

## Education

# Non-compliance with continuing professional development requirements: Perspectives of emergency medical care practitioners in a resource-poor setting

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## Abstract

### Introduction

In 2002, the Health Professions Council of South Africa (HPCSA) made continuing professional development (CPD) a mandatory requirement for all registered healthcare practitioners. However, the latest (2017/2018) HPCSA report states that there is still a generally low level of compliance to CPD requirements by emergency medical care practitioners (EMCPs) nationwide.

### Methods

This was a descriptive study that made use of a questionnaire survey administered to 261 EMCPs.

### Results

Of the 261 questionnaires that were distributed, 247 were returned, giving a response rate of 94.6%. More than half (50.6%) of the EMCPs indicated that they lack knowledge on the HPCSA-recommended CPD requirements for EMCPs, and 54% stated that they do not have CPD portfolios. EMCPs listed the factors that hinder attendance of CPD activities: lack of information about the CPD activities (72.7%); cost of attending CPD events (70.6%); limited availability of CPD activities (70.6%); transportation problems (68.5%); timing of CPD activities (68.2%); difficulty in getting nominated to attend CPD activities (65.5%); and lack of personal funds (65.1%). Furthermore, EMCPs indicated that lack of internet access (45.5%) and poor knowledge of how to use the internet (15.2%) hinder them from accessing the internet for professional learning.

### Conclusion

To provide the best care to patients, healthcare professionals must commit to lifelong learning. Participating in CPD activities has been endorsed as a means for maintaining and updating professional competence. Identifying and alleviating barriers that limit engagement in CPD activities will ensure that EMCPs attain the required professional competence.

### Keywords:

continuing professional development, emergency medical care

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## Introduction

The magnitude and rate of change in medical science is such that the contents of textbooks are obsolete by the time of publication (1). Nonetheless, patients expect to receive accurate diagnoses, and treatment that is effective and based on sound, up-to-date knowledge and evidence (2). To provide the best care to patients, healthcare professionals must commit to lifelong learning (3). Continuing professional development (CPD) is a planned process of education and development that increases professional performance, which, in turn, benefits individuals, organisations and the wider community (4). The putative effect of CPD on the healthcare professional is enhancing patient care by improving practice through activities such as reflection, evaluation and consideration of the evidence base (5).

The CPD program that was implemented by the Health Professions Council of South Africa (HPCSA) is aimed at assisting healthcare professionals who practise in the country to maintain and acquire new and updated knowledge, skills and ethical attitudes, to the end benefit of the patient or client. Healthcare practitioners who wish to maintain their registration with HPCSA are required to accumulate 30 continuing education units (CEUs) per 12-month period, of which at least five CEUs should relate to ethics, human rights and medical law (6). To ensure compliance, mandatory random audits are conducted by the Council, and practitioners found to be non-compliant may be suspended from the register until they submit proof of compliance with the CPD requirements (6). In the 2017–2018 HPCSA annual report, the Professional Board for Emergency Care stated that there was still a generally low level of compliance to CPD requirements by EMCPs (7). Practitioners are encouraged to ensure compliancy with the CPD requirements and to undertake CPD activities that relate to the profession and the relevant scopes of practice (7).

To date, no known study has investigated the causes of non-compliance to CPD requirements by EMCPs in the Free State province of South Africa. Hence, the objective of this study was to determine barriers affecting compliance to CPD requirements by EMCPs in the Free State province, South Africa.

## Methods

This research was designed as a descriptive study that made use of a questionnaire survey to obtain both quantitative and qualitative data.

### Questionnaire survey

The structured questionnaire used in this study was self-administered and was distributed manually (in hard copy) to participants across the five districts of the Free State province. The EMCPs present at the emergency medical service station of a specific district at time of questionnaire distribution were

requested to participate in the study. Participants were given 7 days to complete the questionnaire. The questionnaire comprised three main sections and data collected includes the following:

- Section A: Biographical data; age, gender, qualifications, level of experience and employment profile
- Section B: This section comprised questions relating to participants' knowledge of CPD requirements for EMCPs, as specified by the HPCSA
- Section C: This section explored what barriers EMCPs encounter while complying with CPD requirements.

The questions were formulated from factors garnered during the literature review, which had been used by previous studies. The printed questionnaires were distributed to 261 EMCPs and the survey lasted for approximately 1 month.

