example “obstacles”, which the researcher changed to “problems experienced”. Some of the participants did not understand and felt confused by the Likert scale that was initially in the questionnaire. This was subsequently changed by the researcher to a scale questionnaire, for example in question 4.3.

These six respondents were not included in the main study and analysis of the final data, due to the fact that changes were made to the questionnaire subsequent to their participation.

3.3.5 Data collection

The researcher hand delivered the information sheets, consent forms and hard copy questionnaires to the participants in the districts (cf. Appendices B1-3). The emergency medical care practitioners who were present at the station, in the specific district, at the specific time were requested to participate in the study. A marked box was left in the station and the participants were asked to complete the questionnaire within seven days and add it to the box. The researcher then collected each box with the completed questionnaires from the stations.

The estimated data collection period took place during July 2015 for a period of approximately one month. The completed hard copy questionnaires were scanned into the Evasys system for data capturing on an Excel spreadsheet.

3.3.6 Data analysis

The data on the Excel spreadsheet were collated and analysed. Open-ended questions were coded and reported on. All quantitatively analysed data were checked and confirmed by the Department of Biostatistics at the UFS.

Data were reported using frequencies and percentages, and is presented in figures and tables in the next chapter.

3.4 ENSURING THE QUALITY OF THIS STUDY

In this section the researcher will describe the factors confirming the quality of the study. The researcher will discuss the validity and reliability, ensuring that the conclusions drawn from this study are valid and reliable.

3.4.1 Validity

Validity warrants that the research outcomes are dependable, based on the accuracy of what the researcher wanted to measure. This characteristic improves the degree to which the research forms a base for additional research development (LoBiondo-Wood & Haber 2006:209). This means that a study with a high degree of validity will provide the foundation for further investigation. It is hoped that this study will be the starting point for further inquiry into the needs of emergency medical care practitioners with regard to their further training.

The researcher drew on the input of certain experts within the field of study in order to determine, in the words of Kumar (2005:154), what the instrument is supposed to measure. This assessment will take place in the course of logical or statistical evidence. To establish the validity through the course of logic will imply the justification of all the questions that are related to the objectives of the study. The statistical procedure will provide hard evidence.

During the development period of the questionnaire of this study, each of the objectives was considered as relative to the aim of the study. This approach was used to formulate the relevant and required questions. This ensured logical relations involving the questionnaire and the objectives of the study.

Questions were formulated to address the following two issues experienced by emergency medical care practitioners in the Free State: the level of involvement in continuous professional development by emergency medical care practitioners as well as the challenges that are encountered in complying with continuous professional development.

The questionnaire was submitted to the evaluation committee and ethics committee of the UFS for approval by both. In this way, the experts' input from the study leader, evaluation panel, department of Biostatistics and the ethics panel views were considered. In addition, a pilot study had also been conducted (cf. 3.3.3.4). All of these measures contribute to the validity of the study, its results and the subsequent conclusions and recommendations.

3.4.2 Reliability

Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials (Frankfort-Nachmias & Nachmias 1994:163). De Vos *et al.* (2011:172-176) report that the reliability of a questionnaire can be increased by ensuring the following:

- “Formulating clear and unambiguous questions.
- Standardising the instructions posed on the questionnaire.
- Being consistent with data collection.
- Being consistent with data analysis, in particular the scoring procedures.
- By piloting the questionnaire”.

The questionnaire was pretested in a pilot study to ensure that the instrument was clearly understood and would be amended if there was any uncertainty of the information before final use. By following these steps the researcher feels confident that the study will provide reliable information which will be of use in future research as well.

3.5 ETHICAL CONSIDERATIONS

De Vos *et al.* (2011:114) define ethics as a set of moral principles that is suggested by an individual or group, is subsequently widely accepted, and which offers rules and expectations about the most correct conduct or behaviour towards experimental subjects and respondents, employers, sponsors, other researchers, assistants and students. In this section the ethical process of this study is described. To confirm compliance with the code of ethics adopted by this research study, the following steps were taken.

3.5.1 Approval

Approval for the research project was obtained from the Ethics Committee of the Faculty of Health Sciences at the UFS (ECUFS 113/2015), and the Free State DoH (cf. Appendices A1 & A2). The regional manager of ER24 (private sector) also approved the undertaking of the research study. The Dean of the Faculty of Health Sciences at the UFS and the Vice-Rector (Academic) were notified of the study. Approval from provincial executives was also requested as the questionnaires were distributed at several provincial workplaces.

3.5.2 Informed consent

A short overview of the study and its purpose was provided to the participants together with an explanation of what was required from them. This, together with a separate consent form, was distributed amongst the participants. If the participants consented to participate in the survey, they were requested to complete and return the questionnaire and consent form in a box that was provided. This method ensured that participants were fully aware of their voluntary contribution to this research study.

There was no form of compensation for participating in this research study. Therefore the participants could not be coerced or cajoled into completing the questionnaire. Their participation would not provide them with any direct or individualised benefit but only the indirect benefit of improved research knowledge on the needs and obstacles of fellow emergency medical care practitioners in the Free State.

3.5.3 Right to privacy and confidentiality

Each questionnaire was identified with a unique bar code that authentically linked it to the relevant study. No names or personal identifiers appeared on the newly composed questionnaire, or on any data sheet that were sent for statistical analysis. All information was managed in a strictly professional and confidential manner. By following this procedure the researcher feels satisfied that the respondents' right to privacy and confidentiality of their information had been upheld.

3.6 CONCLUSION

This chapter explained the methodology as well as the procedures that were applied during the course of this study. After conducting a literature review the researcher was able to compile a detailed questionnaire in order to gauge the levels of participation in continuous professional development by emergency medical care practitioners and the challenges facing them in order to participate in these activities. A randomly selected purposive sample of 16% was regarded as convincing representatives of the target population of emergency medical care practitioners in the Free State. This group of participants provided the data which was collected via the questionnaire. The quality of the research is warranted by the process of validation and testing the reliability of the information, both of which were to the satisfaction of the researcher. Ethical issues regarding approval by the authorities, informed consent by the participants and voluntary participation as well as the participants' right to privacy and confidentiality had been safeguarded by the process followed, resulting in an ethically sound study.

Now that the basis of the research has been explained the results and findings of the survey is presented in Chapter 4.

CHAPTER 4

RESULTS AND FINDINGS OF THE QUESTIONNAIRE SURVEY

4.1 INTRODUCTION

In Chapter 3, the methodology that was used in this research study and the theoretical features were discussed. In this chapter the results of the study will be presented and discussed using graphs and tables.

4.2 THE DATA COLLECTION PROCESS AND RESPONSE RATE

This study consisted of a questionnaire survey to analyse the needs of Free State emergency medical care practitioners with regard to continuous professional development (cf. 3.3.2). The questionnaire was developed on the Evasys system. The pilot study consisted of six emergency medical care practitioners within the Free State province from both the private and government sectors. A number of corrections were made during a pilot study to the questionnaire before the survey was conducted (cf. 3.3.4). In view of this development, these participants were excluded from the main study.

The questionnaire consisted of three sections (cf. 3.3.2.4):

- **Section A:** The personal and professional profile;
- **Section B:** The availability of and the level of participation in continuous professional development; and
- **Section C:** Barriers encountered in complying with continuous professional development regulations.

The sample population constituted of 261 participants - 16% of the total target population (cf. 3.3.3.1). A total of 261 questionnaires were printed and the hard copies distributed equally across the emergency medical care service stations in all of the districts in the Free State province (cf. 2.2.1). The research package to each potential participant included an information sheet; consent form and a hard copy of the questionnaire (cf. 3.3.5). The emergency medical care practitioners who were present at the station in the specific district, at that specific time were requested to participate in the study. After completion of the questionnaire participants had to put the questionnaire into the clearly

marked box that had been provided at every station. The researcher then collected each box with the completed questionnaires from the stations.

The data collection period took place during July 2015 for a period of approximately one month. A total number of 247 completed questionnaires were collected. This constituted a 94.6% response rate.

The completed hard copy questionnaires were scanned into the Evasys system for data capturing on an Excel spreadsheet. A report from Evasys can be seen in Appendix B4.

The results from each section of the questionnaire will now be described and discussed.

4.3 SECTION A: THE PERSONAL AND PROFESSIONAL PROFILE

This section of the questionnaire consisted of 30 questions. It will provide descriptive statistics for the personal profile questions, such as age, gender, home language, population group. These questions pertain to the demographic details of each respondent. This will be followed by educational details of the emergency medical care professional and the current employment profile of each participant.

4.3.1 Age of the participants

Figure 4.1 shows that the majority of participants (52.7%) fall into the age group of 31-40, followed by 23.2% aged 20-30, 19.2% aged between 41-50, and 2.0% aged 51-60, with one participant (0.5%) older than 60 years of age. The results showed that the minimum age of the sample was 23 and the maximum age was 60 years. This was an open-ended question and only 203 participants completed the question. Of those, the ages of five participants were illegible and therefore classified as unknown data in Figure 4.1.

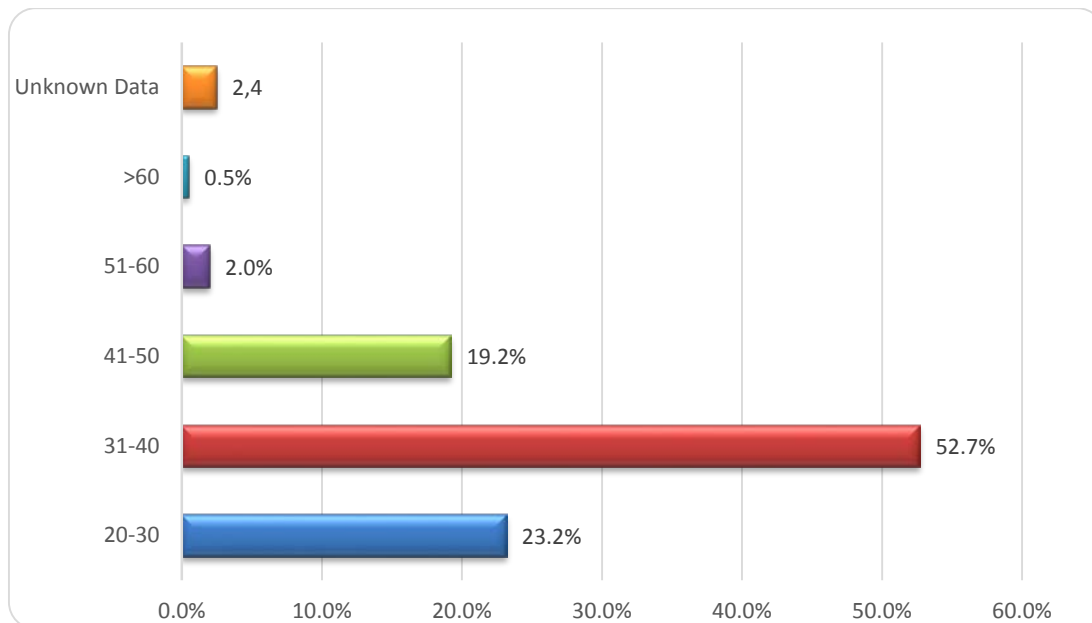


Figure 4.1: Age of the participants (N=247) (n=203)

4.3.2 Gender of the participants

Figure 4.2 indicates that the majority of the participants were male (59.8%) and 40.2% were female. As illustrated in Figure 4.2, only 239 of the 247 participants completed this question.

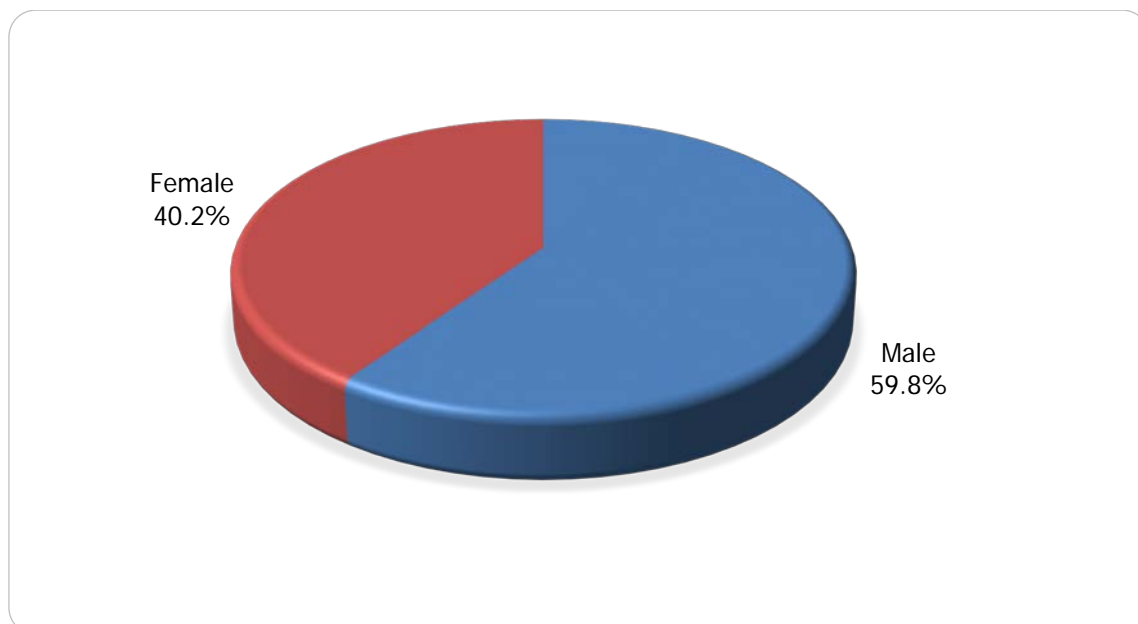


Figure 4.2: Gender of the participants (N=247) (n=239)

4.3.3 The home language of the participants

As indicated in Figure 4.3, 200 participants answered this question. Of these, 16.5% of participants speak Afrikaans and 14.5% speak English at home. The majority of participants (69.0%) indicated that they have a home language other than Afrikaans or English.

