

POSTGRADUATE EDUCATION IN SOUTH AFRICAN EMERGENCY CARE PRACTITIONERS: A SOCIAL REALIST STUDY

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DECLARATION

I, Naseef Abdullah, do hereby declare that:

- ☐ this dissertation is representative of my work in both conception and execution (except where acknowledgements indicate to the contrary);
- ☐ this dissertation has not been submitted for any degree or examination at any other university; and
- ☐ This dissertation does not contain another person's data, pictures, graphs or other information, unless expressly acknowledged as being sourced from other persons.

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ETHICAL CLEARANCE

This is to confirm that full approval to conduct research has been granted by the Institutional Research Ethics Committee (IREC) of the Durban University of Technology (DUT) in KwaZulu-Natal for this dissertation.

Institutional Research Ethics Clearance Number: IREC 089/21

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ABSTRACT

INTRODUCTION

The paucity of research originating from low- and middle-income countries, particularly in the field of emergency care, demands that those entrenched in the healthcare system go on to make meaningful contributions to the knowledge economy of low- and middle-income countries. While the rest of the world builds an appetite for highly skilled South African prehospital practitioners, the emergency care field in South Africa desperately needs practitioners who can engage with research and advance the profession through evidence-based practice. Achieving this requires emergency care practitioners to embark on postgraduate education programmes to learn research skills. Given the shortage of emergency care practitioners in South Africa, the paucity of prehospital-specific research and the large number of paramedics that pursue employment and education abroad, understanding the factors that influence emergency care practitioner's agency in pursuing or eschewing postgraduate education is extremely important as this affects the paramedic workforce and the development of the field in South Africa.

AIM

The study aimed to formulate a deeper understanding of why ECPs pursue or eschew postgraduate education.

METHODS

The study made use of a mixed method exploratory sequential research design. Using both quantitative and qualitative methods generated a thorough understanding of the research problem in the given context. The qualitative phase constituted Phase 1 of the study and used focus group discussions and one-on-one interviews with key stakeholders in the emergency medical services. The findings of this phase informed the quantitative phase (Phase 2) of the study, in which an online structured questionnaire was administered to emergency care practitioners.

FINDINGS

More than half (54%) of the sample of emergency care practitioners pursued postgraduate education. Among the 46% of emergency care practitioners who eschewed postgraduate education, the majority applied their profession in South Africa. This study, therefore, found a decrease in the likelihood of pursuing postgraduate education among emergency care practitioners working in South Africa compared to those working abroad (OR 0.57, CI: 0.25–1.25). The largest proportion (81%) of those who pursued postgraduate education occupied roles within academia. Those emergency care practitioners within operational (72.1%) and managerial (15.6%) roles constituted the largest proportion of those who eschewed postgraduate education.

Structural conditions owing to the paucity of financial incentives (86%), support (57%) and career progression pathways (92%) predominantly motivated emergency care practitioners within the South African prehospital milieu to eschew postgraduate education. Cultural conditions motivated emergency care practitioners, regardless of location or area of speciality, to pursue postgraduate education. The constructs of the individual or collectively held ideals, beliefs, and values were identified as the cultural conditions, which are not easy to change and have lasting conditional influence among emergency care practitioners.

CONCLUSION

In conclusion, the study established and presented, from the emergency care practitioners' point of view, the cultural and structural conditions that influence their agency: motivations to pursue or eschew postgraduate education. The findings highlight the structural and cultural dynamic and interchangeable nature and the overlap of the prehospital milieu's values, practices and behaviours. It notably identified the interconnections as all the practices and behaviours underpinned by the motivations emerging from the prehospital milieu. The study further demonstrated that a comprehensive and deeper understanding of how individuals interpret their structural and cultural conditions, is essential. The objective goal of developing the profession is

interlinked with establishing institutional and cultural norms that capacitate and support those within the profession.

Key Words

Prehospital, postgraduate education, pursue, eschew, Emergency Medical Care

DEDICATION

If I have seen further, it is by standing on the shoulders of giants or because of those who choose to lift me up

This study is therefore dedicated to the following exceptional beings:

To my parents, Rashid and Dilshaad, I am what I am because of you. Your lifetime dedicated to nurturing, providing and striving for excellence has anchored me in this life. No words can express my gratitude and sincere appreciation. Being your son has been the greatest gift bestowed upon me.

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To all the public service prehospital emergency care providers who continue to serve despite the challenges and hardships: continue your passion. Your sacrifice, the emotional and cognitive load you carry, your deeds, and your nobility shall spur us on to continue the pursuit of excellence within the EMS profession. You are that beacon of hope and a pillar of strength for the vulnerable, those living in the townships and informal settlements, the disadvantaged, our sons, our daughters, our mothers, our fathers, our friends and our families.

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ABBREVIATIONS

AEA	Ambulance emergency assistant
BAA	Basic ambulance assistant
BEMC	Bachelor of Emergency Medical Care
BLS	Basic life support
BTech	Bachelor of Technology Emergency Medical Care
CCA	Critical care assistant
CHE	Council on Higher Education
CoP	Community of practice
DoH	Department of Health
DUT	Durban University of Technology
ECP	Emergency care practitioner
ECT	Emergency care technician
EMC	Emergency medical care
EMS	Emergency medical service
FGD	Focus group discussions
GER	Gross enrolment ratio
HEI	Higher education institution
HIC	High income countries
HPCSA	Health Professions Council of South Africa
HOD	Head of Department
LMICs	Low- and middle-income countries

NDP	National Development Plan
NPHE	National Plan for Higher Education
NQF	National Qualification Framework
OECD	Organisation for Economic Co-operation and Development
OSD	Occupation-specific dispensation
PhD	Doctor of Philosophy
PGE	Postgraduate education

CHAPTER ONE

1.1 INTRODUCTION

This thesis focuses on the postgraduate education-seeking behaviour among South African graduate emergency care practitioners (ECPs). This chapter provides the background to the concept of postgraduate education within the field of emergency medical care (EMC) and the research problem addressed in this thesis, which is further translated into a research question with subsequent sub-questions. Furthermore, it provides a brief narrative regarding the researcher's interest in this study area and concludes by providing an overview of the thesis structure.

Using a social realist approach and, where appropriate, aspects of critical realism, this thesis explores the causal factors and generative mechanisms that influence ECPs' postgraduate education-seeking behaviour. It further provides insight into how the structural and cultural conditions within the South African prehospital milieu influence ECPs' agency in pursuing or eschewing postgraduate education. The use of Archer's social realism within emergency medical services (EMSs) is novel. To the best of my knowledge, the phenomenon of interest has not been studied among prehospital ECPs in sub-Saharan Africa.

1.2 BACKGROUND

Worldwide, any healthcare system aims to provide high-quality healthcare, which implies practice consistent with current best evidence (Greenhalgh, Howick, Maskrey, Brassey, Burch, Buton, Chang, Glasziou, Heath, Heneghan, Kelly, Lehman, Llewelyn, McCartney, Milne & Spence., 2014). With the majority of healthcare-related studies originating from high-income countries (HICs) and their specific patient populations, the applicability and transferability to low- and middle-income countries (LMICs), including South Africa, is challenging (Chinnock, Siegfried and Clarke, 2005; Forland, Rohwer, Klatser, Boer & Mayanja-Kizza, 2013). The paucity of research originating from LMICs, particularly in the field of emergency care, demands that those entrenched in the health care system go on

to make meaningful contributions to the knowledge economy of LMICs by advancing practice through research-related activities, to improve health outcomes and patient care (Van Hoving, Barnetson & Wallis., 2015; Young, Naude, Brodovsky & Esterhuizen ,2017).

Over the last three decades in South Africa, the changes in the emergency medical care training and education structures have had a profound influence on the development of the emergency medical care (EMS) profession (MacFarlane, Van Loggerenberg & Kloeck, 2005; Sobuwa & Christopher, 2019; Tiwari, Naidoo, English & Chikte, 2021). Truly to understand and appreciate the ramifications of these changes, it is imperative to review how the EMS profession and its educational structures have evolved over the last few years. The development thereof will provide the required context against which the phenomena under investigation can truly be understood.

The role of the first ambulances in South Africa was to transport patients to hospitals, and no emergency medical care was provided (Fuhri, 1998). In the early 1900s, personnel with first aid became of prime importance in this role, particularly during the South African War (Beighton & de Villiers, 1997). With the support of first aid organisations, local community structures remained tasked with this function until the 1970s (Fuhri, 1998; Bruce, Schmollgruber, Eales, Gassiep & Doubell, 2003). The vast spectrum of clinical cases, especially trauma, demanded that this service had to evolve alongside that of societal structures. The official EMC training and education structure started in 1978 with a one-week basic ambulance and rescue medic course (MacFarlane *et al.*, 2005; Sobuwa & Christopher, 2019). During the 1980s, EMC training and education progressed to the point of capacitating a three-tier EMS education structure: a two-week basic ambulance assistant (BAA), a 12-week intermediate ambulance emergency assistant (AEA), and a nine to ten-month advance life support critical care assistant (CCA) course (MacFarlane *et al.*, 2005). These short courses were aimed to establish an EMS in the absence of any such structure to support the South African health care system. Parallel to this, introducing a university-based, three-year diploma planted the seed to professionalise the EMS profession (Cermak, 2016).

While the seed for professionalising the EMS may have been planted a few years previously, the need for such changes became apparent in 2000 (Emergency Care Society of South Africa, 2012). The EMS short course curriculum, skills and scope of practice eventually became outdated and non-compliant with international best practices (Christopher, 2007). In response, the National Committee on EMS and the Professional Board of Emergency Care revised the emergency care education and training structures (Emergency Care Society of South Africa, 2012). The three-tier EMC education structure remained; however, as depicted in Table 1.1, it constituted university graduates whose curriculum, skills and scope of practice were informed by evidence-based practices. The transitions from what EMS was to what the EMS profession is required to be, has resulted in a revised three-tier EMS structure comprising multiple registration categories within the field of emergency care (Table 1.1). Efforts are being made to transition practitioners from the short course registrations to the formalised EMC training and education programmes offered at South African universities. In line with the requirements for admission to postgraduate education programmes, ECPs are the only prehospital care practitioners eligible to pursue such studies.

TABLE 1.1 South African prehospital emergency care qualifications (Adapted from Sobuwa and Christopher [2019] and Tiwari et al. [2021])

Characteristic of Programme	Tier	Qualification	Abbreviation	Duration	Last offering
Short course	1	Basic ambulance assistant	BAA	4 – 5 weeks	January 2018
	2	Ambulance emergency assistant	AEA	12 – 14 weeks	January 2020
	3	Critical care assistant	CCA	9 – 10 months	January 2018
Professionalised EMC training and education programme	1	Higher Certificate in Emergency Medical Care	HC EMC	1 year	Not applicable
	2	Emergency care technician	ECT	2 years	Last offering 2019
		National Diploma Emergency Medical Care (NDip EMC)	NDip EMC	3 years	January 2018
		Diploma in Emergency Medical Care	Dip EMC	2 years	Not applicable

	3	Bachelor of Technology Emergency Medical Care	BTech EMC	1 or 2 years post NDip EMC	Last offering 2019
		Bachelor of Emergency Medical Care	BEMC	4 years	Not applicable

In South Africa, ECPs are paramedics who have completed a four-year undergraduate programme or a three-year National Diploma, followed by a two-year Bachelor of Technology degree. ECPs account for 2.1% of the professionals registered with the Health Professions Council of South Africa (HPCSA) within the Professional Board for Emergency Care (Tiwari *et al.*, 2021; Health Professions Council of South Africa, 2023). The remaining emergency care provider workforce comprises 91.1% entry-level workers and 6.8% mid-level workers. ECPs, the clinical leaders within the EMS profession, are eligible to seek postgraduate education to develop their knowledge and improve their research capacity within EMC. While the master's degree in EMC was started in 2005 at the Durban University of Technology (DUT) in South Africa, student uptake in the respective master's programmes throughout the country remains unknown. The PhD in EMC commenced at DUT in 2014, although paramedics can enrol for master's and PhD programmes in other allied departments. While ECPs have enrolled for postgraduate studies for the better part of the last two decades, the effect of the South African EMS on postgraduate education and that of postgraduate education on the South African EMS has yet to be studied in the given context.

EMSs, particularly those operating in LMICs, often compete with various sectors of health care systems for scarce resources in a rather challenging environment, where those who allocate resources demand proof that funds spent will result in an appropriate return. In this case, evidence of value requires research, analysis and advocacy regarding skills attained through postgraduate education programmes. If we are to suppose that the EMC field is to meet future challenges and develop in this knowledge-economy era, it will need a calibre of leaders and/or practitioners who can effectively advocate for the needs of the service.

The field of EMC currently needs a generation of ECPs who can engage with research and advance the profession through evidence-based practice. Achieving this requires ECPs to embark on postgraduate education programmes to learn research skills. Given the shortage of ECPs in South Africa, the paucity of prehospital-specific research and the large number of paramedics that pursue employment and education abroad, understanding the factors that influence ECPs' agency in pursuing or eschewing postgraduate education is essential as this adversely affects the paramedic workforce and the development of the prehospital emergency medical care field in South Africa.

1.3 RESEARCH PROBLEM

Africa, the most under-resourced continent in terms of health care provision, endures the most significant burden of mortality as a result of trauma and communicable and non-communicable diseases worldwide (Kuzma, Lim, Kepha, Nalitoela & Reynolds, 2015; Paniker, Graham & Harrison, 2015; Ballot, Davies, Cooper, Chirwa, Argent & Mer, 2016; Reynolds, Stewart, Drewett, Salerno, Sawe, Toroyan & Mock, 2017; Maphumulo & Bhengu, 2019). As a region comprised of primarily low- and middle-income countries (LMICs), sub-Saharan Africa experiences a unique and overwhelming healthcare burden, requiring a robust system of emergency medical services (Kuzma *et al.*, 2015; Hardcastle *et al.*, 2016; Diamond *et al.*, 2018; WHO, 2018). The dire need for the development of emergency care in sub-Saharan Africa is undisputed (Mould-Millman, Dixon, Sefa, Yancey, Hollong, Hagahmed, Ginde & Wallis, 2017). Several authors report on the lack of prehospital research in Africa, which has resulted in the adoption of evidence from the global north that may not always apply to LMICs, such as South Africa (Van Hoving *et al.*, 2015; Razzak, Beecroft, Brown, Hargarten & Anand, 2019; Wenham *et al.*, 2021). McCaul, Clarke, Bruijns, Hodgkinson, De Waal, Pigoga, Wallis & Young (2018) found that only 2% of emergency care guidelines that inform the downstream practice of emergency medical care originate from LMICs. The development of local, evidence-based, prehospital guidance is essential in addressing the high injury and illness burden of sub-

Saharan Africa (Mould-Millman, Sasser & Wallis, 2013; Mould-Millman *et al.*, 2017; Malherbe, Smit, Sharma & McCaul, 2021; Signé, 2021).

Africa needs African healthcare solutions and for its healthcare practitioners to develop these context-specific solutions. Economies worldwide are being developed around the knowledge and skills of the working population (British Council, 2020). Postgraduate education is critical to this process, particularly in a world where knowledge has become the new fuel for development and growth (DHET [SA], 2020a). Within the prehospital milieu, ECPs are eligible to pursue postgraduate education and can be considered the key actors behind the creation of knowledge-based emergency care growth in South Africa.

Despite the largely described paucity of prehospital emergency care research in Africa and, more specifically, South Africa, it is not known how many ECPs access and/or pursue postgraduate education programmes or whether, once qualified, they go on to make meaningful contributions to their field (Mould-Millman *et al.*, 2013; Van Hoving *et al.*, 2015). Furthermore, there is a need to report on challenges and factors associated with motivating prehospital care practitioners to pursue or eschew professional education progression within the South African prehospital milieu. By identifying and understanding these factors impinging on the developmental and academic potentials of ECPs within the prehospital milieu, recommendations can be generated to increase the numbers of high-quality ECPs and strengthen postgraduate education within the South African EMSs and that of other LMICs.

Despite ECPs accessing postgraduate education programmes for the last two decades, South Africa has only eight ECPs that have become doctoral graduates, according to anecdotal evidence. In addition, the largely described paucity of prehospital-specific research in Africa, including South Africa, suggests that it is only sometimes clear whether the current structure and culture within the prehospital setting works best in the given context. It is unknown whether the cultural and structural conditions experienced within the South African prehospital setting might act as 'hygiene' factors (a necessary but insufficient variable in promoting postgraduate-seeking behaviour). Subsequently, others

might act as motivating factors, influencing agency: motivation for pursuing postgraduate education among ECPs (Cox & Trotter, 2016). While some theoretical explanations have been suggested for why postgraduate education is sought in various fields, there is still a knowledge gap regarding how structure and culture within institutions or organisations affect agency (Motshoane & McKenna, 2014). In the case of this study, how do the structural and cultural conditions experienced by ECPs influence their agency?

1.4 THE AIM OF THE STUDY

The aim of the study was to formulate a deeper understanding of why ECPs pursue or eschew postgraduate education.

1.4.1 RESEARCH QUESTION

Why do ECPs pursue or eschew postgraduate education?

1.4.2 SUB-QUESTIONS

1. What structural, cultural and agential conditions within the South African prehospital emergency care field motivate ECPs to pursue or eschew postgraduate education?
2. How does the current postgraduate-seeking behaviours of ECPs emerge from the interplay between structure, culture and agential conditions within the South African prehospital emergency care field?

1.5 METHODS

This study used Bhaskar's (2008) critical realism and Archer's social realism (1995, 2003) as the fundamental theories that informed my ontological (nature of truth underpinning or being) and epistemological (how knowledge is constructed or what can be known) position, as the emergence of a social phenomenon was investigated during this study. The use of these theories to explore the research question is novel. Both critical and social realism are explained further in Chapter Three.

The study made use of a mixed-method exploratory sequential research design. Using both quantitative and qualitative methods generated a thorough understanding of the research problem in the given context. The qualitative phase constituted Phase 1 of the study and made use of focus-group discussions and one-on-one interviews with key stakeholders in the emergency medical services. The findings of this phase informed the quantitative phase (Phase 2) of the study in which an online structured questionnaire was administered to emergency care practitioners.

1.6 THE RESEARCHER'S INTEREST IN THIS AREA OF STUDY

I am a South African-educated and registered ECP who has experienced employment locally and abroad. My career spans thirteen years of prehospital care and education, and I am currently a paramedic lecturer at a government college of emergency care.

During my employment abroad, I noticed a strong tendency for those employed outside of South Africa to pursue postgraduate education. I can bear testament to this phenomenon, as I not only completed my master's, but also started pursuing my doctorate within the three years I spent abroad. My practice and experience in emergency medical care training and education in South Africa led me to conclude that there is a disjuncture between the prehospital care setting, otherwise referred to as the EMS and its postgraduate education sphere in South Africa.

Through this research inquiry, I aimed to understand the emergence of this phenomenon, and mainly how the South African prehospital milieu influences it. By doing so, I hope to have generated new knowledge related to postgraduate-seeking behaviours within the field of EMC, as well as to make practical recommendations for what can be done to improve the emergence of this phenomenon. In doing so, I aimed to contribute to developing improved research capacity and activity within South Africa, particularly to overcome the largely described paucity of prehospital-specific research in South Africa.

1.7 DEFINITION OF CRITICAL OPERATIONAL CONCEPTS

Emergency Care Practitioners (ECPs) are paramedics who have completed a four-year undergraduate programme or a three-year National Diploma followed by a two-year Bachelor of Technology degree and are eligible to seek postgraduate education.

Emergency Medical Services (EMS) is an intricate system, and each component has the essential role of performing part of a coordinated and seamless system that provides emergency medical care to the ill or injured.

Emergency Medical Care (EMC) provides immediate or urgent medical interventions to stabilise patients with life-threatening or limb-threatening injuries or illnesses.

Eschewing postgraduate education refers to the process of not or no longer pursuing postgraduate education.

Postgraduate education is any higher education undertaken after a bachelor's degree or an undergraduate programme. For this research project, postgraduate education refers to master's or doctoral programmes.

Pursuing postgraduate education in this study refers to actively engaging or applying to a master's or doctoral programme.

1.8 STRUCTURE OF THIS THESIS

Chapter Two: Review of the Literature

This chapter provides a brief background to the history of postgraduate education within South Africa, particularly the development of emergency medical care. The chapter then discusses the challenges and motivating factors that influence pursuing postgraduate education.

Chapter Three: Social and critical realism

This chapter discusses social and critical realism, the two theories operationalised to understand the phenomena of interest in the given context. While the philosophical orientation of the study often warranted complex discussions, I attempted to keep the

discussion simple by providing examples that would be easy to follow while maintaining academic rigour.

Chapter Four: Research and methodology

This chapter describes the research design and methodology used in this study. It also goes on to explain my insider perspective as the researcher.

Chapter Five: Structural conditions

This chapter presents and explores the structural conditions identified from the qualitative findings related to the postgraduate-seeking behaviours of ECPs. The chapter seeks to answer part of the first research sub-question: What structural conditions within the prehospital milieu motivate ECPs to pursue or eschew postgraduate education?

Chapter Six: Cultural conditions

This chapter presents and explores the cultural conditions identified from the qualitative findings related to the postgraduate-seeking behaviours of ECPs. The chapter seeks to answer part of the first research sub-question: What cultural conditions within the prehospital milieu motivate ECPs to pursue or eschew postgraduate education?

Chapter Seven: Quantitative results

This chapter presents and explores the quantitative findings of this study. This chapter seeks to answer the second research sub-question: How does the current postgraduate-seeking behaviours of ECPs emerge from the interplay between structure, culture and agential conditions within emergency medical care?

Chapter Eight: Eschewing postgraduate education

This chapter presents pertinent discussion points about why ECPs eschew postgraduate education.

Chapter Nine: Pursuing postgraduate education

This chapter presents pertinent discussion points about why ECPs pursue postgraduate education.

Chapter Ten: Conclusion and recommendations

The chapter concludes the thesis by presenting a summary of the key findings of this study. The chapter then discusses how this study has generated new knowledge that can subsequently be used to aid the development of the EMS profession in South Africa. This discussion is followed by recommendations for future practice and recommendations for further research. The chapter concludes by providing the limitations of this study.

1.9 SUMMARY

This chapter introduced the study by discussing the philosophical orientation of the study. Postgraduate education within the South African context was raised, particularly regarding the EMS profession where appropriate. This was followed by a discussion on the background of postgraduate education concerning the need for more prehospital-specific research in Africa, specifically sub-Saharan Africa. The chapter includes the research questions and sub-questions this study seeks to investigate. The next chapter provides a discussion of the relevant literature.

CHAPTER TWO: REVIEW OF THE LITERATURE

2.1 INTRODUCTION

This chapter reviews the literature relating to the study, sculpting the landscape where the phenomenon of interest occurs. The chapter provides a brief background to the history of postgraduate education within South Africa, particularly regarding the development of emergency medical care. I then discuss the challenges and motivations reported for postgraduate education. Finally, I conclude with the knowledge gap this research aims to fill.

Several databases accessible through the Durban University of Technology's library were utilised to identify pertinent literature relating to the phenomena of interest. The databases employed in the retrieval of research articles included EBSCO host, MEDLINE, Pubmed, Science Direct and Elsevier. Additionally, supplementary search engines such as Google/Google Scholar were utilised to acquire publications, news, and illustrations. The publications sourced from these platforms formed the foundation of this literature review, with due referencing applied to all literature sources where appropriate.]

The search strategy implemented involved keywords and phrases aligned with five primary thematic areas encompassing postgraduate education. These areas include motivations for pursuing postgraduate education, challenges associated with the pursuit of postgraduate education, the prehospital milieu, and factors influencing the agency of postgraduate learners. The specific keywords employed in this endeavour comprised, but were not limited to:

- Postgraduate education OR higher education OR Doctoral degrees OR PhD OR Master's Degree
- Motivations OR Motivators OR Motives OR opportunities Or Benefits
- Challenges OR Barriers OR Difficulties OR Problems
- Pursuing OR Enabling OR Eschewing OR constraining
- Emergency Medical Services OR prehospital Or Emergency Medical Care

Furthermore, an exhaustive examination of the reference list of identified publications was conducted to uncover any additional relevant literature related to the scope of this study.

2.2 BACKGROUND

Worldwide, economies are being built more and more around the knowledge and skills of the working population. Governments increasingly see education as a significant contributor to national wealth and economic development (British Council, 2020). As a result, the role of research, innovation, and the importance of having a large number of individuals with high levels of knowledge-based abilities is critical for economic well-being and progress. Research and education in research are essential in enabling involvement in innovation and knowledge-driven prosperity in the knowledge economy imagination (Zapp, 2022). In Africa, the exponential expansion of higher education systems and a growing demand for experienced researchers beyond academia have made postgraduate education a critical component of development strategies (Molla & Cuthbert, 2016).

The term 'postgraduate education' refers to an advanced level of study beyond the level of an undergraduate (bachelor's) degree (Cambridge Dictionary, 2023). This level of education is undertaken to gain or develop a more comprehensive understanding of a particular area of a discipline (i.e. specialisation), acquire a specific skill (research), develop a new interest, or in some cases, start a new career path. Postgraduate education is completed through research or a coursework curriculum. The former is the mainstay of doctoral programmes. These programmes require a previous undergraduate qualification and, in some instances, relevant work and experience in the field of study. Postgraduate education is regarded as the key to generating the highly skilled workforce required for participation in the knowledge economy, as well as providing universities with the necessary level of research-qualified staff to improve educational standards and research capacity and to drive innovation in the broader economy (Molla & Cuthbert, 2016; Schendel & McCowan, 2016). Higher education institutions (HEIs) offer postgraduate education programmes in South Africa.

Worldwide, the role and expectation of HEIs are to aid in social impact and subsequently in addressing societal contentions related to race, ethnicity, gender and human rights concerns (Elmassah, Biltagy & Gamal, 2022; Tomasella, Wylie & Gill, 2022). Aligned with their pursuits of promoting social development, HEIs are obligated to find solutions to the social ills of society. HEIs have three main functions: education, research, and contributing to society, all of which one can argue to be interconnected. The Council for Higher Education (2013) suggested that higher education, through its educational standing, has four main overarching aims. These are:

1. meeting the needs of learners by developing their intellectual abilities;
2. providing industry and/or professions with high-level expertise and competencies ensuring growth in society;
3. encouraging the development of reflective capacity; and
4. contributing to the creation and sharing of knowledge.

Higher education can be considered to be one of the most important investments in human capital. It is, therefore, of great importance and holds many benefits for the future of South Africa.

The significance of learning cannot be emphasised enough. This self-enlightening process is essential for the overall development of individuals and society. In South Africa, the National Development Plan (NDP) was introduced in 2012 and provides a detailed blueprint for addressing societal inequality and reducing poverty by 2030 (National Planning Commission, 2012). Education, training, and innovation are the fundamental elements of this long-term development plan, which aims to create a society of equal opportunity in South Africa. Education, which capacitates agents to take control of their lives, define their identities, raise balanced families and contribute to developing a responsible society, is the foundation of the NDP. Despite the strides made in South Africa in developing postgraduate education, a significant amount of work to meet the required objectives of the NDP is still required.