### Target population

The target population consisted of all EMCPs in the Free State province (employed in both the state and private sector) who (at the time of the study) were registered with the HPCSA. The target population totalled 1630 EMCPs (1554 from the state sector and 76 from the private sector).

### Sample size

The survey population consisted of individuals who were asked to take part in the study. A purposive sampling method was used to select 16% of the target population. This constituted 261 EMCPs.

### Pilot study

A pilot study was conducted to test the suitability of the study design and methods, the chosen data collection method and the overall structure of questionnaire. To achieve this, a copy of the information letter, consent form and hard copies of the questionnaire were hand delivered to six EMCPs (three state and three private employees) who met the criteria stated for the target population. The recommendations, mainly linguistic, given by the participants of the pilot study were considered and changes were made to the questionnaire accordingly. The result of the pilot study was not included in the final results.

### Data collection and analysis

To ensure anonymity, participants were instructed to drop all completed questionnaires in a designated box that was strategically placed in their station. The boxes containing completed questionnaires were retrieved later, at the end of the study, and the completed hard-copy questionnaires were scanned into the Evasys system (an electronic survey system) for onward data capturing on an Excel spreadsheet. Quantitative data collected from the structured questionnaire was analysed quantitatively, and results presented as percentages. The open-ended questions were analysed by the researchers by reading, identifying and summarising concepts, and grouping themes into specific categories.

## Ethics

Approval to conduct this study was obtained from the Health Sciences Research Ethics Committee of the Faculty of Health Sciences at the University of the Free State (Ref. No. ECUFS 113/2015). Permission was also obtained from the Free State Department of Health and the regional manager of a private emergency care provider.

## Results

A total of 247 of the initial 261 questionnaires that had been distributed were returned, giving a response rate of 94.6%. Of the participants, 16.9% were employed in the private sector, while 83.1% indicated that they work for the government.

### Demographic information of questionnaire survey participants

#### Age of participants

Only 203 participants completed the question. The majority of participants (52.7%) were 31–40 years of age; 23.2% were 20–30 years of age, 19.2% were 41–50 years of age, and 2.0% were 51–60 years of age, with one participant (0.5%) aged more than 60 years. The ages of five participants were illegible and therefore classified as unknown data. This data indicates the diversity of participants in relation to the age of EMCPs in the province.

#### Gender

Of the 239 participants who completed this section, male participants made up 59.8% of the group, and female participants 40.2%. This suggests a male predominance in the profession.

### Qualification/HPCSA registration

Results obtained indicate that the majority (69.3%) of the participants were registered with the HPCSA as basic life support (BLS) practitioners (basic ambulance attendant certified), and 18.5% were registered as intermediate life support practitioners (ambulance emergency assistant certified). Only a minority (12.2%) were registered as advanced life support (ALS) practitioners (5% emergency care technician; 2.9% national diploma EMC; 2.5% critical care assistant and 1.8% Bachelor of Technology EMC) (n=238).

### Number of years employed as an EMCP

The number of years that participants had been working as EMCPs is presented in Figure 1. The majority (42.8%) of the participants indicated that they had been in service for up to 5 years. A further 27.3% and 25.3% indicated that they had worked for 11–15 years and 6–10 years, respectively. Only a few participants (3.1%, 0.5% and 1.0%) indicated that they had worked for 16 years or more (Figure 1).

### Current level of employment

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. A smaller number of participants (2.9%) selected the option other, and specified their response by providing the following explanations: lecturer, shift leader or working in maintenance (n=242).

### Area of practice

Of the 225 participants who answered this question, 32% indicated that they work in small towns, 30.2% in rural areas, 26.7% in cities and 11.1% in metropolitan areas.