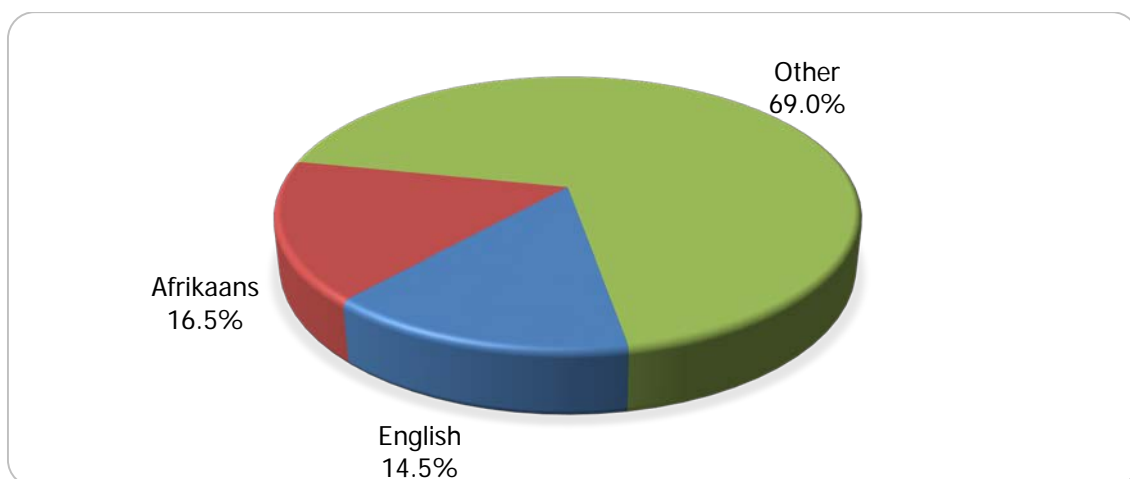
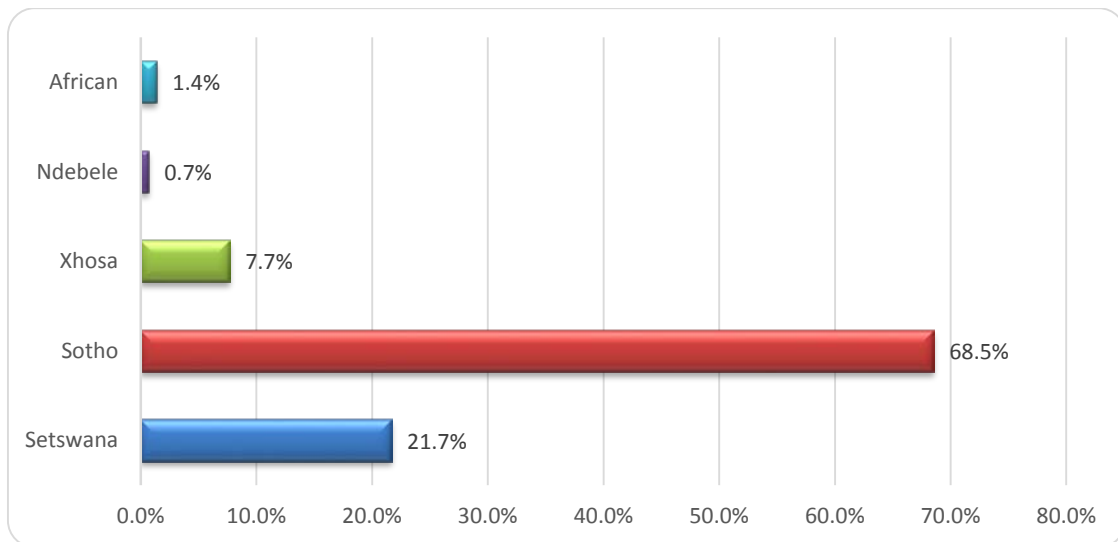


Figure 4.3: The home language of the participants (N=247) (n=200)

In terms of the option "other", the home language reported by participants are summarised in Figure 4.4. The majority of participants (68.5%) indicated that their home language is Sotho, followed by 21.7% Setswana, 7.7% Xhosa, 0.7% Ndebele and 1.4% indicated another African language.



**Figure 4.4: Other home language spoken by the participants (N=247)
(n=143)**

It should be noted that 143 participants completed this open-ended question as opposed to the 138 who selected the option other. This signifies that five participants additionally reported another African language as their home language which could mean that several participants consider more than one language as their mother tongue.

4.3.4 Ethnic group of the participants

Participants were asked to indicate which ethnic group they stem from. They were able to select from the following five responses: Black, White, Indian, Coloured and other.

A total of 236 participants answered this question. Figure 4.5 shows that the majority of participants (84.7%) indicated that they are Black, followed by 12.3% who indicated that they are from the White population and the minority (3.0%) are from the Coloured population. No participants were from the Indian population, or selected other.

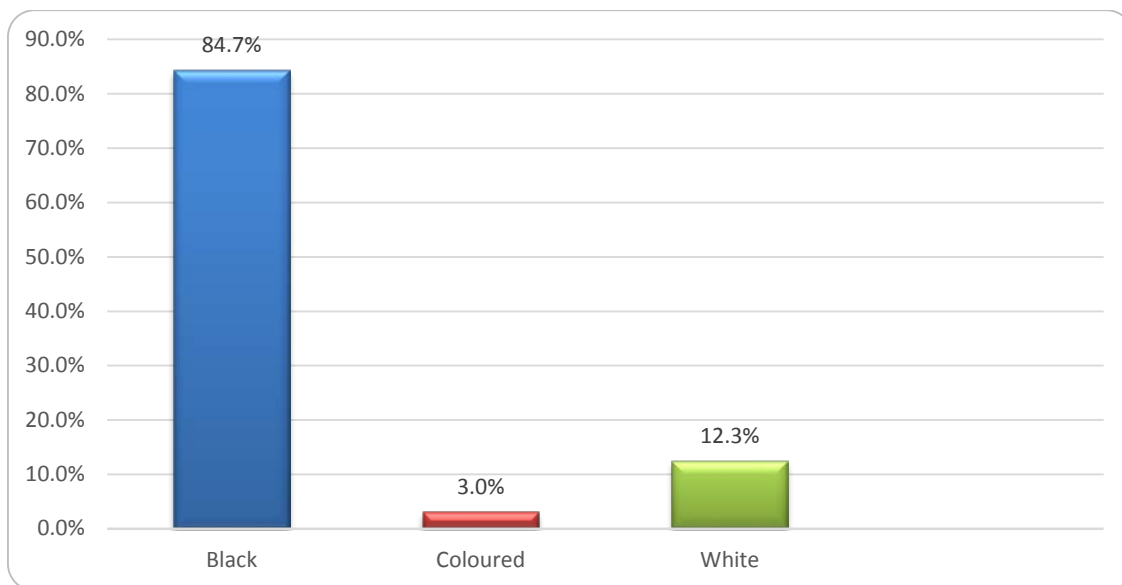


Figure 4.5: Ethnic group of the participants (N=247) (n=236)

4.3.5 Educational background and EMS qualification

Participants were asked to specify their highest educational background and their highest EMS qualification obtained.

4.3.5.1 Educational background

In terms of the highest educational background the following options were presented to select from: Doctorate, Master's, Bachelor's degree, diploma, grade 12, grade 10 or other. Only three of the participants did not answer this question.

Figure 4.6 shows that 3.7% and 77.9% of the participants respectively obtained a grade 10 and grade 12 qualification as their highest educational level. Only a very few participants (8.2%) obtained a diploma. A small minority (1.2%) obtained a Bachelor's degree and 0.4% obtained a Master's degree. No participants indicated that they had a Doctorate degree.

The 8.6% of participants who selected the option 'other' gave the following examples as their highest educational backgrounds: financial management, human resource management, factory fitting and turning and a certificate in audio visual communications. Several participants indicated that they had obtained BAA, AEA and ECT certificates.

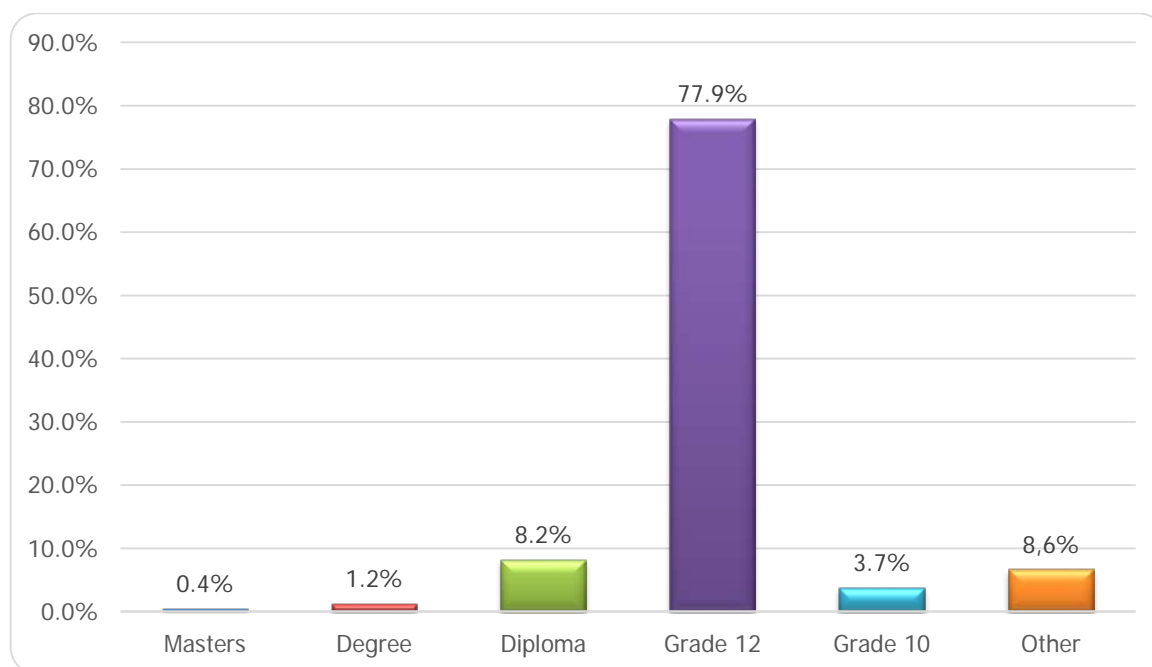


Figure 4.6: Educational background (N=247) (n=244)

4.3.5.2 Highest professional EMS qualification

A total of 238 participants selected an option in this question. Figure 4.7 indicates that 69.3% of the participants were BAA qualified, 18.5% were AEA qualified and 2.5% were CCA qualified. This data indicate that the majority of the study population obtained a certificate in one of the three short courses.

The minority reported having higher level qualifications including ECT (5.0%), N.Dip.EMC (2.9%) and B.Tech.EMC (1.8%). No participants had a Master's or Doctorate degree in EMC.

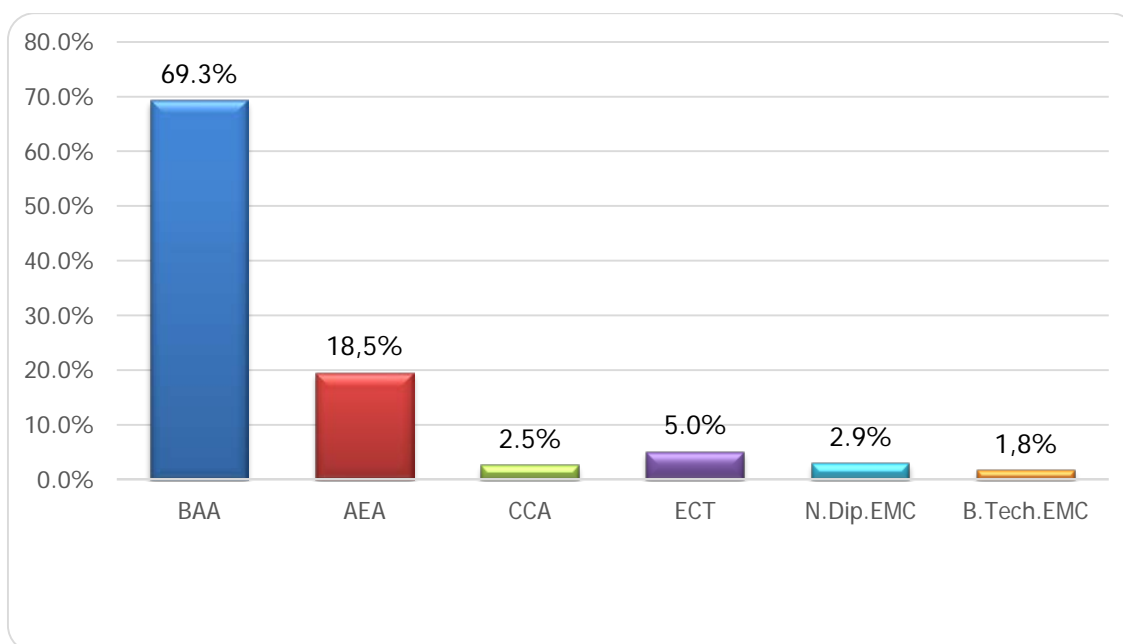


Figure 4.7: Highest professional EMS qualification (N=247) (n=238)

4.3.6 Employment profile

The second question in the questionnaire concerned the participants' employment information, which will be discussed in the following section.

4.3.6.1 Region of work (district/s)

Emergency medical services in the Free State province are divided into five districts (cf. Figure 2.3). In an open-ended question participants were asked to name the region (district) in which they are currently working. The majority of the participants (63.5%) indicated that they work in the Motheo district, 19.4% in the Thabo Mofutsanyane district, 11.5% in the Fezile Dabi district, 3.0% in the Lejweleputswa district and 2.6% in the Xhariep district (Figure 4.8).

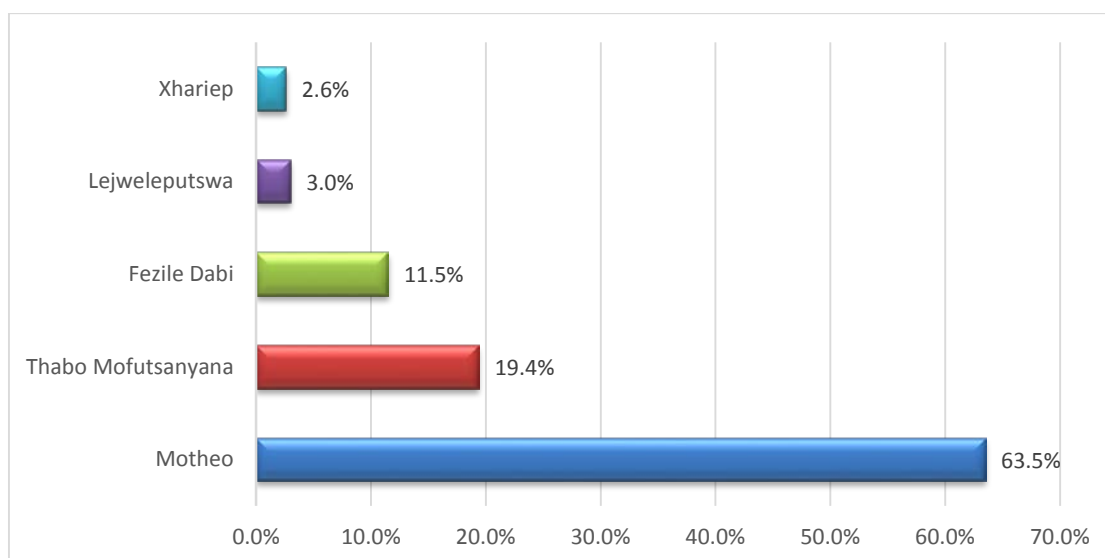


Figure 4.8: Region of work (N=247) (n=233)

4.3.6.2 *Number of years employed as an emergency medical care practitioner*

From the results it can be seen that the majority (42.8%) of the participants has 0-5 years' work experience. Only a slightly smaller number of participants (27.3% and 25.3%) indicated that they respectively have 11-15 years and 6-10 years of work experience. A few participants (3.1%, 0.5% and 1.0%) indicated that they have 16 years and more experience as an emergency care professional. The results are displayed in Figure 4.9.

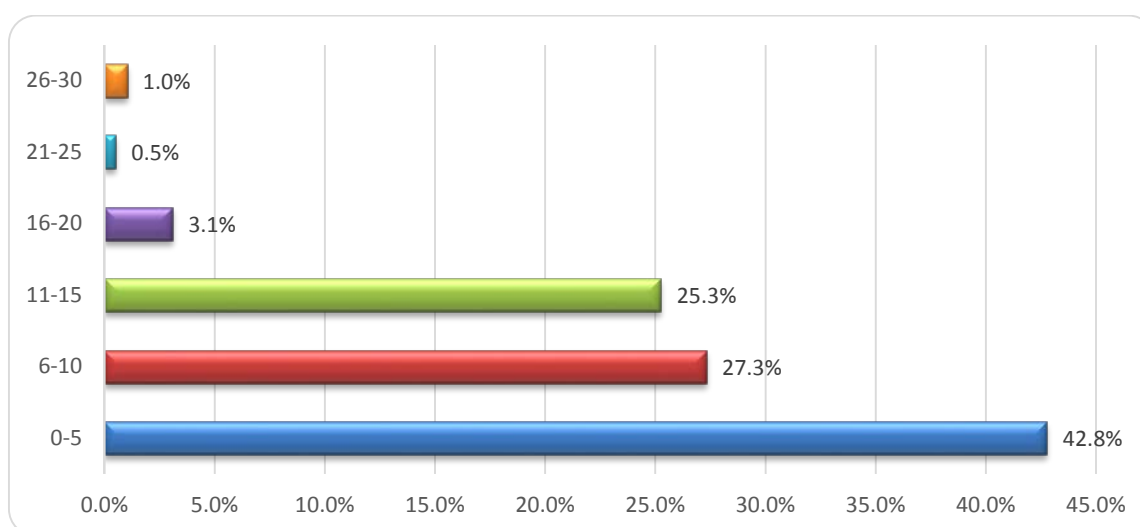


Figure 4.9: Number of years employed as an emergency medical care practitioner (N=247) (n=194)

4.3.6.3 *Nature of current employment*

The participants were asked to indicate nature of their current employment. The majority of participants indicated that they were predominantly working in the government sector (83.1%). Private sector employees who completed the questionnaire represented 16.9% as indicated by Figure 4.10. Three participants did not indicate in which sector they are currently employed. One person mentioned that he was working in a private hospital.