2.3 POSTGRADUATE EDUCATION

Worldwide, the importance of postgraduate education has disproportionately increased over the last decade, particularly relating to its share of the overall graduate output in Africa and LMICs, such as South Africa (Cloete, Mouton & Sheppard, 2015). The disproportionate nature of this phenomenon has received significant attention over the last two decades. However, this is not due to the foreboding in the supply of future academics, but rather the increasingly important role that these graduates are perceived to play in the knowledge economy (Van Schalkwyk, Mouton, Redelinghuys & McKenna, 2020).

The ever-changing global environment has seen the introduction of the knowledge economy, which has become a dominant concept within higher education and training over the last decade (Marginson, 2010; Danjuma & Rasli, 2013). This era has seen a significant movement towards improving the interface between industry and research to increase science- and technology-based research and, more importantly, produce knowledgeable workers who can synthesise information to solve problems and advance organisational goals (Hendarman & Tjakraatmadja, 2012). Furthermore, high-quality research remains essential for the sustainable development agenda in LMICs, for which postgraduate education is a critical component of this process (ASSAF, 2010; Cloete *et al.*, 2015). The academic community in South Africa shares a broad consensus regarding the paucity of high-quality postgraduate alumni being produced concerning the developmental needs of the country (ASSAF, 2010; Commission of Inquiry into Higher Education and Training, 2013; Pandor, 2018; Craig, Khan, Rambharose & Stassen, 2023). Therefore, this study is grounded in the quest to understand this phenomenon and subsequently improve the research capacity within South Africa, particularly concerning the field of EMC.

In Africa, postgraduate education is significant in ensuring sustainable development processes (Talib, Narayan & Harrod, 2019; The World Bank, 2020; Van Staden, 2021). To revitalise postgraduate education over the last decade on the continent, the African Union has explored many collaborative efforts with HICs and empowered many local

initiatives to improve African capacity (Munung, Mayosi & De Vries, 2017). However, the African continent is besieged by increased poverty, so that state spending has become under pressure, and universities have become neglected (Azevedo, 2017). Most issues experienced in Africa today affect or compromise the quality of education of African HEIs (Teferra & Altbach, 2004; Mugimu, 2022). Given the limited resources and a history of neglect, HEIs need help to respond to the demand for their services (Maphumulo & Bhengu, 2019; Mugimu, 2022). Subsequently, the efforts of many African countries towards tackling environmental and development problems have yielded minimal results, as the African continent still has among the lowest postgraduate education statistics worldwide (Marginson, 2016; Roser & Ortiz-Ospina, 2018; Knoema, 2019; The World Bank, 2022; Zavale & Schneijderberg, 2022).

2.4. HIGHER EDUCATION WORLDWIDE

In 2020, more than 235 million students were enrolled in higher education worldwide, either as postgraduate learners or for undergraduate studies, and who may go on to postgraduate studies after their first degrees (UNESCO, 2022). Over the last two decades, the global gross enrolment rate for higher education has nearly doubled from 19% at the start of the millennium to 40% of the global population in 2020 (Vieira, Mutize & Chinchilia, 2020; The World Bank, 2022; DHET [SA], 2023). While the world has seen significant growth in enrolment in higher education, millions across the globe are challenged as the learning opportunities continue to be unequally distributed. For example, the enrolment rate of students in sub-Saharan Africa is 9% (UNESCO, 2022).

Higher education enrolment has increased, but at different rates, changing the distribution between regions worldwide. Students in Europe and North America accounted for 40% of the enrolment rate of the world in 2000 and 21% in 2020, respectively (The World Bank, 2022; UNESCO, 2022). Although Europe and North America saw a 24% increase in enrolment rates during this period, the overall proportion decreased compared to the rest of the world. Southern and Central Asia reported a 268% increase, which is the highest reported rate, and as such, went from representing 13% in 2000 of the higher education students in the world to 21% in 2020 (UNESCO, 2022). Subsequently, rapid growth and

development in the Asian economies have been reported due to the increased postgraduate education-related activities in the region (Piracha, Tani, Zimmermann & Zhang, 2022).

As more and more nations develop their economies around the work force, the need to produce more knowledgeable workers for the workplace increases (Hendarman & Tjakraatmadja, 2012; Van Schalkwyk *et al.*, 2020). Therefore, it is not surprising that high-income countries have the highest enrolment rates worldwide (Figure 2.1). The developed infrastructure, socioeconomic conditions and accessibility to educational structures are among the key driving factors for the status of these countries. As depicted in Figure 2.1, high- and upper-income countries consistently demonstrate growth in enrolment rates, nearly double that of the global average at times. In addition to the disparities between high- and upper-income and lower-middle-income countries, it is interesting to note that the Organisation for Economic Co-operation and Development (OECD) members all display similar enrolment rates. This is likely due to a common interest in improving their economies by ensuring improved access to and quality of higher education. While South Africa is an OECD member, its enrolment rates remain comparable to that of lower-middle-income countries.

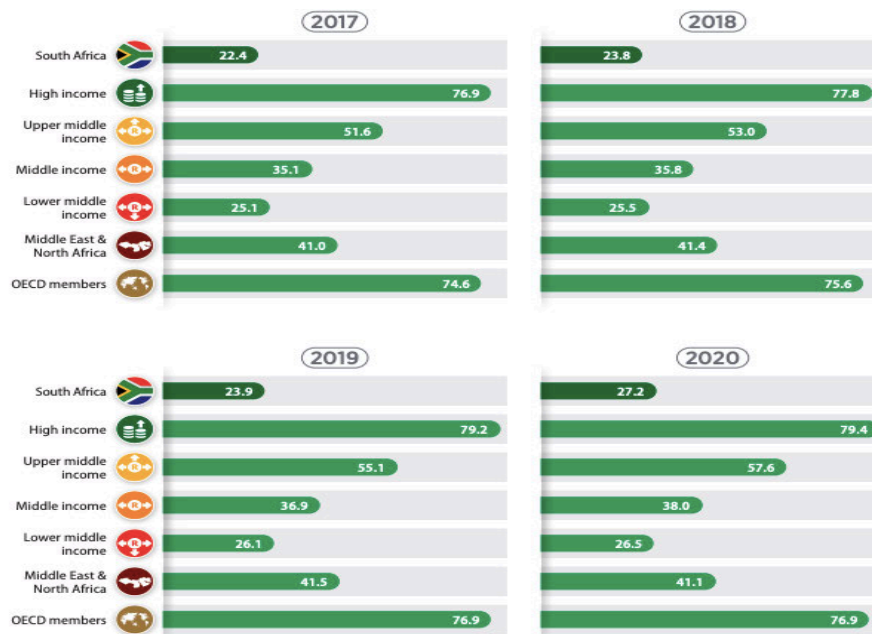


FIGURE 2.1: The percentage of higher education participation rates (GER) enrolment of South Africa and other income groupings (The World Bank, 2022; DHET (SA), 2023)

As depicted in Figure 2.1, the gross enrolment ratio (GER) of middle-income countries has subtly improved in recent years. The gross enrolment ratio, also referred to as participation rate for higher education, is calculated by dividing the number of students enrolled in higher education (regardless of age) by the population of the age group, which officially corresponds to the higher education five-year age group in that country and then multiplied by 100 (DHET [SA], 2023). In South Africa, the age group of 20–24-year-olds is used to calculate the GER. Despite the significant gains between 2017 and 2020, the South African enrolment rates remain consistently lower than other comparable middle-income nations (UNESCO, 2022). China, Columbia and Algeria have attained and constantly achieved rates of more than 50% (The World Bank, 2022). While The World Bank reports significant gains in enrolment rates among middle-income countries, the disparities in those constantly achieving more than 50% and those with less than 30% call for improved participation rates on a global scale (The World Bank, 2020; Vieira *et al.*, 2020).

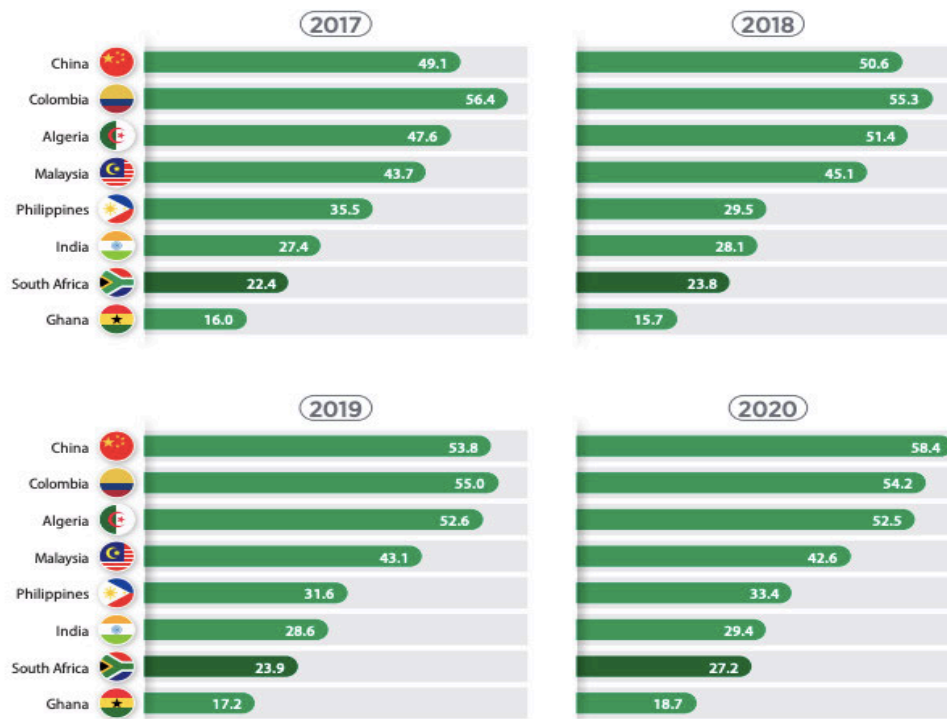


FIGURE 2.2: The percentage of higher education participation rates (GER) in South Africa and other countries (The World Bank, 2022; DHET [SA], 2023)

Global enrolment trends suggest that universal access to higher education has increased worldwide (UNESCO, 2020). More than one-third of the global population now pursue post-secondary education (Marginson, 2016; UNESCO, 2020; Vieira *et al.*, 2020). This, however, does not mean that all parts of society are equally able to access and benefit from higher education, as there are still significant differences in access and pursuits worldwide. South Africa is such a country, as its participation rates in higher education rates remain substantially lower than the averages of the OECD members and other upper-middle-income countries (The World Bank, 2022; UNESCO, 2022).

2.5. POSTGRADUATE EDUCATION IN SOUTH AFRICA

Education in South Africa is no longer a privilege reserved for an elite few; it is now a constitutional right of each citizen. The South African Constitution, Act 108 1996, not only emphasises the right to basic education but also recognises the right to further education (Republic of South Africa, 1996).

South Africa is a rapidly developing upper-middle-income country, particularly in its economic and social developmental structures (Luescher, 2016; The World Bank, 2019). Its economy can claim to be one of the wealthiest in Africa and one with a stable functioning democracy (Jha, Kickbusch, Taylor & Abbasi, 2016). While it may be one of the biggest economies in Africa, it has the most deep-rooted structural problems constraining its growth and development (Macha & Kadakia, 2017). For one to truly understand the notion of postgraduate education within the field of EMC, it is imperative to unpack the idea of postgraduate education in South Africa. The development thereof will provide the required context against which the phenomena under investigation can truly be understood.

Over the last two decades in South Africa, a significant increase in student enrolment has been seen within higher education (Table 2.1). While one would assume that the introduction of the knowledge era and the fourth industrial revolution are among the most significant generative factors, the introduction of democracy in South Africa and its relation to this developmental behaviour cannot be ignored (Macgregor, 2014; Luescher, 2016). According to the GINI Index, The World Bank notes that South Africa effectively remains an economy plagued with one of the highest inequality rates in the world (International Bank for Reconstruction and Development & The World Bank, 2018; Scott, 2019; The World Bank, 2019). The legacy of the South African apartheid system, which lasted up until 1994, is largely to blame for this, as the education system in the country, in particular has never really recovered from the 1953 Bantu Education Act, which essentially deprived people of colour from participating in furthering their education (Luescher, 2016).

TABLE 2.1: Headcount enrolment in public higher education by race: 2008–2013
(Council for Higher Education, 2013)

Categories ¹	2008	2009	2010	2011	2012	2013	Population 2013
African	515,058	547,686	595,963	640,442	662,123	689,503	42,284,132
Coloured²	51,647	55,101	58,219	59,312	58,692	61,034	4,766,172
Indian	52,401	53,629	54,537	54,698	52,296	53,787	1,329,302
White	178,140	179,232	178,346	177,365	172,654	171,927	4,602,386
Total	799,490	837,779	892,943	938,200	953,373	983,698	52,981,991

Since the end of apartheid, South Africa has invested considerably in education, as evidenced by student enrolment rates (International Bank for Reconstruction and Development and The World Bank, 2018). Student enrolment rates have significantly grown from 425 000 in 1994 to 985 212 in 2015 and then again to 1 074 912 in 2019 (CHE Annual Report, 2015; Luescher, 2016; DHET [SA], 2021). The 2017 report on the status of education in South Africa suggested that between 1994 and 2014, the number of black graduates had more than quadrupled, from about 11 339 (in 1994) to 20 513 (in 2004) to approximately 48 686 graduates in 2014 (Macha & Kadakia, 2017).

As depicted in Figure 2.3, most students in public HEIs between 2009 and 2019 enrolled for undergraduate degrees, followed by undergraduate certificates and diplomas and postgraduate studies below the master's level. While considerably fewer students enrolled for postgraduate studies during the same period and despite the subtle decline in undergraduate enrolment between 2018 and 2019, a steady increase in postgraduate education enrolment can be noted from 2009 until 2019. South Africa is one of the few countries whose increase in GDP per capita has not correlated with an increase in tertiary education enrolment (British Council, 2013, 2020). In 2021, tertiary enrolment in

¹ These were the distinct racial identities used to define the South African population during the system. These are still used in the post-democracy era, particularly for statistical redressing purposes.

² Racial identifier used in South Africa for a person of mixed ethnic origin.

South Africa as a percentage of the total population of students was 19%. When compared to the tertiary enrolment rates of America (91.4%), Europe (59.8%), and Australia (72.3%) for the same year (Roser & Ortiz-Ospina, 2018), it becomes evident how far South Africa lags behind. South Africa has a reported average annual tertiary enrolment rate of 8.5%, seeing growth from 11.8% in 1989 to the 23.8% noted in 2020, which is nearly half that of the global average rate of 40% (Knoema, 2019; The World Bank, 2022).

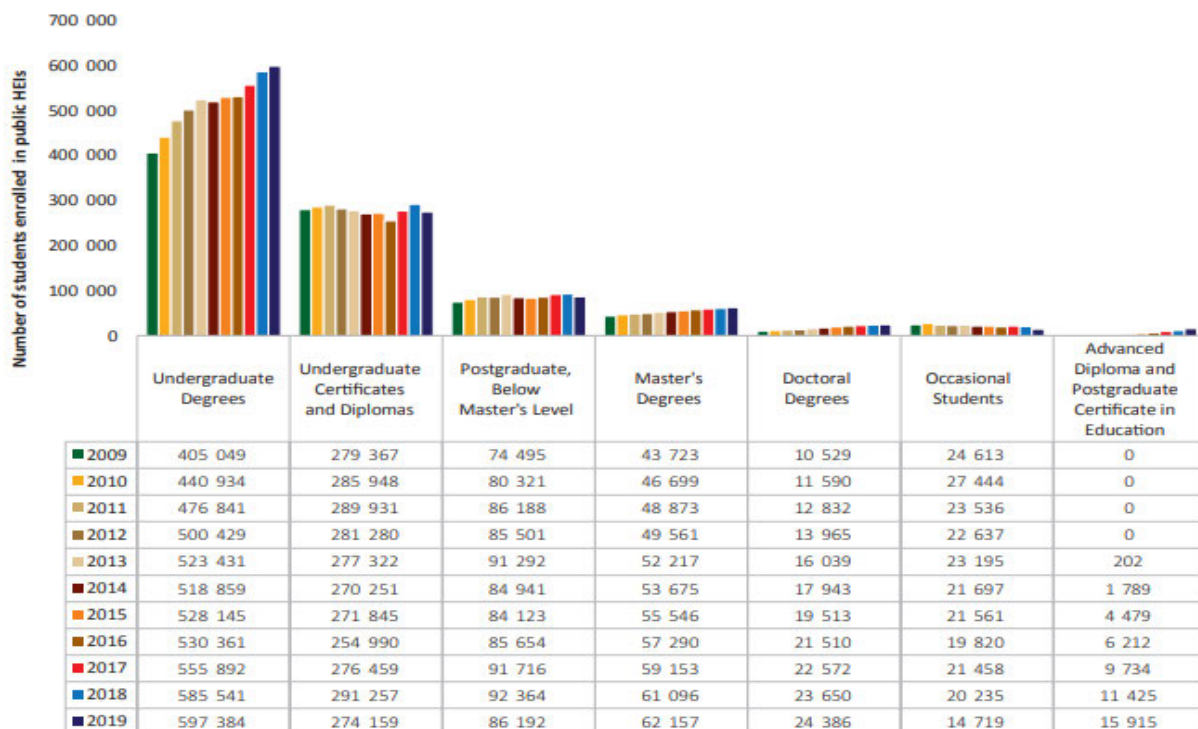


FIGURE 2.3: Number of students enrolled in public HEIs by qualification type (2009 – 2019) (DHET [SA], 2021)

While various studies depict a steady increase in those pursuing postgraduate education, they do so in an attempt to explore the disproportionate nature of academic success among certain race groups (Macgregor, 2014; Alabi, Seedat-Khan & Abdullahi, 2019; Talib, Narayan & Harrod, 2019). This is often done against the focus of the education system on redressing issues experienced before the implementation of democracy. Research on this matter usually concludes with the question: Are our higher education systems meeting the demands of South Africa? (Council on Higher Education, 2010; Mould-Millman, Sasser & Wallis, 2013; Brits, 2018; De Villiers, 2019; Talib, Narayan &

Harrod, 2019; DHET [SA], 2020) While this might be a multifactorial question, at an empirical level, the paucity of prehospital-specific research in sub-Saharan Africa suggested that we may not be meeting these demands.

Several studies allude to challenges in retaining higher education graduates, particularly the inability to retain them as they migrate to more developed nations (Chen, Buch, Wassermann, Frehywor, Mullan, Omaswa, Greysen, Kolars, Dovlo, Gali Abu Bakr, Haileamlak, Koumare & Olapade , 2012; Tankwanchi, Özden & Vermund, 2013). This is evident within the field of emergency care, as the global market has a healthy appetite for highly skilled South African ECPs (Govender *et al.*, 2012). Several publications suggest that the limited postgraduate medical education capacity in sub-Saharan Africa plays a substantial role in this phenomenon, as many of those who leave to pursue further training abroad never return (Clinton, Anderson & Kwawukume, 2010; Greysen, Dovlo, Olapade, Jacobs, Sewankambo & Mullan , 2011; Qureshi, Young, Muyco, Borgstein, Charles, Mulwafu, Shores, Banza, Cairns, Viste & Mkandawire , 2013; Tankwanchi, Özden & Vermund, 2013).

While the proportion of those engaged in higher education in Africa is still relatively low, enrolment in Africa has risen faster than anywhere else (during this period), some 66% from 1999 to 2009 (World Conference on Higher Education, 2009). The 2009 World Conference on Higher Education reported 150.6 million students globally, a 53% increase from that reported in 2000 (Altbach, Reisberg & Rumbley, 2009). In 2020, more than 236 million students enrolled in higher education worldwide, a further increase of 63,5% from that reported in 2000 (Vieira, Mutize and Chinchilia , 2020; UNESCO, 2022). Altbach and others further described the improvement among LMICs, whose participation rates marginally improved from 5 to 7% over the same period (Altbach, Reisberg and Rumbley , 2009; UNESCO, 2020; Vieira *et al.*, 2020). Alarming, for the reported period, sub-Saharan Africa had one of the lowest reported participation rates of 5% in 2000 and then again at 9% in 2020 (Altbach *et al.*, 2009; UNESCO, 2022).

Botman (2010) suggests that the postgraduate education system imparts knowledge and produces professionals who directly and indirectly affect the quality of human resources

as agents of change within their settings. He further emphasises the responsibility of HEIs as knowledge brokers, who are ultimately tasked with equipping their graduates with the ability to develop societies (Botman, 2010). Jha *et al.* (2016) echo these sentiments, but further describe its role in achieving the Sustainable Development Goals (SDG) of LMICs, particularly in line with its framework to support the effective implementation of goals and action.

While the number of HEIs in LMICs has steadily increased over the last two decades, Africa still only accounts for 8.9% of the HEIs in the world (MacGregor, 2010; uniRank, 2020). Based on the 2021 mid-year estimates, this equates to 0.89 universities per 1 000 000 of the African population. South Africa has the second most universities in Africa, with each university catering to approximately 500 000 of its citizens (Atlas, 2017; uniRank, 2020). The African continent is estimated to account for 16.1% of the population of the world, making it abundantly clear that higher education offered in Africa is primarily under-represented compared to the rest of the world, at least regarding the institutions available to its citizens. While South Africa has made some progress in this regard, it still needs to go some way to equal the rates reported for HICs, such as the USA, with 6:500 000 per population (Moody, 2021; Worldmeter, 2021). Other African LMICs display a different trend, with countries like Nigeria and Tanzania reporting 1:1 500 000 and 1: 2 000 000, respectively (Atlas, 2017; uniRank, 2020; Worldmeter, 2021).

South Africa is reported to have 26 public HEIs that offer postgraduate education, three of which offer EMC-specific postgraduate education programmes (Atlas, 2017; DHET [SA], 2019; Sebola, 2022). The research output from public universities in South Africa has grown from 7 100 in 2005 to 21 019 in 2019 (DHET [SA], 2019). This may be attributed to the research output policy implemented by the South African government to improve research output from universities. This policy encouraged research productivity by rewarding output by HEIs (DHET [SA], 2019). Despite the financial resources injected into this initiative, South Africa displayed an 8.1% average growth rate in research output from 2005 to 2019 (Sebola, 2022). Furthermore, the 2019 research output data suggests that 10 of the 26 HEIs produced 82% of all output. This suggests that the commonly

researched notion of the disparities in South Africa extends to the output of HEIs contributing to knowledge generation as well (DHET [SA], 2019). Despite there only being one HEI for every 2 367 682 people in South Africa (Worldometer, 2023), the country still occupies 8 of the top 10 African university spots, with Egypt and Kenya occupying the 9th and 10th seats, respectively (uniRank, 2020). Cloete *et al.* (2015) suggest that South Africa may even be the “continental PhD hub” as its government makes considerable investments toward increasing PhD production. The increase in doctoral enrolments and graduations over the last two decades and South Africa being a relatively inexpensive destination for PhD candidates from elsewhere in Africa, may have contributed to this status (Cloete *et al.*, 2015).

Many HICs, particularly those in the Middle East and European regions, offer their citizens free entry into higher education as part of the development strategies of the countries. Conversely, LMICs and even some HICs (for example USA) are reported to have higher education systems that are financially taxing on postgraduate students. While little evidence on the correlation or relationship between these two systems or variables has been published, one can assume that in sub-Saharan Africa, where the socio-economic status is dire, postgraduate-seeking behaviour is primarily affected by the financial burden associated with such pursuits.

South Africa, labelled one of the most rapidly developing nations in Africa, is often thought to be setting the pace for the rest of the African continent (Cloete *et al.*, 2015). With the paucity of literature on postgraduate-seeking behaviour in South Africa, one can only assume that the situation may be far worse in the rest of Africa. In comparison, LMICs such as Tunisia, Gambia and the DRC have very little published literature relating to the development of postgraduate education over the last two decades (Talib, Narayan & Harrod, 2019). Certain inferences can be drawn from the limited institutional publications that, to a certain extent, depict the transformation of sub-Saharan Africa or the postgraduate educational aspect thereof in South Africa.

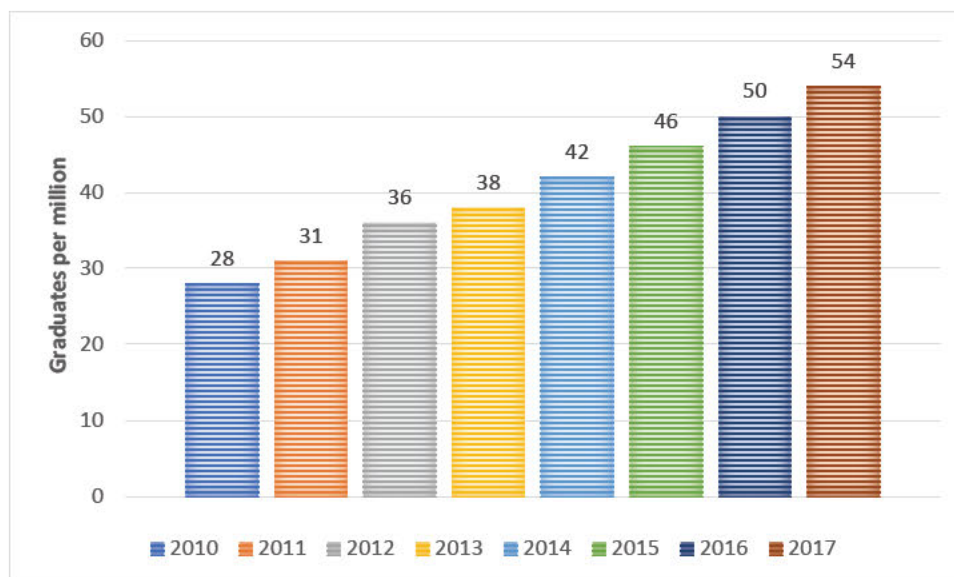


FIGURE 2.4: Number of doctoral graduates per million of population per year in South Africa, 2010–2017 (DHET [SA], 2020).

As depicted in Figure 2.4, the past few years have witnessed new interest in doctoral production in South Africa. To meet the NDP 2030 goal of 100 doctorate graduates per million population, South Africa would have to nearly double its current output to 5 000 more doctorates per annum (National Planning Commission, 2012; DHET [SA], 2020). In 2017, the number of doctoral graduates per million of the population in South Africa was 54, almost a 100% increase from the 28 graduates reported in 2010 (DHET [SA], 2020). In 2017, 46% of academics had PhDs. Given the reported trends over the last two decades, achieving the 2030 goals of the NDP of 75% of academics being doctoral graduates at universities, were reported to be highly unlikely (DHET [SA], 2020). Mouton *et al.* (2019, 2022) have a more optimistic view, and in their recent investigation of the research pursuits in South Africa, suggested that the 2030 targets of the NDP are likely to be met. In 2020, the South African DHET report on doctoral graduates indicated that, while an increase in rates may be noted, they are still significantly lower than that of our BRICS (Brazil, India, Russia and China) counterparts (DHET [SA], 2020; UNESCO, 2020). Furthermore, Mouton *et al.* (2019, 2022) reported that of the 28 686 doctoral students who graduated between 2000 and 2017 from South African universities, approximately two-thirds were South African citizens (DHET (SA), 2020). They did however go on to report that doctoral students from the rest of Africa have been growing

at a significant rate, nearly three times faster than those originating from South Africa. This in itself is rather worrisome, as while the number of South African doctoral graduates is rising, one wonders if this will translate into an improvement of the South African knowledge economy or elsewhere in the world.