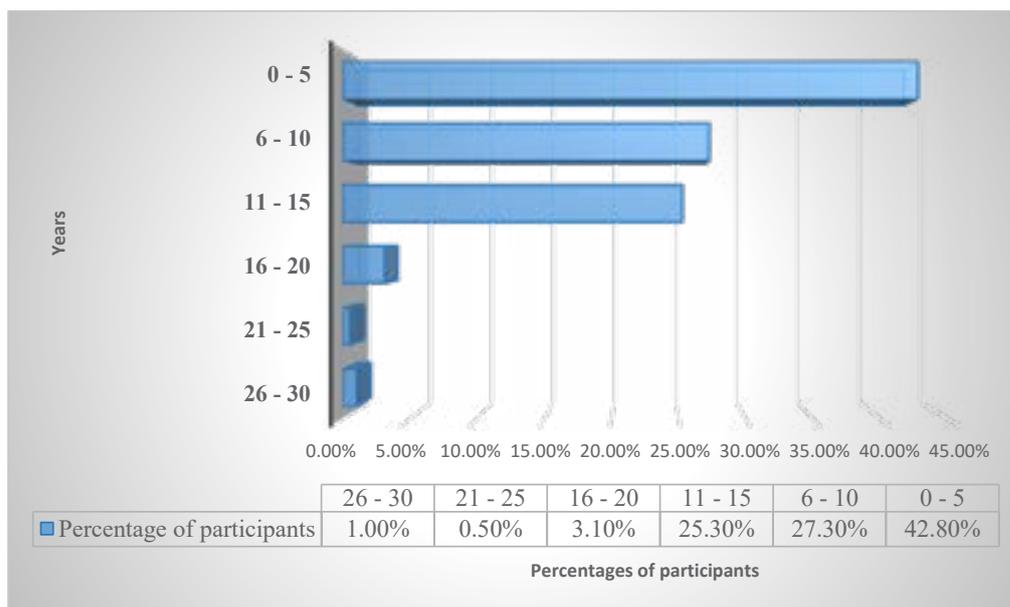


Figure 1. Number of years employed as EMCP (n=194)

## Participants' knowledge of CPD requirements for EMCPs specified by the HPCSA

### CPD portfolio

Participants were requested to answer 'Yes', 'No' or 'Unsure' to the question: Do you have a CPD portfolio? Only 237 participants answered this question. Results reveal that 54% of the participants indicated that they do not have CPD portfolios, and 15.2% were unsure what a CPD portfolio was. Only 30.8% of participants indicated that they have a CPD portfolio.

### CPD requirements for EMCPs in a 24-month period

In this section, participants were asked if they were knowledgeable on the CPD requirements (CEUs) for EMCPs as specified by the HPCSA for a 24-month period. Participants were first asked to indicate their answers by choosing either 'Yes' or 'No', after which those who had indicated Yes were asked to specify the number of points required in this period. Of the 235 participants who answered this question, 50.6% said that they did not know what the CEU requirement for EMCPs was, by indicating 'No', while 49.4% indicated that they were knowledgeable. However, only 29.1% of those who indicated 'Yes' correctly specified the required number of CEUs (ie. 60 CEUs in 24 months). The majority (65%) wrote 30 CEUs (the number of points that should be earned annually), suggesting that they are not knowledgeable of the requirements or did not understand the question; 2% admitted that they were unsure about the required number of CEUs to be earned in a 24-month period.

### Barriers EMCPs encountered while complying with CPD requirements

## Knowledge of CPD activities available in the Free State province

When asked whether they knew of CPD activities available in the Free State province, as many as 45.7% of the participants reported they were not knowledgeable of CPD activities available in the province, while 9.1% of participants reported that they were unsure. The remainder 45.2% of the participants reported 'Yes' and gave the following examples: CPD courses offered through various service providers (eg. at the Free State College of Emergency Care (FSCoEC), through ER24, and at various private hospitals in Bloemfontein), and refresher courses (mostly offered by the FSCoEC). Only 164 participants responded to this question.

### Self-directed learning

#### CPD events/programs (seminars or workshops)

##### Recent attendance of CPD events/programs

Participants were asked to indicate whether they had attended any CPD events during the previous 12 months. Of the 236 participants who answered this question, the majority (64.4%) indicated that they had not attended any CPD events/programs during the previous 12 months, while only 35.6% indicated that they had recently attended such an event.

#### Barriers encountered while attending CPD events/programs

To determine what barriers participants encountered while attending CPD events, participants were first asked to indicate whether they had encountered difficulties in participating in CPD events during the past 12 months, by indicating either 'Yes' or 'No'. Results reveal that 54.4% of the participants

Table 1. Participant responses on barriers encountered while attending CPD events/programs (n=247)