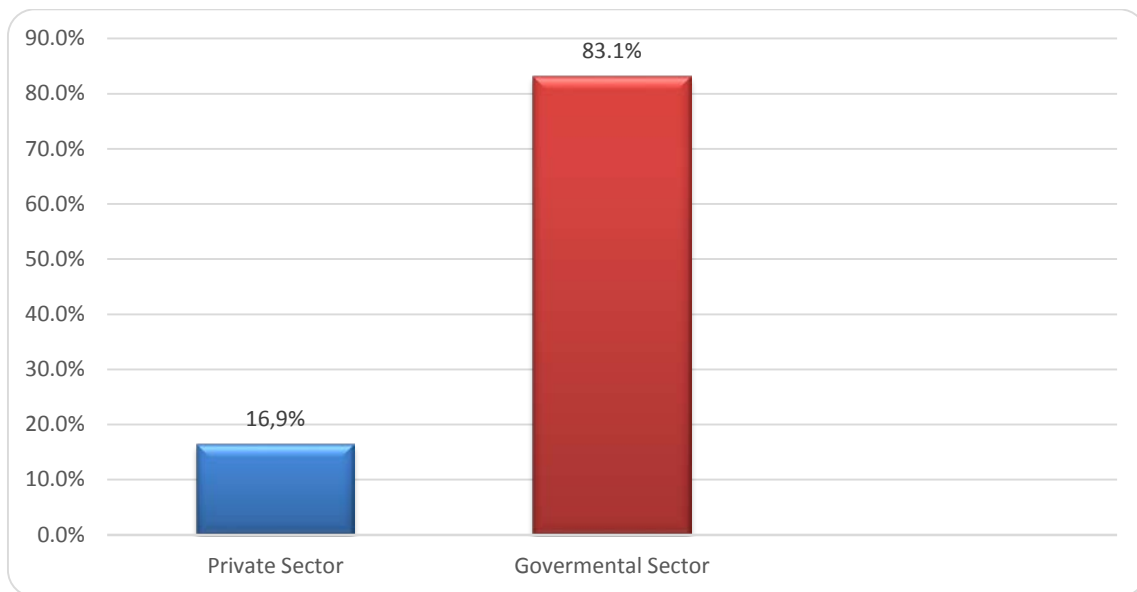


Figure 4.10: Nature of current employment (N=247) (n=243)

4.3.6.4 *Current level of employment*

To the question regarding their current level of employment, the majority (89.7%) of participants indicated that they are employed on an operational level and 7.4% on a managerial level (Figure 4.11). A smaller number of participants (2.9%) selected the option other and specified their response by providing the following examples: lecturer, shift leader or working in maintenance.

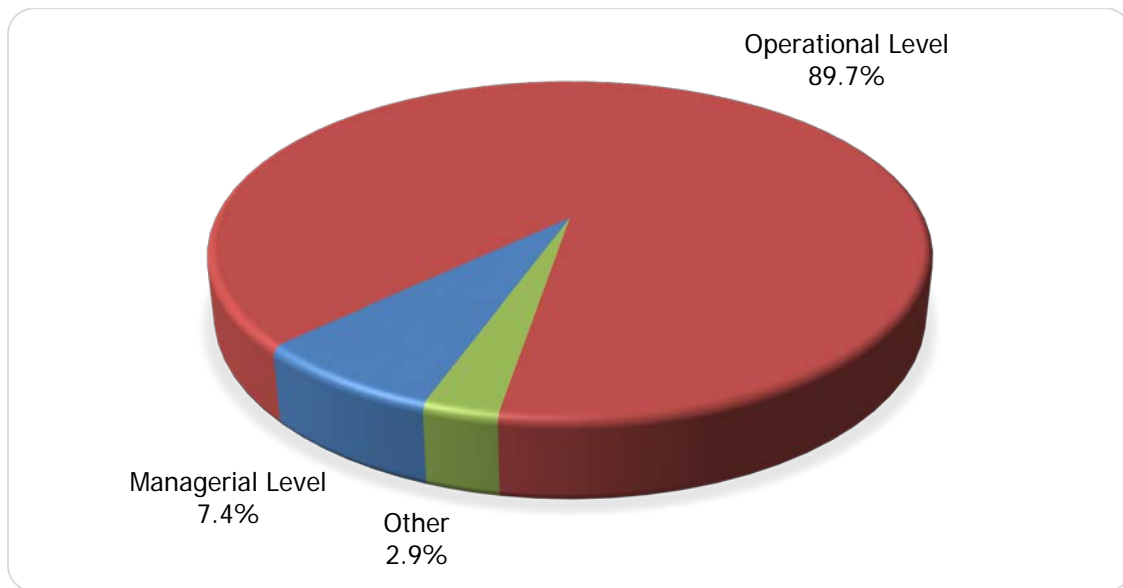


Figure 4.11: Current level of employment (N=247) (n=242)

4.3.6.5 Main area of practice

This question was related to the area in which the participants practiced as an emergency medical care practitioner. Only 225 participants answered this question. As seen in Figure 4.12, 32.0% indicated that they work in a small town, 30.2% in a rural area, 26.7% in a city and 11.1% in a metropolitan area. It is possible that some of the participants did not take into consideration that Bloemfontein has been considered to be a metropolitan area since 2011.

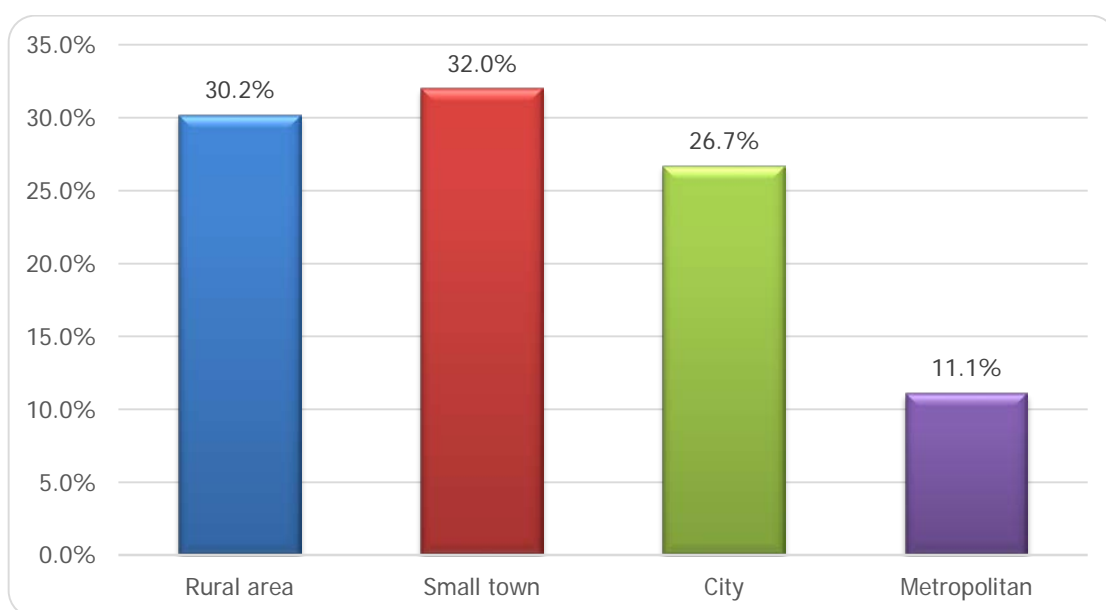
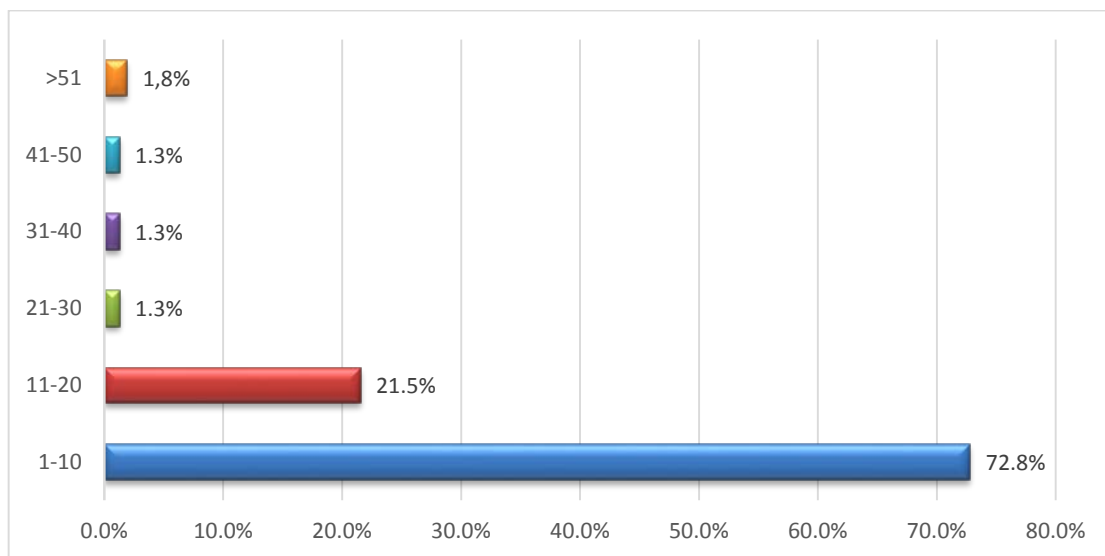


Figure 4.12: Main area practicing in (N=247) (n=225)

4.3.6.6 *Distance between place of work and home*

Participants were asked to indicate how far their home was from where they work. A total of 89 participants did not answer this open-ended question.

Figure 4.13 illustrates that the majority of the participants (72.8%) indicated that the distance between their home and work is 1-10 kilometres, 21.5% indicated a distance of 11-20 kilometres and 5.7% stated that they live more than 21 kilometres from work.



**Figure 4.13: Distance between place of work and home (N=247)
(n=225)**

4.3.7 Access to electronic resources and technologies

Participants were asked whether they have access to the internet; a working computer; a cell phone with internet and e-mail. Table 4.1 present the participants' responses in percentages. It can be seen from the table that not all the participants answered all of the sections in this question. One question was also repeated, but asked in reverse in order to assess whether the participants are actually reading the questions before responding. It would then be expected that a similar response (in reverse) will be seen.

Table 4.1: Access to electronic resources and technologies

	Number of responses (n)	Response options	
		Yes	No
Internet	233	41.2%	58.8%
A working computer	229	48.8%	51.2%
A cell phone with internet access	235	66.8%	33.2%
A cell phone without internet access	203	36.5%	63.5%
E-mail	235	22.1%	77.9%

The results show that as many as 58.8% of the participants indicated that they do not have access to the internet, whilst 41.2% indicated that they have access.

Slightly more participants (51.2%) indicated that they do not have a working computer as opposed to the 48.8% who indicated that they have a working computer.

With reference to having access to a cell phone with internet access. The majority of the participants (66.8%) indicated that they have internet access on their cell phones and 33.2% of the participants reported that they do not have internet access on their cell phone. When the same question was asked in reverse, even though the question was answered by less participants, a similar result was found. This proves the reliability of the answers to this question.

Finally, a total of 77.9% participants indicated that they do not have e-mail and only 22.1% indicated that they have access to e-mail.

4.3.8 The closest place to gain access to a computer with internet

Participants were asked in an open-ended question: "If you do not have internet access, what is the nearest place you can gain access to a computer with internet". A total of 86 participants responded to this question.

A total of 8.1% of the participants who responded reported that they have no place to go to obtain access to a computer with internet.

Only 3.5% of participants indicated that they can access internet at home and 8.1% use their cell phones.

Some participants (2.3%) reported having access to the internet at their workplace and 18.6% reported that they have access to the internet at the hospitals where they work.

The majority of participants (44.2%) reported making use of internet cafés in shopping centres or in town and 15.1% of participants indicated making use of public or university libraries where they have access to computers with internet.

4.3.9 Resources in the workplace

Participants were asked if their place of work had available various resources which they could utilise in order to obtain continuous professional development points. Five resources, namely: Internet access, computers, resource centres, journals and books were listed and the participants were asked to select between a response of yes or no. The results are summarised in percentages in Table 4.2.

Table 4.2: Available resources in the workplace

	Number of responses (n)	Response options	
		Yes	No
Internet access	236	22.1%	77.9%
Computers	227	39.2%	60.8%
Resource centres	238	25.0%	75.0%
Journals	230	14.6%	85.4%
Books	238	16.4%	83.6%

It can be seen that 77.9% of the participants indicated that they did not have access to the internet at their work place and 22.1% reported that they had access to the internet at their work place.

A total of 60.8% of the participants indicated that they do not have computers and 39.2% reported that they have computers at their work place.

The majority of the participants (75.0%) indicated that they had no access to resource centers in the work place and 25.0% of the participants reported that they have.

With reference to journals, the majority of the participants (85.4%) indicated that they do not have journals at the work place and 14.6% reported that they do have access to journals at work.

Lastly 83.6% of participants indicated that they do not have books available at work and 16.4% reported that they have access to books at their work place.

The results show that the majority of participants do not have any of the five resources mentioned earlier available at their work place. At the very most, only computers are available, and it does not necessarily mean that the computers have internet access or that they are available for use by the participants.

When asked if there are any other resources available in the work place of the emergency medical care practitioner from which they would be able to study in order to obtain continuous professional development points, only 36.4% of the participants left a response (N=247) (n=121). Many participants mentioned that continuous professional development activities are available through the FSCoEC or at the Central University of Technology (CUT); some also mentioned workshops or seminars hosted by Medi-Clinic Hospital.

Several participants were unsure of other resources. Examples of these responses include: "There are no resources available", "not sure at the moment", "No HPCSA does not give any information about continuous professional development points", "No I don't know there is, no one tell me about it and where I must do it" and "no nothing we can use".

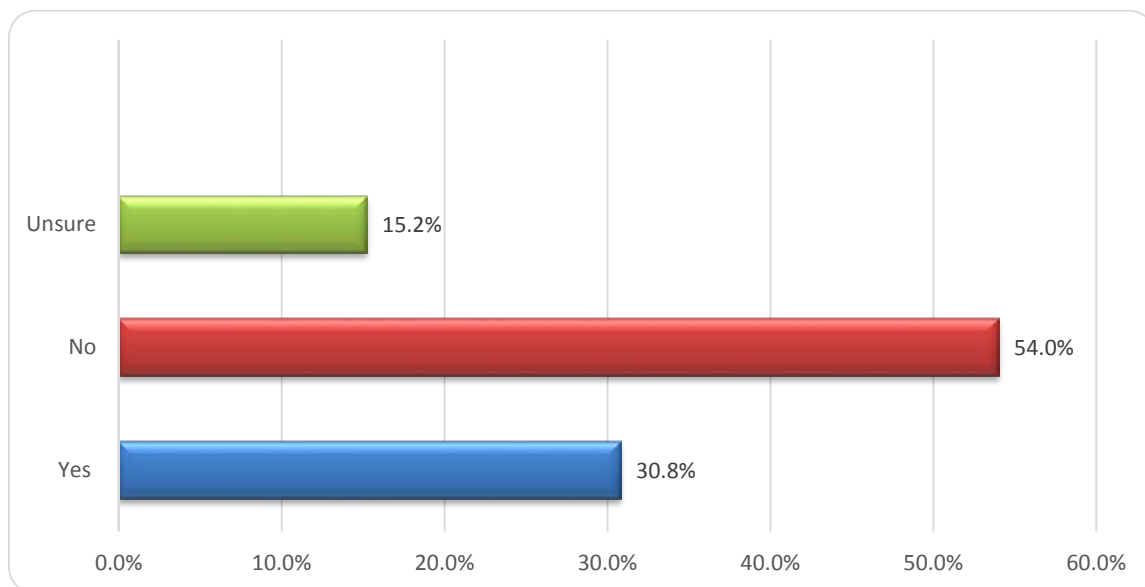
4.4 SECTION B: THE AVAILABILITY OF AND THE LEVEL OF PARTICIPATION IN CONTINUOUS PROFESSIONAL DEVELOPMENT

Responses to Section B of the questionnaire will be reported in this section.