To summarise, postgraduate education in South Africa may be doing well compared to other African countries, but still needs to catch up with international trends. The introduction of the 4th Industrial Revolution undoubtedly changed the direction, or instead redirected, the herd mentality of postgraduate-seeking behaviours. The progressive increase in the demand for informatic educational programmes and the introduction of various sub-specialities related to the advancement of the cyber age have become evident (Haleem, Javaid, Qadri & Suman, 2022). While the factors influencing this behaviour may be based on development and growth, as progressive thinkers, we need to ensure that sustainable development occurs symmetrically throughout the required sectors, healthcare being one such an example. While there has always been great demand or interest from the grassroots level, the accessibility and applicability to the rapidly incentivised culture of creating knowledgeable workers against the needs and circumstances of the local population should be considered.

An example is the cultivation of development among a workforce during the technological era against the backdrop of a struggling economy (Rasool & Botha, 2011; Khuluvhe, Bhorat, Oosthuizen, Asmal, Gantaupfu, Netshifhefhe, Martin, Monnakgotla & Rooney, 2022), which is concerning as the population either does not have the support structure (technology) or the foundation to keep up with international trends. With these uncertainties, what is the future of postgraduate education? With the steady supply of future ambassadors for the profession and its future leaders, one cannot stop asking these vital questions.

2.6. POSTGRADUATE EDUCATION WITHIN THE FIELD OF EMERGENCY CARE

The knowledge economy era is the central theme or task of medical education, focusing not only on teaching knowledge, but also teaching students how to obtain knowledge (Forland, Rohwer, Klatser, Boer & Mayanja-Kizza, 2013). It further emphasises the importance of cultivating students' ability to use and/or create new knowledge, creating problem-solving methods and developing a culture of scientific inquiry. The field of EMC serves as an illustrative example of this, as it has been transformed from an efficient hands-on approach to a tertiary-orientated blended approach, emphasising the synthesis of theoretical and practical implications of actions within a healthcare system (Sobuwa & Christopher, 2019).

Postgraduate education and the continuous development of high-quality research capacity within prehospital settings are considered the cornerstone of the EMC field, further building toward professional agency (Mould-Millman *et al.*, 2013). Recent higher education developments regarding the professionalisation of the EMC qualification structure include the introduction of master's and doctoral programmes as developmental pathways for practitioners (Sobuwa & Christopher, 2019). The broadly described paucity of South African prehospital or EMC-specific research echoes the importance of exploring factors associated with the professional education progression within the prehospital environment (Van Hoving *et al.*, 2015).

Over the past 15 years, a significant expansion of undergraduate medical education in sub-Saharan Africa can be noted. These developments have yet to be matched by an appropriate increase in the capacity of postgraduate medical education, with inadequacies reported among several specialities in the region (Chen *et al.*, 2012; Mengistu, Vins, Kelly, McGee, Spicer, Derbew, Bekele, Mariam, Del Rio, Blumberg & Comeau, 2017; Kilmarx, Katz, Razak, Palen, Cheever & Glass, 2019). In a recent scoping review of postgraduate medical education, South Africa was identified as having the most medical publications in sub-Saharan Africa (Talib, Narayan & Harrod, 2019). The same sentiments cannot be shared within the field of prehospital emergency care, which, while

within the realm of medical education, has yet to make up a significant proportion of the publications listed.

The South African EMS profession is presently supported by nine (9) HEIs, each entrusted with the responsibility of advancing professionalism in the prehospital milieu through the cultivation of a suitably skilled workforce (Sobuwa & Christopher, 2019). Notably, among these institutions, three (3) HEIs offer master's degree programs, and only two (2) extends its offerings to include a doctoral program (Sobuwa & Christopher, 2019). Despite the vertical articulation feature inherent in the South African academic framework, facilitating ECPS to engage in structured allied healthcare programs, it is imperative to note that EMC-specific postgraduate education programs are solely research-based. The existing structure of postgraduate programmes presents certain limitations with regard to professional registration, developmental pathways, and the enhancement of clinical competencies among the prehospital workforce. This raises concerns about the ability of active members within the prehospital milieu to contribute effectively to the knowledge economy. Crawford and Hagemeister (2021) have contended that the infancy of postgraduate education within the field of EMC contributes to the silo-based healthcare system. This situation is further complicated by the absence of professional recognition for postgraduate programs undertaken within the prehospital milieu. Consequently, there exists a pressing need to address these challenges to ensure the comprehensive development of the EMS profession and mitigate the perpetuation of fragmentation of the healthcare system.

Prehospital emergency medical care is a rapidly developing profession, similar to that of the field of emergency medicine. The global emergency medicine and prehospital emergency medical care communities, particularly those in HICs, are seeing more trainees and clinicians pursuing different experiences in global health and emergency care (Martin, Jacquet, Levine, Douglass, Pousson, Dunlop, Khanna, Bentley & Tupesis, 2013). Despite its growing popularity, little is known worldwide about the effects that postgraduate education and training in global health and emergency care have on learners and, subsequently, on their patients (Altbach *et al.*, 2009; Mould-Millman *et al.*,

2013). This is evident by the commonly adopted practice of many HICs and LMICs in developing research agendas of pressing questions and areas that require further understanding (Martin *et al.*, 2013; Van Hoving *et al.*, 2015).

One of the key challenges with postgraduate education is demonstrating the efficacy of the educational effort and the meaningful impact on the intended and unintended targets. The prehospital emergency care postgraduate education field is no exception, as training is wide-ranging and often extremely difficult to measure. Martin *et al.* (2013) argue that in the realm of global emergency medicine, the impact and contributions of emergency medicine fellows, particularly from the HIC setting who operate in the global context, has yet to be determined. While they remain a different cohort of health care practitioners within the health care system, South African-trained ECPs face a similar fate, as they go on to receive intensive training to perform at a high acuity level, and then migrate abroad (Govender *et al.*, 2012; Tankwanchi *et al.*, 2013).

The most apparent and essential prehospital postgraduate education efficacy marker is the impact or effect on patient outcomes (Thind, Hsia, Mabweijano, Hicks, Zakariah & Mock, 2015; Kruk, Gage, Arsenault, Jordan, Lesli, Roder-DeWan, Adeyi, Barker, Daelmans, Doubova, English, Elorrio, Guanais, Gureje, Hirschhorn, Jiang, Kelley, Lemango, Liljestrand, Malata, Marchant, Matsoso, Meara, Mohanan, Ndiaye, Norheim, Reddy, Rowe, Salmon, Thapa, Twum-Danso & Pate, 2018; Jones & Lightowler, 2022). While many HICs have demonstrated the effectiveness of education interventions on resuscitation efforts, the paucity of emergency care-specific research and reporting systems in LMICs fail to provide the same benefit. Systems development, education, and research infrastructure are more subtle markers that can be used to measure efficacy within the South African emergency care field. It must be acknowledged here that these efforts may not be an accurate reflection, as many highly skilled South African emergency care workers are applying their trade abroad, thus improving their (abroad) measurable markers. These graduates do not remain in the South African system to plough back into the system and report on system omissions or challenges experienced during their

postgraduate education pursuits. This, in itself, may be a mechanism that limits the growth and development of the profession.

2.7 CHALLENGES WITH THE PURSUIT OF POSTGRADUATE EDUCATION

Despite the advances in postgraduate education over the last two decades, poor throughput or low graduation rates still need to be addressed among South African HEIs (Council for Higher Education, 2010, 2018). According to the National Plan for Higher Education (NPHE), the 2002 South African graduation rate was 15% – one of the lowest in the world (Minister of Education, 2001; Department of Education, 2002). In 2008, it was reported that one in every three learners dropped out of university (Letseka & Maile, 2008). In 2015, the Department of Higher Education reported that 47.9% of university learners still needed to complete their degrees after their expected completion dates. The dropout rates in South Africa have not improved much in subsequent years, which is of particular concern, given the shortage of skilled employees in South Africa (Rasool & Botha, 2011; Khuluvhe *et al.*, 2022). Research has found considerable similarities in why undergraduate and postgraduate dropout rates are deemed constrainers. These authors cite financial constraints, lack of support, lack of motivation, and academic challenges to be among the most prevalent challenges associated with the pursuit and perseverance of postgraduate education (Dominguez-Whitehead, 2017; Havenga & Sengane, 2018; Alabi, Seedat-Khan & Abdullahi, 2019; Mmadi & Sithole, 2019; USAF, 2022).

Learners eschew undergraduate and postgraduate education for a multitude of reasons. De Villiers (2019) and others found that South African postgraduate learners were more prone to do so due to financial constraints, considerable academic demands, time management, and challenges associated with their social settings (Mouton, Boshoff & James, 2016). Koen (2007) and Fike (2008) argue that while studies on why students pursue and eschew postgraduate education are critical, operationalising their recommendations and proposed intervention strategies should be prioritised as such. This is to say that the research investigating these reasons has concluded similar reasons as to why learners drop out or avoid such activities altogether. Earlier research by Tinto (1975) suggested three main factors influencing these decisions among students. They are:

1. Characteristics of the individual (self-actualisation, personality, family background, and previous experiences);
2. Characteristics of the academic institutions (size, quality, support offered, accessibility); and
3. Students' interface (social interaction, shared beliefs, and values).

Several authors have reported similar results nearly three decades later and echoed these conclusions (Yasmin, 2018; Mmadi & Sithole, 2019; Li, Deng, Yang & Chen, 2020; Mbombi & Mothiba, 2020). The constant emergence of similar answers may suggest that current preventative measures are ineffective in minimising student dropout or encouraging the pursuit of postgraduate education.

Thomas (2002) suggested that academic experiences, preparedness, employability, and family support were equally important for those pursuing postgraduate and undergraduate education. McGivney (2004) also reported similar findings, but further emphasised the need for effective tutors providing academic support to those pursuing postgraduate education. In addition to what has been reported on, and more than a decade later, Mouton, Boshoff & James (2016) asserted that South African postgraduate learners were most likely to terminate their pursuits prematurely due to poor academic supervision, challenges in their personal lives, and financial challenges. At the same time, there is evidence that graduates fail to meet employer expectations. South Africa faces the anomaly of graduate unemployment because the graduates lack the high skills needed for the country (Oluwajodu, Blaauw, Greyling & Kleynhans, 2015; Brits, 2018). Part of addressing this issue is understanding the deeply seeded challenges and motivators that these potential graduates face.

2.7.1 SUPERVISION

Despite the several definitions affiliated with supervision, Gohar and Qouta (2021) suggest that academic supervision generally means the guidance of students during their master's and doctoral degrees by faculty members that the department commissions. Gohar and Qouta (2021) further assert that postgraduate education is one of the most significant university programmes that predominantly focuses on exploring and

developing different capacities of society. Akyürek and Afacan (2018) argue that postgraduate education is the key to aiding science and technology in driving social development – the need for this within the challenging landscape of South Africa cannot be argued. Cekiso and others conclude that good supervision is central to successful postgraduate research (Sonn, 2016; Van Biljon & De Villiers, 2016; Cekiso, Tshotsho, Masha & Saziwa, 2019). Despite this, supervision has been reported to be a critical challenge in postgraduate education worldwide.

Postgraduate research supervision aims to support postgraduate learners during their learning journey to develop research skills and become contributing members of the academic community. This process should ideally occur in a collaborative learning environment (Gohar & Qouta, 2021). However, early research in this area paints a different picture. Robison and others refer to postgraduate education as a lonely journey (Wisker, Robinson & Shacham, 2007; Fergie *et al.*, 2011). Green (2005) discusses the notion of “unfinished business”, and Grant (2005) describes the supervision process as an uncertain practice. The relationship between postgraduate learners and their respective supervisors was further described as complex and to favour only a few who have strong interpersonal skills (Sambrook, Stewart & Roberts, 2008). Adkins (2009) reported on the mismatch in expectations between postgraduate supervisors and students regarding their respective responsibilities. From the student’s perspective, Adkins (2009) further identified concerns with the quality of supervision, completion rates and students’ satisfaction with the process.

Nearly a decade later, Muraraneza, Mtshali and Bvumbwe (2020) argued that postgraduate education is still plagued by insufficiently prepared supervisors that predominately use face-to-face methods and provide inconsistent and poor feedback to learners. In South Africa, Maistry (2017) suggests that obtaining competency and capacity in supervising research remains a struggle because novice supervisors are caught between conducting and teaching research simultaneously. He further suggests that postgraduate education needs more guidelines that help novice supervisors and students navigate this process. Vereijken, Van der Rijst, Van Driel and Dekker (2018) suggest that supervisors often rely on their own experiences. This may often lead to

supervisors implementing the unfair practices they were subjected to by their supervisors and subsequently imposing these on their postgraduate learners. Despite the importance of postgraduate education supervision, the ongoing challenges create discomfort in the relationship between supervisor and student – what Johansen, Olsen, Overby, Garred and Enoksen (2019) report as a power imbalance during supervision activities. In addition, these tend to affect research supervision negatively or contribute to dropout practices among postgraduate education learners (Vereijken *et al.*, 2018).

The number of postgraduate learners who require academic supervision is growing worldwide and in the South African HEIs (Mhlahlo, 2020). In South Africa, the postgraduate numbers have increased rapidly due to various reasons such as government subsidies and massification (Bozalek, Ng'ambi & Gachago, 2013; Singh, 2016). With postgraduate research programmes rising in the country, HEIs have been forced to increase their staffing levels of people with doctoral degrees (Bastalich, 2017; Ndlangamandla, 2017; Vereijken *et al.*, 2018). Despite the increase, Tlali *et al.* (2022) argue that HEIs are plagued with low numbers of qualified supervisors for the large cohort of postgraduate learners. Muraraneza *et al.* (2020) reported similar concerns within the South African nursing sector. They say that the paucity of clear guidelines for supervision, the limited pool of appropriate research supervisors and the large-scale recruitment of postgraduate learners leads to a mismatch between capacitating the profession and results in limited support in meeting the individual needs of these learners. The EMS profession likely faces these challenges, particularly as only three (3) HEIs in South Africa offer EMC-specific postgraduate education programmes. Limited capacity and quality of supervision are further concerns within the field of emergency care as anecdotally, there are only eight (8) doctoral graduates born from the EMS profession.

Singh (2016) further asserts that the need for increased postgraduate throughput in South Africa has forced HEIs to focus on research capacity building in supervision, publications and staff qualifications. However, merely improving the number of people who can fulfil the supervision role does not necessarily mean that the postgraduate learner will receive good-quality supervision. It is not only the students who are plagued with challenges; supervisors are also on the receiving end. Backhouse (2009) reported that the increasing

academic demands, resource constraints and the preparedness for supervision are among the challenges that postgraduate supervisors face. Similarly, Pather (2023) and Mhlahlo (2020) reported that heavy academic workloads and lack of experience are ongoing challenges among supervisors. In addition to what has been reported in earlier research, the lack of financial incentives, heavy teaching loads and administrative loads among supervisors hinder the process of providing good quality supervision during the research process (Müller, Fünfingerlings & Tolks, 2018; Veer Ramjeawon & Rowley, 2020).

Postgraduate supervision is a concern worldwide. Capacity, preparedness, and heavy academic workloads are challenges that have yet to be dealt with effectively over the last two decades. Without any emergency care-related research on supervision, it is safe to assume that with the low number of doctoral qualification holders within the field and the limited related HEIs, the EMS profession shoulders many of the challenges related to supervision reported in the literature.

2.7.2 FINANCIAL CONSTRAINTS

Financial support is a critical component required for completing postgraduate education (Nevill & Chen, 2007; Mouton, Cloete & Sheppard, 2015; Botha, 2018; Mbombi & Mothiba, 2020). Nevil and Chen (2007), over a ten year longitudinal study, established that many postgraduate students in the USA need help to balance the financial demands of these programmes and work, family and educational responsibilities. On a more local scale, Mmadi and Sithole (2019) and Mbombi and Mothiba (2020) identified the need for more funding to influence the pursuit of postgraduate education among South African healthcare workers.

Styger and others assert that student retention and throughput is a critical challenge on an international scale, with student drop-out being the centre of this discussion (Styger, Van Vuuren & Heymans, 2014; McCoy & Byrne, 2017; Nurmalitasari, Awang Long & Faizuddin Mohd Noor, 2023). The financial implications of this phenomenon are that HICs such as the United States of America report a 6.2-billion-dollar state appropriation for HEIs. Several authors have reported that the worrisome financial landscape and its associated challenges predominantly manifest among learners with poor socio-economic backgrounds (Tinto, 2010; Mouton *et al.*, 2015; Botha, 2018). Thomas (2015) further

reported that the success rates of those who pursue postgraduate education and navigate a poor socio-economic landscape had dropped even further. Similar reasons for discontinuing postgraduate education have been reported in countries such as the UK, Germany and Australia (Botha, 2018).

According to Sondlo (2016), the situation in Africa is even worse as the socio-economic challenges are confounded with several others, with the political landscape being an example. Furthermore, he suggests that most of Africa is lagging in development and higher education and, as a result, cannot keep pace with its counterparts in developed nations (Sondlo, 2016). Pursuing postgraduate education and the urgent need for financial support during these endeavours is largely influenced by the underdevelopment and poverty that besiege most of the African continent (Wenham *et al.*, 2021). Financial constraints and socio-economic status challenge the pursuit of postgraduate education.

2.7.3 FINANCIAL REMUNERATION

Financial remuneration can reinforce positive behaviour, which may invariably aid in achieving high institutional performance (Mathis & Jackson, 2016). Baum and Payea (2013) present several benefits of pursuing postgraduate education. The most prominent is the increased probability of securing employment and attractive remuneration. Several authors (Baum, Ma & Payea, 2013; Mathis & Jackson, 2016; Kisoonduth, Webb & Kahn, 2019) suggest that the pursuit of postgraduate education with the prospect of improved financial remuneration provides agents with the opportunity to experience economic well-being and a more attractive socio-economic status within society than without such education. Conversely, the lack thereof may be considered a challenge to improving the postgraduate-seeking behaviour of learners. Crowley and Daniels (2023) report on the low remuneration status of postgraduate qualification holders, which may be described as hygiene factors in the motivation to pursue postgraduate education.

The Department of Health (DoH) in South Africa implemented the Occupation-Specific Dispensation (OSD) strategy to curb the exodus of skilled medical practitioners and attract them to the public healthcare sector. This retention-based policy was introduced in 2007 and consisted of a unique structured pay progression aligned to the work experience of professionals (George & Rhodes, 2012). In turn, the framework centrally

determined grades associated with specific job profiles, which aimed to improve service delivery by establishing new salary dispensation and recognised career paths within specific health professions, including EMS (George & Rhodes, 2012). After the implementation of the OSD, no assessment of its appropriateness or impact on further professional development has been conducted within the prehospital milieu.

Among allied healthcare sectors, such as South African radiographers, Thambura (2016) reported that most participants were unsatisfied with the OSD implementation. The omission of the OSD framework to recognise additional training was a significant concern among radiographers. Naicker (2011) and Naidoo (2015) reported similar findings among pharmacists, as the majority (more than 75%) of their study participants also reported being unsatisfied with the OSD implementation strategy. Thambura (2016) further suggested that these remuneration concerns may be due to the disproportionate nature between industry–academia and the registering authority to cater for registration-specific specialities aligned to further training (postgraduate studies serve as an example). Those who study medicine and pursue postgraduate education are considered specialists in health medicine and can subsequently register with the HPCSA as a specialist and be remunerated as such (Zweigenthal, Pick & London, 2019). Thambura (2016) concluded that the most significant proportion of those satisfied with the OSD framework were newly qualified radiographers who entered the employment setting with remuneration packages that acknowledged their undergraduate qualifications appropriately. While the implementation aimed to bolster the public sector workforce by retaining and attracting healthcare professionals, the implementation was suggested to be of no benefit to radiographers at all levels (postgraduates included).

Ditlopo, Blaauw, Rispel, Thomas and Bidwell (2013) applied the Hogwood and Gunn analytical framework to appraise the application of the OSD within the nursing sector of South Africa. Their analysis suggested that the OSD was not an evidence-based initiative and needed more human and financial resources before implementation. Several authors (George & Rhodes, 2012; Ditlopo *et al.*, 2013; Crowley & Daniels, 2023) reported that the OSD initiative had lowered the risk of healthcare professionals migrating. Ditlopo *et al.* (2013) further recommended improved management systems and planning to mitigate

the lack of foresight this framework had beyond merely retaining healthcare professionals, with practitioners pursuing postgraduate education being an example of such. Crowley and Daniels (2023) reported on challenges experienced by nurses who pursue postgraduate education. They went on to recommend that due to the relatively low remuneration status occupied by these professionals related to OSD, the DoH should explore the possibility of dual appointments to ensure that these professionals not only add value to both the operational and academic spheres of their profession but are remunerated appropriately because of it (Crowley & Daniels, 2023).

2.8 MOTIVATORS FOR THE PURSUIT OF POSTGRADUATE EDUCATION

Ryan and Deci (2000) assert that to be motivated means to be “moved to do something”. They further suggest that to understand the true nature of motivation, one should acknowledge the degree and/or level of motivation and its orientation (Ryan & Deci, 2000). The latter accounts for the underlying attitude and goals that give rise to the action. Research on these motivations, which are complex phenomena, commonly categorises them as being intrinsic or extrinsic in nature (Clercq *et al.*, 2021). Intrinsic motivation is being moved to do something, because it is inherently interesting or enjoyable. Extrinsic motivation refers to being moved to do something because it leads to a separable outcome (Ryan & Deci, 2000; Mathews, 2022).

Several researchers have reported on factors that motivate learners to pursue and stay in higher education (Thomas, 2002; McGivney, 2004; Demetriou & Schmitz-Sciborski, 2011; Viljoen & Deacon, 2013; Khalifa, Nasser & Ikhlef, 2016; Incikabi, Pektas, Ozgelen & Altan Kurnaz, 2017; Mathews, 2022). For example, Khalifa *et al.* (2016) reported that social motivation, academic supervision, parental support, faculty support, peer support, the academic programme being fit for purpose, and academic preparation were among the motivators to retain students within higher education. Other authors (Thomas, 2002; McGivney, 2004; Viljoen & Deacon, 2013; Gaunt, Markham & Pawlikowska, 2018) have suggested that academic experience, institutional expectations and commitment, social fit, employability, family support and commitment, university support services, engagement, and financial support motivated learners' access and retention into higher

education programmes. Internationally, motivation broadly speaks to support derived from an interconnected nature of 'people', rather than that of 'parts'.

On a local scale, Hansraj and Rampersad (2022) reported that interest in an academic career, research, and social influence were motivators for pursuing postgraduate education among South African medical professionals. Ronnie and Wakeling (2015) concluded that business skills acquisition and enhancement, career progression, personal development, networking potential, and the prospect of academic stimulation were among the most prevalent motivators for non-medical personnel pursuing postgraduate education. Dlungwane (2020) suggested that career advancement, the status of postgraduate education qualification and being a first-generation postgraduate student provide the internal and external motivation that affects postgraduate learners' persistence. Amani, Myeya and Mhewa (2022) reported similar trends, with employment prospects, better salary, career progression or change, personal development, and prestige or self-actualisation noted among the most prevalent motivators for postgraduate education.

Bandura and others (1989; Zimmerman, 2000; Eccles & Wigfield, 2002) view motivation as a one-dimensional notion with a linear interface. In contrast, Clercq *et al.* (2021) argue that motivation should be considered two-dimensional – comprising intrinsic and extrinsic features. This is to say that the orientation, rather than the level of self-actualisation, needs to grow and progress as opposed to being static in life (extrinsic), and the motivation to seek ideals in life (intrinsic) provide a better understanding of its features (Del Castillo, 2021). Self-actualisation is the pinnacle of Maslow's hierarchy of needs, which was developed to address fundamental and esoteric needs of human existence. For Maslow, self-actualisation describes the desire that leads to the realisation of one's full potential. Self-actualisation is suggested to be best conceptualised as the sum of its parts rather than a trait seen in isolation (Henwood, Derejko, Couture & Padgett, 2015). Its resultant theory deals more with one's openness to growth and health than achieving ideals such as perfection, success, and/or happiness. Because self-actualisation involves

a sense of purpose and self-awareness, in addition to that of one's basic needs being met, it can be a challenging goal to reach.

Human behaviour is a medium primarily influenced by the social and interpersonal environment, suggesting that agents' (ECPs) actions may be informed by the power awarded to the roles of social agents (Trigueros, Aguilar-Parra, Cangas, Fernandez-Bantanero & Alvarez, 2019). On a simple level, parents, friends and teachers (social agents) may influence extrinsic motivation. However, Thoman *et al.* (2019) argue that social influences can shape intrinsic and extrinsic motivation. It may result in motivation systemically contributing to learners' persistence and how they self-regulate goal-defined and experience-defined motivation. Albaram and Lim (2023) assert that the motivation derived from social influence relates to satisfying psychological needs based on the belonging theory. They go on to suggest that the power associated with social interaction and its associated motivation is a by-product of knowledge-sharing behaviour (Albaram & Lim, 2023), which is a common trait among those within the high-knowledge-intensive field of health care (Wu, Wang & Hsiao, 2021).

Motivating factors identified among those pursuing postgraduate education in South Africa presented what can be seen as the equal distribution between those emerging as a result of both 'people' and 'parts'. Interestingly, compared to that reported internationally, the 'parts' appear to be more frequently presented. A blend between the two is often noted when further stratified by those emerging due to structural and cultural conditions. In South Africa, we start to note more motivation being reported because of structural conditions – career progression and salaries, for example – than those from cultural conditions – self-actualisation, prestige, personal development, and social influence. Therefore, this study is grounded in understanding how these conditions affect the motivation of ECPs to pursue postgraduate education.

As previously mentioned, a postgraduate learner has completed an undergraduate degree and is studying further to obtain an advanced degree in a specific field (Cambridge Dictionary, 2023). Pursuing postgraduate education promises learners certain benefits,

such as a higher income, in-depth knowledge of a particular study area, professional advancement and career prospects, and increased credibility and employability (Skakni, 2018; Dlungwane, 2020). Introducing these individuals into society results in a skilled workforce, which allows the country to gain a competitive advantage and compete internationally. However, only some South Africans experience these benefits, as South African universities have relatively few postgraduates annually. This results in an inadequately skilled workforce (CHE Annual Report, 2015; Council for Higher Education, 2018). South Africa needs more individuals with postgraduate qualifications in emergency medical care. To overcome this problem, we need to understand why they pursue or eschew such activities. Thus, this study aims to move beyond describing the observable phenomena of postgraduate seeking behaviours of ECPs and to explain the level of that which is unobservable and formulates a deeper understanding from which the phenomena emerge.