Themes	Percentage of participants	Excerpts from participant response
Lack of information about CPD activities	72.7%	'The various facilities and persons that present CPD in Bloemfontein do not advertise or make the events public enough to the public' 'We don't get information about CPD points'
Cost	70.6%	'Cost regarding continuous professional development'
Limited availability of CPD activities	70.6%	'There are limited opportunities to do continuous professional development courses' 'Not enough activities available in the year' 'Not enough activities to build up enough points'
Transportation	68.5%	'Because most of the time we must travel 350 km to come to the college to be refreshed' 'The department must at least meet us [people who are in small towns] by supporting with transport'
Timing of CPD activities	68.2%	'The available dates, venues and times are not always accessible due to shift or duty times'
Difficulty in getting nominated to attend CPD activities	65.5%	'Difficult to be nominated'
Lack of personal funds	65.1%	'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' 'Pay out of our own pocket'

indicated that they had not encountered difficulties in participating in CPD event(s), while 45.6% reported that they had experienced problems participating in CPD event(s) during the previous 12 months. Furthermore, in an open-ended question, participants were asked to specify the difficulties encountered. Barriers reported by participants were classified into seven major themes (Table 1).

Other minor themes identified, but not included in Table 1 include:

- Limited topics: 'There are no ethics seminars and you must have ethics points'
- Availability of instructors: 'Sometimes there is no instructor to run the course'.

### Reading scientific journals

Participants were asked how regularly they read scientific journals. Close to half (48.1%) indicated that they never read scientific journals, while 51.9% indicated that they do read scientific journals. Of those participants who do read journals, 8.5% indicated that they always read, 13.2% reported that they read at least one journal annually, 16.6% reported that they read at least one journal in a month and 13.6% reported that they do read at least one journal in a week.

The majority (62.8%) of those who indicated that they do not read scientific journals reported that getting access to scientific journals was a major barrier. Other barriers reported by this group are presented in Table 2.

Table 2. Participant responses on reason for not reading scientific journals

Themes	Percentage of participants
No access to scientific journals	62.8%
Lack of time to read scientific journals	16.3%
Lack of knowledge of scientific journals available	11.6%
Lack of interest	9.3%

### Accessing the internet for personal professional learning

When asked how often participants accessed the internet for professional learning purposes, 32.5% indicated that they access the internet for professional learning at least once a week, 18.8% indicated at least once in a month, and 7.5% reported at least once a year. The majority (41.3%) reported that they never accessed the internet for professional learning. Some of the reasons given for not accessing the internet for self-learning were grouped into four major themes as presented in Table 3.

## Discussion

Today's fast pace of global research and development in medical science makes it increasingly difficult for healthcare professionals to keep up-to-date with current knowledge of medicine and medical practice (8). Nonetheless, there is a critical need for healthcare professionals to remain professionally updated on continuous changes in current evidence-based practice and technological advancements, particularly in order to limit any knowledge gap between 'actual practice' and 'best practice' (9). CPD is used widely to encourage healthcare professionals maintain professional competency (10,11). Although CPD has long been an aspect of other healthcare professions, it is relatively new to the EMC profession (12,13).

In South Africa, the Health Professions Act, 1974 (Act No. 56 of 1974) (as amended) endorses CPD as the means for maintaining and updating professional competence, for ensuring that the public interest will always be promoted and protected, and that the best possible service is provided to the community (6). In 2002, the HPCSA made CPD a mandatory requirement for all registered healthcare practitioners. However, low levels of compliance to CPD requirements by EMCPs nationwide has been reported, necessitating a need to investigate factors that hinder EMCPs from attaining HPCSA-recommended CPD requirements, particularly in a resource-poor setting such as the Free State province of South Africa.

Table 3. Participant responses on reason for not accessing internet for professional learning (n=33)

Themes	Percentage of participants	Excerpt from participant response
Lack of internet access	45.5%	'We don't have any internet access' 'There is no access to internet at the workplace'
Limited availability of internet access at work	33.3%	'We share one computer and it is always busy' 'Only supervisors have [internet access]'
Lack of knowledge on how to use the internet for professional purposes	15.2%	'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'
Too costly	6%	'You have to use your own money which is insufficient'

Findings presented by this study suggest that the majority of the EMCPs in the Free State province are between 31 and 40 years of age with a moderate amount of practice experience (0–5 years) in the pre-hospital setting (Figure 1). This is consistent with similar findings (14). A male dominance of 59.8% to 40.2% female found by this study corroborates findings in published literature (15-17) and suggests that male practitioners dominate the EMC profession in the Free State province. This dominance is partly due to the fact that, prior to the establishment of EMC as a profession, pre-hospital emergency medical services had been offered by staff of fire departments, who were, in most communities (including the Free State) traditionally men (15,18). However, this situation is not unique to the Free State, as many emergency medical services in South Africa are still lacking female practitioners and concerns about gender bias in the profession have been reported (14,15,19).