4.4.1 Continuous professional development portfolio

From Figure 4.14, it can be seen that 54.0% of the participants indicated that they do not have a continuous professional development portfolio, and 15.2% were unsure what a continuous professional development portfolio was.

A total of 30.8% of participants indicated that they have a continuous professional development portfolio, which was a positive find.



**Figure 4.14: Continuous professional development portfolio (N=247)
(n=237)**

4.4.2 The number of required continuous professional development points for an emergency medical care practitioner

Participants were asked if they had knowledge of the number of continuous professional development points that an emergency medical care practitioner must earn in a two-year period. They were first asked to select between an option of yes and no and those who selected the option yes were then asked to specify the number of points. In Figure 4.15 it can be seen that 50.6% of the participants said that they do not know how many points they must earn while 49.4% indicated that they know.

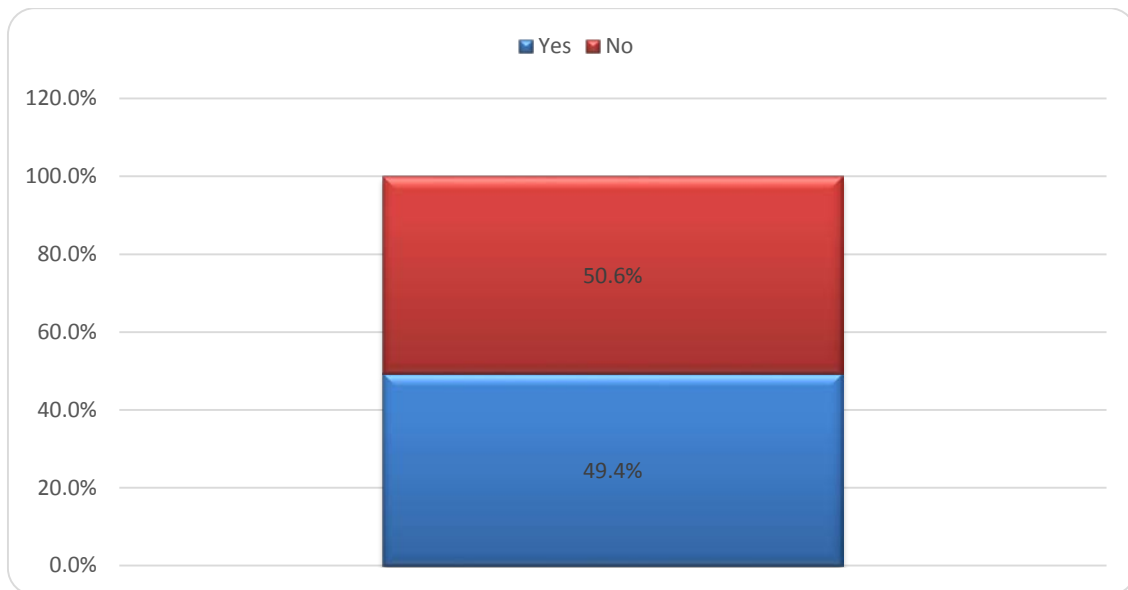


Figure 4.15: Knowledge of the required number of continuous professional development points to be earned in two years (N=247) (n=235)

A total of 103 participants completed the open-ended section where they were required to indicate the required number of continuous professional development points. Only 29.1% correctly indicated that in a period of two years the required number of continuous professional development points is 60 (30 points per year). Many participants (65.0%) wrote down a total of 30 continuous professional development points which is in fact the number of points which should be earned annually. A minority of participants (4.0%) reported a wrong number of points (e.g. 5, 14, 15 and 50 points). Of the respondents, 2% admitted that they were unsure about the required number of points to be earned in a two-year period.

4.4.3 Recent attendance of continuous professional development events

Figure 4.16 shows that 64.4% of participants indicated that they had not recently attended any continuous professional development events. Only 35.6% indicated that they had recently attended such events.

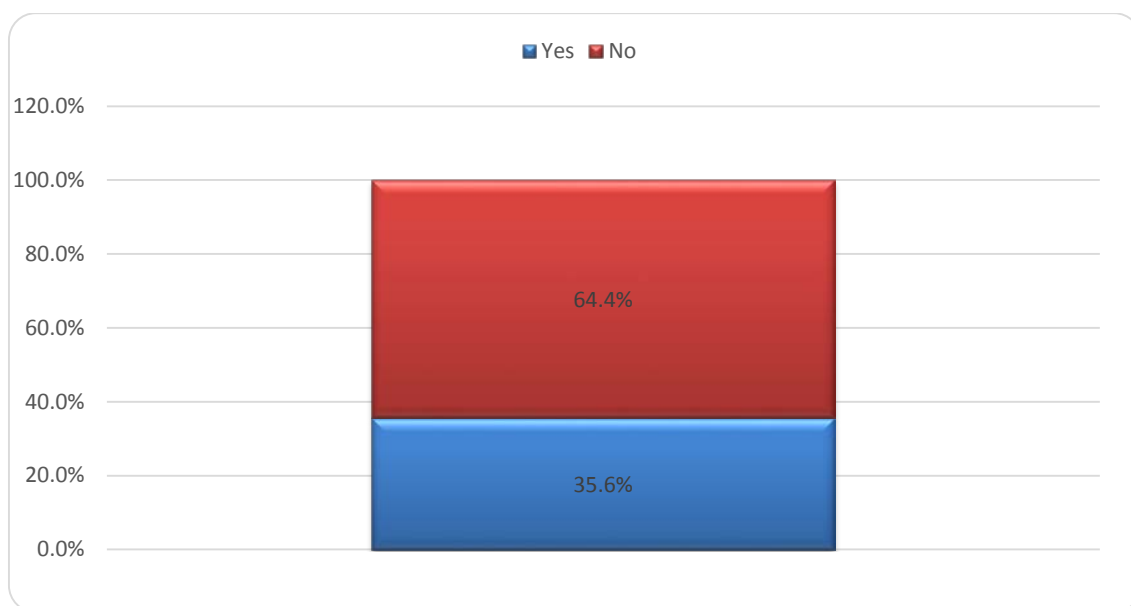


Figure 4.16: Recent attendance to continuous professional development events (N=247) (n=236)

Those participants who indicated that they had attended continuous professional development events were asked to elaborate on when they attended such event/s. The results show that 6.6% attended continuous professional development events in 2013. The month of February was highlighted for this year. In 2014, 4.4% of participants indicated having attended continuous professional development events. No dates or specific months were indicated.

Finally the majority of participants indicated that they had attended continuous professional development events in 2015. The following months were noted: February, March, April, June, July, August and September.

4.4.4 Knowledge of continuous professional development activities available in the Free State province

When the participants were asked in an open-ended question if there were any continuous professional development activities available in the Free State province, 164 participants responded to the question. Of those, 9.1% of participants reported that they were unsure of any and as many as 45.7% reported there were no activities available.

The remainder of the participants who responded to this question gave the following examples of continuous professional development activities available in the Free State

province: continuous professional development courses offered through various service providers (e.g. at the FSCoEC, through ER24, and at various private hospitals in Bloemfontein), and refresher courses (mostly offered by the FSCoEC).

4.4.5 Types of continuous professional development activities in which they participated

Five response options were given to participants when they were asked which of these types of continuous professional development activities they had participated in during the last 12 months. The majority of participants (47.8%) indicated that they had not participated in any of the activities listed. A total of 12.5 % selected the option 'focused on the job training', 17.9% selected the option 'only possible through workshops and seminars', 12.1% selected the option 'focused on development' and 9.7% selected 'focused on training'. These responses are illustrated in Figure 4.17.

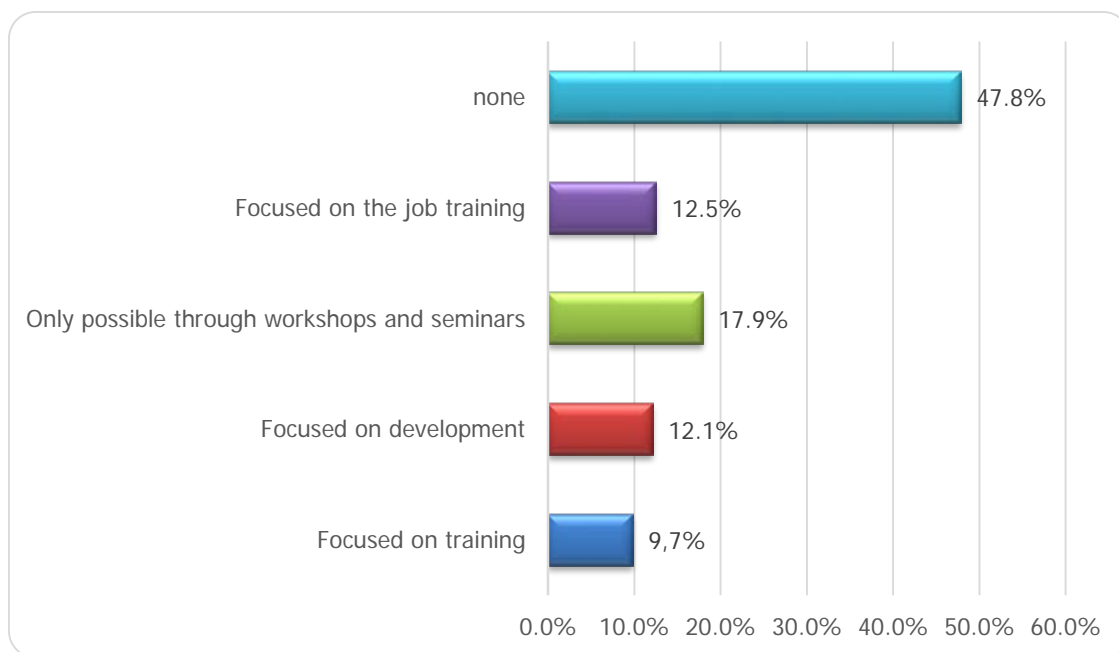


Figure 4.17: Continuous professional development activities in which the respondents had participated (N=247) (n=224)

4.4.6 Regular attendance of seminars/ or workshops to obtain continuous professional development points

In Figure 4.18, it is indicated that 33.8% of the participants selected the response of 'no opportunities are available'.

In terms of the other selection options, 15.0% selected the option 'whenever an affordable opportunity arises', 27.8% selected the option ' whenever I am invited', 5.6% selected the option 'once every two years' and 17.9% the option of 'at least once per year'.

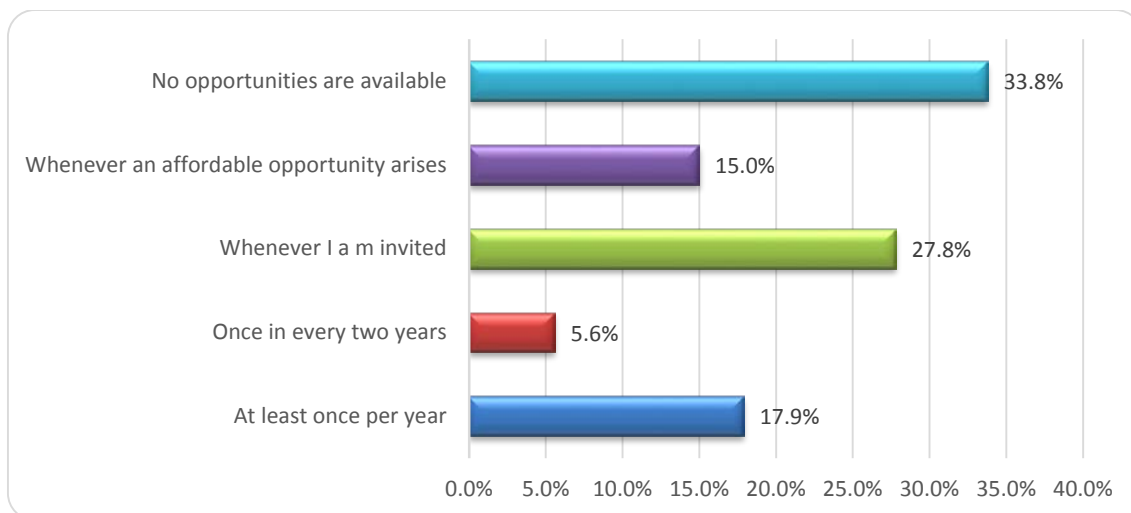


Figure 4.18: Regular attendance of seminars/ or workshops to obtain continuous professional development points (N=247) (n=234)

4.4.7 Regularity of reading scientific journals

Participants were asked how regularly they read scientific journals. A high number of 48.1% of participants indicated that they never read scientific journals; however, at least 51.9% were positive that they do read scientific journals (Figure 4.19).

Of those participants who do read journals, 8.5% indicated that they always read, 13.2% reported that they read scientific journals on an annual basis, 16.6% on a monthly basis and 13.6% on a weekly basis.

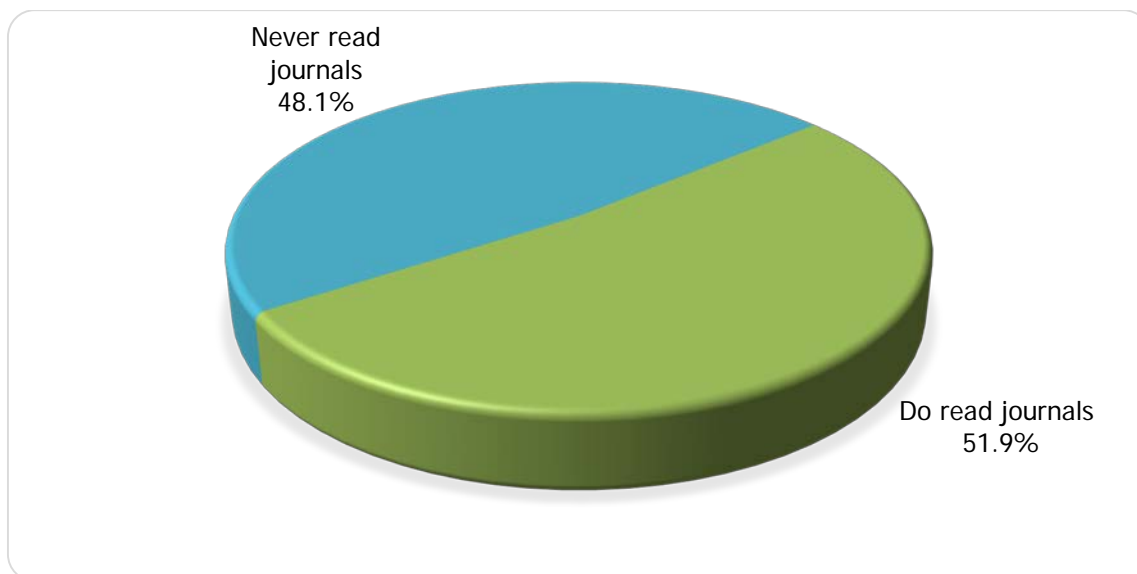


Figure 4.19: Regularity of reading scientific journals (N=247) (n=235)

In an open-ended question the participants who did not read scientific journals were asked to give their reasons. A high number of 62.8% participants indicated that they did not have access to scientific journals.

Other reasons for not reading journals included: not having time (16.3%), not knowing about the available scientific journals (11.6%), and that they were not interested in reading scientific journals (9.3%).

4.4.8 Regularity of accessing the internet for professional learning

With reference to how often the participants accessed the internet for professional learning purposes, the responses included: at least once per week (32.5%), at least once per month (18.8%), at least once per year (7.5%) and never (41.3%). This is presented in Figure 4.20.