2.9 CONCLUSION

This chapter introduced the notion of postgraduate education and its role in the knowledge economy. It then presented the strides taken on the African continent, particularly in South Africa, to improve participation in postgraduate education. However, despite these advances, participation and student success within South Africa still need to improve. This chapter further discussed postgraduate education in emergency medical care, which remains a concern owing to the paucity of emergency care-related research and throughput. The chapter concluded with the challenges and motivators for postgraduate education and how this study aims to fill the knowledge gap.

CHAPTER THREE: THEORETICAL FRAMEWORK

3.1 INTRODUCTION

The focus of this chapter is critical and social realism, the two theories I attempt to operationalise in pursuit of understanding the emergence of the phenomena of interest. This chapter provides a brief description of critical realism: the theory of the nature of the world, which underpins this study. Later in the chapter I go on to explore social realism: the theory of the nature of society. Throughout this chapter I attempt to distinguish clearly how each of these theories informs the ontological and epistemological stance that I took during this study. While the metaphysical nature of the study and its associated theories often necessitate complex debates, I have attempted to keep the discussion simple by providing examples that are easy to follow.

3.2. CRITICAL REALISM

Roy Bhaskar (1975, 2008) developed the philosophical approach that distinguishes the relationship between the “real” world and the “observable” world, otherwise known as critical realism, which has subsequently become the mainstay ontology used to explain objects of study in both the natural and social sciences (Gorski, 2013). The ontological position of critical realists is that the “real” world exists regardless of our human knowledge or experiences (Muthama, 2018).

Danermark *et al.* (2005) suggested that this ontology is termed ‘critical’ as it:

- i) provides a detailed analysis of what can be seen at the empirical level;
- ii) is critical of amalgamating mechanisms which emerge at the structural level and the associated agential experiences in the form of constraints and enablements; and is a
- iii) is a critical reflection on everyday practices to reveal underlying ways of being.

The realism component comes from the consensus that reality is differentiated, structured, ever changing, and that our knowledge of reality is fallible (Danermark *et al.*, 2005).

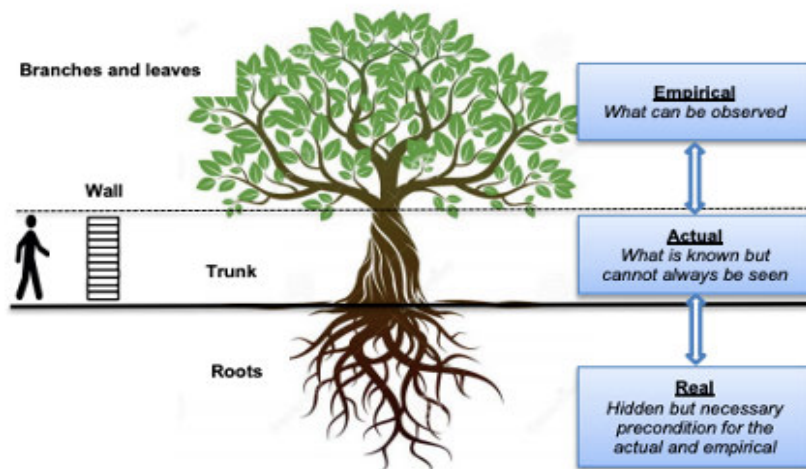


FIGURE 3.1: The tree diagram of the three ontological domains (Bhaskar, 1975; Walsh Evans, 2014)

As depicted in Figure 3.1, Bhaskar (2008) suggested that our reality is made up of three very distinct levels: the empirical (observed by our senses), the actual (events that are effects of social interaction), and the real (what emerges as a result of causal and generative mechanisms). Case (2015), who echoes this sentiment, described these layers as being made up of subjective experiences (empirical), objective observations (actual) and the mechanisms that underpin actual observations and the empirical experiences (real). The underlining generative mechanisms, which are the focus of this study, are the building blocks of scientific thought and may or may not be discernible to our beliefs, experiences or even the phenomena they generate (Muthama, 2018). In other words, they are characteristic properties in the phenomena of study that act as causal forces that bring about events or experiences at the actual and empirical level.

The objective in research, based on the epistemology of a critical realist, is to move beyond the observed and experienced phenomena and get to the level of that which is unobservable. In other words, critical realists aim to move from the level of empirical and actual (see Figure 3.1) during studies and get to the point of that which is believed to be

at the level of real and from which the phenomenon of interest emerges. In an attempt to operationalise this process, and unlike the empiricist ontological position which deems that our understanding of the real world is reduced to our own experiences, critical realists advocate for the separation of what can be observed or our beliefs and experiences from the reality from which they emerge (Danermark *et al.*, 2005). This allows for the identification of the real mechanism(s) that promote or demote what emerges as events and experiences within the phenomena being studied.

Bhaskar (2008) differentiates between two features of knowledge. The first feature being transitive, which is interpretable and something humans learn and come to know and understand (Bhaskar, 2008). In the case of this study, or rather the context of its participants, the emergency care education system can be used to illustrate the transitive (ever-changing knowledge of things) feature of knowledge (Gorski, 2013). The prehospital emergency medical care education system has experienced significant changes over the last two decades, and as we (those within the field of emergency medical care) gain more knowledge and insight, further development or change is likely to occur.

In 2005 and as depicted in Table 1.1, entry into the emergency care profession was possible after completing a four- to five-week short course programme to become a basic life support (BLS) practitioner (Sobuwa & Christopher, 2019). The teacher-centred, algorithmic approach used to ensure that the skill-centred goals were achieved among these learners, were deemed appropriate for that period (Schreurs & Dumbraveanu, 2014; Xu, 2020). Since then, various agents (i.e ECPs) within the field of emergency medical care have not only developed themselves through education, but their contributions and respective roles within the health care sector and subsequent power thereof has also demanded for the professionalisation within the field of emergency medical care worldwide (Xu, 2020), particularly in ensuring that the calibre of professionals and learners can take the profession forward in a manner befitting the fourth industrial revolution and empower the phenomenon of lifelong learning.

Nearly two decades later, the South African prehospital emergency care education framework has changed vastly, with an entry qualification now being a year-long higher certificate, accessible only to those who have completed high school and have sufficient foundational knowledge to become lifelong learners (Sobuwa & Christopher, 2019). This example demonstrates the transitive feature of knowledge, specifically regarding what was known or thought to be understood about education in the prehospital setting and how it evolved over the years. This example further demonstrates that knowledge is a social product of science produced through human agency and is thus fallible.

Bhaskar asserts that the second feature of knowledge is intransitive in nature (Bhaskar, 2008). In contrast to the ever-changing knowledge of things associated with the transitive domain of knowledge, the intransitive domain is not a by-product of social activity. The intransitive domain rather exists independently of human agency, regardless of our actions or perceptions (Richards, 2018). This is to say that the intransitive domain encompasses knowledge that is outside the human mind, will and action, which can also be expressed as the outside social world existing independently of agents (Banifatemeh *et al.*, 2018). Bhaskar (2008) further suggests that objects in this domain are real structures (for example, gravity) and mechanisms that generate phenomena, but function independently of our knowledge and/or experience. Therefore, intransitive objects of knowledge are unchanging, and even though they occur independently of our actions as humans, it does not mean that they are unknowable to us (Richards, 2018).

The clear distinction between these two domains (intransitive and transitive) targets the belief that to speak about the “the real world” is meaningless or naïve, and that more value can be sought when engaging how we understand or arrange the real world (Bhaskar, 2008). However, when these two domains or the subsidiaries thereof (what we know and what exists regardless of this) are conflated, Bhaskar refers to it as epistemic fallacy. In the case of this study, we may realise that there are real concerns affecting ECPs in the South African prehospital emergency care setting that contribute to the brain drain (migration) seen over the last few years (Govender *et al.*, 2012). The epistemic fallacy would assume that major concerns do not exist, without seeing the large number of ECPs leaving to practice their profession on foreign soil. In other words, the existence

of concerns (ontology) has been conflated with the knowledge (epistemology) of ECPs leaving South Africa.

Epistemic relativism is another epistemological lens that critical realists adopt and can be used to provide greater insight into the phenomenon under investigation. Bhaskar (2008) suggests that our beliefs are underpinned by our historical and social context – epistemic relativism. Kusch (2017) suggests that epistemic relativism adds to the debate of objectivity in science, as our claims of what we know are relative to a specific context: the social, economic and/or cultural setting that we experience. Epistemic relativism therefore implies that we all see and experience the world differently, according to our individual contexts and experiences (social, economic and cultural). In the case of this study, the beliefs of ECPs regarding postgraduate education could change based on the social, economic and/or cultural conditions they experience.

Further than identifying, critical realism is not geared towards understanding how these generative mechanisms or causal factors interact to produce events and experiences in our social world, nor does it clearly describe the methods I required to analyse aspects of the social world. It is for this reason that I explored Archer's social realist theory, with the aim of operationalising both theories in the pursuit of understanding the phenomena in the given context.

3.3 SOCIAL REALISM

Margaret Archer (1995), a social theorist, described the social world as having two domains, that of 'people' (agency) and 'parts' (structure and culture); and so provided a practical social theory that accounts for patterns of social phenomena by taking subjects' context and history seriously. The culmination of these three spheres is proposed to be the foundation of one's internal conversation (Figure 3.2), which in turn evokes the action taken. Archer (1995), describes the external world (parts), or rather the components thereof, as structure, which represents material or tangible goods, systems or directives in place (which are distributed unequally across society and social positions), while ideas and beliefs represent culture. Agency, on the other hand, relates to human action and interaction. She was fundamentally concerned with the question of 'How does structure

influence agency?', and if there are causal mechanisms between the two (Archer, 1995). In other words, Archer established herself during her pursuit of understanding social phenomena and their associated underlying mechanisms, which is a question in which this study is grounded. She further went on to argue that social practices such as research production, or in the case of this study postgraduate education seeking behaviour, is significantly influenced by pre-existing structures, cultures and agency at the level of the real (Archer, 1995; Karlsson, 2020).

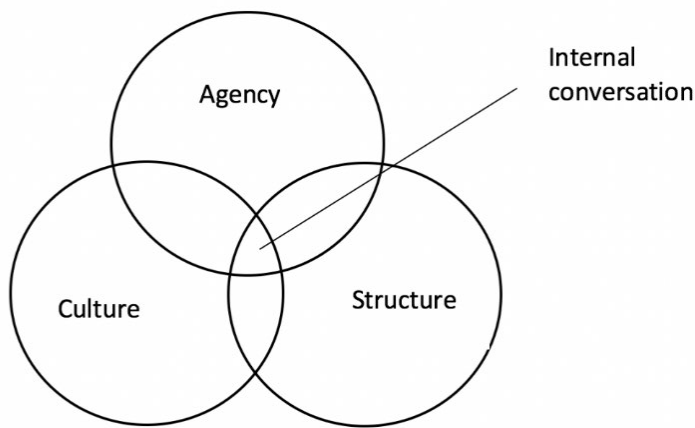


FIGURE 3.2: Social Realism: the interplay between structure, culture and agency.

Archer (1995) proposes that the emergent properties of structure and culture culminate to condition, but do not determine the actions of agents. Danermark *et al* (2002) echo these sentiments and further suggest that through the emergent properties of reflexivity, agents are enabled to either reproduce or alter the conditioning experienced as a result of structures and cultures. Social realists define reflexivity as the internal conversation: the inward talk that agents have to clarify and reaffirm beliefs, ideas, attitudes and goals (Archer, 2003; Behari-Leak, 2015). As depicted in Figure 3.2, Archer (2003, 2007) argues that when agents are challenged with structural and cultural constraints, the process of reflexivity (internal conversation) aids in the decision making of how to respond or react to the conditions that are not of their own making.

3.3.1 STRUCTURE

For a social realist, the term 'structure' refers to aspects such as material and/or tangible resources, recurring patterns of social behaviour or the interaction between different aspects of society. Through a general lens, this may even refer to: social institutions (public and private EMS), the various provincial EMS systems in South Africa and/or even a degree of social stratification (gender, class, and race are examples). However, through an analytical lens, structure refers to networks formed between healthcare practitioners or institutions owing to the presence of certain elements (policies, curricula, or committees).

Archer's definition of structure, or rather the understanding she associated with it, vastly differs from the notions shared by Giddens (1984), another social theorist who has added value to the field of social science. Giddens suggests that structure can be virtual and is largely based on the perception of those who interact with it. While the notion is widely debated, I agree with Archer, as accepting Giddens's notion would mean that structures (as we see them) would only be real when acted upon by people or culture. Archer (2003) argues that these structures are independent of the people they currently affect, as they pre-exist and are independent of the people who currently operate within them. Similar inferences can be drawn to the dynamic within the South African prehospital setting, as structures, which predate most of the currently practising ECPs, influence their agential conditions. Many of these ECPs entered into a pre-structured context and confront social

structures which are ‘not of their own making’, but products of the doings of previous agents. ECPs are not responsible for the present social structures, although the structures are dependent on their actions to either reproduce or change, with the current study grounded in an attempt to enable the latter.

Structural conditions motivate ECPs to either pursue or eschew postgraduate education. The rationale for this lies in the fact that structures have causal properties and powers which are relatively enduring. An example of this would be that if I took up the position of a postgraduate lecturer at an EMS institution, or with EMS organisations that all existed prior to my appointment. While I might bring my own agency in the form of certain ambitions, ideas and/or expectations, I would be enabled or constrained to achieve them by the structures (institutional policies and processes) that pre-date my appointment. The influential nature of structural conditions occurs alongside those of other agents, such as colleagues with whom I now share a professional setting, and that of cultural conditions.

3.3.2 CULTURE

For a social realist, the term ‘culture’ refers to beliefs, ideas, values, perceptions and/or intentions (Archer, 1996). These are basically all the things that the human mind can comprehend, which cannot be physically seen without further enquiry. Behari-Leak (2015) further argues that culture is also made up of forms of societal opinions that are not easy to change.

While I agree and appreciate the simplistic nature of the definition allocated to culture by Archer (1999) and Behari-leak (2015), I find myself gravitating towards the concept of culture being a manifestation of discourses, a sentiment described by Archer in her earlier work on the matter (Archer, 1995). It is these manifestations that have real effects in the world, in society, and among the groups of people that are conditioned by them. In this context, a critical realist would therefore deem it to function as a mechanism, as it has the power to enable or constrain the actions of people (agents). Fairclough (2000, 2005) similarly argues that discourse has causal powers in relation to how society thinks, acts and even talks, which ultimately contributes to the emergence of action in the world, and subsequently the experiences, of these actions.

Similar to structure, culture has the properties of pre-existence and endurance, which implies that agents enter into, or come to realise, that they are in a culturally conditioned environment (Archer, 1995). Archer (2003) further postulates that culture has its own vigour within society and exists independently of agents who enter into a particular setting or context. This occurs regardless of agents being aware that the cultural systems are present or whether the cultural systems are activated through agents' actions. Cultural systems that agents enter into have powers of motivating agents to pursue or avoid certain actions. This process is mediated through agential presence (Archer, 2003).

The disentanglement of structure and culture enables one to understand that culture is equally real to that of structure, even though it cannot be seen in plain sight. This further has important methodological implications in this study, as it enables me not to favour one over the other, based on ease of identification within society. Archer (1996) argues that since structure and culture are parallel to each other, operationalising the "same conceptual, theoretical and analytical framework" enables researchers to not only explore the interplay between them, but also to compare and contrast the effect on social life. While I aim to analyse both structure and culture within the same analytical framework, the identification process differs vastly. The ideas, beliefs, and values (culture) are not visible through direct observation and description (unlike structure), because these can only be detected through verbal statements about the agents' beliefs, intentions and motivations.

Archer refers to 'parts', as pre-existing structural and cultural conditions that influence the choices available to people. While they might influence or serve as enablers and constraints, they do not determine the choices made by agents. This is a protected sphere for the notion of agency.

3.3.3 AGENCY

Archer (1995) refers to 'agency' as the ability of agents (people sharing similar life chances through having common relations to structural conditions) to take action based on their own vested interests and concerns. Agents, regardless of whether they belong to a certain cohort or operate as individuals in a society, are able to make choices, as

they possess properties like reflexiveness and intentionality. These properties are noticeably different from those of structure and culture, which also enables the agency to hold power to maintain or modify structures and culture within a given context (Archer, 1995). While the choices ECPs make are enabled or constrained by the structural and cultural conditions they are conditioned to, the role they occupy, or their position, also has some degree of influence. Archer (1995) describes the roles as either primary agents, social actors or corporate agents.

Muthama (2018) argues that primary agents are people who lack the ability to act on their own agendas, due to their disempowered position within society. Archer (2017) suggests that these agents have limited influence due to the structural and cultural conditions they experience. This position could be a role they occupy out of necessity (involuntary) within institutions, and they therefore lack the resources or ability to change that position. Primary agents are uncoordinated in their actions and often unstated in their aims. However, they can transform themselves into corporate agents to fulfil a particular purpose (Karlsson, 2020). Corporate agents are groups of people who have attained qualities and powers as members of a particular group. Archer (2017) argues that, unlike primary agents, these agents are cognisant of what they want, and their actions are often strategically involved in forming and reforming structural conditions. Karlsson (2020) further suggests that these agents have articulated to the aims of others which are align with what they strive for, by focusing their efforts and activities in a coordinated manner to reach these goals. South African higher education abounds with examples of students as corporate agents. For example, university students can be considered as primary agents. However, during the “#FeesMustFall” campaign, their collective power and qualities were directed at bringing about a change and shifted them into corporate agents. Social actors are people who embrace a role or position which has certain properties and power. These individuals then draw on their agency to enact that position. A social actor can be an ECP navigating the issues of postgraduate education within EMS, attaining the desired levels and using that position to influence a change in the dynamic for those to follow suite.

Archer describes structure, culture and agency as each having their own distinctive emergent properties and powers which are proportionate to each other (Archer, 1995). The relation between agential emergent properties (people) with those of the parts (structure and culture) is indicative of two aspects of social life (Archer, 1995; 2003). She further argues that any social-cultural dynamic (coherence among people) and cultural system can be characterised as mutually influential to one another (Archer, 1995). Yet, they are to be distinguished temporarily as separate entities to identify their respective emergent powers that result in what can be observed as events or experiences that inform social practices. This is what Archer terms 'analytical dualism' (Archer, 1995; Danermark *et al.*, 2005).

3.4 ANALYTICAL DUALISM

Archer (1995), in her morphogenetic approach describes analytical dualism as the process that enables researchers artificially to separate and examine the complex duality of structure and culture. Archer's work not only goes on to describe the role of structure, culture and agency in enabling or constraining events, but she also argues that mechanisms emerge as a result of the constant interplay between these components. Clarke, Liddy, Raftery, Ferris & Sloan (2020) echo these sentiments. They argue that structural and cultural conditioning, related to professional development, are largely influenced by institutional practices and rationales, as well the context of the population of interest. While acknowledging this important concept, the process of disentangling the various mechanisms and relationships are encouraged for researchers who wish to understand the emergence of events and ultimately advocate for ways to bring about change (Archer, 1995; Motshoane & McKenna, 2014; Case, 2015).

Archer (1995, 2003) argues that the usefulness of analytical dualism in disentangling structure or culture from agency and that of structure from culture (Figure 3.2), is only for the purpose of analytical assessment or that of logical reasoning. Bhaskar (2008) echoes these sentiments. These authors further suggest that this process encourages articulation of the aspects of social reality that occur because of conditioning over time. Here, Archer refers to the ways in which structures and culture act as enablers or constrainers to human agency or in the case of this study, how structure and culture either motivate ECPs

to pursue or eschew postgraduate education. Archer (1995) further argues that this process is dependent on the distinction that is made between logical relations that govern culture and the material relations that govern structures, which amalgamate to predispose agents to take particular actions. According to Archer (1995), to understand this relationship between structure and culture in any given context, particularly in the setting of enablers and constrainers, one has to explore the situational logics at play as depicted in Table 3.1.

TABLE 3.1: Summary of morphogenetic relationships between structure and culture at a system and social level (adapted from Archer, 1995; Luckett, 2012).

	Contradictions/constrainers		Complementariness/enablers	
	Necessary	Contingent	Necessary	Contingent
Situation logic	Correction	Elimination	Protection	Opportunism
Culture system	Syncretism	Pluralism	Systematisation	Specialisation
Socio-cultural interaction	Unification	Cleavage	Reproduction	Sectionalism
Structural system	Compromise	Competition	Integration	Differentiation
Social interaction	Containment	Polarisation	Solidarity	Diversification

The emergence of social phenomena can only be truly understood when the subjects' context and history is taken into account, a sentiment shared by Archer and other experts in the field (Archer, 1995; Case, 2015). A key component of Archer's (1995) social realism is morphogenesis, which, simply put, refers to the change in structure, culture or agency that occurs over time. Banifatemeh *et al.* (2018) argue for the appropriateness of morphogenesis, particularly given the dynamic nature of society. Luckett (2012) demonstrated the effectiveness of Archer's morphogenetic framework in gaining a rich understanding of academic development within national and institutional situational logics within the South African Higher Education system, with specific reference to structure, culture and agency. By taking the unique history of South Africa into account, Luckett (2012) was able to tailor the morphogenetic cycle to incorporate the key elements of context and history, a method that informs my approach. As depicted in Table 3.2, the morphogenetic cycle incorporates three time periods or stages of the cycle and their associated emergent properties, will be specifically geared towards understanding the

socio-cultural interaction and its influence on ECPs agency to seek out postgraduate education within the EMC field of South Africa. The first stage shapes the situational context that predisposes ECPs to adopt certain actions, whereas the second stage focuses on the present and how ECPs engage with the structural and cultural conditioning. The final stage alludes to the new conditioning that occurs as a result of the first two stages, in the form of new morphogenetic cycles that improve the attitudes and conditioning related to postgraduate-education-seeking behaviours.

TABLE 3.2: The morphogenetic cycle for postgraduate seeking behaviour of South African ECPs (Adapted from Archer 1995; Luckett, 2012).

Periodisation	Morphogenesis
Time period 1: up until 2005 Historical background	Structural/cultural conditioning
Time Period 2: 2005–2020 Period under review	Social/cultural interaction
Time Period 3: from 2020 onwards Improvement plans and forward	Structural/cultural/agential elaboration?

Danermark and Ekstrom (2005), who refer to societies as being structures of social relationships, suggest that as a result of generative mechanisms from structures within the level of reality, and the interaction between the domains of structure, culture and agency, the nature of reality is always changing (Danermark *et al.*, 2005). Thus, our reality or rather the knowledge thereof, in the realm of social sciences is often referred to as fallible. Williams (2012) agrees with this statement and further argues that Archer's theory can be productively applied to guide student learning in higher education. He goes on to argue that this approach is well suited for higher education, as it links well with what is considered the ontological turn in student learning research (Williams, 2012).

According to Archer (2010), the stance of social realists often leads them to ask a single question: What needs to be in place (socio-cultural condition) in order for things to operate in a particular way?

Social realism was therefore determined to be the most appropriate theory to identify, analyse and understand the emergence of phenomena examined in this study. Critical and social realism enable researchers to analyse social structures, which in conjunction with their generative mechanisms, create events that motivate ECPs to pursue or eschew postgraduate education. This is based on the assumption that the emergence of events (to pursue or eschew) occurs as a result of generative mechanisms that exist within their social environments. This theory seems appropriately suited to aid me in exploring the interplay between structural and cultural conditions within the field of emergency care, particularly as they relate to the ECPs' agency which is used to navigate coercive forces that arise from generative mechanisms from these domains.

3.5 AN ANALYSIS OF ARCHER'S SOCIAL REALISM

I decided to use Archer's social realism theory, which is supported by the meta-physical position of critical realism, for this study. This decision was not taken because it is the only correct philosophical stance for this study, but rather because her ontological and epistemological positions provided a practical social theory that accounts for patterns of social phenomena (postgraduate education seeking behaviours) by taking subjects' (ECPs) context and history seriously during the pursuit of understanding the emergence of the phenomena of interest. As with any qualitative methodology, there has been criticism expressed of Archer's ontological and epistemological positions. It is therefore only appropriate for me to bring forward these instances which may have a bearing on this study.

A criticism shared among various authors (Benton, 2007; Luckett, 2008; Caetano, 2014; Behari-Leak, 2015), suggests that Archer places significantly more emphasis on the internal conversation of agents (properties of reflexivity), as opposed to their dialogue with others (external conversations). Behari-Leak (2015) further suggests that agents are able to confer their personal concerns and/or agendas and determine their actions by engaging with either their internal dialogues or their external dialogues in a specific context.

Caetano (2014) argues that the emphasis Archer places on agency, undervalues the role of social structures in determining action. She acknowledges that Archer does emphasise the causal powers of social structures and their temporal priority, but goes on to suggest that this mostly occurs at a theoretical level (Caetano, 2014).

Another criticism shared regarding Archer's social realism theory is that she privileges agency reflexivity more than causal powers and generative mechanisms of structural and cultural conditions (Akram, 2013). Caetano (2014) argues that this might be construed as a return to the approach of individualism, whereby agency is perceived to determine the structural and cultural conditions within a specific context. I tend to agree with Caetano (2014) in rebutting Akram's (2013) notion, as Archer's framework of analytical dualism is specifically powered to enable the separation of structure, culture and agency in the pursuit of understanding which of these are activated and result in events or experiences among agents.

These criticisms by no means imply that I or any of the above-cited authors reject Archer's work on social realism. The importance of highlighting these enables those within the realm of sociology to identify certain aspects that require additional attention when operationalising this framework. Bearing in mind all the above-mentioned criticisms, I cautiously applied the ontological and epistemological stance of social realism and the meta-physical stance of critical realism in this study. I found that by exploring these notions, I could cautiously operationalise the chosen framework in the most appropriate manner.

3.6 CONCLUSION

This chapter provided an overview of the ontological and epistemological stance of this study. The critical realist stance I took on during this study calls upon me to see data collected at an empirical level not as explanatory, but rather as a representation of the multitude of events and experiences occurring at the level of actual and real. To achieve this, I operationalised social realism to investigate the phenomena of interest by acknowledging the need to separate the emergent properties of structure and culture analytically to determine their influence on the agency of ECPs. In accordance with

Archer's arguments, changes in the social world emerge out of the interplay between mechanisms (i.e. structure, culture and agency), as very little is known about the postgraduate-seeking behaviours among ECPs. Social realism further enhances the depth of ontology required to answer the overarching question posed in this study: What needs to be in place (i.e. socio-cultural conditions) to explain the postgraduate-seeking behaviours of ECPs within the prehospital field of emergency medical care.

In this chapter, I further alluded to some of the criticisms posed regarding Archer's position in the field of sociology. In doing so, I hoped to have identified the limitations and complexities with regard to the ontological and epistemological stance embodied. Throughout this chapter I argued the appropriateness of the theories chosen and I further believe that I would be appropriately informed to make claims and deliberations regarding what is observed from the data collected in the given context.