Data of this study reveals that the majority (69.3%) of the participants had only BAA certification, thus suggesting that majority of the EMCPs in the Free State province are BLS practitioners. The low number of ALS practitioners (12.2%) reported by this study confirms findings by prior studies, that reported on the low level of certified ALS in the province (14,20). Concerning level of employment, the majority (89.7%) of the participants worked as operational staff (ie. respond to emergency call-out). This implies that they were in regular contact with patients who needed pre-hospital emergency care and, as such, EMCPs need to be professionally competent. A major benefit of CPD to the healthcare practitioner is improvement of his/her professional effectiveness and credibility (1). EMCPs are known to work in various geographical settings (20). Findings by this study reveal that most (62.2%) of the EMCPs who participated worked in small towns and rural areas of the province.

To ensure compliance, the CPD section of the HPCSA conducts CPD audit on a number of health professionals who have been randomly selected from every register, every 2 months (6). Once selected, the practitioner is expected to submit a CPD portfolio to the Council within 21 days and practitioners found to be non-compliant may be suspended from the register until they submit proof of compliance with the CPD requirements (6). Findings presented by this study reveals that more than half (54%) of the EMCPs indicated that they do not have CPD portfolios. This suggests non-compliance, which may be due partly to lack of awareness of CPD activities in the province, because 45.7% of participants reported that they were not aware of CPD activities available in the province. According to the HPCSA, practitioners should aim to accumulate a balance of 60 CEUs by the end of their second year of practice, and thereafter top up the balance through additional CPD as each 24-month validity period passes (6). The compliance requirement is reaching and maintain a level of 60 CEUs (of which at least 10 CEUs should be for ethics, human rights and medical law) at all times. When asked if they were

knowledgeable on the CPD (CEU) requirements for EMCPs, approximately half (50.6%) of the participating EMCPs reported that they were not knowledgeable on the CEU requirement for EMCPs.

One of the activities that constitute CPD is self-directed learning, which includes attending conferences and seminars, writing articles, reading journals/articles and updating personal knowledge through the internet or distant learning (1,6,21). According to the HPCSA ranking of activities that constitute CPD, self-directed learning is ranked as a Level 1 activity (6). These activities do not have a clearly measurable outcome and are presented on a once-off, non-continuous basis. CEUs are allocated according to time: One CEU per hour to a maximum of eight CEUs per day (6). Although the majority (64.4%) of the participants indicated that they had never attended any CPD events/programs in the previous 12 months; 45.6% reported that they experienced problems participating in CPD events.

Communicating information is a stimulus that enhances participation in CPD (22). Hence, poor communication about CPD events could present as a potential barrier to participation. Findings by this study reveal that 72.7% of the EMCPs indicated that lack of information about CPD activities in the province was a major barrier to participating in CPD events (Table 1). This confirms findings by Kanamu et al, who report that lack of information and communication prevented radiographers from attending CPD events in Kenya (23). Furthermore, the financial cost of attending CPD events and lack of personal funds were reported to be barriers by 70.6% and 65.1% of the EMCPs respectively (Table 1). Findings by this study suggest that the majority of the EMCPs in the province work in small towns and rural areas. EMCPs in rural areas may experience additional infrastructure challenges, such as the need to travel many kilometres, and may lack transportation (which was reported as a barrier by 68.5% of the participants), if they have to attend CPD events presented outside their workstation. Travel requirements will invariably increase the cost of CPD participation and compound the lack of funds that may be precipitated by inadequate salaries. Lack of time to attend CPD activities affected 68.2% of the EMCPs. This may be the result of work pressure as the scheduling of CPD events, in most cases, generally coincides with shift or duty times (Table 1). In addition, the Free State province is confronted by an extreme shortage of healthcare professionals (24,25). Hence, there are no replacements for staff away from work attending CPD activities. These findings are similar to findings by Younes et al where it was reported that cost, staff shortage, heavy workload, limited funds and lack of time were major barriers preventing Jordanian physicians from attending CPD events (26). In the present study, 65.5% of the EMCPs reported difficulty being nominated to attend CPD activities. This suggests lack of support from department heads or line managers of learning opportunities (27). Other barriers reported by EMCPs include lack of instructors and limited choice of topics for CPD.