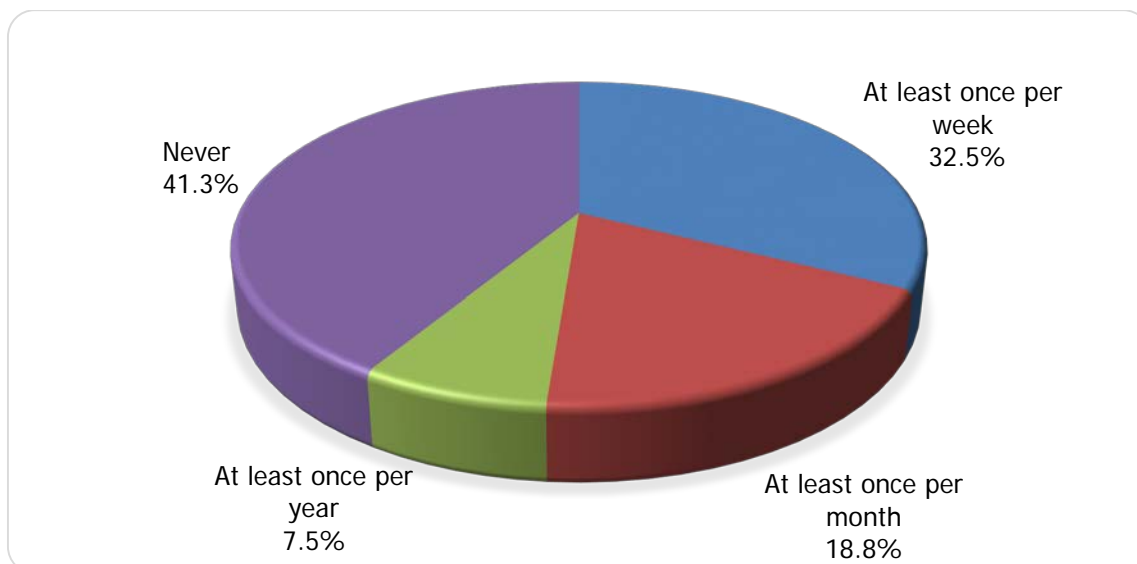


Figure 4.20: Regularity of accessing the internet for professional learning (N=247) (n=240)

In an open-ended question the participants were asked to give their reasons for not accessing the internet for professional learning purposes. Some of the reasons offered include (divided into four themes):

- **No internet access** (n=15)
 - "Don't have internet access";
 - "We don't have any internet access"; and
 - "There is no access to internet at the workplace".
- **No opportunity to use internet at work** (n=11)
 - "Not available or given the opportunity to utilise it";
 - "Because they don't give us a chance at work to use the computer or internet";
 - "There is no internet laboratory for us as workers";
 - "No internet access at all at work";
 - "We share one computer and it is always busy";
 - "Only supervisors have (internet access)"; and
 - "Because we don't have resources to access information at our workplace".
- **Lacking knowledge of how to use the internet for professional purposes** (n=5)
 - "I do not have knowledge in which instant I should do that";
 - "I don't have someone to guide me based on which stuff to read";

"I don't know how to operate the computer at all"; and
 "I lack knowledge, I don't know how to access".

Too costly (n=2)

- "It's expensive for me and I do not have transport"; and
- "You have to use your own money which is insufficient".

4.4.9 Participation in distance learning programme(s)

The majority of the participants (90.6%) indicated that they have not participated in any distance learning programme(s) during the past 12 months. However, 9.4% indicated that they had participated in a distance learning programme, providing examples of studies conducted through Unisa and Boston College.

4.4.10 Participation in formal training to obtain continuous professional development points

A total of 240 participants responded to this question. The majority (75.8%) indicated that they have not participated in formal training where they obtained continuous professional development points. But 24.2% had undergone some form of training where they obtained continuous professional development points. Examples of the courses mentioned include: EMS refresher courses, BAA refresher courses, BLS courses, advanced Kangaroo Mother Care courses, a mother care course, cardiovascular training course, Intermediate Trauma Life Support, and Paediatric Advanced Life Support.

4.5 CHALLENGES ENCOUNTERED COMPLYING WITH CONTINUOUS PROFESSIONAL DEVELOPMENT REGULATIONS

This section reports the results of Section C of the questionnaire.

4.5.1 Problems encountered in participating in continuous professional development

In Figure 4.21, it can be seen that 54.4% of the participants indicated that they did not encounter any problems in participating in continuous professional development activities. However, 45.6% reported that they experienced problems participating in continuous

professional development activities during the last 12 months. It was noticed that ten participants did not answer this question.

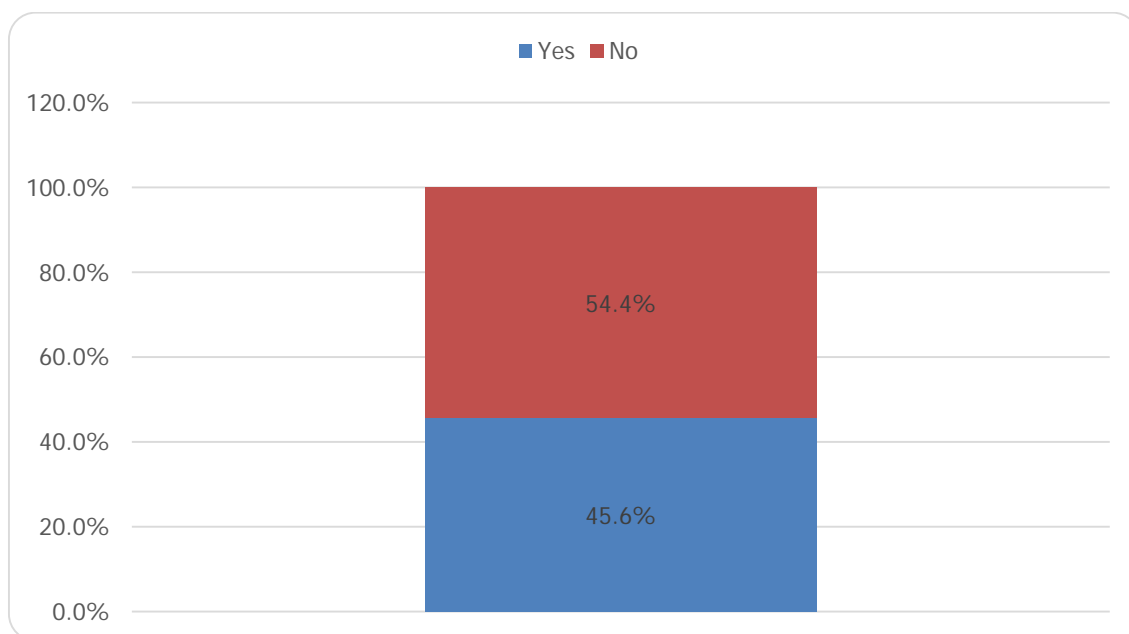


Figure 4.21: Responses in terms of whether problems were encountered with regards to participation in continuous professional development (N=247) (n=237)

The participants were asked to indicate in an open-ended question what were some of the problems that they encountered to obtain continuous professional development points. Five themes were identified as presented in Figure 4.22.

The majority of participants (38.6%) reported that there was no centre for continuous professional development available. A further 23.9% reported a lack of information regarding continuous professional development activities; 12.5% indicated they did not have transport to attend continuous professional development activities. The penultimate group of 12.5% indicated they were not nominated by their employer to attend continuous professional development activities, and finally 12.5% indicated that their workload was too high when they attended continuous professional development activities.

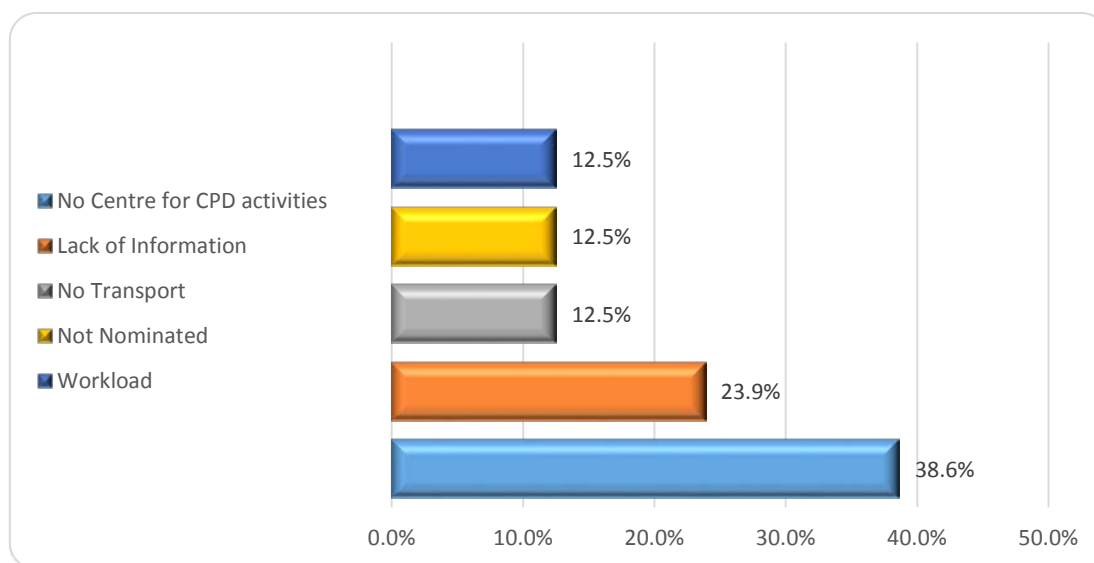


Figure 4.22: Problems encountered in participating in continuous professional development (N=247) (n=88)

4.5.2 Possible reasons which affected practitioners from obtaining continuous professional development points

Seven possible reasons (barriers) which could have affected the emergency medical care practitioner in obtaining continuous professional development were listed and the participants were asked to select a response between yes, no and don't know for each of the barriers. The results are shown in Table 4.3.

Table 4.3: Possible reasons which affected practitioners from obtaining continuous professional development points (N=247)

	Number of responses (n)	Response options		
		Yes	No	Don't know
Time	233	68.2%	24.5%	7.3%
Financial support from the workplace	238	70.6%	22.3%	7.1%
Supporting myself financially	238	65.1%	26.9%	8.0%
Lack of information about the available continuous professional development activities	238	72.7%	21.0%	6.3%
Transport	232	68.5%	25.0%	6.5%
Limited or no continuous professional development activities available in my area	235	70.6%	23.8%	5.6%
Difficulty in getting nominated to attend activities	235	65.5%	26.4%	8.1%

From the table it can be seen that across the list (time, financial support from the workplace, supporting myself financially, lack of information about the available continuous professional development activities, transport, limited or no continuous professional development activities available in my area and difficulty in getting nominated to attend activities) the majority of patients selected the response yes. This indicates that all of these examples may be considered as possible reasons why emergency medical care practitioners have difficulty in obtaining continuous professional development points.

In an open-ended question participants were asked to indicate any other problems that they could have encountered in obtaining continuous professional development points. Ten themes were identified and each theme is presented with some examples of the responses:

- **No problems** (n=15)
"No"; and
"No other problems".
- **Finance** (n=5)

"I encountered problems because if the Free State College of Emergency Care does not give us continuous professional development we have to pay for them for us not to be de-registered and we have to only come into Bloemfontein for them"; and

"Cost regarding continuous professional development".

- **Transport (n=3)**

"Yes, because most of the time we must travel 350km to come to the college to be refreshed"; and

"The department must at least meet us (people who are in small towns) by supporting with transport. Tell us in time with continuous professional development activities. Give us more information".

- **More continuous professional development providers/ activities (n=10)**

"Yes, there are limited opportunities to do continuous professional development courses";

"Not enough activities available in the year"; and

"Not enough activities to build up enough points".

- **No ethics activities (n=1)**

"There are no ethics seminars and you must have ethics points".

- **Availability of instructors (n=8)**

"Sometimes there is no instructor to run the course";

"Yes some of the courses are not repeated or no instructor to run the courses that are already scheduled"; and

"Shortage of lectures".

- **Lack of information and communication (n=13)**

"Access to information";

"Yes the information is lacking";

"The various facilities and persons that present continuous professional development in Bloemfontein do not advertise or make the events public enough to the public";

"We don't get information about continuous professional development points";

"Yes because I didn't know where to go for continuous professional development points".

- **Time (n=5)**
 "The available dates, venues and times are not always accessible due to shift or duty times";
 "Operational responsibilities"; and
 "Time and communication".
- **Being nominated to attend (n=3)**
 "Difficult to be nominated"; and
 "I never attended any continuous professional development points".
- **Bring continuous professional development to the districts (n=2)**
 "Please provide us with continuous professional development every month so that we can make QwaQwa a better place"; and
 "Please can we have points arranged".

4.5.3 Participation in continuous professional development activities

In this question 11 statements were presented and participants were asked to select an option from agree, don't agree and don't know to best explain the continuous professional development activities that they participate in. The results are summarised in Table 4.4.

Table 4.4: Responses between the options agree, don't agree and don't know in terms of continuous professional development activities participated in [N=247] (n=247)

(Table continues on the next page)

	Number of responses (n)	Response options		
		Agree	Don't agree	Don't know
1. Continuous professional development is linked to the strategic plan of the health institution where I work	238	61.8%	23.5%	14.7%
	Number of responses (n)	Response options		

		Agree	Don't agree	Don't know
2. Continuous professional development is linked to my individual professional needs	241	58.1%	28.6%	13.3%
3. Continuous professional development is viewed as an investment in human resource management of the health institution where I work	243	49.0%	29.6%	21.4%
4. Continuous professional development is evaluated with both pre and post course assessment	240	51.7%	25.8%	22.5%
5. Continuous professional development is about learning as opposed to training	239	55.2%	26.4%	18.4%
6. Continuous professional development is transferred to action and change in the workplace	240	58.8%	22.9%	18.3%
7. Continuous professional development is flexible in application including open, distance and self-development approaches	240	57.5%	24.6%	17.9%
8. Continuous professional development is viewed as a reward for good performance in your health institution	242	48.8%	33.9%	17.3%
9. Continuous professional development is viewed as unimportant and course attendance is frequently cancelled due to pressure of work or lack of commitment	241	41.9%	45.2%	12.9%
10. Continuous professional development is menu driven (i.e. areas of development are determined by what is available)	241	56.4%	24.5%	19.1%
11. Continuous professional development is about directive thinking and knowledge achievement	241	68.0%	15.8%	16.2%

In Table 4.4 the participants were given an opportunity to respond from the options agree, don't agree and don't know in terms of continuous professional development activities they have participated in.

From the table above (Table 4.4) the majority of the participants indicated that they agreed with the questions posed to them:

- Continuous professional development was linked to the strategic plan of the health institution where they worked (61.8%);
- Continuous professional development was linked to their individual professional needs (58.1%); and
- Continuous professional development was viewed as an investment in human resource management of the health institution where they worked (49.0%).

In statement four the participants (51.7%) agreed that continuous professional development was evaluated with both pre- and post-course assessment. An almost equal amount of the participants responded negatively with 25.8 % who don't agree and 22.5% who don't know.

In statement five, 55.2% of the participants agreed that continuous professional development was about learning as opposed to training; however, 26.4% reported that they did not agree.

For statements six and seven, the majority of the participants (58.8% and 57.5% respectively) were in agreement with the questions.

With regard to statement eight, 48.8% of the participants agreed that continuous professional development was viewed as a reward for good performance in their health institution whilst 33.9% of the participants did not agree.

Statement nine was almost balanced with 41.9% of participants who opted to agree while 45.2% indicated that they didn't agree with the statement provided.

In statements 10 and 11, the majority of the participants (56.4%) indicated that continuous professional development was menu driven and 68.0% indicated that continuous professional development was about directive thinking and knowledge achievement.