In the following chapter, I will describe how I operationalised both social and critical realism to identify mechanisms influencing the emergence of events which influence the phenomena of interest.

CHAPTER FOUR: METHODOLOGY

4.1 INTRODUCTION

The focus of this chapter is the research design and methodology used to guide this study. This researcher provides insight into the research design and then goes on to discuss the research procedure by specifying in detail the respective phases of the study. This is followed by an overview of the data collection methods and analysis procedures. The chapter concludes with an overview of the data management strategies used and ethical considerations for this study.

4.2 RESEARCH DESIGN

This study used a mixed-method exploratory sequential research design. This mixed-method approach, otherwise referred to as the “third paradigm” or “third methodological movement”, is frequently used within the realm of social science research focusing on everyday life as it encourages collaborative and creative research across various disciplines during the research process (Bowen, Rose & Pilkington, 2017; Johnson & Onwuegbuzie, 2004). In addition, neither a quantitative nor qualitative design on their own would have been sufficient to generate a thorough understanding of the research problem in the given context. However, combining these approaches not only allowed me to draw on the prospective strengths of both qualitative and quantitative methods, but also enabled me to explore diverse perceptions and uncover the interplay between intricate aspects of the multifaceted research question. Furthermore, an exploratory approach is an embedded research design, which in the context of this study, sees qualitative data informing and playing a supportive role to the quantitative data gathering process (Almalki, 2016). Tashakkori and Teddlie (2009) conclude this method to be well suited for investigations when social phenomena are investigated, particularly in instances where information is made available through numerical and narrative forms.

The mixed-method approach to research is not merely about including both a quantitative and a qualitative component to the study, but rather linking them in such a manner that the two converse with each other (Creswell, 2009). As illustrated in Figure 4.1, this study

began with an exploratory qualitative phase and then sequentially moved to a quantitative phase. The first phase involved the use of qualitative measures to collect data and concluded by producing codes or conceptual themes. The result of this analysis was used to develop precise research questions and direct the subsequent quantitative phase.

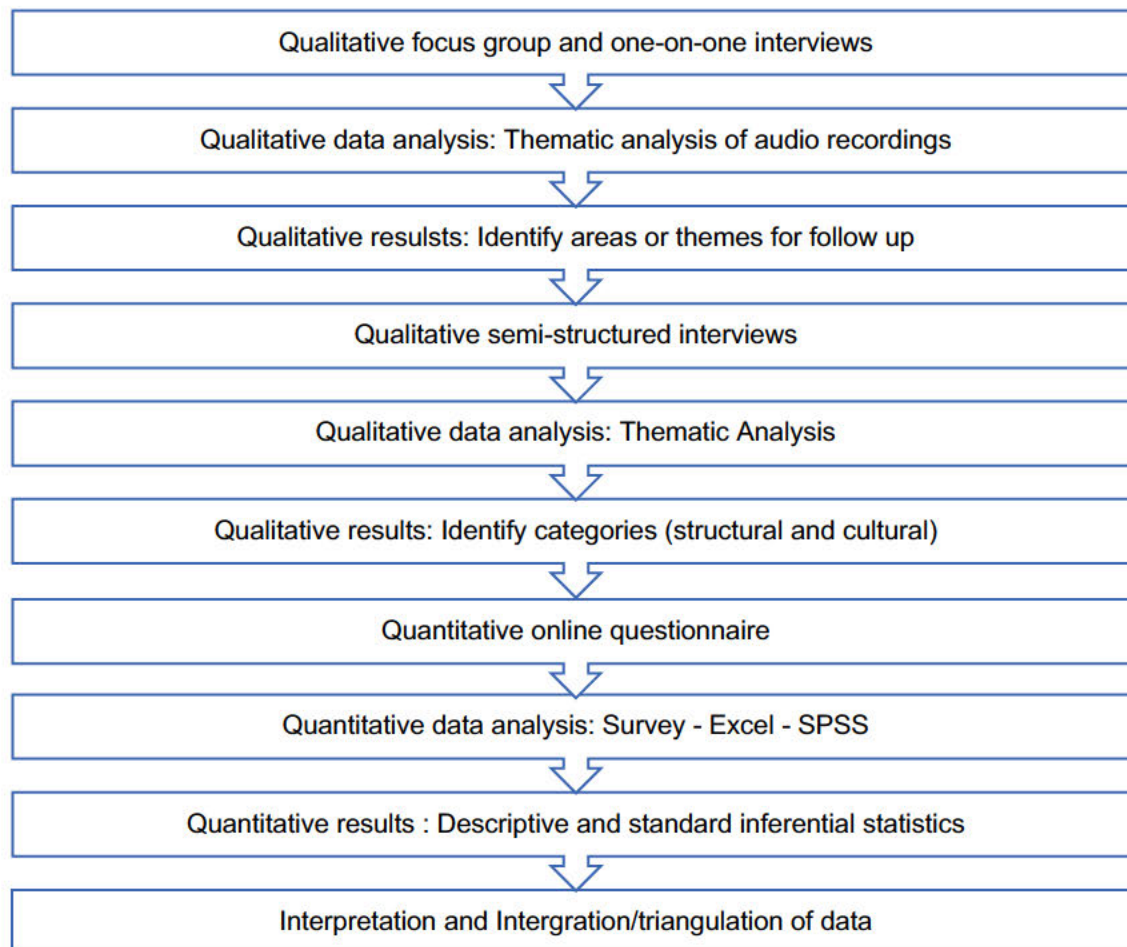


FIGURE 4.1: Mixed-method sequential exploratory process used for this study (Adapted from Subedi, 2016; Creswell, 2009)

4.3. PHASE 1: QUALITATIVE STUDY

The first phase of this study, as depicted in Figure 4.1, was qualitative in nature. This phase of the research journey consisted of semi-structured interviews and focus-group discussions with ECPs, facilitators involved in undergraduate and postgraduate programmes, and various key role players within EMS, who influence the structural and

cultural conditions within the South African EMS. This phase was aimed at identifying the properties and powers of structure and culture that influence agential conditions within the prehospital milieu. Additional data gathered during this phase aided in gaining insight into the participants' sociocultural history, current area of focus or specialisation and perception of postgraduate education, as well as determining the sample for the second phase.

4.3.1 STUDY SAMPLE

On 1 March 2022, there were 1203 ECPs registered with the Professional Board of Emergency Care of the HPCSA (HPCSA, 2022). This equates to a ratio of 1.9 ECPs per 100 000 people based on the 2023 population estimates for South Africa (Statistics South Africa, 2023). While the exact proportions of practicing paramedics who have pursued postgraduate education and are actively contributing to the development of the EMS in South Africa are not known, it is likely to be lower, as many paramedics pursue employment and education abroad (anecdotal evidence).

Considering this, I aimed to include ECPs who were practicing their profession both abroad and within South Africa. This was expected to provide an appropriate representation of the structural and cultural conditions across the diverse landscape of South Africa, as well as to allow an opportunity for a degree of international comparability (abroad vs national ECPs) of South African ECPs' perceptions of the studied phenomena. Given the paucity of broad scale studies that include international comparability in Africa, specifically regarding the emergence of this educational phenomenon within the field of emergency care, this would likely create a novel dataset.

Purposive and snowball sampling methods were used during phase one of the study as I attempted to examine the structural and cultural conditions experienced by ECPs. Participants were recruited from five categories (purposive) within the prehospital milieu, who shared similar characteristics and were knowledgeable and able to provide deep insights into the emergence of the phenomena being studied. The categories for phase one were:

1. Operational ECPs;

2. Academic ECPs;
3. Managerial ECPs;
4. Stakeholders in the industry (Organisation directors, policy developers, strategic planners, non-ECP managers); and
5. Undergraduate and postgraduate course conveners and facilitators.

Snowball sampling implies a chain-like effect, where participants go on to recommend and potentially recruit prospective participants from among their acquaintances. This process continued until data saturation was achieved. Naderifar *et al.* (2017) suggest this method to be particularly effective in recruiting participants with similar characteristics within a widespread geographical location. They further argue for its use when recruiting participants for educational programmes or studies. While one cannot use these sampling methods to make statistical generalisations about the population of interest, analytical inferences are favourable and are well suited as they offered value in informing the second phase of this study (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2015). The combination of these methods appeared to be rather well suited for this research study, as I aimed to investigate the emergence of educational-seeking behaviours among ECPs who were practising their profession both abroad and within South Africa.

Creswell (2013) cautions that although sample sizes in qualitative research should be large enough to describe the phenomena of interest sufficiently, it runs the risk of producing repetitive data. He further suggests that the goal of those pursuing qualitative research should be attaining a point of data saturation, which occurs when recruiting more participants to the study would not result in new perspectives or information regarding the phenomena of interest. In the case of this study, I aimed to include an appropriate representation from the diverse landscape of the South African EMS and abroad where possible.

4.3.2 DATA COLLECTION

Multiple sources of data were used for this study: focus-group discussions, semi-structured interviews and in the subsequent study, an online questionnaire. This approach, otherwise referred to as triangulation, was adopted to ensure that the various mediums of investigation generated rich data to develop a comprehensive understanding of the phenomena of interest (Carter, Bryant-Lukosius, Dicenso, Blythe & Neville, 2014). Heale and Forbes (2013) assert that this approach enables researchers to increase the validity and credibility of the findings by neutralising the limitations and strengthening the benefits of the respective data collection methods. In addition to encouraging comparisons of the findings from the different perspectives, Hussein (2009) argues this method to be highly effective in social science research, as it enables researchers to gain a revealing picture of the events and the associated meaning participants attach to their experiences. Hussein (2009) and Maxwell (2005) both suggest that when there is rich data, the likelihood of the researcher being confused by participants' representations or his or her bias influencing explanations provided, significantly decreases.

Carter *et al.* (2014), Hussein (2009) and Maxwell (2005) all allude to the reality that the use of multiple sources of data enables researchers to ensure that the complexity of the phenomena under investigation is examined fully. The depth required in this study, particularly to move beyond the level of that which is observable (actual and empirical), but to that of the level of real, required such an approach.

Prior to any form of data being collected, approval to conduct this study was obtained from the Durban University of Technology Institutional Research Ethics Committee (IREC 089/21 – Appendix A), the institution in which the study was lodged. No further ethical clearances or permission processes were required.

4.3.3 PILOT STUDY

A search for similar surveys and/or focus-group discussions among ECPs was conducted. However, the novel nature of this research question and the paucity of social realism studies among medical personnel in LMICs, meant that finding such surveys and/or focus-group discussions proved challenging. The literature search yielded no results, thus further informing the need to validate the tools, approach and method of data generation chosen, by means of a pilot study.

I piloted the focus-group discussion strategy and interview questions among South African emergency care technician (ECT) graduates who had either chosen to pursue or eschew their ECP qualification. ECTs are prehospital care practitioners who have successfully completed a two (2) year National Certificate in Emergency Care, which is a mid-level qualification within the current framework of emergency medical care education. While these are still within the realm of undergraduate studies, I believed that the education seeking behaviours of ECTs are also largely influenced by the structural and cultural conditions of the prehospital milieu.

In response to the research advertisement letter disseminated to the various informal prehospital specific information sharing social media sites, a total of twenty-one (21) potential participants indicated their willingness to partake in the pilot study, but in the end only eight (8) were available to attend. These participants were subjected to the proposed data collection process intended in the study: a) a focus-group discussion via the online Zoom video-conferencing programme, which provided me with the opportunity to gauge my facilitation skills, as well as assess the appropriateness of the focus-group discussion guide (Appendix B); b) The subsequent phase of the pilot study involved the dissemination of the proposed quantitative questionnaire, during which, certain questions had to be altered for the specific audience. However, the core concepts remained the same.

The eight participants were asked to provide feedback on the following:

- ☐ Clarity and coherence of the questions during the focus-group interview;
- ☐ Relevance of the questions posed in relation to the research question; and

- Clarity and relevance of prompts used during the focus group interview.

The feedback and comments provided by the participants during the pilot study phase were insightful, specifically those related to the respective delivery medium. The suggested amendments were simple and involved the inclusion of a user-friendly definition for structural and cultural conditions within the context of this study. The implementation of these definitions ensured clarity and coherence for the main study.

4.3.4 INTERVIEWS

Semi-structured interviews and focus-group discussions were designed to identify and explore the structural and cultural conditions that influence ECPs' agential conditions. These methods were appropriate to gain access to in-depth interpretative data, which in conjunction with the key descriptive trends would provide the empirical data and identify key endpoints for further analysis related to the phenomena under investigation.

A research advertisement letter (Appendix C) was disseminated across various prehospital-specific social media sites, to EMS-specific training institutions, emergency medicine and allied postgraduate support platforms and institutions, and to various key role players within the industry. All these endpoints and individuals were called upon further to disseminate the research advert to ECPs they knew. In response to the research advertisement letter, seventy-one (71) potential participants indicated their willingness to partake in these focus-group discussions but in the end, it was only possible to engage with forty-three (43) of them, due to busy schedules or some form of problem or the other. I then resorted to the snowballing method once again, which enabled me to expand the sample by sharing the research advertisement letter with those whom the current participants thought would be willing to participate and add value to the data collection process. This process yielded a further eight participants who actively engaged in a focus-group discussion and added value to the process.

Considering the Covid-19 pandemic and the widespread geographical location of the participants, Zoom video-conferencing, an online medium, was used to engage with participants during these sessions. The study information letter (Appendix D) and an expression of interest form (Appendix E) were shared with participants before the

interview or discussion sessions. This enabled me to cluster the respective participants according to the five (5) respective categories, as well as attain the necessary consent to audio record these sessions (Appendix F and G).

As depicted in Table 4.1, a total of fifty-one (51) participants participated in either the two semi-structured interviews or the six focus-group discussions. All participants participated by means of the online medium previously mentioned, with nine requiring further follow-up correspondence, which was largely due to time constraints and/or other issues occurring that required them to prematurely exit the focus group discussion. These nine participants elected to receive the remaining focus-group discussion questions in the form of written correspondence. The follow-up correspondence was poorly answered, with a response rate of 55% (five of the prospective nine responded). The 51 participants represented the appropriate portions of each respective category, with respect to the distribution across the field of emergency care. A proportionate representation of those working abroad as compared to those working within South Africa was also largely achieved among participants. The semi-structured interviews and focus-group discussions lasted on average between 60 and 80 minutes.

In qualitative research, the notion of data saturation is used as a criterion for discontinuing the data collection process while maintaining qualitative rigor (Saunders *et al.*, 2018). Guest, Bunce and Johnson (2006) suggest this to be the gold standard by which purposive sample sizes are determined in health science research. Inductive thematic saturation (noted by reviewing the codes and themes identified from the data depicted on each transcript and field notes) was reached after two semi-structured interviews and five focus-group discussions – i.e. no new perspectives or information regarding the phenomena of interest were identified. However, as I had not yet included a sufficient representation from the rural regions in South Africa, I conducted one more focus-group discussion, which included representation from the rural regions.

TABLE 4.1: Distribution of study participants across EMS sectors

Category	Number of participants
Operational ECPs	27
Academic ECPs	13
Managerial ECPs	6
Stakeholders in the industry	3
Postgraduate course conveners and/or facilitators	2
Total	51

During these sessions, I used an interview guide with a list of questions to be explored in the course of the discussions with the participants (Appendix B). The online medium further enabled me to be able to display these questions or remarks during the sessions, a suggestion made by the pilot phase participants.

Following the introductory discussion and obtaining informed consent, I began each interview by verbally requesting permission to record the sessions. This was followed by a general introduction to an open-ended question, where I asked about the participants' feelings regarding the role of postgraduate education within the prehospital field of emergency medical care. The use of general questions relating to the phenomenon under investigation at the beginning of the session was merely to establish rapport for the purpose of building trust in order to get the participants engaging freely (Qu & Dumay, 2011). This also enabled me to understand their trajectory from the outset of the sessions.

This was then followed by a semi-structured approach by asking the proposed questions (Appendix B) which led to deeper discussions related to the identification and exploration of structural and cultural conditions influencing postgraduate seeking behaviours of ECPs. I concluded these sessions by exploring the insights of participants, specifically regarding what needs to be done to enable ECPs, and by extension, the South African EMS in the realm of postgraduate education.

My decision to use a semi-structured approach to these interviews and/or discussions was to access a wide range of perspectives on the organisational and/or institutional environments (i.e. structure). I further aimed to identify the ideas, beliefs, and values (i.e. culture), which were not easily accessible through a structured approach, but manifested

themselves in discourses. As the facilitator for this session, I only truly understood the value behind this approach when actively engaging with the participants, specifically when attempting to explore the foreground of what matters to them (i.e. culture). According to Lee Ann (2017), and Arksey and Knight (1999), the use of a semi-structured approach is a common occurrence within the realm of social science research. Nearly a decade later, similar arguments for the use of semi-structured interviews and/or discussions are presented, with particular reference to its usefulness for depth of data, because it enables the facilitator to adapt according to the input from participants and allow in-depth explorations of the personal matters to participants (Arksey & Knight, 1999; Qu & Dumay, 2011).

4.3.5 DATA ANALYSIS

The data analysis process is an integral component of any research process, as it in a decisive way forms the outcomes of research. Hatch (2002, p80) defines data analysis as:

a systematic search for meaning. It is a way to process qualitative data so that what has been learned can be communicated to others. Analysis means organising and interrogating data in ways that allow researchers to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories. It often involves synthesis, evaluation, interpretation, categorisation, hypothesising, comparison, and pattern finding.

I agree with the sentiments shared by Hatch (2002), particularly regarding the systematic nature of this process. I found this process to be exactly that: a systematic search for meaning from within the data, the recognition of patterns, relationships, themes and what they represent. I therefore used a thematic analysis to analyse the qualitative data, which according to Braun and Clarke (2017), is the technique or tool used to identify, analyse and report patterns within the data. I followed Braun and Clarke's six-step guide for thematic analysis minimally to organise and describe the qualitative data in rich detail (Braun & Clarke, 2017). This was the most appropriate method as the majority of the others that seek to describe patterns emerging from qualitative data are theoretically bound or associated with a phenomenological design.

Throughout this systematic process, I endeavoured to maintain a philosophical orientation (used to guide me in making sense of the qualitative data) to the study, necessitated by critical and social realism, the two theories underpinning this study. In the following sections I will discuss the systematic procedures and strategies followed in an attempt to make meaning of the data collected, with the sole purpose of answering the research questions posed. This includes the procedural transcribing, coding and interpretation. Furthermore, theorisation by means of using reduction and abduction techniques to identify generative mechanisms at the level of the real, can be attributed to the critical realism aspect of this study, where analytical dualism enabled me to determine the structure, culture, and agential conditions under the phenomena of interest.

4.3.5.1 TRANSCRIBING DATA

I started the analysis of data from the preliminary stages of the data collection process. As more data became available, I needed to engage in an intensive analysis by consolidating all the data in text form. This required all the interview recordings to be transcribed.

I transcribed all the interviews myself by making use of the Microsoft Word online function of transcription. I ensured that all the interviews were accurately transcribed by going through each recording with its respective transcript. I then proceeded to tidy up the transcription documents by removing unnecessary segments of informal discussion points and ice breakers where necessary. This aided in creating documents aligned for ease of use. I further employed the technique of member checking, also known as respondent or participant validation (Birt, Scott, Cavers, Campbell & Walter, 2016). This validation technique was aimed at ensuring the transcripts included that which the participant shared during the discussions, ensuring a degree of credibility, as discussed in 4.7 (Candela, 2019). In addition to checking for accuracy, it also enabled participants the opportunity to correct or improve their contributions if they felt the text misrepresented their opinions (Birt *et al.*, 2016).

Findings and results do not merely emerge from the transcripts by themselves, further work is required to identify the most important elements to answer the research questions

of this study. The next step was to analyse the data and I used the initial approach of category construction.

4.3.5.2 CODING

Category construction, otherwise referred to as categorising the data (Saldaña, 2009), refers to the process of coding the data. Linneberg and Korsgaard (2019, p. 3) refer to coding “as an important process of turning raw qualitative data into a communicative and trustworthy story“. During this phase, I used the inductive thematic coding for its core function: examining coherent portions of empirical data (phrases, words or even a page) and then assigned a shorthand designation (word or short phrase) that summarised the content, without trying to fit it into a pre-existing frame. This allowed me to retrieve specific pieces of data easily when required. I followed Braun and Clarke’s six-step guide for thematic analysis minimally to organise and describe the qualitative data in rich detail (Braun & Clarke, 2017).

Given that the philosophical stance of this study is underpinned by critical realism, I first had to engage with the content at the level of real and actual. This was something that I had to remind myself of continuously, specifically as I kept asking the question: What conditions has to exist in the world of the participants to identify at this level. I had to ensure that I focused on the empirical and/or literal data in front of me, the form of text that was of interest to me answering the research questions of this study. During this process, I also attempted to use a technique called soft eyes or focus, which refers to the process of identifying themes or patterns that emerge from the text without the explicit use of any theoretical or analytical framework (Maton & Chen, 2016). I attempted to remain open at all times to any relevant issues that emerged from the data. This kind of coding is often called open coding (Merriam, 2009).

I used the NVivo version 12 computer software as a tool to assist me in coding this vast amount of empirical data. This software has the capacity to manage and, through various functions, organise large amounts of data, by supporting coding, sorting and storing. Nvivo software refers to codes as nodes and has the appropriate tools to arrange them

in a manner that enabled me to not only see patterns or similarities emerging from the text, but to also categorise my interpretations into themes. Durrheim and Kelly (2006:325) advocate for the use of software during the coding process. However, they go on to suggest that “as useful as the computer software can be during the process of data analysis only humans ultimately can make creative association between the data aspects of account or relate to what people say to the context in which they operate”.

I first coded similar views, concepts and ideas that emerged while reading through the transcripts. I then grouped similar issues raised. This was not a sequential process, but rather involved a back-and-forth approach to see whether there were differences and similarities which allowed development of nodes that accommodated new ideas.

As discussed in Chapter Three (3.2 and 3.3), this study is underpinned by the social realist theory which operationalises analytical dualism as a mode of analysis. Archer (2003), the social realist who developed this approach, argues that the social world emerges from the interplay of structure, culture and agency. Thus, for analytical purposes, this interplay is separated in order to identify the mechanisms at play in each sphere, that either enables or constrains events and experiences from emerging over time. In the case of this study, it was imperative in analysing the data to look separately within each coded event at the structure and culture that were at play, specifically as it related to the agential conditions that either motivate ECPs to pursue or eschew postgraduate education. I therefore moved from the data of events and experiences at the level of the empirical and actual, to establish the structural, cultural and agential conditions at play. Transitioning from these levels was made possible through the process of abduction and retroduction, the area that alludes to critical realism aspect of this study. While these concepts are briefly discussed in Chapter Three, I now go on to discuss them in further detail, with particular reference to how they were operationalised.

4.3.5.3 ABDUCTION AND RETRODUCTION

A core component of critical realism ontology is the distinction between three ontological domains: the empirical, the actual and the real. As discussed in Chapter Three in greater detail, the empirical domain encompasses our experiences of what actually occurs, and

the actual is what happens independently of whether we observed them or not (i.e. events). The real domain, which is actually the deepest level of reality, is constituted by the generative mechanisms with causal powers (Jeppesen, 2005). This study sought to explore the deepest level and uncover the generative mechanisms that are largely responsible for the postgraduate-seeking behaviours of ECPs. In order to identify the underlying mechanisms that produce the phenomena of interest and to further understand the interplay between them and how they shape the outcome, I operationalised two modalities of inferences commonly used by critical realists: abduction and retroduction.

Danermark *et al.* (2005) refer to abduction as the process of moving from an idea or concept to a different, possibly more developed or deeper conception thereof. Abduction is therefore a way of creating links that enable the researcher to understand relations and connections that are not always obvious at the empirical level. By operationalising this modality, I was able to see something as something else, thinking or seeing things in a different context, by asking questions such as: “What must exist for this to be possible, what does this mean, what follows this?” (Eastwood, Jalaludin & Kemp, 2014:3). This process is appropriately geared towards drawing causal explanations required to get to the level of real, as it enabled me to find the underlying mechanisms that produce the phenomena of interest.

I therefore used abductive reasoning to interpret data in the categories of structural and cultural conditions that influence the postgraduate seeking behaviours of ECPs. This enabled me to move beyond the point of merely interpreting empirical data (actual events and experiences) transcribed, but to develop a new understanding of the conditions that influence this behaviour among ECPs.

Unlike the process of drawing inferences through abduction, retroduction sees researchers employ certain assumptions when they engage with the data. This can only be possible if the researcher is aware of the context-specific conditions, which are fundamental to the existence of the phenomena (Danermark *et al.*, 2005; Walsh & Evans, 2014). Danermark *et al.* (2005:93), refer to retroduction as the process of drawing inferences from merely observation to “what must have been the case in order to bring about the observed events”. They further argue that this process involves moving from

the empirical observation of events to understanding or attaining insight as to what conditions and properties must exist for the observed events to be possible (Danermark *et al.*, 2005).

Operationalising this modality enabled me to move beyond the point of merely identifying the structures of the social reality, and enabled me to move beyond empirically observed data by asking questions such as: How is this possible? What must exist for the observed to be seen like this?

This process was particularly helpful in making meaning of the raw data appearing on the transcripts. By asking questions such as: What must the context or the world be like for participants to experience and to have the observations they do, for them to share those notions regarding postgraduate seeking behaviour? This not only required me to move from the level of empirical to that of real, but it also required me to have an in-depth understanding of the structural and cultural conditions which either encouraged or discouraged postgraduate seeking among them. This required me to work through the data to understand and orientate myself as to the nature of these conditions and then go back and create codes by means of operationalising abduction and retroduction. It was imperative that I clearly identified by endpoints during this process, as the use of these modalities were not geared towards me developing any new theories or assumptions, but rather merely to aid in getting to the true meaning of the data available on the transcripts.

4.3.5.4 ANALYTICAL DUALISM

As discussed in Chapter Three, Archer's ideology of analytical dualism favours the notion that "independent properties and powers pertain to both the parts of society and to the people within it" (Archer, 2003:18). Archer's work on this matter not only goes on to describe the role of structure, culture and agency in enabling or constraining events, but she further argues that mechanisms emerge as a result of the constant interplay between these components, a notion also shared among others in the field of sociology (Archer, 1995; Clarke *et al.*, 2020).

The application of analytical dualism enabled me to separate and subsequently examine the duality of structure and culture. During this phase of the study, the process of

disentangling the various mechanisms and relations was first used during the coding process. After creating the codes, the disentanglement process enabled me to create categories or meaningful pockets for the data to be grouped into, categorising the codes into either structural or cultural conditions. This process is encouraged by social realists, for researchers aiming to understand the emergence of events (Archer, 1995; Motshoane & McKenna, 2014; Case, 2015).