Traditionally, most self-directed CPD activities are undertaken at medical conferences, professional meetings, talks by experts, and by reading professional, printed journals (28). The advent of recent advances in information technology present an opportunity for CPD learning to take place using online resources and in a less formally structured way (28). Findings by this study reveal that 48.1% of the participants indicated that they never read scientific journals. Furthermore, the majority (62.8%) of the EMCPs who indicated that they do not read scientific journals reported that getting access to scientific journals presented a major barrier (Table 2). A major benefit of the internet is the dissemination of scientific publications that have migrated to electronic formats (29). Inability to access these scientific journals may be precipitated by lack of internet access (as reported by 45.5% of participants) or limited availability of internet access at work (as reported by 33.3%) (Table 3). This drawback is more obvious in rural settings, where access to learning resources is limited (23).

The clinical workload and high need for service delivery in most parts of Africa and, indeed, the Free State province, often make it difficult if not impossible for healthcare professionals to dedicate time to self-professional development (30,31). This inability may be the case for those EMCPs (16.3%) who reported that they do not have the time to read scientific journals (Table 3). Internet-based (e-learning) CPD programs have been reported to be just as effective for imparting knowledge as traditional formats of CPD activities (32). However, Childs et al report that lack of IT skills is a major barrier that prevents healthcare professionals from achieving effective e-learning (33). Similarly, 15.2% of the EMCPs who indicated that they never accessed the internet for self-professional learning (41.3%), reported that poor knowledge of how to use the internet for professional purposes was a major barrier. It is common knowledge that e-learning has a wide range of associated costs such as hardware (eg. start-up costs for purchasing sufficient equipment) and software costs, particularly for licences (33). In this study, cost was reported as a barrier by 6% of the EMCPs who indicated that they had never accessed the internet for self-professional learning (Table 3).

## Conclusion

EMCPs are among the first healthcare professionals to arrive at the scene of a medical emergency, therefore their actions may have bearing on the overall prognosis or outcome of patients. Therefore, EMCPs need to have up-to-date knowledge and be highly competent. To provide the best care to patients, healthcare professionals must commit to lifelong learning. In South Africa, the Health Professions Act, 1974 (Act No. 56 of 1974) (as amended) endorses CPD as the means for maintaining and updating professional competence, as well as ensuring the best possible service to the community. Barriers limiting engagement in CPD, such as those presented

herein, are consistent across the literature, regardless of country and geographical location (27). Identifying factors that hinder compliance to CPD will inform plans for future CPD activities. Alleviating these barriers will ensure that EMCPs in the province meet CPD requirements and attain the required professional competence.

## Recommendations

Based on the findings of this study, the researchers propose the following recommendations to support EMCPs in attain their CPD requirements:

- Online or web-based (e-learning) CPD activities should be made available for rural EMCPs who are unable to travel the long distances. An example includes using online interactive learning and communication management technologies to show pre-recorded and/or livestreaming of seminars. Recorded seminars and videos can be re-played at a convenient time with minimal impact on work time.
- Information about these online/web-based or any CPD activity can be communicated via electronic platform to allow for wider dissemination of information and improve communication channels. For example, the use of a social media platform such as 'WhatsApp'. In addition, an online information hub can be created.
- The Professional Board for Emergency Care should create a list of online peer-reviewed paramedic journals. Access to these journals should be made readily available. Furthermore, EMCPs should be educated on the value of reading scientific journals, ie. educate EMCPs on the recent practices in the field.
- Basic training on the use of computers and navigating the internet can be given to those EMCPs who are not computer literate.
- A strategic plan in the workplace should be linked to CPD requirements.
- Performance development appraisal systems should be implemented that will encourage EMCPs to undertake CPD activities and motivate them to become lifelong learners.
- Employers should encourage CPD participation by planning and offering time off for EMCPs to attend CPD activities.

## Study limitations

- The study findings are limited to the EMCPs in the Free State province. However, some of the findings can also be true for EMCPs in other provinces of the country.
- Another limitation encountered in this study is the selective answering of the question leading to varying response rates per question.

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## Competing interests

The authors have no conflicts of interest to declare. Each author of this paper has completed the ICMJE conflict of interest statement.

## Author contributions

BPS conceptualised the study, collated and analysed data; CVW supervised the conceptualisation, execution of the study; AOA collated and analysed the data and wrote the manuscript.

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