4.5.4 Continuous professional development – a cost or an investment

Participants were asked to indicate if continuous professional development is a cost or an investment. Figure 4.23 shows that the majority of the participants (74.9%) indicated that continuous professional development is an investment and 25.1 % indicated that continuous professional development is a cost.

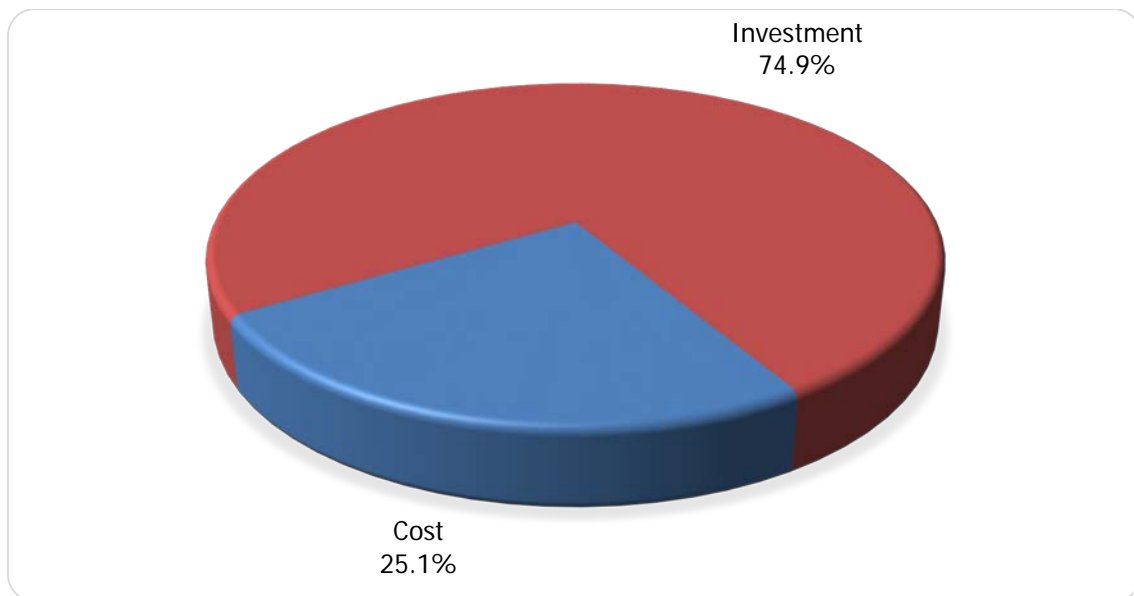


Figure 4.23: Response in terms of continuous professional development being a cost or an investment (N=247) (n=239)

4.5.5 Further needs to obtain continuous professional development points

In a final open-ended question, participants were asked to report any further needs they could experience to obtain continuous professional development points. Five themes were identified. Each theme is listed with examples of the written text:

- **Finance and transport** (n=15)
 "We have to pay for continuous professional development in the private sector and we are struggling to find continuous professional development points";
 "Pay out of our own pocket" (for Focus on Health - my continuous professional development); and
 "Finance and transport".

- **Continuous professional development providers and activities** (n=3)
 "Get more providers";
 "More continuous professional development providers";
 "No service providers in the Free State"; and
 "Ethics".

- **Information and communication** (n=8)
 "Availability of information";
 "To be informed on time";
 "Site where you can check what your current status is at the Health Professions Council of South Africa".

- **Resources** (n=4)
 "Government must provide facilities for continuous professional development"; and
 "Access to computers in the workplace".

- **Employer support** (n=1)
 "Employer to help with regular programme of refresher courses".

4.6 CONCLUSION

The results of the three sections (Section A-C) of the questionnaire were presented in this chapter. An overall response rate of 94.6% was obtained, which is considered a high response rate.

In Chapter 5, **Interpretation and discussion of the results**, the results of the survey will be discussed as final outcome of the study.

CHAPTER 5

DESCRIPTION AND DISCUSSION OF THE RESULTS OF THE QUESTIONNAIRE SURVEY

5.1 INTRODUCTION

In Chapter 4 the researcher presented the results from the study by means of figures and tables. This chapter will present a discussion of the results from the questionnaire.

The participants in this study did not complete all the questions. A possible reason for not completing the demographic questions is that the participants could have been concerned that by answering the questions they could be identified. Another explanation as to why some of the questions were not completed could be ascribed to participants not understanding the question.

5.2 DEMOGRAPHIC INFORMATION

The demographic information that will be discussed in this section are: age, gender, home language, population groups, educational background, highest professional qualification and the number of years that the participant had worked as an emergency medical care practitioner.

5.2.1 Age

The participants' self-reported age ranged between 23 years and 60 years. This means that the average age of emergency medical care practitioners in this study was 41 years. This is slightly older than a reported average age of emergency medical technicians/paramedics from the USA whose average age was reported as 35 years (EMS workforce for the 21st Century: A National Assessment 2008:online).

It was noticed that most of the participants fell into the age group of 20-30 years. One possible explanation for this could be that after completing certain emergency medical services qualifications directly after school (grade 10 and grade 12) an individual could start working in the field from their early 20's (cf. 2.2).

5.2.2 Gender

According to this study, the majority of participants were male (59.8%) but there was also a large group of female participants (40.2%) (cf. 4.3.2). This was according to expectation due to emergency medical care practitioners predominantly being male. However, the findings could suggest that there is a gradually increasing number of females in this profession in the Free State province.

5.2.3 Home language

The universal business language in EMS is English. It is therefore expected that all of the participants should be able to speak and understand English. However, working in rural areas in the Free State province, it is an advantage that many emergency medical care practitioners reported their first language as Sotho. Sotho is one of the most commonly spoken African languages in the Free State province; also, many patients in rural areas might not be able to speak or understand English or Afrikaans (cf. 4.3.3).

All continuous professional development activities in the Free State province are presented in English. It would be reasonable to suggest that journal clubs or workshops could be presented in Sotho in the Free State province. This may potentially draw the attention to learning and complying with continuous professional development regulations in SA of an increased number of emergency medical care practitioners.

5.2.4 Ethnic group of the participants

In the Free State province most of the emergency medical care practitioners are from the Black ethnic group (this includes practitioners in both the private and government sectors) (cf. 2.2.1). This correlates well with the participants in this study having reported that they are from the Black ethnic group who reported their home language as an African language (cf. 4.3.4).

5.2.5 Educational information

With respect to educational (schooling) background it was encouraging to ascertain that up to 77.9% of the participants had at least matriculated (cf. 4.3.5.1).

In terms of the EMS specific qualifications the data shows that the majority of the emergency medical care practitioners that participated in this study were BAA and AEA qualified (cf. 4.3.5.2). This correlates with the educational background reported and the statistics available for emergency medical care practitioners in the Free State province (cf. 2.2.1).

It was alarming to see that there were only a few emergency medical care practitioners with degrees in EMC. Vincent-Lambert (2011:4) suggests that there are inconsistencies amongst various EMC curriculums and difficulties in bridging from one level of education to another. Due to little or no articulation from short courses to undergraduate qualifications (cf. 2.2); this could be a possible explanation for the few postgraduate qualifications being reported in this study. It could thus be expected that there are very few emergency medical care practitioners qualified with a Master's or Doctorate degree in EMC (cf. 4.3.5.2).

In light of the professional degrees in EMC that are not offered in the Free State province and only offered in certain provinces in SA (cf. 2.2) there is a very real possibility that emergency medical care practitioners cannot financially afford to leave their families and go out of the Free State province to further their studies. The situation can be better understood if one considers that formal degrees such as most undergraduate qualifications can take up to four years to obtain and most postgraduate degrees take up two to three years of study.

5.2.6 Employment profile

Of the five districts in the Free State province, a large percentage of the participants (63.5%) indicated that they were working in the Motheo region (cf. 4.3.6.1). This resonates with the fact that the largest EMS station is situated in the Motheo region and that this is also where most (if not all) of the private sectors of emergency medical care practitioners are situated (cf. 2.2.1). Therefore, the result was expected that the majority of participants would indicate that they are working in the Motheo district.

The Motheo district is divided into small towns and rural areas. This study confirmed that many emergency medical care practitioners worked in small towns and in rural areas (cf. 4.3.6.5). This could strongly influence their participation in continuous professional development activities (cf. 2.6.3). Based on the fact that all continuous professional

development events in the Free State province are held at the FSCoEC in Bloemfontein or at Medic Clinic Bloemfontein (cf. 2.5), these emergency medical care practitioners have to travel considerable distances to attend continuous professional development events. Distance away from resources and educational facilities that are offering continuous professional development activities/ seminars is one of the most serious barriers that are affecting participants negatively (cf. 2.6.3).

Considering that 1554 emergency medical care practitioners in the Free State province work in the government sector and only 76 in the private sector (cf. 2.2.1) it was expected that a higher number of participants in this study would report that they are working in the government sector (cf. 4.3.6.3).

The data indicated that up to 89.7% of emergency medical care practitioners work on an operational level and therefore on a shift system (cf. 4.3.6.4). In view of this, the likelihood exists that when continuous professional development activities are presented at the FSCoEC, most of the emergency medical care practitioners will not be available to attend, considering the nature of hours they work based on the shift system (cf. 2.2.1).

Another important result in this section includes the years of work experience. Considering that 42.8% of the participants have up to five years' work experience, it could then reasonably be expected that these participants should have accumulated 150 continuous professional development points in their portfolio of evidence (cf. 2.4).

5.2.7 Access to electronic resources and technology

A total of 58.8% of the participants stated that they do not have access to the internet (cf. 4.3.7). Therefore, a lack of connectivity could be considered a major problem for self-directed learning. Self-directed learning is a preferred learning method considering that most of the participants lack time and transport (cf. 2.6.3).

Furthermore, the internet has become the most popular method of obtaining new knowledge and skills (cf. 2.3.2.3). Henderson (2005:1) states that on the World Wide Web, you can find almost any information or topic you are searching for. The internet is a major source for scholarly journals, articles, theses and online books. Leu (2002:310) states that if emergency medical care practitioners wish to stay up to date they must be computer literate and be able to communicate using the World Wide Web. Having said

this, however, a large proportion of the participants in this study indicated that they do not have a working computer or internet access and therefore it would be difficult to keep up to date with new knowledge and skills (cf. 4.3.7; 4.3.8; 4.3.9).

Those participants in this study who indicated that they can have access to a computer with internet also reported that they will have to travel to an internet café in a shopping centre or go into town at their own cost (cf. 4.3.8).

In the 21st century cell phones allow for internet access. Even though it seemed promising that 66.8% of the participants indicated that they have a cell phone with internet access, it does not mean that they are actually using it for professional purposes (cf. 4.3.7). Accessing articles and information in the field of EMS on the cell phone could increase their knowledge but it will be at their own expense, and data is expensive.

Furthermore, it was concerning to find that 77.9% of the participants in this study revealed that they do not have access to an email facility (cf. 4.3.7). It is concerning because all communication (advertising events and additional correspondences) regarding continuous professional development events are distributed by email (cf. 2.5). This poses the question of how the participants receive information regarding continuous professional development events. The results indicate that continuous professional development opportunities should be marketed differently.

5.2.8 Available resources in the workplace

A resource centre in the workplace offering a computer with internet access, applicable journals and books (cf. 2.3.2) will be conducive to stimulating interest in continuous professional development opportunities. This in turn will afford the opportunity for emergency medical care practitioners to update their knowledge and skills (cf. 2.3.1). The evidence obtained in this study indicate that the majority of respondents do not have access to these resources in the workplace (cf. 4.3.9). Even though computers in the workplace seem to be available to 39.2%, the majority (60.8%) still have to do without this essential resource. The result is somewhat disconcerting: without the aforementioned resources, there is no possibility of continuing learning in the workplace. In view of this there is a strong argument to reassess the current situation and to consider establishing a resource centre. These resource centres could consist of a computer with internet access to be used for professional purposes only, offering access

to online and/or hard copies of relevant scientific journals and books. Obviously this suggestion would include incurring expenses and providing the necessary infrastructure.

5.3 AVAILABILITY AND THE LEVEL OF PARTICIPATION IN CONTINUOUS PROFESSIONAL DEVELOPMENT ACTIVITIES

In this section the results of the availability and level of participation in continuous professional development activities will be discussed.

5.3.1 A continuous professional development portfolio

The researcher found it disturbing that most of the participants in this study (54.0%) indicated that they do not have a continuous professional development portfolio (cf. 4.4.1). The HPCSA requires all health care professionals to have a continuous professional development portfolio to prove attendance of continuous professional development events (cf. 2.4.3). Furthermore, the study found that 15.2% of the participants were unsure of what a continuous professional development portfolio was (cf. 4.4.1). This strongly indicates a need to educate the emergency medical care practitioners regarding the continuous professional development portfolio and its importance.

5.3.2 The number of continuous professional development points emergency medical care practitioners should earn

This study showed that about half of the participants (50.6%) indicated that they were unaware of how many continuous professional development points had to be earned every two years (cf. 4.4.2). The main concern is that many emergency medical care practitioners were confused about the number of continuous professional development points that are required in a two-year cycle since they repeatedly reported it incorrectly (cf. 4.4.2). To address this, it can be useful to inform the emergency medical care practitioners (again) about the HPCSA's requirements in terms of the number of continuous professional development points to be earned in a two-year cycle.

5.3.3 Continuous professional development activities recently attended

At present, the FSCoEC presents various continuous professional development activities in Bloemfontein for emergency medical care practitioners stationed in the Free State province (cf. 2.5). This is done to ensure that emergency medical care practitioners in the Free State province can stay up to date with knowledge and skills in the field of EMC. In this study the findings highlight that the majority of the participants did not regularly attend continuous professional development events (cf. 4.4.3; 4.4.5; 4.4.6) even though continuous professional development events are presented on a weekly basis (cf. 2.5). Two of the barriers which could adversely affect their attendance are the fact that some of the sessions are cancelled due to poor attendance, and the fact that presenters are sometimes not available on the day of the session (cf. 2.5). This matter should be attended to by considering alternative methods of presentation, for example the use of modern technological means to deliver continuous professional development sessions (cf. 2.7) like interactive learning communication and management (ICAM), or video-recorded sessions which could be watched in the professional's own time.

Furthermore, many of the participants indicated that they had no knowledge of continuous professional development activities that were available in the Free State province (cf. 4.4.4; 4.4.6). This could also explain why they do not attend any continuous professional development events that are held at the FSCoEC in Bloemfontein.

In view of the findings it could be postulated that the emergency medical care practitioners who participated in this study were not keeping up to date with new knowledge by attending the available continuous professional development activities.

In conclusion, considering that there is a lack of awareness of the continuous professional development activities, urgent attention should be given as a priority to how these activities are marketed as well as presented amongst these professionals.

5.3.4 Using scientific journals and the internet for professional learning

An interesting finding was that 48.1% of the participants in this study indicated that they never read scientific journals (cf. 4.4.7). The importance of reading scientific journals had been highlighted previously. In addition, it is globally perceived as a major educational

tool and used around the world by professionals as an effective and efficient source of obtaining new and reliable knowledge and skills (cf. 2.3.2.2.).

The findings showed that there were a lack of time, availability and interest when it came to using scientific journals for professional learning purposes (cf. 4.4.7). It may be argued that if emergency medical care practitioners realise the value of reading scientific journals and if they are more readily available to them, a new generation of emergency medical care practitioners would be more willing to invest in updating their knowledge by reading.

According to this study, 41.3% indicated that they never access the internet for professional purposes (cf. 4.4.8). Their reasons include not having access and not knowing how to access the internet for professional purposes. Interestingly, some of the participants reported that even though a computer with internet access was available in the workplace, it was mostly used by management (cf. 4.4.8). Having access to the internet has become so crucial in the twenty-first century that it is concerning that there is no internet access for professional purposes in the workplace. This situation should be seriously reconsidered in order to allow emergency medical care practitioners the benefit of the opportunity for self-directed learning (cf. 2.3.2.3).