Throughout her work on this matter, Archer refers to the ways in which structures and culture act as enablers or constrainers to human agency and in the case of this study, how structure and culture either motivate ECPs to pursue or eschew postgraduate education. Operationalising this notion streamlined the process of identifying the themes arising from the intertwined yet largely opposing contexts. This further encouraged me to see them as the entities at the level of real, which I intend to articulate further with the aspects of social reality that occur as a result of conditioning over time, a concept explored in the chapters that follow.

4.4 PHASE 2: QUANTITATIVE STUDY

The second phase of this study, as depicted in Figure 4.1, was quantitative in nature. This phase of the research journey consisted of disseminating an online questionnaire to ECPs registered with HPCSA. This phase was aimed at determining how current postgraduate seeking behaviours of ECPs emerge from the interplay between the structural, cultural and agential conditions identified during the first phase of this study. Additional data gathered during this phase aided in gaining insight into the participants' sociocultural history, current area of focus or specialisation and the attitudes regarding postgraduate education, as well as determining the suggested practical recommendations to address the paucity in postgraduate education seeking behaviours of ECPs.

4.4.1 SAMPLE AND SAMPLING METHOD

Once again, a purposive sampling method was implemented during this quantitative phase of the study, as I attempted to examine how the identified postgraduate seeking behaviours emerged as a result of the interplay between structure, culture and agential conditions within the prehospital milieu of South Africa. The study population for this

phase was recruited from the target population of 851 ECPs (registered with the HPCSA at the time this study was registered) and separated into five categories only, as each of these categories were a source of rich data significant to achieving the aim of this study. These units included and also made up the inclusion criteria.

Inclusion criteria for the study

The inclusion criteria for the sample were:

- ☐ Operational ECPs;
- ☐ Academic ECPs;
- ☐ Managerial ECPs;
- ☐ non-postgraduate and postgraduate ECPs; and
- ☐ South African-based and non-South African-based ECPs.

Based on the target population of 851 registered ECPs with the HPCSA (during proposal development), I aimed to recruit a minimum of 265 (CI 95%, z 5%) participants to attain an appropriate reflection of the target population.

Exclusion criteria

The exclusion criteria for the sample were:

- ☐ Practitioners who had de-registered or been suspended from the ECP registry with the HPCSA; and
- ☐ ECPs who declined to complete the consent form.

4.4.2 DATA COLLECTION

This phase was aimed at collecting data from the ECP population by means of an online questionnaire (Appendix H). During this phase, I utilised a descriptive, cross-sectional design as this would provide the quantitative data required to understand the interplay between the variables (identified in phase one) that influence the emergence of the phenomena studied. Creswell (2013) reports this to be one of the most effective methods of identifying factors that may influence an outcome, or in the case of this study, aid in providing an understanding of the predictors of the phenomena studied. Acknowledging

the claim that quantitative methods are largely descriptive tools for critical realists, these alone cannot appropriately identify causal and generative mechanisms (Zachariadis, Scott & Barrett, 2013). The quantitative phase aimed to play a largely supportive role to refine and, where appropriate, draw inferences against the backdrop of the rich data identified during phase one.

A research advertisement letter (Appendix B) was once again disseminated across various prehospital-specific social media sites and to the various EMS training institutions. These endpoints were further called upon to disseminate the research advertisement to ECPs they knew, with the aim of recruiting as many ECPs as possible. In response to the initial recruitment attempt, one hundred and twenty-four (124) responses were captured. Numerous additional attempts at disseminating the online questionnaire were then carried out, which finally yielded the required total of two hundred and sixty-five (265) responses.

The HPCSA registration details of each participant were further used to cross reference with the HPCSA i-registry, thus ensuring that all criteria for analysis were satisfied. All responses were deemed appropriate for analysis.

4.4.3 QUANTITATIVE DATA ANALYSIS: ONLINE QUESTIONNAIRES

The data from the questionnaires were exported to a Microsoft Excel spreadsheet (Microsoft Corporation, 2018), and from there into the Statistical Package for Social Science (SPSS) version 27 (Amonk, NY: IBM Corp) program for analysis. A descriptive analysis of the data was performed by using standard procedures. The data were further analysed using simple descriptive statistics. Continuous variables were described using means and standard deviations. Categorical data were described using relative means and proportions. Standard inferential statistics was used, which included parametric and non-parametric tests where appropriate. A 95% confidence interval and corresponding p value ≤ 0.05 was applied to determine statistical significance. Where applicable, determinations of key findings are discussed in relation to the existing literature in the discussion section.

The two phases of this study in conjunction with the data analysis plans (detailed in 4.3.5 and 4.4.3), outlined the methods with which data were analysed at an empirical and actual

domain, or rather that of the level of the 'actual'. However, in order to answer the research question within the context of operationalising critical and social realism, I moved beyond this point and dug deeper to the level of the 'real'. Thus, the first leg of this research journey involved the collection of data at the empirical level (actual). Thereafter I applied the critical and social realists' approach to operationalise aspects of Archer's morphogenetic approach, specifically analytical dualism with the aim of analysing down to the level of real (Archer, 1999). In doing so, I was able artificially to separate and examine the complex duality and interplay of structure and culture, particularly the influence on the agency of ECPs.

4.4.4 RELIABILITY AND VALIDITY

With specific reference to this phase, reliability referred to the extent to which the data collection tool may be trusted to provide consistent results, while validity referred to the extent to which the tool measures what it was intended to measure (Creswell, 2009). The data collection tool, or in the case of this study, the online questionnaire was developed to demonstrate the interplay between the key variables suggested in phase one and the emergence of the phenomena studied. Key variables, themes, areas of interest and aspects of the morphogenetic cycle and relationship chart were used to design the questionnaire.

A search for similar surveys was undertaken in an attempt to validate it. However, the novel nature of this research question within the EMS context led me to believe that none could be found. Therefore, for the purpose of this study, validity and reliability was ensured by doing a pilot study among ten South African prehospital emergency care technicians (ECTs) who were pursuing their ECP qualification. While these were still within the realm of undergraduate studies, I believed that the educational seeking behaviours of ECTs were also largely influenced by the structural and cultural conditions experienced within the prehospital milieu. Similarly, these participants were asked anonymously to take part in a pilot study and to appraise the questionnaire or measurement tool. The research process described throughout phase two was carried out, thus providing an opportunity to reveal areas of concern or that required amendments. Upon completing the questionnaires, participants were requested to

comment on predetermined criteria to ensure validity and reliability of the questionnaire. Their responses were studied for consistency and understanding, and where required, amendments were made. The evaluation of the pilot study was not included in the study results or discussion chapters that follow.

4.4.5 DATA MANAGEMENT

The recorded, transcribed and exported Microsoft Excel spreadsheet, containing de-identified data relating to this study was saved on a password protected device, which was only accessible by the primary researcher and the supervision team. The researcher further stored all the data in the form of hardcopies and on a password protected device in a safe, which will remain so for a period of five years. After the elapsed data storage period, data in the form of hardcopies will be shredded and recycled, whereas the password protected device will be physically destroyed. The confidentiality of respondents will be safeguarded throughout this process.

4.5 MY POSITION AS A RESEARCHER

As the researcher for this study, I facilitated the data collection process for each of the respective phases. During the conception and proposal development phase of this study, I was working as an operational ECP in the United Arab Emirates, a position I occupied for three years. During the conception phase of this study, I was not directly exposed to the structural and cultural conditions experienced by ECPs in South Africa.

I returned to the South African EMS setting as a work integrated learning lecturer at a provincial emergency medical care training institution, a position I held for four years earlier in my career. It was during this time that phase one of the data collection took place. Occupying a hybrid position at the provincial training institutions, saw me working in both the operational (clinical) and academic settings. During the phase one data collection phase, I considered myself an insider, owing to the fact that I was part of the community under investigation (ECPs) and was exposed to the structural and cultural conditions of the South African prehospital setting and those abroad while pursuing further postgraduate education. I therefore have a lived experience of the potential participants and the phenomena of interest.

Fleming (2018) suggests that insider research studies are fairly common among work integrated learning studies. It is important to note that this was not a work integrated learning study and that throughout this study, no vested interest in the research topic was associated to the respective institutions I worked for or the positions I held. Fleming (2018) further notes that the insider role is rather advantageous in studies attempting to gain an in-depth understanding of the phenomena under investigation. I agree with Fleming, as being an insider enabled me to understand and interpret the historical and cultural conditions shared by participants during the first phase of this study. Brannick and Coghlan (2007) refer to this as the pre-understandings the insider brings to the design of the study.

Insider research within the context of education offers many advantages, yet still presents the researcher with multiple challenges. Some of these challenges include potential coercion of participants, the desire for positive outcomes and taking implicit regularities and patterns for granted (Brannick & Coghlan, 2007). Fleming (2018) argues that many of these challenges are common across different methodologies. Deploying someone else to facilitate the data collection process to mitigate these potential challenges would not be appropriate as they would have been considered an outsider, which is also not without its own limitations in the context of this study.

The debate between the insider or outside notion and its use within research has been unremitting, with no final answer (Brannick & Coghlan, 2007; Mercer, 2007; Dwyer & Buckle, 2009; Fleming, 2018). I resonate with many of the notions shared by Mercer (2007), in particular the notions shared about insiders being able to cultivate a degree of credibility and rapport with participants. Being an insider aided me in the recruitment process, as many ECPs and key role players within the industry reported only showing an interest after seeing my name on the research advertisement letter, as they recalled me to have been an active member of the operational setting. I further felt that many of the participants demonstrated a great deal of honesty and shared intimate and valuable contributions owing to the fact that I was regarded as a member of the ECP community. These sentiments further enforced my decision not to use an outsider for the research process, as participation and recruitment may have yielded additional challenges.

Throughout the research process, I aimed to remain consciously aware of my relationship to the study participants. I ensured that participants were not only informed but understood that their responses and views expressed would remain anonymous and that I would take every precaution in ensuring their privacy at all times. Creating a safe space for ECPs to engage freely and disclose the nature of the structural and cultural conditions was something I ensured throughout the data collection process. To facilitate this process, I drew on the knowledge and experience gained through my previous qualifications (Mphil: CEC, NDip:ODETP, Btech:EMC and NDip:EMC). I further used the consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups, to ensure I held true to the research process as an insider (Tong, Sainsbury & Craig, 2007).

4.6 TRUSTWORTHINESS FOR THIS STUDY

In the case of this study, I aimed to ensure that the research findings are insightfully rich and maintain a high standard of quality in terms of rigor and trustworthiness by means of satisfying the criteria and techniques for establishing trustworthiness, as created by Lincoln and Guba (1985). Forero, Nahidi, De Costa, Mohsin, Fitzgerald, Gibson, McCarthy and Aboagye-Sarfo (2018) referred to Lincoln and Guba's earlier work as the "four dimensions criteria", of which they have demonstrated its efficacy when used in qualitative research within the field of emergency medicine. These four criteria are discussed below, with particular reference to how I achieved each throughout this study.

Credibility, which in the case of quantitative studies is primarily referred to as internal validity, refers to the degree to which the study measures what it intended to measure. In the context of qualitative studies, Krefting (1991) refers to this as 'truth value' and suggests that it is aimed at establishing how confident the researcher is with the truth of the findings based on the research design used. To respond to Krefting's operational definition of credibility, I feel that the research design with the associated measures implemented aided me in ensuring that I present the findings which are true and credible for ECPs on the whole.

In the context of this study, purposeful sampling was employed for just that reason, to ensure that an appropriate representation of ECPs applying their craft within South Africa and abroad were attained. In addition to equipping this study with a certain degree of international comparability, this enabled me to mitigate the likelihood of certain local dynamics occurring which might have been experienced by ECPs in a certain region. Focus-group discussions were facilitated in such a manner to ensure I established a degree of rapport with the participants to ensure honesty and truthfulness during these discussions. In addition to ensuring a safe space for participants to share their thoughts and opinions, the incorporation of the chat function in the online software provided participants with the opportunity to mitigate the notion of 'group thinking' or 'jumping on the bandwagon'. These are instances where participants submit to the majority view and are unwilling to share their contrasting opinions and therefore remain silent. This potential threat to the credibility was mitigated through the implementation of member checking. The chat function available during the focus-group discussions enabled participants to share ideas, thoughts, beliefs and opinions which were not aligned to what was verbally shared by other participants, in a secure and non-discriminatory manner. Whereas the former (process of member checking) involved the sending of transcripts out to participants to ensure that which was notated is what was understood and was credible.

Transferability, or as Krefting (1991) refers to it as applicability, largely relates to the degree in which the findings of the study are applicable or transferable to other settings or situations. Quantitative studies aim to include an appropriately powered sample to ensure some degree of generalisability to larger populations (Creswell, 2009). Krefting (1991) argues that the ability to generalise is not central to the premise of qualitative research. Lincoln and Guba (1985) further argue that in the context of qualitative research, transferability is the responsibility of the individual wanting to transfer the findings to other situations or contexts and not that of the original researcher. Their arguments conclude by them advising researchers to ensure that sufficient data is provided to ensure that the appropriate description of the context in which the findings were obtained is presented (Lincoln & Guba, 1985).

I agree with these sentiments shared, as qualitative research, or in the case of this study, the qualitative phase is aimed at describing the phenomena of interest and the associated experiences of ECPs and is not geared to make inferences for all practitioners in the prehospital setting. Furthermore, in the case of this study, I have provided sufficient background (descriptive data) in the preceding chapters to establish the context of the study and support the research design, thus permitting transferability of the findings.

Dependability addresses the aspect of reliability or consistency of the findings of this study (Noble & Smith, 2015). This criterion specifically refers to whether the findings would be consistent if another researcher repeated the study, in the same context, with the same research design and participants (Krefting, 1991). Lincoln and Guba (1985) suggest this to be the case in quantitative studies as their perspective is largely based on the presence of a single reality, when the phenomenon of study is unchanging. However, Bhaskar (2008) asserts that the same results are only possible in science if they are gathered in a laboratory within a closed system and contends that the world is an open system where a constant conjunction of events is unfeasible. Other social realists further argue for the notion that realism comes from the consensus that reality is differentiated, structured, ever-changing and that our knowledge of reality is fallible (Danermark *et al.*, 2005). Archer (2003) further argues that a multitude of realities are experienced, and that our internal conversations differ based on the structural and cultural conditions we experience.

Accordingly, the phenomenon under investigation is continuously changing, the dynamic nature of our internal conversations and the associated forces that inform it add a degree of complexity that renders reliability or consistency rather challenging. This notion is shared by Morse and Field (1996), who suggest that qualitative research highlights the individuality of participants, making variation in experiences more sought after than the idea of repeatability of findings. In the case of this study, I have gone on to provide a detailed description of the research design and the implementation of data gathering techniques used during each of the respective phases.

Confirmability, otherwise referred to as 'neutrality' by Krefting (1991), is concerned with the degree to which the findings are solely that of the participants and not of other biases.

This criterion speaks largely to the qualitative researcher's objectivity throughout the data collection process (Loh, 2013). In quantitative research, this criterion is achieved by the researcher adopting the stance of being scientifically distant, whereas in qualitative research, one tries to increase the value of the findings by decreasing the distance between yourself and the participants. Lincoln and Guba (1985) suggest that in the case of qualitative research, the researcher is able to maintain confirmability by shifting focus from the researcher to that of the data instead.

In the case of this study, I performed a bracketing exercise to mitigate the influence my preconceptions might have on the data collection and analysis phases (Chan, Fung & Chien, 2013). Furthermore, I employed the technique of member checking, which ensured that participants were provided with the opportunity to review the transcripts and identify anything that was misinterpreted. Lastly, I explicitly provided a description of the theoretical stance employed in this study.

4.7 ETHICAL CONSIDERATIONS FOR THIS STUDY

Ethical considerations are primarily a set of principles and ideals that guide researchers during the research process. In mixed-method research studies, ethical considerations have a particular reverberation, due to the in-depth nature of the research process. Issues of ethical consideration are related to the manner of conduct (right or wrong) during the entire research process, especially when generating new knowledge, attaining informed consent and during interpretation of the data (Bryman, 2012). In the case of this study, the main elements under scrutiny, or rather the ethical issues I engaged with, included the right to autonomy and confidentiality, avoiding harm, informed consent, and voluntary participation during the study.

Ethical approval for this specific study was obtained from the Durban University of Technology Institutional Research Ethics Committee (IREC 089/21).

This study conformed to the 2013 Declaration of Helsinki. Furthermore, it can be classified as low risk research as it involves the description and analysis of de-identified data (Creswell, 2009). However, as this study recruited ECPs registered with the HPCSA as the target population, numerous aspects were considered during the conception phase

of the research to ensure ethical compliance. As all ECPs are registered with the HPCSA, the information provided by each participant was cross checked against the I-register of HPCSA to ensure each participant met the criteria for inclusion. During all research activities conducted, the protection of human participants through the application of appropriate ethical principles was of outmost importance.

Throughout the course of this study, the right to anonymity and confidentiality of all the participants was preserved. To ensure this, I implemented a coding system and only recorded de-identified data during the data collection, analysis, and reporting of findings from the various phases of this study (anonymity and confidentiality). Furthermore, all participants were informed of their right to agree freely to either participate or not in this study, with no retributive consequences (autonomous individuals). Participants were invited to participate in either semi-structured interviews or focus-group discussions and then the subsequent online survey. Throughout the course of this study, the right to anonymity and confidentiality of the participants was stringently preserved.

Confidentiality was ensured throughout the research process, and no information obtained during the data collection phases was shared with any party other than the supervision team supporting me during this study, in any form other than the methods depicted in the data analysis plan. All data were further stored on a password protected device.

All participants who agreed to participate in this study were required to sign a consent form, which contained a comprehensive description of the purpose of the study, data collection phases and the intended benefits (informed consent). Lastly, participants were alerted to the fact that their participation also remained completely voluntary and that there would not be any form of compensation (voluntary participation).

4.8 CONCLUSION

This chapter summarised the research methods and investigative framework used in the study to understand the postgraduate seeking behaviours among ECPs. Throughout this chapter, I have attempted to describe the decisions taken during the research process and where appropriate, to demonstrate the methods used to ensure congruence between

the research question, theoretical framework and methodologies used during this study. The subsequent chapters, Five, Six and Seven, feature the research findings and the subsequent discussions.

CHAPTER FIVE: STRUCTURAL CONDITIONS

5.1 INTRODUCTION

The focus of this chapter is the structural conditions that were identified from the qualitative findings captured during the first phase of this study (detailed in the previous chapter). Archer (1995) asserts that in reality, structure and culture are intertwined, particularly as the emergence of social events stem from societies' properties as an open system. The process of analytical dualism enabled me, as a social realist, temporarily to separate structural and cultural conditions for analytical purposes. Thus, for the purpose of analysis I present structural conditions in this chapter, first in an attempt to sketch the landscape of the field of emergency care and its context. In the chapter that follows, the cultural conditions are identified and explored as they relate to the personal conditioning that influences the postgraduate education-seeking behaviours of ECPs.

Throughout this chapter I attempt to report, deduce, and contextualise the findings in an attempt to answer the research question: What structural conditions motivate ECPs to pursue or eschew postgraduate education? I go on to report the themes and respective sub-themes that were identified, owing to the inductive thematic analysis of the discourse shared by participants during the semi-structured interviews and focus-group discussions, which were detailed in Chapter Four (Methodology). Where appropriate, I included select aspects of these contributions to support the themes and sub-themes, in an attempt to understand the phenomena under investigation. I conclude with the pertinent points that were carried over into Chapter Seven (quantitative findings), as this was a mixed methods study.

TABLE 5.1: Participants demographic overview

No.	Name	Sex		Years in EMS	Category	Applying trade		Postgraduate education (pursue)	
		Male	Female			Abroad	South Africa	Yes	No
1.	John	x		8–11	1	x		√	
2.	Sizwe	x		12–15	1	x		√	
3.	Richard	x		8–11	1	x		√	
4.	Ian	x		12–15	1	x			x
5.	Tom	x		8–11	1	x		√	
6.	Ann		x	>16	1		X	√	
7.	Fred	x		8–11	1		X	√	
8.	Patrick	x		8–11	1		X		x
9.	Sam		x	4–7	1		X	√	
10.	George	x		12–15	2		X		x
11.	Pam		x	>16	1		X		x
12.	Dave	x		4–7	1		X		x
13.	Sarah		x	12–15	3		X		x
14.	Albert	X		8–11	1		X		x
15.	Kelly		x	4–7	1		X	√	
16.	Fagri	X		4–7	1		X		x
17.	Owen	x		0–3	1		X	√	
18.	Jenny		x	>16	1		X	√	
19.	Zina		x	4–7	1	x			x
20.	Ryan	x		12–15	1	x		√	
21.	Ben	x		>16	1		X		x
22.	Osman	x		>16	1		X		x
23.	Samantha		x	12–15	1		X		x
24.	Zara		x	8–11	1		X	√	
25.	Percy	x		12–15	1		X		x
26.	Eric	x		4–7	1		X		x

27.	Liam	x		>16	1	x		√	
28.	Greg	x		>16	3	x		√	
29.	Chris	x		8–11	3	x		√	
30.	Peter	x		>16	3		X		x
31.	Frank	x		10	3		X	√	
32.	Astrid		x	12–15	3		X		x
33.	Jerry	x		4–7	1	x		√	
34.	Tariq	x		8–11	2	x		√	
35.	Kim		x	12–15	2	x		√	
36.	Henry	x		12–15	2	x		√	
37.	Robert	x		>16	2	x		√	
38.	Kyle	x		4–7	2		X		x
39.	David	x		12–15	2		X	√	
40.	Siya	x		8–11	2		X	√	
41.	Steve	x		>16	2		X	√	
42.	Jack	x		12–15	2		X	√	
43.	Pat	x		4–7	2		X	√	
44.	Jay	x		8–11	2		X	√	
45.	Edward	X		8–11	2		X	√	
46.	Lerato		x	8–11	1	x		√	
47.	Dougie	x		-	4	-	-	-	-
48.	Rassie	x		-	4	-	-	-	-
49.	Ernest	x		-	5	-	-	-	-
50.	Robin	x		-	5	-	-	-	-
51.	Tim	x		-	4	-	-	-	-
Total		39	12			16	30	29	17

Category: 1: Operational ECPs, 2: Academic ECPs, 3: Managerial ECPs, 4: Stakeholders in industry, 5: Postgraduate course convener. (Please note that these are fictional names.)

The interpretive data (qualitative findings) presented in this chapter were derived from a series of semi-structured interviews and focus-group discussions, which were designed to identify and explore the structural and cultural conditions that influence ECPs' motivation to either pursue or eschew postgraduate education. As depicted in Table 5.1, a total of 51 persons participated in either of the two semi-structured interviews or the six focus-group discussions. The participants presented the appropriate proportions of each respective category, with respect to the distribution across the field of emergency care. On average these discussions lasted 60–80 minutes (greater detail was provided in the preceding chapter). Table 5.1 below provides some insight into the demographic profiling of the participants, who have been given fictional names to ensure anonymity.

5.2. STRUCTURAL CONDITIONS

As discussed in the preceding chapters, structural conditions refer to the overall conditions or circumstances experienced due to the presence or absence of certain structures being in place. In the case of this study, the adapted definition provided to participants was:

Structural conditions: represents the overall conditions, systems and tangible/material factors present in the workplace (EMS setting) that influence our daily lives. (institutional/organizations rules and conditions, policies and procedures, the higher education architecture are but a few examples of this)

The above-mentioned definition was well received by participants who were more than happy to discuss the circumstances and/or conditions they experienced owing to the structural conditions present or absent within their respective EMS settings. During phase one, participants openly projected their own realities, often mitigating the need to employ abduction and retroduction for certain sections of the data. The inductive thematic analysis enabled me to identify three themes related to the structural conditions experienced by participants, namely, socio-economic, industry and academic. In keeping with Archer's (1995, 2007) guidance on the application of analytical dualism, structural conditions or rather the material relations that govern structures are further divided into the notions of structural systems and socio-interactions, which are both logically and

sociologically distinct for analysis, thus, enabling me to explore the situational logics experienced by ECPs. Figure 5.1 offers a visual representation of the themes and sub-themes discussed in this chapter.

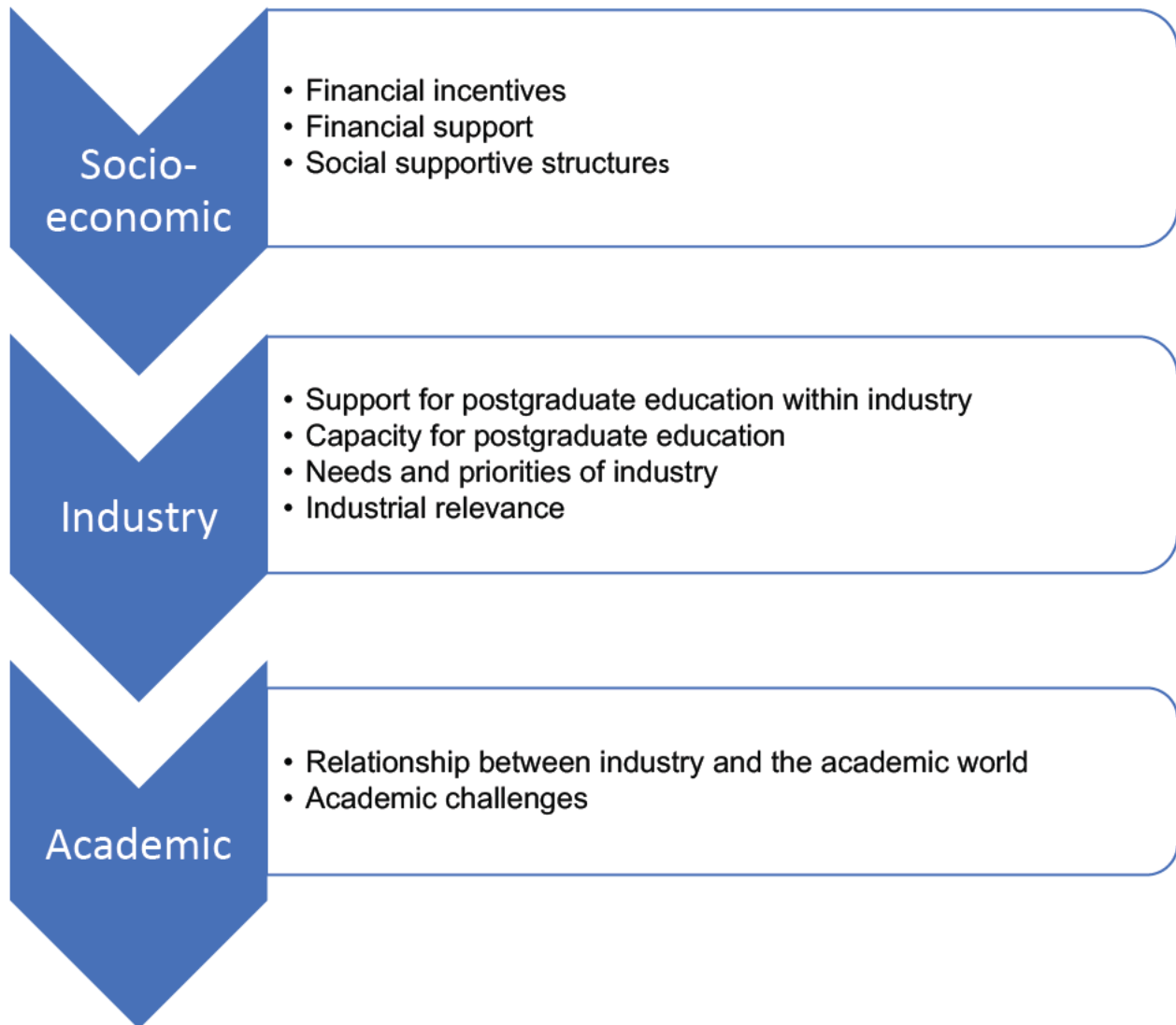


Figure 5.1: Structural conditions motivating ECPs to pursue or eschew postgraduate education: Themes and Sub-themes.