5.4 BARRIERS ENCOUNTERED COMPLYING WITH CONTINUOUS PROFESSIONAL DEVELOPMENT REGULATIONS

This section identifies some of the barriers that emergency medical care practitioners encounter in complying with continuous professional development regulations. Furthermore, it highlights the specific needs of emergency medical care practitioners in the Free State province with regard to continuous professional development.

5.4.1 Continuous professional development barriers

The barriers identified by the participants in this study include time, financial support, lack of information regarding continuous professional development activities, limited or no continuous professional development activities in the districts, and difficulty in getting nominated to attend continuous professional development activities (cf. 4.5.2). Similar barriers were found in the literature (cf. 2.6).

With reference to time as a barrier, Friedman and Phillips (2001:6) note that time was clearly identified as the most frequent barrier encountered by professionals. These authors continue to say that pressure at work, home and family made continuous professional development a challenging task for many. Botes (2013:75-79) also identified time away from work as one of factors that negatively influence usage of continuous professional development (cf. 2.7). A possible solution to address this barrier could be for employers to plan ahead and offer time off for emergency medical care practitioners to attend continuous professional development activities (cf. 2.6). This should ideally be linked to the professional's role and duties and, in turn, his performance management plans (cf. 2.6.2).

Planning continuous professional development well in advance to the event could also help emergency medical care practitioners plan their time effectively so that they are in a position to attend continuous professional development activities (cf. 2.6.5). Therefore, it is important that continuous professional development service providers send out dates, venue and time of a continuous professional development activity long before the event. If there is buy-in from the managers, and attendance is encouraged and supported (cf. 2.6.5,) this barrier could easily be managed.

In view of the results regarding financial support from the work place, literature seems divided as to who is responsible for providing financial support regarding continuous professional development (cf. 2.6.1). The findings from this study show that some participants do not attend continuous professional development activities on a sufficiently regular basis because they do not get time off to do so and also due to the fact that all costs incurred is on their own pocket (cf. 4.4.6; 4.5.1; 4.5.2). Therefore, it is important that managers have a decidedly positive influence in planning and supporting their employees to participate in continuous professional development activities by either bringing continuous professional development to the immediate area, providing them some time off from work, or assisting them with transport (cf. 2.6.1; 2.6.2).

Another barrier that was identified was that limited or no continuous professional development activities were available for emergency medical care practitioners in their area of practice of (cf. 4.5.2). A possible solution to address this, as requested by the participants, is to bring continuous professional development to the districts. This echoes the recommendation made by Botes (2013:75-79) to periodically present continuous

professional development activities through a rotation system covering all five districts in the Free State province.

5.4.2 Continuous professional development is linked to the strategic plan within the workplace

Emergency medical care practitioners who work for an institution that supports them in maintaining their continuous professional development are notably more committed (cf. 2.6.2). The majority of the participants in this study indicated that the strategic plans in their workplace are linked to continuous professional development (cf. 4.5.3). However, this is conflicting with the results that indicated that there is lack or no support from their employers regarding resources, time off and other organisational support in their workplace (cf. 5.2.8). Irrespective of the results stated above, it is important that the employer supports continuous professional development as this in turn will improve the quality of service to the public (cf. 2.3.1). It is proposed that guidelines could be developed for EMS stations to illustrate how a continuous professional development programme could benefit both the emergency medical care practitioner and the EMS station.

5.4.3 Continuous professional development - a cost or an investment

Health care resources are very scarce in the Free State province. Therefore, it is imperative that proper planning is done to ensure that efficient resources which are cost effective and value for money are allocated to continuous professional development (Brown, Belfield & Field 2002:652).

Continuous professional development should be viewed as an investment in the self to accelerate in one's career (cf. 2.3.1). Investing in continuous professional development will help broaden one's knowledge, skills and will create more confidence. In addition it will reinforce the professional credibility of the emergency medical care practitioner enabling him to accept greater responsibilities. It will also help to close the gap between knowledge and skills (cf. 2.3.1; cf. 2.6.4). It is therefore important that employers view continuous professional development as an investment so that they can channel resources to continuous professional development activities. This will assist emergency medical care practitioners to improve the quality of their health care. It was encouraging that the

majority of the participants (74.9%) in this study viewed continuous professional development activities as an investment, rather than a cost (cf. 4.5.4).

5.5 OTHER PROBLEMS THAT EMERGENCY MEDICAL CARE PRACTITIONERS EXPERIENCE TO OBTAIN CONTINUOUS PROFESSIONAL DEVELOPMENT POINTS

An option was given to the participants in this study to indicate if they experience any additional problems to obtain continuous professional development points. From the results presented, it was interesting to see that the majority of the participants in the Free State province had similar challenges as identified in the literature provided (cf. 2.6). Some of the needs that were indicated by the participants included finance, transport, the need for more continuous professional development providers; information and communication, resources, the employer's support, more courses on ethics topics, and bringing continuous professional development to the districts (cf. 4.5.5). A solution for the needs of emergency medical care practitioners regarding continuous professional development is to address the issues that they are experiencing so that continuous professional development can be easily accessed and that the participants can grow and renew their knowledge and skills. In turn, it is hoped that emergency medical care professionals will show a better understanding of the importance of continuous professional development and become more compliant with HPCSA regulations.

5.6 CONCLUSION

In this chapter, the results from Chapter 4 were discussed. Several barriers were identified that affect compliance with continuous professional development regulations. Lack of communication and information were the main reasons, followed by time, transport, difficulty in getting nominated and having adequate resources available in the workplace.

Although most the participants indicated that they were willing to financially support themselves in continuous professional development activities, there should be a reward system from the organisation to motivate their employees for expanding their knowledge and skills.

Many of the barriers can be overcome if communication and information regarding continuous professional development activities are distributed well in advance. In addition, the needs of emergency medical care professionals regarding continuous professional development activities should be considered. A need that could be easily addressed is taking continuous professional development activities to the districts where the participants work. This would eliminate time and transport expenditures to attend continuous professional development activities.

The final chapter, **Conclusion, recommendations and limitations**, consists of an overview of the study, the conclusion reached, while the recommendations and the limitations of the study are brought to the attention of the reader.

CHAPTER 6

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

6.1 INTRODUCTION

In Chapter 5, the results from the study were interpreted in correlation with the objectives of the study. Chapter 6 presents an overview of the study, the conclusion reached, recommendations and the limitations of the study.

6.2 OVERVIEW OF THE STUDY

The following research question was addressed in this study: What are the needs of emergency medical care practitioners in the Free State regarding compliance with continuous professional development regulations? In order to address this question, two objectives were posed.

6.2.1 Objectives of the study

Objective 1: To conceptualise and contextualise the requirements of emergency medical care practitioners for continuous professional development.

To address this objective, a literature study was conducted. The main findings of the literature study included an overview of education in EMSs (cf. 2.2), an overview of continuous professional development, the importance thereof (cf. 2.3.1), an overview of the continuous professional development learning opportunities available (cf. 2.3.2), continuous professional development in the EMS profession (cf. 2.4; 2.5) and barriers which affect compliance with continuous professional development regulations (cf. 2.6).

Objective 2: To gain a deeper understanding of the needs of emergency medical care practitioners in order to comply with continuous professional development regulations in the Free State province.

A questionnaire was used to address this objective.

The main findings of the study included:

- Only a few participants were in possession of advanced EMS qualifications (cf. 4.3.5.1).
- The emergency medical care practitioners in the Free State province are spread out across the five districts in the province and the majority work in the government sector (cf. 2.2.1; 5.2.6). In view of continuous professional development activities only being presented at the FSCoEC in Bloemfontein, emergency medical care practitioners must get time off from work and travel into Bloemfontein at their own cost to attend the activities (cf. 5.2.6).
- More concerning was the finding that a communication barrier existed as many emergency medical care practitioners did not seem to know about the available continuous professional development activities (cf. 5.2.7).
- In addition, several emergency medical care practitioners did not seem to know how many continuous professional development points should be obtained (cf. 5.3.2), nor did they have a continuous professional development portfolio (cf. 5.3.1).
- Access to the internet, journals (journal clubs) and books appeared to be non-existent at the workplace. The result showed that the non-availability of resources both privately and in the workplace negatively affect emergency medical care practitioners to be completely compliant with obtaining continuous professional development points (cf. 5.2.7; 5.2.8).
- Transport, finance, time (also, getting nominated) to attend the continuous professional development activities were all identified as barriers to comply with continuous professional development regulations (cf. 5.4.1).
- Needs that were indicated by the participants included support with finance; transport; the need for more continuous professional development providers; better information and communication; resources in the workplace and their

employers' support; more ethics topics to be offered, and having continuous professional development activities available in their districts (cf. 5.5).

6.3 CONCLUSION

This study identified several barriers that possibly contribute to the problems experienced by emergency medical care practitioners in complying with continuous professional development regulations. In addition both the literature and the results from this study agree that emergency medical care practitioners in the Free State experience similar needs regarding compliance with continuous professional development regulations. Some of these needs could potentially be addressed by making up to date information available and informing the practitioners about continuous professional development regulations and ways in which they could comply.

In addition, continuous professional development activities should be planned to address some of the needs of the emergency medical care practitioners in the Free State province. Examples could include taking some activities to the districts as opposed to hosting all sessions in Bloemfontein only, and by encouraging the use of accredited continuous professional development journal clubs or case discussions in the stations and/or districts. Further research is necessary to implement strategies and set up guidelines and formal programmes in terms of tailoring continuous professional development opportunities for emergency medical care practitioners in the Free State province.

6.4 LIMITATIONS OF THE STUDY

The researcher recognises the following limitations of the study:

- The primary field of study was continuous professional development, but the study also touched on education and training in EMC (cf. 2.2). Some of the aspects were merely touched on, but may be clarified further in follow-up research or when the research findings are prepared for publication.
- There was limited literature available in terms of continuous professional development for EMS. Literature in terms of the use and compliance of

continuous professional development regulations with reference to other health professions were used where appropriate.

- The study findings are limited to the emergency medical care practitioners in the Free State province. However, some of the findings are also true for various health care professionals.
- Although a sufficient response rate was obtained, there were very few participants from rural areas in the districts furthest away from Bloemfontein. The researcher attempted on numerous occasions to visit the different districts in order to encourage persons to participate in this study. Unfortunately, due to time constraints and many of these emergency medical care practitioners being on shift at the time of the visit, participation remained low.
- Another limitation of this study included the response rates per question. There were many questions that were not answered by a number of participants. It could be that these participants did not wish to make available their demographic information; alternatively, it is possible that they did not understand a question. In terms of the open-ended questions some participants possibly did not have anything to add. In future research this could possibly be addressed by making use of researcher-administered questionnaires as opposed to self-administered questionnaires.

6.5 RECOMMENDATIONS

The following recommendations can be made from this study:

- Some journal clubs or workshops could be presented in Sotho in the Free State province (cf. 5.2.3).
- Continuous professional development activities should be presented regularly. Shorter courses spread over a few days are advisable as opposed to full days (cf. 2.7).

- Continuous professional development activities should be presented within the districts on a rotation basis (cf. 2.7; 5.4.1).
- Different technological advancements should be used to reach out to those emergency medical care practitioners who are unable to travel the long distances for continuous professional development activities (cf. 2.7). An example include using Interactive Learning Communication and Management (ICAM) to show pre-recorded and/or live streaming of seminars (cf. 2.7; 7.2). Videos may be replayed which will ensure that no seminars are missed.
- A different approach to the marketing of continuous professional development events should be taken (cf. 5.2.7). This could include advertising the activities in advance to increase awareness, and by improving communication channels (through the station managers and directly with the emergency medical care practitioners).
- Consideration should be given to building up resource centres in the workplaces. These resource centres should ideally include a computer with internet access, relevant journals and books (cf. 5.2.8).
- Emergency medical care practitioners should be informed about the importance of and requirements for a continuous professional development portfolio (cf. 5.3.1).
- Emergency medical care practitioners should be clearly informed about the HPCSA's requirements in terms of the number of continuous professional development points to be earned in a two year cycle (cf. 5.3.2).
- Informing the emergency medical care practitioners of the value of reading scientific journals and making them more readily available (cf. 5.3.4).
- Employers should encourage continuous professional development participation by planning ahead and offering time off for emergency medical care practitioners to attend continuous professional development activities (cf. 2.6; 5.4.1).

- Performance development appraisal systems should be implemented that will encourage emergency medical care practitioners to attend continuous professional development activities and motivate them to become lifelong learners (cf. 2.6.2; 5.4.1; 5.4.2).
- A strategic plan in the workplace should be linked to continuous professional development requirements (cf. 5.4.2).
- Employer support is crucial in the successful usage of continuous professional development services and encouraging lifelong learning of their workers (cf. 5.4.2).
- Continued acknowledgement of the needs of emergency medical care practitioners with regard to continuous professional development is necessary, and where possible, these needs should be addressed (cf. 5.5).
- The DoH should provide a data base for all emergency medical care practitioners where they could track their continuous professional development points and obtain more information about continuous professional development regulations and how to be compliant.

Recommendations for further research include:

- Research could be conducted into the development of modern continuous professional development technologies which could address the needs and limitations experienced by the emergency medical care practitioners in the Free State province where limited resources are apparent.
- Further research could also focus on the development of an educational programme to inform all relevant parties of the importance of continuous professional development and its availability in the Free State province.
- Research could also be conducted to develop guidelines for EMS stations in terms of the development, successful implementation and subsequent continued

evaluation of continuous professional development programme within each district or at the various EMS stations.

6.6 CONCLUDING REMARKS

To ensure that continuous professional development is effective and efficient, there should be effective communication between the accredited service providers, the EMS station managers and the emergency medical care practitioners. Addressing the needs of emergency medical care practitioners with regard to continuous professional development will contribute positively not only towards the workplace but to the community at large. This study serves as a directive for further research in the field in order to improve continuous professional development services, in return ensuring compliance with HPCSA regulations and contributing to lifelong learning whilst keeping abreast with the latest knowledge and skills in EMS.

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APPENDICES

APPENDIX A

APPENDIX A1	EVIDENCE OF PERMISSION TO CONDUCT THE STUDY
APPENDIX A2	ETHICS COMMITTEE OF THE FACULTY OF HEALTH SCIENCES DOCUMENT

APPENDIX A1

EVIDENCE OF PERMISSION TO CONDUCT THE STUDY



health

Department of
Health
FREE STATE PROVINCE

30 July 2015

Mr. BP Sookram
Free State College of Emergency Care

Dear Mr. BP Sookram

Subject: An analysis of the needs of Free State Emergency Medical Care Practitioners with regards to continuous professional development.

- Permission is hereby granted for the above – mentioned research on the following conditions:
- Participation in the study must be voluntary.
- A written consent by each participants must be obtained.
- Serious adverse events to be reported and/or termination of the study.
- Ascertain that your data collection exercise neither interferes with the day to day running of the facilities nor the performance of duties by the respondents or health care workers.
- Confidentiality of information will be ensured and no names will be used.
- Research results and a complete report should be made available to the Free State Department of Health on completion of the study (a hard copy plus a soft copy).
- Progress report must be presented not later than one year after approval of the project to the Ethics Committee of the University of the Free State and to Free State Department of Health.
- Any amendments, extension or other modifications to the protocol or investigators must be submitted to the Ethics Committee of the University of the Free State and to Free State Department of Health.
- Conditions stated in your Ethical Approval letter should be adhered to and a final copy of the Ethics Clearance Certificate should be submitted to khusemi@fshealth.gov.za or sebeelats@fshealth.gov.za before you commence with the study
- No financial liability will be placed on the Free State Department of Health
- Please discuss your study with the institution managers/CEOs on commencement for logistical arrangements
- Department of Health to be fully indemnified from any harm that participants and staff experiences in the study
- Researchers will be required to enter in to a formal agreement with the Free State department of health regulating and formalizing the research relationship (document will follow)
- You are encouraged to present your study findings/results at the Free State Provincial health research day
- Future research will only be granted permission if correct procedures are followed see <http://nhrd.hst.org.za>

Trust you find the above in order.