5.2.1 THEME ONE: SOCIO-ECONOMIC

The most commonly occurring theme identified from the discourse shared among participants are the generative mechanisms of a social and economic nature that motivate ECPs to either pursue or eschew postgraduate education. Social and economic factors such as income, education, community safety and social support can significantly affect the quality and longevity of our lives (Braveman & Gottlieb, 2014). These factors are suggested to influence and affect our ability to make informed and healthy decisions that influence our lives. These generative mechanisms or causal factors (discussed in Chapter Three in greater detail) are suggested to be trans-empirical, yet are real existing entities that possess causal powers to produce events and experiences in our social world, or in the case of this study, to motivate ECPs to pursue or eschew postgraduate education. This theme encompassed three sub-themes, namely: financial incentives, financial support, and social supportive structures.

5.2.1.1 FINANCIAL INCENTIVES

The lack of financial incentives for postgraduate qualification holders within the field of prehospital emergency medical care was identified as a common discussion point during the focus-group discussions, with many participants highlighting this to be a motivating factor for ECPs to eschew postgraduate education.

One participant indicated:

When I worked in South Africa, my salary was enough from my primary job to cover my immediate expenses. It was however not enough to push us to a point of which we say we can save enough to go to varsity and not even receive a salary increase for the new qualification attained. Some people are able to do that, I was not. Some people have access to bursaries, where most of us within operations do not.

I had to leave South Africa, find better employment opportunities and create the possibility for myself to study further while raising a family, as the financial situation in South Africa does not make it possible. (John)

This participant highlighted that economic conditions play a role in motivating ECPs to pursue or eschew postgraduate education. John proclaimed, as an ECP, he was not able to meet the financial requirements of his household appropriately in the limited resource setting of South Africa. John further alluded to the fact that his reality as an operational paramedic, did not provide him with the opportunity to save (financially capacitate himself) for a postgraduate education venture which would not result in a change in his financial income. His reality dictated that he sought out additional income to meet the needs of his family and pursue postgraduate education. Many participants echoed John's sentiments, particularly regarding the lack of financial incentive in the economically challenged setting of South Africa. Sizwe stated:

To a large extent I have to agree with my colleagues that financial incentives are an issue within the South African EMS.

I'll make a simple example with regards to the public service, where salary is based on this thing called occupation-specific dispensation (OSD) which has no room for a paramedic with a master's or a PhD, and he (John) is absolutely spot on to say there is no financial remuneration beyond the degree holder within EMS. In industry, a sector occupied by the most ECPs, there is no financial incentive for them to upskill themselves, there is no career progression plan affiliated with master's or PhD studies for them. Why should they then go do it? (Sizwe)

Sizwe suggested that the current structure within EMS does not financially accommodate the postgraduate qualification holders. He made specific reference as to how the OSD financial incentive strategy introduced in 2007, lacks the financial incentive appropriately to attract, motivate and retain ECPs wishing to transition into postgraduate qualification holders in the public health care sector. Sizwe also alluded to the notion that the majority of ECPs are employed within industry (operational sector of EMS), which lacks financial incentive initiatives to upskill them. He further suggested that the field of EMS does not recognise postgraduate qualifications within the requirements for career progression pathways. An operational ECP who migrated from South Africa suggested:

... I struggled to get my degree, I worked multiple extra jobs where possible, my family chipped in where they could, and this was all over and above the bursary I had to pay for my fees.

I wanted to continue my education, but there was not a way I could afford it. There were no bursaries for us operational staff, I would not get a better post or more money by studying, but I was determined to develop myself. When the opportunity to work abroad presented itself, I took it, I grabbed it with both hands. It has provided me with the opportunity to get my master's while being financially stable. I can also do more for my family without sacrificing unnecessary time away from them. (Richard)

Richard shared his reality with his colleagues during a focus-group discussion. By sharing his insights, Richard provided valuable insight into the effect that the economic conditions in South Africa has on ECPs wanting to pursue postgraduate education. The sense of responsibility for his family's needs in conjunction with his desire for self-improvement led him to seek out alternative options that would make each option possible. The notion of being required to choose between the two was something that participants acknowledged. Richard later echoed John's sentiments with regard to the lack of financial incentives for postgraduate qualification holders, as well as the poor access to bursaries within the workplace for operational ECPs. When asked how these economic conditions or the lack of financial incentives have influenced the postgraduate seeking behaviours of ECPs, Ian stated:

Gone are the days where we have to work endlessly and not be rewarded. We now have an opportunity to reach great heights. We have the capacity to be leaders within EMS, however the current landscape does not enable us to get there. Should we merely capacitate the service by attaining master's and doctorates without remuneration? Other countries have EMSs that know our worth, that will financially support us in our dreams. (Ian)

John, who agreed with Ian's comments, suggested:

... (the) international appetite for South African ECPs is growing. First world countries know that our ECPs are highly skilled and progressive individuals that will add value and

develop their EMS. South Africa is losing its future, the young ECPs are leaving, they are outgrowing the EMS back home, their needs are not being met, no support or incentives for them to progress, they are looking abroad to gain financial stability and opportunities to develop themselves without having to sacrifice a balanced lifestyle.

Here in Qatar, (the) majority of the ECPs are engaged in some sort of studies. Many are attempting to complete postgraduate programmes aligned to specialising in EMC. This is a position for which organisations worldwide have funded positions for, something that is not recognised or present in the South African EMS. (John)

John asserted that the consequences of not financially incentivising postgraduate qualifications within the South African EMS context have had devastating effects. This notion is evident by the 'brain drain phenomenon' and the rapid depletion of degree holders from within the South African setting (Oberoi & Lin, 2006; Kaplan & Höppli, 2017). John further suggested that the incorporation of funded specialised roles has motivated ECPs abroad to pursue postgraduate education. Ian shared a notion that encapsulated his emotions and outlook on the phenomena under investigation. He went on to suggest that the international appetite for South African ECPs might stem from the lack of financial incentives available for those who hold postgraduate qualifications and tirelessly go on to capacitate industry without being appropriately remunerated. Throughout the discourse shared among participants, it became evident that the highest proportion of ECPs ($14/16 = 87.5\%$ as opposed to $15/30 = 50\%$) actively pursuing postgraduate education related activities were not applying their trade within the South African EMS context (as depicted in Table 5.1 for categories 1 to 3). While the reasons for this may be multifactorial, participants shared aspects of their realities that alluded to potential reasons for this.

When I finished my Btech (undergraduate degree) there was a funded position for me. If I was still in South Africa, there would not be a funded position for me with my master's. That's why I am here in the UAE. (Tom)

I am an operational paramedic in South Africa with an NQF³ 9 qualification. I am a bum in a seat (occupying a seat in the ambulance). The system does not know what to do with us, so how can they pay us more? (Ann)

I agree with my colleagues that financial incentives are non-existent at the moment. I have reached the clinical ceiling within the EMS structure here. Out there, I may have more room to grow, a better job to work towards. (Fred)

Similar sentiments were shared throughout the discourse. Participants reported on the lack of financial incentives, which may be owing to the limitation within industry to accommodate postgraduate qualification holders within its current structures.

Tom's reality entailed financial incentives and career progression pathways for ECPs who pursue a postgraduate qualification. Ann, a South African-based ECP, who has a completely different reality, suggested that even though she has obtained a postgraduate qualification, the system she finds herself in, has not developed to the point where they are able to operationalise postgraduate qualification holders. This is likely to be the reason for the paucity in financial incentives expressed by the participants. Fred alluded to the discrepancy within the global EMS setting. He suggested that the EMS settings that his colleagues find themselves in, potentially offer the opportunity to grow within a more developed EMS structure, a setting that encourages growth for those who have reached the clinical ceiling within South Africa.

Throughout the discourse and experiences shared, it was evident that the lack of financial incentives for postgraduate qualification holders was one of the generative mechanisms that motivate ECPs to eschew postgraduate education. The elevation of the discourse, particularly since participants projected their own realities during the discussions, meant that this mechanism operated at the level of real. The reality differed between those within the South African EMS setting and those abroad, with the latter being described as a more structurally developed setting that promoted the notion of financially incentivising postgraduate seeking behaviours among ECPs. The paucity of financial incentives in the

³ NQF – National Qualification Framework

workplace has been widely reported in the literature as not only one of the main reasons for the brain drain experienced in South Africa (Kaplan & Höppli, 2017), but also a constraint for the pursuit of postgraduate education. In certain instances, this phenomenon may be empirically observed, and its causal power may not be exerted upon each ECP. This is to say, that not every ECP who experienced this structural condition may be motivated to eschew postgraduate education, as other factors may have significant influence on their agency as well. This is a notion further explored in Chapter Eight, as some cultural conditions may supersede that of structural ones.

5.2.1.2 FINANCIAL SUPPORT

The lack of financial support or access to support packages for postgraduate education within the field of prehospital emergency medical care was another common discussion point during the focus group discussions, with many participants suggesting this to be a motivating factor for ECPs to eschew postgraduate education. John and Richard suggested:

Some people have access to bursaries, where most of us within operations do not.

(John)

There were no bursaries for us operational staff.

(Richard)

Here John alluded to the fact that his reality as an operational paramedic did not provide him access to bursaries within the workplace for postgraduate studies, where others might have. Richard concluded that in his time as a South African-based ECP, operational ECPs were not provided an opportunity to access bursaries for postgraduate education. Patrick, who applies his craft in a rural province in South Africa, shared similar sentiments to those shared by his colleagues operating in urbanised provinces of South Africa. He indicated:

When I was a national diploma, I was told (that I) am already a paramedic and there is no need for me to go to university to get my Btech (undergraduate degree). I was not afforded time off to go study. I did not manage to secure a bursary even though I approached all levels of management. Their response (to me) was you are not at the college, so you don't need to study further. I completed my degree out of pocket. I want to go further, but

I can't do this out of pocket again and I do not want to go to the college.

(Patrick)

Even though Patrick found himself on the other side of South Africa, more than 1600 kilometres away from where John and Richard once resided, his reality was quite similar. As an operational ECP, he asserted that financial support in the form of bursaries is only available to ECPs in an academic setting. Sam and Kyle shared insights into their realities during one of the focus group discussions. They stated:

This is the second year that I have tried to get a bursary to study further. Second time that I do not get it (the bursary). I just started my course work (module based) master's which is not the programme I wanted to do, but because I can pay for each subject when I am ready, I was forced to go this way. I feel that it is unfair that I have been here for four years now and can't get a bursary, but someone here (participant part of the discussion) has just qualified and got a bursary because they work at the college. (Sam)

One has to realise the dynamic (that) we're dealing with. We are in a third world country and (are) finding ourselves training paramedics for the rest of the world and not South Africa. At the moment, academia is in need of ECPs with master's and doctorates. I am not saying that operations don't need them, however, to ensure that we professionalise this service, (and) get the proper education structures going, we need to capacitate our institutions. This might be one of the reasons why bursaries are freely available to us within education departments. (Kyle)

Though Sam and Kyle are ECPs working in the same province, their core functions are different. Sam is an operational ECP working for a specialised unit within industry, whereas Kyle is a lecturer at the EMS training institution. During the focus group discussion, Sam shared her frustration of not being afforded a bursary to pursue postgraduate education. She further alluded to the fact that even though she has been employed for four years and is part of a specialised unit within industry, a newly qualified ECP has access to financial support services. Kyle attempted to provide Sam with the context in which the support is afforded to him. Kyle suggested the need for postgraduate

qualification holders is prioritised within the academic environment as a measure to capacitate EMS education institutions.

But I have access to financial support, almost everyone at the training facility has access. So I am not sure why the rest of you do not. (George)

During another focus group discussion, where participants shared thoughts on the same matter, George proclaimed that ECPs at EMS training institutions have access to financial support by means of bursaries. He continued to express his uncertainty as to why ECPs from other components of EMS did not. David and Siya, who shared a similar reality as they occupy similar positions in different provinces of South Africa, shared a contradictory notion through their discourse.

At the provincial training institutions, it's not as easy as you all think it is. I am pursuing my PhD and I am paying for it myself. There is not enough money to give everyone bursaries. At my institution, we have to prioritise upskilling CCAs⁴ to BEMCs⁵ and then master's and doctorates. I am not sure if it's first come first serve, or if it's aligned to positions occupied by certain individuals. I know of people in my institution who got a bursary and then those of us who have not, as to why this is, I don't know. (David)

I find this strange. I am also employed at a provincial training institution and as far as I know, all my colleagues that are study(ing) have bursaries. I do not think anyone here (in his setting) is doing this out of pocket. (Siya)

Through their shared realities, David and Siya alluded to a potential discrepancy present within South African EMS training institutions. David had to pursue postgraduate education at his own expense, whereas Siya suggested that all those at his institution

⁴ Critical care assistant (CCA) refers to an individual who has successfully completed a nine (9) month, emergency care short course which is not NQF aligned at an EMS training institution.

⁵ Bachelor of emergency medical care (BEMC) refers to graduates with a four (4) year professional degree in emergency medical care.

had access to bursaries. David suggested that upskilling CCAs to the level of a degree holder was a priority at his institution and could potentially be a reason for this discrepancy. The discussion related to the matter concluded that this was a measure employed to professionalise the qualification holders and structures within the South African EMS setting.

Here (abroad) my employer will not provide any sort of bursaries. They give us free education aligned to the role we occupy. For many that is purely clinical training. For those select few who are in research positions, they provide access to training required.

... we can comfortably afford to pay for our studies. (Sizwe)

Sizwe provided some insight into the reality of those ECPs applying their trade abroad. He suggested that the lucrative salaries that attract ECPs out of South Africa create a degree of financial stability which makes funding their own postgraduate activities a possibility. This is a sentiment shared by his colleagues applying their trade abroad. He further reported that his employer provides role-specific support through the provision of training initiatives, a notion explored later in this chapter.

Throughout the discourse and experiences shared, the paucity of financial support in the form of bursaries appeared to be a potential generative mechanism that motivates ECPs to eschew postgraduate education. Participants demonstrated a strong desire to overcome this generative mechanism by resorting to various self-funding models. Throughout the discussion, participants projected their own realities, which gave a clear indication that this mechanism operated at the real level. The active engagement between participants alluded to a notion of frustration present, which largely stemmed from the feeling of unfairness or unjustness experienced by those who do not have access to financial support for postgraduate education. The discourse further alluded to a degree of discrepancy within the South African EMS context, a notion discussed later in this chapter. Outside of South Africa, these generative mechanisms or causal powers are mitigated by the lucrative salaries and developed structure of the EMS settings the participants find themselves in. ECPs working abroad recognised the influence of this mechanism during their time in South Africa and reported that its causal power

contributed to the decision to migrate aboard. During these discussions it became evident that in certain instances, the lack of financial support may be empirically observed, and its causal power may not be exerted upon each ECP.

5.2.1.3 SOCIAL SUPPORTIVE STRUCTURES

Throughout the discussions, participants actively engaged with each other around various structural conditions they felt that they were subjected to. The discourse alluded to social phenomena that were identified owing to the interrelatedness of the above two mentioned sub-themes and the social settings in which they found themselves. Within this sub-theme the author goes on to discuss these conditions and subsequently the generative mechanisms and causal powers of a social nature that first motivated ECPs to pursue and then eschew postgraduate education.

During the discussions, participants identified social circumstances to be a determinant of postgraduate seeking behaviours among ECPs.

When I think about postgraduate studies, I think where and when?

... finding the time and the proper environment is something that stops me from studying further. At work, I spend all my time in an ambulance and not behind a desk or PC⁶. My station does not provide internet access, there are no PCs, no books, no research journals, there is only patient care and transport. At home I need to be a mother to my kids, I am their father and their mother. I have to run a household. How do I start something that is going to require lots of time without improving my financial situation. I don't have the time to waste on something that will not immediate(ly) benefit my family?

Where do I study and get research done? At home after putting my kids to sleep, (while) knowing that I have to be ready for work early the next day? These types of studies (postgraduate education) require us to spend many hours working through research and

⁶ PC- Personal computer

so on. It's very different to the normal clinical training where we learnt most of the things in class. (Pam)

Here, Pam shared her reality as a single mother. She presented two determinants that influenced her motivation to eschew postgraduate education. She contrasted her work setting with that of an academic or researcher, a role suggested to be primarily filled by ECPs who are pursuing and/or have completed postgraduate education within South Africa. Her work setting is dynamic in nature, she uses the ambulance as a transport medium to provide emergency medical care. Her world view is that postgraduate education is designated for those who are within a static setting and are actively engaged in the use of information systems and/or literature. She further alluded to infrastructure omissions within her work setting that would be required for any postgraduate-education-related activity.

Pam asserted that as a single mother, time is not a commodity that she can freely use. She explained that the needs of her children outweigh those that are not associated with financial gain or improving her quality of life. Peter, who hails from a rural province in South Africa, echoed the experiences expressed by Pam from an urbanised province. Here, Peter shared notions that can be deemed to be at the level of actual (that which is known but cannot always be observed).

How many of our people, myself included, have struggled to get to the ECP level? They battled with the older short courses and then were told: you not relevant – go study again. Adults, who have families and kids. The workload is enormous. Personally, I am tired of going to study and trying to juggle the workload, my family has suffered over the last 14

years with me going through BAA⁷, AEA⁸, ECT and now BEMC. When am I ever going to enjoy some time with my family and raise my kids if I must continue (studying)?

If we (industry) create the post(s) and have the career progression available, our staff will make a way because it means more money for their families, but at what expense? For your service to grow? (Peter)

Peter suggested that the transition from the historical qualification structure of EMS to the more professionalised National Qualification Framework (NQF)-aligned structure has been demanding on his family life. His reality encompassed a notion of relevancy to the field, which he tried to maintain by attaining his undergraduate degree (BEMC). He further shared the sacrifices he has made to attain this and started to question the expense of his ongoing progression.

I have a family, I have kids, I need to support them. I can't deal without the 8-hour allowance. I can't live without this job. I need time to look after my kids and do for them. If I can't be afforded time off work to study, like those people in the college, then how will I be able to study and survive? We are living from month to month. I can't progress at the expense of my family. There are people in this service who get the opportunity to study, with time off, without losing their 8 hours (portion of their income) and who know, once they complete it, there will be incentives. As an operational person, I have come to realise that this is not the case. (Dave)

⁷ Basic Ambulance Assistant (BAA) refers to an individual who has usefully completed a 4 – 5-week emergency care short course (non NQF aligned) on the basic life saving measures to be performed under supervision.

⁸ Ambulance Emergency Assistant (AEA) refers to an individual that has successfully completed a 12 – 14-week emergency care short course (non NQF aligned)

Like Dave and Peter, many participants shared similar realities that alluded to an ongoing concern for the basic and social needs of their families. Time spent away from their families was often compared to the notion of “progressing within my field at the expense of my family”. Dave suggested that the provision of protected time for postgraduate education is not afforded to all. This discrepancy across the field of EMS in South Africa was a sentiment echoed by other participants.

My employer afforded me time off to attend contact sessions. The introduction of protected time at work really helped in motivating me in furthering my education. (Siya)

Throughout the discourse, it became evident that the social conditions experienced by ECPs varied across work settings (operations versus academic, South Africa versus abroad). When asked how the social conditions of working abroad had influenced his motivation to pursue postgraduate education, Jerry suggested:

Time wise, time wise I think there is more opportunity here (abroad). Because in South Africa, you know work takes up a lot of time, it's the actual working time and then the extra work activities that do not count towards your working hours. The financial situation in South Africa that ECPs experience force(s) them to either work overtime or get second jobs. On this side, financially so, we are comfortable. Work only requires a set number of hours because the systems here are not overburdened and do not demand extra from us. We have more time to focus on ourselves, our families, to study. Working here (abroad) has given me the opportunity to do things I never even thought about when I was in the rat race in South Africa. (Jerry)

In contrast to Dave's circumstances, who shared that many South African-based ECPs' financial situation dictates that they live month to month, Jerry's reality of being financially comfortable in an EMS setting that is not overburdened, has provided him with the appropriate amount of time to pursue postgraduate education. During the discussion Jerry drew on his experiences as an ECP in South Africa to suggest that the “extra work activities that do not count as working hours”, the need for “overtime or a second income stream”, and the basic social needs of his family were no longer contentious issues that influenced his decision making. Zina similarly drew on her experience in South Africa and

contrasted it to her current position in a developed nation. She concluded by making specific reference to the causal powers, the structural conditions, alluded to by her colleagues, have on the decision-making process to pursue postgraduate education.

Because some of our families aren't here, so we have a bit more time. We are not faced with the financial stressors that we once had. So yes, we have a bit more time. We're not working a second job. With these circumstances, we're not just autonomous practitioners. Now we're autonomous individuals because (of) everyday life. (There are) less workplace shackles, we are no longer sheep in every component of our lives.

We do things on our own. We rely on ourselves to determine our objectives, because we are away from our families. We are working abroad and that makes us decision makers and actually enables us to go out and seek further development. (Zina)

I mean in Australia, for instance, a place where many of our ECPs have now gone to, if you busy with your PhD within an ambulance service, you can ask for a sabbatical. I can say listen, I need three months to go finish my PhD. Where we don't see that extent of support for the most ... well ... let me rephrase that, because it's not entirely true. We don't see that amount of support publicly back home. (Tom)

Tom further suggested that his specific EMS setting (abroad) deemed postgraduate education related activities as part of work-related activities. Tariq shared a similar reality to that of Tom, where his EMS organisation not only advocated for the pursuit of postgraduate education, but also incorporated features to enhance the productivity of those who do so.

Let me give you an example. Because we have specialised roles here like clinical oversight, protocol development officers and prehospital-specific research roles. Our academically inclined ECPs in those positions have created a relaxed semi-social workspace, dedicated space for you to come and collaborate with others, get your work done, research, to share ideas and get help from people on other projects. It's the Google type setup, a think tank setting with healthy food, couches, and large screens and lots of

team break away rooms. It's a lekka⁹ social vibe with people getting things done.

(Tariq)

Tariq's projection of his reality startled his fellow participants who applied their craft within the South African EMS setting. Participants even went as far as to suggest that South Africa would never be able to mimic what the first world countries are doing to support the development of ECPs and subsequently the systems they are tasked to develop. Lerato actively engaged with Tariq during the discussion. She expressed her fascination with the structural conditions he was exposed to. She further went on to share that even though her setting might not be as proactive in advocating for postgraduate endeavours, the subtle socio-economic changes that her family and her are now exposed to may as well carry the same weight. Lerato suggested that a large proportion of medical practitioners in South Africa are influenced by the conditions she and her family were once exposed to. Lerato stated:

... I walked a very different and difficult path to become an ECP and it was not an easy road to get to this point. We need to realise that each one of us walked a different path to get here (being an ECP). Before I brought my family here (abroad), my kids only knew life in the township (impoverished area). My entire family lives in a township back home. My kids now know what it's like to live in a house that has enough space for them all, a place that has all amenities. No load-shedding (period without electricity) and no constant sound of gun shots. Safety is a reality here. My kids know what it's like to have a pool at home. For the thousands living in the townships, how many of them know what it's like to even have access to one?

Back home life is tough, we are not all afforded the same opportunities, the playing field back home is not even. Like many people in EMS, I had to leave home early in the morning and return late at night because you use public transport. Dealing with poor infrastructure and safety issues are problems that not all of you experienced. How can people living in those kinds of conditions back home be concerned with postgraduate

⁹ Lekka : South African adjective for nice or good

education whilst having to deal with real-life issues? People back home want to study further to improve their immediate conditions. (Lerato)

Lerato shared a reality experienced by so many in South Africa. Access to education in South Africa is not the same for everyone. The advantaged, disadvantaged and privileged are exposed to generative mechanisms that operate at every level and determine the degree of access and support for activities such as postgraduate education. Steve alluded to the sentiments shared throughout the discourse.

I can do my PhD for free because I am a university staff member; means that it doesn't cost me an extra 25 thousand (rand) every year. How do you as a person that can barely put food on the table for your kids and your family go (on to) do a bachelor's or spend how much extra it is these days to do a master's degree, which you do not really need, right. You already got to where you are with your degree.

Where if you're in academia, for instance, your institution or university wants to send you for further education, so they encourage you. Sometimes they pay for you; in academia if you get a master's you're immediately eligible for a promotion to a lecturer position, yeah.

... why is it that when you get a position in a favourable social economic status and you're now eligible to or you're now able to study further because you believe that you've got the money to do so or you believe you've got the time to do so, but when you working for a quarter or a third of the money in South Africa, you can't. There must be a reason (for) that. (Steve)

Throughout the discourse and experiences shared, it was evident that the lack of social constructs, and subsequently the socio-economic conditions experienced by ECPs, are generative mechanisms in their postgraduate seeking behaviours. The socio-economic influence experienced by ECPs applying their trade abroad had evidently motivated them to pursue postgraduate education, whereas the social constructs and socio-economic conditions proved to be challenging for ECPs in South Africa. This is not to say that it motivated them to avoid taking up such activities, as many may go on to break free from the circumstances from which they hail. Furthermore, in certain instances, this

phenomenon may be empirically observed, and its causal power may not be exerted upon each ECP. This is to say, that not every ECP who experienced this structural condition may be motivated to eschew postgraduate education, as other factors may have significant influence on their agency as well.

5.2.2 THEME TWO: THE PROFESSION

This theme deals with the prevailing conditions related to the EMS profession, which were identified as the second most occurring theme from the discourse shared by participants. The associated generative mechanisms or causal factors were suggested to motivate predominantly ECPs to eschew postgraduate education. This theme encompassed four sub-themes, namely: the support for postgraduate education within the profession, capacity for postgraduate qualification holders, the needs or priorities of the profession and the relevance to the EMS profession.

5.2.2.1 SUPPORT FOR POSTGRADUATE EDUCATION WITHIN THE PROFESSION

The lack of support for postgraduate education within the profession was identified as a common discussion point during the focus group discussions, with many participants suggesting this to motivate ECPs to eschew postgraduate education. Sarah indicated:

To be honest, the idea of postgraduate education is not actually supported for us on the road (operations). It is not even recognised for us, whereas it is more recognised in the educational field, but for (what about) us on the road?