Kind Regards

Dr D Motau

HEAD: HEALTH

Date: 26/8/2015

LETTER TO REGIONAL MANAGER ER24
LETTER REQUESTING PERMISSION TO CONDUCT THE STUDY

Regional Manager Er24
Bloemfontein

Dear Sir

APPROVAL TO CONTINUE WITH A REASEARCH TOPIC

I am in the process of writing a full dissertation to obtain the Magister in Health Professions Education in the Faculty of Health Sciences at the University of the Free State (student number 2006024257).

Project title of my research is An analysis of the needs of emergency medical care practitioners with regards to Continuous Professional Development

My Study leader is:
Miss C van Wyk
Division Health Science Education
Faculty of Health Sciences, UFS
Bloemfontein, South Africa

The field of emergency medical care is dynamic and health care practitioners in this field encounters frequent changes in the area of health care. Change is an ever present factor in the modern world of health care. Research has a continuous influence on the delivery of health care. Consider the changes that have happened in recent years to the role of the paramedic; clinical factors include the introduction of LMAs, intubation, schedules drugs five, six, and the delivery of thrombolytics prehospital, intra osseous infusion; clinical performance indicators etc. All and more of these factors make it necessary for emergency medical care practitioners to prepare for and to stay abreast to change due to shifts in demand from the public eye they serve.

The emergency medical care practitioner, like his/her counterparts in other parts of the world, should be well equipped to competently cope with the changes due to advance technology and the expanding responsibilities in the area of their scope of practice. Pre hospital care is an important part of the holistic management of a patient. The need for

competent appropriately trained paramedics and pre hospital practitioners at all the different levels has been recognised. Continuous Professional Development which has been a driving force behind the maintenance of skills and knowledge in physicians for many years is a new concept in emergency medical care in the pre hospital environment. Currently the availability, appropriateness and affordability of an effective CPD program for emergency medical care in the Free State with different levels of qualifications seem to be problematic.

The **problem** that needs to be addressed is the needs faced by emergency medical care practitioners in the Free State Province to be CPD compliant.

The **goal** of the study is to conduct a critical analysis of the current status of CPD in Emergency Medical Care in the Free State Province in order to address the factors that influence practitioner's attitudes towards CPD. In addressing the issues that influence CPD activities for practitioners in the Free State Province more research could be developed to better accommodate practitioners to be more confident and interested in CPD and become lifelong learners

The **aim** of the study is the needs of continuous professional development for emergency medical care practitioners in the Free State Province.

To achieve this aim, the following **objectives** will be pursued namely:

- To conceptualise and contextualise the needs faced by emergency medical care practitioners for CPD (a literature study will be completed).
- To gain a deeper understanding of the needs faced by emergency medical care practitioners regarding complying with CPD regulations in the Free State Province (a questionnaire will be used).
- To compare the needs of the different levels of emergency medical care practitioners (a questionnaire will be used).

The **methods** that will be used in this study are a comprehensive literature study will be completed to gain a deeper understanding of CPD with reference to Health professionals and specifically emergency medical care practitioners in the Free State Province.

In the empirical phase of the study a quantitative questionnaire will be compiled electronically and printed in a hard copy using the Evasys system.

An application to the Ethics Committee of the Faculty of Health Science will be done to conduct this study.

Kind regards

Mr BP Sookram
Course Coordinator
Free State College of Emergency Care
Cell phone: 083 305 8830
E-mail: bradleysookram@gmail.com

A handwritten signature in black ink, appearing to be 'BP Sookram', written over a horizontal line.

Signature of Approval

APPENDIX A2

ETHICS COMMITTEE OF THE FACULTY OF HEALTH SCIENCES DOCUMENT



IRB nr 00006240
REC Reference nr 230408-011
IORG0005187
FWA00012784

16 September 2015

MR BP SOOKRAM
C/O MS C VAN WYK
DIVISION OF HEALTH SCIENCES EDUCATION
FACULTY OF HEALTH SCIENCES

Dear Mr BP Sookram

ECUFS 113/2015

DIVISION OF HEALTH SCIENCES EDUCATION

PROJECT TITLE: AN ANALYSIS OF THE NEEDS OF FREE STATE EMERGENCY MEDICAL CARE PRACTITIONERS WITH
REGARDS TO CONTINUOUS PROFESSIONAL DEVELOPMENT

1. You are hereby kindly informed that, at the meeting held on 15 September 2015, the Ethics Committee approved the above project after all conditions were met.
2. Any amendment, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.
3. A progress report should be submitted within one year of approval of long term studies and a final report at completion of both short term and long term studies.
4. Kindly use the ECUFS NR as reference in correspondence to the Ethics Committee Secretariat.
5. The Ethics Committee functions in compliance with, but not limited to, the following documents and guidelines: The SA National Health Act. No. 61 of 2003; Ethics in Health Research: Principles, Structures and Processes (2015); SA GCP(2006); Declaration of Helsinki; The Belmont Report; The US Office of Human Research Protections 45 CFR 461 (for non-exempt research with human participants conducted or supported by the US Department of Health and Human Services- (HHS), 21 CFR 50, 21 CFR 56; CIOMS; ICH-GCP-E6 Sections 1-4; The International Conference on Harmonization and Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH Tripartite), Guidelines of the SA Medicines Control Council as well as Laws and Regulations with regard to the Control of Medicines, Constitution of the Ethics Committee of the Faculty of Health Sciences.

Yours faithfully

DR SM LE GRANGE
CHAIR: ETHICS COMMITTEE

Ethics Committee
Office of the Dean: Health Sciences

T: +27 (0)51 401 7795/7794 | F: +27 (0)51 444 4359 | E: ethicsfhs@ufs.ac.za
Block D, Dean's Division, Room D104 | P.O. Box/Posbus 339 (Internal Post Box G40) | Bloemfontein 9300 | South Africa
www.ufs.ac.za



APPENDIX B

APPENDIX B1	LETTER OF INVITATION TO PARTICIPATE IN THE STUDY
APPENDIX B2	CONSENT TO PARTICIPATE IN THE STUDY
APPENDIX B3	QUESTIONNAIRE

APPENDIX B1

LETTER OF INVITATION TO PARTICIPATE IN THE STUDY

Project title of my research is an analysis of the needs of emergency medical care practitioners with regard to Continuous Professional Development

Researcher: Mr BP Sookram, Free State College of Emergency Care, Bloemfontein

Study leader: Ms C van Wyk, Division Health Sciences Education, Faculty of Health Sciences, University of the Free State.

Information Letter

Dear participant

I am a student in the Division of Health Sciences Education at the University of the Free State. I am doing a research to analyse the needs of Emergency Medical care Professionals with regard to Continuing Professional Development (CPD) in the Free State Province.

The study is done as a partial fulfilment for Mr BP Sookrams' Masters in Health Professionals Education (HPE).

The aim of the study is the analysis of the needs of emergency medical care practitioners with regard to Continuous Professional Development in the Free State Province. The researcher and the Division of Health Sciences at the University of the Free State (UOFS) is inviting you to participate in a research study by completing the questionnaire.

The study design will be a quantitative study with some open ended questions.

The research holds no risks for you as a participant. You may keep this information letter as well as a copy of the questionnaire.

Participation in this research is voluntary and you as the participant can withdraw at any stage without any penalty or loss of any benefits.

There will be **no cost to participating and no remuneration** offered whilst participating in this research study.

You will have **three days to complete the questionnaire**. Once the questionnaire is completed kindly drop it in the box supplied by the researcher in your station.

Confidentiality: all information will be handled confidentially and professionally. The results may be published, but **no personal information** will be included in the final report.

The research questionnaire as well as this document is **available only in English**.

For further information of the study conducted you are free to contact Mr BP Sookram at 083 305 8830 or bradleysookram@gmail.com

**Mr BP Sookram
Researcher
Free State Department of Health, Bloemfontein**

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APPENDIX B2

CONSENT TO PARTICIPATE IN THE STUDY

Consent form for completion of the questionnaires'

Project title of my research is an analysis of the needs of emergency medical care practitioners with regard to Continuous Professional Development

You have been asked to participate in a research study.

You may contact Mr BP Sookram at 0833 05 88 30 if you have any questions about the research.

Your participation in this research is voluntary, and you will not be penalised or lose any benefits of any type if you refuse to participate or decide to terminate participation.



If you agree to participate, you may keep a copy of this document, the participant's information sheet, as well as a copy of the questionnaires.

All the information will be kept confidential. No identifiable personal information will be used in any reports or possible publications.

I understand what is expected of me in this research study. I have read the information letter and the above information. I understand what my involvement in the study means and I fully voluntarily agree to participate. I also understand that there will be no compensation for my participation in this study.

_____	_____
Signature of participant	Date

APPENDIX B3
QUESTIONNAIRE

EvaSys	An analysis of the needs of Free State EMC practitioners with regards to CPD	
University of the Free State	EvaSys 2015	
EVASYS External and Internal Users	An analysis of the needs of Free State EMC practitioners with regards to CPD	

Mark as shown: ☐ ☒ ☐ ☐ Please use a ball-point pen or a thin felt tip. This form will be processed automatically.
 Correction: ☐ ☒ ☐ ☐ Please follow the examples shown on the left hand side to help optimize the reading results.

1. Section A: Demographic details

Personal and professional profile

Please complete all questions in the following section:

1.1 What is your age (in years)

1.2 Please indicate your gender

☐ Male

☐ Female

1.3 What is your home language?

☐ English

☐ Afrikaans

☐ Other

1.4 Please specify if other

1.5 Please indicate your population group
(population group is important for research purposes because of possible variances)

☐ Black
☐ White

☐ Indian
☐ Other

☐ Coloured

1.6 Please specify if other

Professional profile

1.7 What is your highest educational background? (Please select the applicable options)

☐ Doctorate
☐ Diploma
☐ Other

☐ Masters
☐ Grade 12

☐ Degree
☐ Grade 10

1.8 Please specify if other

1.9 What is your highest professional qualification?

☐ BAA
☐ ECT
☐ B Tech EMC

☐ AEA
☐ ECA
☐ Prof Degree EMC

☐ CCA
☐ N.Dip EMC
☐ Masters EMC

☐ Doctorate EMC

☐ Other

1.10 Please specify if other



2. Employment profile

2.1 Please name the Region you are currently working at.

2.2 Please indicate the number of years you have worked as an Emergency medical care practitioner.

2.3 What is the nature of your current employment?

☐ Private sector

☐ Governmental sector

☐ Private hospital

☐ Part time appointment

☐ Currently unemployed

☐ Other

2.4 Please specify if other

2.5 On what level are you currently employed?

☐ Managerial level

☐ Operational level

☐ Other

2.6 Please specify if other

2.7 What are the main type (s) of area (s) in which you practice?

☐ Rural area
☐ Metropolitan

☐ Small town

☐ City

2.8 Approximately how many kilometres is your station to your home?

Do you have access to the following?

2.9 Internet

☐ Yes

☐ No

2.10 Computer (a working computer)

☐ Yes

☐ No

2.11 Cell phone (with internet access)

☐ Yes

☐ No

2.12 Cell phone (without internet access)

☐ Yes

☐ No

2.13 Email

☐ Yes

☐ No

2.14 If you do not have internet access what is the nearest place you can gain access to the computer/internet?



2. Employment profile [Continue]

Does your workplace have facilities to access CPD activities such as?

- | | | |
|-----------------------|------------------------------|-----------------------------|
| 2.15 Internet access | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2.16 Computers | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2.17 Resource centres | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2.18 Journals | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| 2.19 Books | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

- 2.20 Are there any other resources available which you can use to obtain CPD points which are available at your workplace?

3. Section B: Availability and the activities Level of participation to CPD

- 3.1 Do you have a CPD portfolio? (e.g. a file of CPD activities (CPD certificates) you have attended)
- | | | |
|-------------------------------------|-----------------------------|---------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Unsure |
| <input type="checkbox"/> Don't know | | |

- 3.2 As an EMC practitioner do you know how many CPD points you must earn every 2 years?
- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

- 3.3 If yes (please specify) the amount

- 3.4 Have you attended CPD activities recently? (e.g. a workshop/refresher course that has CPD points)
- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

- 3.5 If yes please specify when

- 3.6 What CPD activities are available to you in the Free State Province?

Please answer the following questions to the best of your knowledge.

- 3.7 During the last 12 months/year the CPD activities I participated in are (tick all that are applicable)
- | | | |
|--|---|---|
| <input type="checkbox"/> Focused on training | <input type="checkbox"/> Focused on development | <input type="checkbox"/> Only possible through workshops and seminars |
| <input type="checkbox"/> Focused on the job training | <input type="checkbox"/> none | |



3. Section B: Availability and the activities Level of participation to CPD [Continue]

Answer the following question as accurately as possible:

- 3.8 How regularly do you attend seminars/ or workshops to obtain CPD points? Tick only one
- | | | |
|--|---|--|
| <input type="checkbox"/> At least once per year | <input type="checkbox"/> Once in every two years | <input type="checkbox"/> Whenever I am invited |
| <input type="checkbox"/> Whenever an affordable opportunity arises | <input type="checkbox"/> No opportunities are available | |
- 3.9 How often do you read scientific journals? Tick one only.
- | | | |
|---------------------------------|----------------------------------|-----------------------------------|
| <input type="checkbox"/> Weekly | <input type="checkbox"/> Monthly | <input type="checkbox"/> Annually |
| <input type="checkbox"/> Always | <input type="checkbox"/> Never | |

- 3.10 If your answer to 3.9 is Never, please give your reasons

- 3.11 How often do you access the internet for professional purposes?
- | | | |
|---|--|---|
| <input type="checkbox"/> At least once per week | <input type="checkbox"/> At least once per month | <input type="checkbox"/> At least once per year |
| <input type="checkbox"/> Never | | |

- 3.12 If your answer to question 3.11 is Never, Please explain briefly

- 3.13 Did you participate in any distance learning programme (s) in the last 12 months? (E.g. registered at UNISA).
- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

- 3.14 If yes please specify

- 3.15 Did you undergo any training programme (s) in the last 12 months where you obtained CPD points? (e.g. BAA CPD refresher course)
- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

- 3.16 If your answer is "yes" in question 3.15 above, state the name of the programme (s)



4. Section C: Barriers encountered complying with CPD regulation

- 4.1 Did you encounter problems participating in CPD activities during the last 12 months? ☐ Yes ☐ No

- 4.2 If you answer to 4.1 is yes, please list all the problems you encountered

Below is a list of possible reasons that could effect you from getting CPD points. Please tick one if it effects you.

- | | YES | NO | DON'T KNOW |
|--|--------------------------|--------------------------|--------------------------|
| 4.3 Time | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.4 Financial support from the work place | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.5 Supporting myself financially | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.6 Lack of information about the available CPD activities | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.7 Transport | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.8 Limited or no CPD activities available in your area | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.9 Difficulty in getting nominated | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- 4.10 In your opinion is there any other problems that you have in getting enough CPD points.

Please tick the option which best explains CPD activities that you participate in.

- | | Agree | Don't agree | Don't know |
|---|--------------------------|--------------------------|--------------------------|
| 4.11 CPD is Linked to the strategic plan of the health institution where I work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.12 CPD is Linked to my individual professional needs | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.13 CPD is Viewed as an investment in human resource management of the health institution where I work | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.14 CPD is Evaluated with both pre and post course assessment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.15 CPD is About learning as opposed to training | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.16 CPD is Transferred to action and change in the workplace | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.17 CPD is Flexible in application including open, distance and self-development approaches | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.18 CPD is Viewed as a reward for good performance in your health institution | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



4. Section C: Barriers encountered complying with CPD regulations [Continue]

- | | Agree | Don't agree | Don't know |
|---|---|--------------------------|--------------------------|
| 4.19 CPD is Viewed as unimportant and course attendance is frequently cancelled due to pressure of work or lack of commitment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.20 CPD is Menu driven (i.e. areas of development are determined by what is available) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.21 CPD is about directive thinking and knowledge achievement | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.22 In your own opinion, is CPD a cost or an investment | <input type="checkbox"/> Cost <input type="checkbox"/> Investment | | |
| 4.23 Is there any other needs that you have to obtain CPD points? | | | |

Thank you for your time