Practically nothing changes so people go like, “Why should I go and study again while I will continue doing the very same thing?” (Sarah)

Sarah shared her reality with the participants. She contrasted the support present within the profession to that present within the academic environment. She further went on to not only assert the lack of support present within the profession, but also alluded to why that might be the case. The historic nature of EMS might have a lot to do with this notion, as previously stated, the development and progression within the profession was firmly aligned to being able to practically do more and/or offer a greater clinical skill set as an

extension of the organisation. Sarah further suggested that the lack of support present had encouraged her to question the rationale of going to study again, as she assumed that nothing would change for her. This is a rather interesting perception as education encapsulates the notion of changing one's internal environment so that one changes one's external environment. Was Sarah now starting to question the power of education in her setting? Or has the lack of support made her lose interest in the power of education?

Throughout the discourse, South African-based ECPs echoed similar sentiments. Albert asserted that there was limited support for ECPs. He shared his worldview on the matter and provided some context to his feelings, which was commonly shared among his colleagues. Albert asserted:

... EMS or the organisation will support everyone beneath an ECP. They will upgrade everyone, BAAs to go to diploma, AEAs to go do diploma, ECTs to do BEMC, everyone besides the ECP. The ECP qualification is the ceiling in the operational field. There is no room or no allocated place for anything above an ECP. Industry does not recognise, nor has it made provisions for researchers, because that's what you become with a master's. There are no postgrad (postgraduate) programmes that push out subject matter experts or consultants.

Our service and the HPCSA¹⁰ has not made provision for that, and our EMS will not either. So, what is the use? (Albert)

Here Albert alluded to the fact that developing ECPs, who were perceived as the clinical ceiling might not be a priority within the operations sector of South African EMS. He suggested that a large proportion of operational staff were still short course qualification holders and that upskilling them might be more aligned to the immediate needs of the profession. He further suggested that capacity within the profession and the provision of postgraduate education activities aligned to the needs of the profession, likely notions

¹⁰ HPCSA – Health Professions Council of South Africa

that motivated ECPs to eschew postgraduate education, which are two aspects explored in the sub-theme that follows.

Fred and Owen's reality, as postgraduate students within the same setting offered some valuable insight into the lack of support for postgraduate education present within the profession.

I have first-hand experience with this. I am a master's student and I sit on shift alone in a corner and work on my assignments. There is no safe working space that allows for these activities. I need to sit in a communal noisy space or in the ambulance to get work done. When I need help or guidance, there is no person within my workplace that can aid me. (Fred)

I agree with Fred, I think this might be owing to the lack of academic presence or even postgraduate qualification holders within operations or even industry as a whole. These people we never see, they are either HODs¹¹ or lecturers that do not interact with us.

(Owen)

Fred and Owen asserted that the lack of academic presence and appropriate workspace for related activities within the profession is a measure they perceived as demonstrating the lack of support for this type of initiative. The loneliness and the feeling of being isolated within the profession as a postgraduate student was a notion that was shared among participants of the South African-based ECPs. Throughout the discourse shared, participants openly shared their realities, which echoed sentiments of their postgraduate education being a lonely journey. The lack of academic presence within the profession, poor infrastructure and the absence of related activities were shared as likely reasons for ECPs feeling isolated during their postgraduate education journeys. ECPs further identified the lack of academic presence and support by EMS leadership to motivate them to eschew postgraduate education. These sentiments were unique to the South African-

¹¹ HOD – Head of Department

based participants, whereas ECPs applying their craft abroad shared a different reality. Tom and Kim suggested:

Over here (abroad) we are supported. EMS staff are encouraged to progress, study further and develop themselves and achieve a master's or a doctorate. This is largely because in doing so, the person now becomes a commodity to the organisation, they are likely to contribute more to its development, (and) they will be positioned so that they can plough back and create capacity. This happens here (abroad) because this is a first world country with totally different challenges (to) that (which) South Africa has. Staffing numbers are not an issue, retention is not an issue, having the proper people to ensure the system develops is an issue. (Tom)

Similar(ly), to Tom, my setting has a dedicated pathway for this (postgraduate education-related activities). Our organisation is affiliated to two EMS-specific institutions and even an EMS journal. Staff wanting to study further, can do so through the organisation. They do this as an employee of the organisation and enter into an agreement binding them to (the) organisation for the duration of their studies. (Kim)

Here, they suggested that in more developed nations, postgraduate education was supported as a workplace activity. As ECPs currently engaged in postgraduate education, they felt supported by provisions such as protected time and access to EMS-specific postgraduate programmes. Their realities were shaped by the fact that their organisations viewed postgraduate-education-related activities as a measure to capacitate the organisation.

Throughout the discourse shared, participants openly projected their realities and identified various generative mechanisms that operated at the level of real. The lack of support within the profession for ECPs wishing to pursue, and for those actively pursuing postgraduate education was unanimously described as a generative mechanism for eschewing postgraduate education by the participants. The disproportionate nature of support for postgraduate education within the profession, within the confounds of South Africa and abroad were explored by participants. While the cohort at times alluded to various solutions that would address the issues at hand, it became fairly evident that

supportive structures for postgraduate education within the profession were limited for ECPs within the South African EMS setting.

5.2.2.2 CAPACITY FOR POSTGRADUATE EDUCATION

Capacity for postgraduate qualification holders within the profession was identified as another common discussion point during the focus group discussions. Throughout the discussion and experiences shared, it was evident that the lack of capacity for postgraduate education within the profession was a generative mechanism that motivated ECPs to eschew postgraduate education, particularly for those applying their trade within the confounds of South Africa. Peter suggested:

... within operations, we can't even get to the point of supporting EMS staff to perform their medical function properly. How are we going to get to the point where we have people preparing or equipping us to get to the master's level? (Peter)

Peter shared his reality as an operational manager with the group. He asserted that his EMS setting lacked the fundamental structure and capacity to support and enable practitioners to perform their primary role appropriately. In the same breath, he suggested that capacity for the minority of individuals pursuing or who had completed postgraduate education was far outweighed by more substantial demands required for an effective EMS.

Fagri, an operational ECP, who largely agreed with Peter's sentiments, suggested that his reality borne out of the lack of capacity for postgraduate qualification holders within the profession, was not one of frustration, but rather of omission or exclusion. He suggested that his current position within the profession excluded him from pursuing postgraduate education.

The college is the only place to go if you want to do master's, but they not taking on people so what must we do, but move rather (out of South Africa)? Even if you do master's at the college, they have no positions for research, so what is the use? You are there also (at the college with a postgraduate qualification)? Does master's or PhD make you a better lecturer? Our EMS does not know what to do with master's or doctorates yet. EMS

is developing like you all say, but it's not aligned with academia (EMS specific), there are no quality indicators other than response times (and) no quality assurance, no EMS-specific research departments. EMS is not aligned to academia, its aligned with plug in holes, moving people from point A to point B, we are a taxi service. (Fagri)

Fagri stated that not all ECPs are afforded the same support for postgraduate education. He suggested that ECPs at the EMS training institutions are predominantly encouraged to pursue and are supported for postgraduate education. He further questioned the capacity these institutions have for these qualification holders. In addition to the notion of ECPs viewing leaving the South African-EMS setting as an option to attain better opportunities to pursue postgraduate education, he suggested that the profession and EMS academia are misaligned. He further asserted that the profession had not developed alongside EMS education structures, a notion discussed later in this chapter.

Contrary to the sentiments shared by ECPs within the profession lacking the capacity for postgraduate qualifications holders, Fred alluded to the fact that the profession failed to capacitate its staff to engage with postgraduate education.

Something you have to bear in mind. If I am working at the university or any other EMS training place (institution), I will be engaged in research, teaching methods, evidence-based discussions and that level of interaction. Here within the operations (industry), we are engaging with people that are not really academically educated. We talk to the general public, we use broken English, Afrikaans and Xhosa. How does that prepare us to interact at a master's or doctorate level at university? (Fred)

Here, Fred contrasted the disproportionate nature of capacity affiliated to the role occupied by ECPs within the profession and the academic world. He suggested that the nature of discourse and engagement present within EMS training institutions for postgraduate qualification holders also capacitated ECPs to appropriately engage at the level required for such educational activities. He felt that his reality within the profession and the demands of the context in which he found himself, handicapped him from developing or being able to do the same.

I completed my master's, almost four years ago now and what has changed since then? I was able to help with policies and some projects because of my ability to produce quality documents, (and) nothing more. I am still just an ambulance driver. The operations component of EMS does not have specific positions where they can use me effectively. I do not want to go to the college or the university to lecture. (Jenny)

... Industry does not recognise, nor has it made provisions for researchers, because that's what you become with a master's. There are no postgraduate programmes that push out subject matter experts or consultants. (Albert)

Jenny and Albert shared similar worldviews regarding the capacity present for postgraduate education within the profession. Jenny alluded to not being provided the opportunity to plough back into the profession after completing her postgraduate education. In the four years since completing her master's, she had aided in only a handful of activities. She, like Albert, asserted that the lack of designated roles within the profession appropriately to use ECPs with these qualifications as agents for change was a system issue. She further concluded to suggest that capacity for postgraduate qualification holders primarily existed within the academic setting. Albert went a step further to suggest that the profession in conjunction with the statutory body for emergency medical care providers in South Africa had failed to capacitate the EMS profession with the necessary roles that would not only use these qualification holders effectively, but also encouraged more ECPs to pursue postgraduate education.

Academia has rapidly outgrown industry. As a Btech (undergraduate qualification holder), the operations (industry) has a purpose for you, as a postgraduate, they do not. (Jack)

Jack, like so many before him, asserted that the academic world had rapidly outgrown the profession. He equated this notion to the predefined purpose the profession had for him as an ECP, compared to that of a postgraduate qualification holder. He further alluded to various omissions within the profession that have been discussed in the preceding sections. In response to the discourse shared on the disproportionate relationship between the profession and the academic world, Pat, who is also a lecturer at an EMS-specific training institution stated:

... I think that many of you have this wrong. Let me give you an example.

The master's programme I recently completed allowed me to build capacity as a researcher. My core function as a lecturer is to facilitate learning among various groups of learners. The master's programme may have helped me improve the way I engage with the literature, to develop learning materials, but my diploma in education provided me with the necessary knowledge, skills and attributes required to facilitate learning. Everything my master's prepared me for, the research supervision, scoping reviews and research studies are things I have to do in my own time. These are extramural activities. Many of the training institutions do not have dedicated positions for people with master's or PhDs, these positions are only at the university, and they are extremely limited. (Pat)

Here, Pat shared his reality with the group, clearly opposing the notion that only the EMS-specific training institutions have capacity for postgraduate qualification holders. He suggested that all his activities related to his postgraduate qualification were in fact extramural in nature. He further alluded to the fact that only a limited number of positions are actually available within the academic world, whose core function it is to operationalise the specific tools attained during the postgraduate education programmes as researchers.

In contrast to the sentiments shared above, ECPs applying their craft abroad shared a very different reality. While the majority of them are in developed nations, the capacity present within their EMS settings not only encouraged postgraduate seeking behaviours among these ECPs, but also supported them throughout their journey and ensured some sort of mechanism for them to plough back and add value to their settings.

Okay, so one of the reasons I left, if I completed my studies, then what? Come back to the same ambulance (to) do the same thing. Am I recognized - I am not? So that is one of my reasons that defeated the purpose of studying and going through postgraduate education within EMS back home. You see, I was frustrated with the EMS setting itself, so I left and came here (abroad). I completed my master's from this side. Where I knew I would be recognised and provided the chance to use the skill. (Henry)

Henry shared his reality and drew on his time back in South Africa. He reported the lack of capacity within the profession frustrated him and actually discouraged him from pursuing postgraduate education. The lack of capacity within the South African EMS setting to accommodate him as a postgraduate qualification holder motivated him to look for opportunities elsewhere. Tariq went so far to suggest that the EMS profession within South Africa had not made the need for postgraduate education available to ECPs.

Right now, within industry back home, I don't. I don't think there's a need for them (postgraduate qualification holders). Well, at least industry has not made the need available.

What are people going to do with the qualification? The system has not adapted to the point where they are providing a specialised service or doing anything else (other) than work in an ambulance. (Tariq)

Tariq asked the question that so many had asked throughout the discourse: What are people going to do with the qualification? Throughout the discussions, many ECPs rhetorically answered this question by suggesting that they would return to their conventional ambulatory duties, almost as if they had not partaken in any form of postgraduate education. Chris provided some insight into the capacity present within the EMS of developed nations.

...here (abroad) our EMS is developed. QA (quality assurance), clinical oversight, clinical guideline developers and infrastructure developers are real roles that are occupied by mostly ECPs. Those who are busy with their studies get transitioned into pathways related to their studies and upon completion they are already part of the team. For me this was amazing, the team I was exposed to not only helped me through my studies, but also encouraged me to see the development of the organisation as (a) responsibility I had. (Chris)

Chris provided a detailed example of how capacity was present within his context. He shared his experiences as a candidate or end-user of the capacity within the organisation as a postgraduate student and subsequently the qualification holder. Chris compared the

profession in South Africa and the developed nation where he found himself. Interestingly, he reported specific roles or positions that are geared to create capacity in his setting, whereas these are roles that are required within any functional EMS.

When asked how ECPs applying their trade abroad can accelerate the growth of the profession within South Africa, Chris stated:

We need people like you to return from here (abroad), to head back home and change things, a product of the system to change it and take it by the horns for the next few years.
(Chris)

While many of the participants agreed with the sentiment shared by Chris, they went on to express certain reservations.

What will change? Will I be provided the opportunity to give back and help them develop or will I just be told to drive the ambulance? (Greg)

I would gladly go back home to help develop the service when I reach my financial goals. One concern I have is that we have become accustomed to working in a decent EMS, a progressive system, one where we have proper systems in place. Working here has opened my eyes to what the EMS back home can actually be, but is the system prepared to accept us in that capacity?
(Ryan)

Greg and Ryan echoed similar sentiments to those shared by participants applying their trade abroad. This is to say, that ECPs were open to the idea of returning to South Africa and ploughing back into the EMS, but shared similar concerns of relevance to the profession: But they doubt whether the South African EMS profession is ready to accommodate these individuals as agents of change.

Throughout the discourse, participants openly projected their realities, concerns, and frustration with the lack of capacity within the EMS profession to accommodate postgraduate education. It was evident that the lack of capacity is a generative mechanism that operates at the real level. The lack of capacity has done more than

merely discourage ECPs from pursuing postgraduate education, it has motivated ECPs to look elsewhere for the appropriate context to sustain and nurture their developmental needs. Once again, the disproportionate nature of the EMS profession in South Africa and abroad was explored by participants. While the participants at times alluded to various solutions that would address the issues at hand, it became fairly evident that the capacity within the profession is rather challenging for ECPs in South Africa.

5.2.2.3 NEEDS AND/OR PRIORITIES OF THE EMS PROFESSION

The immediate needs and priorities of the EMS profession were identified as another common discussion point during the focus group discussions. Participants described the needs of the profession to be a determinant for the postgraduate seeking behaviours among ECPs. They further suggested that the omission of the academic world to provide purposeful postgraduate packages aimed at meeting the needs of the profession, was likely resulting in ECPs being motivated to eschew postgraduate education-related activities.

Frank suggested:

Ok, so at the moment, so operations' larger problem is still getting more people present at work to do the job required or as Ann says: bums in seats. That is what us as managers see. In the immediate setting, how will you (ECPs) going off to do a master's or PhD help them meet their daily targets? It won't, it will set them back – a person to fill up a vehicle that will move the workload. (Frank)

As an operational manager, Frank's reality was conditioned by his managerial role. He alluded to the daily challenge managers within the profession were faced with – the staffing levels which are no longer merely a human resource department concern but appeared to be one shared among all within the profession. His reality and the embedded frustration guided him to question how encouraging postgraduate seeking behaviour among ECPs would aid in meeting these urgent needs of the industry, to such a degree that he even suggested enabling such behaviours and motivating ECPs to pursue

postgraduate education may likely precipitate the magnitude of this challenge experienced by the profession.

I understand the need for CCAs and N-dips needing to go do the BEMC (undergraduate degree) to upskill themselves and ensure that they are relevant to the new scope.

I understand BAAs, AEAs, ECTs and even Diplomas wanting to go study, as they will get EMS-specific and relevant qualifications that will improve our primary objectives, in terms of what we are able to offer our patients and communities.

As a manager, I can't justify sending my staff or even advocating for them to go, because I know they might not come back, and if they do, what difference will they make? But what EMS-specific postgraduate education is there? None in South Africa, actually. (Astrid)

Astrid, another ECP occupying the role as manager within the profession, suggested that the needs of the EMS profession were satisfied by upskilling practitioners up to the undergraduate degree level. She asserted that this was aligned to one of the primary objectives of the EMS profession. The EMS-specific nature of undergraduate training (additional clinical ability) was further contrasted as a possible reason for the uncertainty of how postgraduate qualification holders would return to elicit change within the profession. Astrid further suggested the pursuit of postgraduate education was associated with ECPs leaving the profession.

Like many of the participants, Astrid questioned the role of postgraduate education within the profession. As an operational ECP who had pursued postgraduate education and now applied his craft abroad, Tom alluded to the possible role ECPs like him could play within the profession. He stated:

This is our opportunity to develop and mould the thinkers and strategic planners that will radically change the status quo, but we need to realise the (EMS) system is broken and acknowledge that, then we can build forward.

People (ECPs) are losing their relevance at the moment. Those in education can't contextualise their teaching, nor their research. They do not have their finger on the pulse

and (are) living with an illusion of what they think the (prehospital) field is like. How can these be the only people (that) the service (industry) turns to for advice, guidance, and development? We need to start turning to our own (members of industry) for this and (by) getting our own (ECPs) to progress (pursue postgraduate education) will get EMS to that point. (Tom)

Tom expanded on a common discussion that occurred throughout the discourse: he also suggested that the current context is that of a broken system that requires developmental interventions. He felt that ECPs who pursue postgraduate education were losing their relevance in South Africa, a likely reason for the wide-spread immigration practices among ECPs. He further suggested that there is a misalignment between that of the profession and the academic world, which was of particular importance as the academic world is often charged with driving the development and guidance for the profession. He alluded to the need to capacitate ECPs within the profession to take charge of this notion and develop rather than be subjected to guidance from an outside entity.

Fred further expanded on this topic and suggested:

EMS is still developing; the (prehospital) field is still in its infancy. We have grown from having only short course qualifications (non-NQF aligned) within EMS to a more professionalised service, where we have the appropriately qualified people providing the right kind of care. Yes, we have a long road ahead of us to get all our practitioners to that point, but we are headed in the right direction.

....none of this would have been possible if we did not have people that went on to study master's and PhDs. They might be a few, but they have been ambassadors for change. The CPGs¹², the new scope, all that is products of people with those qualifications.

¹² CPG – Clinical practice guidelines are statements and guidelines that include recommendations intended to optimise patient care that are informed by a systematic review of the evidence and an assessment of the benefits and harms of alternative care options.

I would say, we need to acknowledge that the current options available to ECPs are not specific to EMS, neither does it enable them to bring about real change in our field. Yes, they can do research, but is that what we really need right now? (Fred)

Fred described the profession as still being in its infancy and alluded to the value that postgraduate-related activities have added to the development of industry thus far. Later in his discussion, Fred shared his reality as an academic, which sees ECPs who pursue postgraduate education as ambassadors for change and development within EMS. In the latter part of his contribution to the discussion, Fred agreed with the notion of EMS-specific postgraduate education shared by his colleagues. He asserted that while research capacity is important within any profession, the ability to perform research only, might not address the immediate needs of the EMS profession in the given context.

Ryan responded to this notion by suggesting:

...we need postgraduate programmes tailored to the needs of EMS. Programmes that will develop our people (ECPs) to the point where they can be system developers or policymakers or even great managers, not just researchers. (Ryan)

Osman shared similar sentiments to that of his colleagues by suggesting that the needs of the profession should direct the postgraduate education streams and not merely capacitate ECPs to perform research. He stated:

A paramedic who is now a researcher is great, he can do research for us, but we need more than just that.

We need people who are experts in systems development, people who have been trained extensively to develop a sustainable QA (quality assurance) system or to be consultants. If that's the end product of master's or PhD programmes, then what EMS will not jump at the chance to take them on and create room in our structures for them? (Osman)

Owing to the nature of the discussions among participants, Henry felt it necessary to remind his colleagues of the role of postgraduate education in meeting the needs and subsequently capacitating the profession.

We need these people now more than ever, specifically in EMS. These are the people that will help us get our own identity, they will help us develop region-specific protocols that we really need. At the moment our protocols are developed or adopted from those produced by other countries based on their needs and South Africa is unique. These are the people that are going to integrate information systems in our field, the people who will create a research presence which we do not have. So, they are actually the future.

(Henry)

Here, Henry touched on topics suggested by many of his colleagues. While he acknowledged the resource limitations and unique needs of the profession within South Africa, his reality of being abroad, and understanding of the capacity provided by postgraduate qualification holders within the workplace, encouraged him to advocate for the inclusion of such activities in meeting the needs of the profession. Henry, like Osman, further suggested that the need of the profession to develop its own identity, region-specific protocols and integrate with other developing fields to enhance the capacity and effectiveness of the discipline are likely to be met by ECPs who become postgraduate qualification holders.

5.2.2.4 RELEVANCE WITHIN THE EMS PROFESSION

This sub-theme deals with the structural conditions experienced owing to the perceived relevance of postgraduate education within the profession, as alluded to by participants. The generative mechanisms and causal powers associated with the relevance of postgraduate education in priming ECPs to have real-world success after graduation was further identified as a common discussion point throughout the discourse shared among practitioners, with participants suggesting that this is likely to result in ECPs being motivated to eschew postgraduate education.

This sub-theme therefore encompasses two notions, namely being fit for purpose and the misaligned expectations between the profession and the academic world. While in certain instances these may be reported as trans-empirical in nature, the manner in which they influence ECPs' decision making suggests that they are actually real existing entities that produce events in our social world, or in the case of this study, to motivate ECPs to

eschew postgraduate education. Fagri, an operational ECP, who is currently not interested in pursuing a postgraduate qualification, stated:

I studied and put in countless hours to complete my (undergraduate) degree and become a competent clinician, this allowed me to enter into EMS and have a purpose. This purpose is transparent and all ECPs know this. From the start it is clear how our training will help us fulfil this role. What are the roles of postgrad(uate) qualification holders in EMS? What is their purpose? These are not really well defined. As an ECP, I am fit for a purpose. If I go study a master's, what purpose will I (exactly) be fit for? (Fagri)

Samantha, an operational ECP from a rural region of South Africa, echoed Fagri's sentiments:

When you are doing the degree, your mind is saying to you, that when you qualify your scope of practice is going to increase, you will physically be able to do more for patients, your service will be able to do more for the patients.

When you do the master's, there's no such thing that will happen, and, if you look at the management part, where if you do have people who actually are in the management or education space, are they being moulded to do more in their space? No, they are not.

So if I do my master's, fantastic and now (I) have the tools, I can now conduct research. I can supervise the research activity. Fantastic! That's all I can do.

Does it mean I'm maybe a subject matter expert in a specific area, does it mean I will be a good lecturer or a good manager? No, it does not. There is a disconnect and until this is made clear to us all, most of us will not go that route. (Samantha)

Samantha and Fagri both alluded to the notion of being fit for purpose within the profession. They went on to share their realities and described how the lack of specific purpose for postgraduate qualification holders was largely instrumental in motivating them to eschew postgraduate education. Fagri drew on his experiences during undergraduate training. He suggested that having an educational programme aligned to a specific role and/or function provided ECP learners with a purpose, whereas the same could not be

said for postgraduate education learners. Samantha drew on the practical aspect of having one's scope of practice enhanced, thus enabling prehospital care providers with the ability to render a higher level of care than without such experience. She further argued that the postgraduate programmes pursued by ECPs did not capacitate them for the current functions they occupy as lecturers and managers within the profession. Furthermore, she alluded to a disconnect between the profession and the academic world, a disparity discussed throughout this chapter. Ann, who completed a postgraduate education programme and remained an operational ECP, concurred with her colleagues by providing some insight into her reality:

I have a master's. I did the course work one. It was amazing, I learnt so much, very little that can be used within this setting though. I looked for opportunities to use small things here and there, but I have never appropriately used those tools in the workplace, maybe that was because I was never really afforded the opportunity.

I can conduct research, but I can't fix the issues of staffing levels.

I have a master's and all I do is run around in an ambulance transferring patients all day. I am not the EMS problem solver the university wanted us to become.

So, I do understand what you are saying when you mention being fit for purpose.
(Ann)

Ann provided some valuable insight as an ECP who had navigated the structural conditions within the profession to pursue and successfully complete her postgraduate education. She further shared her reality of not being afforded the opportunity to use the tools which she attained during her studies. She suggested that her postgraduate studies did not enable her to become the EMS problem solver the postgraduate environment insinuated she would become and therefore concurred with the sentiments shared by her colleagues of the current postgraduate activities not being fit for purpose.

George, as an ECP within the academic setting, echoed these sentiments. He stated:

Well, we have to ask ourselves the realistic question: Do ECPs really have a say in the matter and should we not be the ones defining our own purpose at this level?

The academic institutes and universities have a role for these people (postgraduate qualification holders). Some of these roles are appropriate (postgraduate course conveners and researchers), but the rest are just occupying an academic post as a lecturer, when EMC master's or the PhD does not even equip one for those roles.

And there is still too many remnants of “we will do things this way because we have been doing it this way”, in our profession. (George)

George suggested this to be an issue within the academic setting as well. He rhetorically posed a question to the group of postgraduate holders in an attempt to awaken the voice of reason, the voice of the end-users to postgraduate education. In doing so, he attempted to demonstrate the invaluable position these qualifications hold within the profession and/or the academic world. George went on to suggest further that as a profession, EMS still holds on to remnants of an autocratic system, where practitioners required guidance and instruction from those with a higher qualification to bring about meaningful change.

In a different discussion, David engaged a similar argument to the one posed by Ann. He stated:

These qualifications allow and actually make us capable of making meaningful change in the workplace. Things are getting worse, and we are not being encouraged or supported to be the reason that things get better. It's like management do(es) not see our capabilities in helping (to) fix things, but the onus is upon you as the (postgraduate) qualification holder. You attain a certain degree of autonomy, a certain degree of responsibility with the newfound (informed) outlook. At the moment the numbers (of postgraduate qualification holders) are so low, the canvas is blank, you decide your purpose, you position yourself to make the relevance. (David)

David suggested that the personalised nature of postgraduate education enables the qualification holders to make meaningful change within the profession. While he went on to acknowledge the sentiments shared by his colleagues of these activities not being openly supported within the profession, he suggested that the paucity of postgraduate qualification holders enabled those who pursue this avenue to choose their own direction and create their own purpose within the EMS profession.

Tom nicely synthesised the correspondence and feelings of ECPs applying their trade abroad by stating:

ECPs working abroad are pursuing these forms of studies to stay relevant and to be appetizing for the South African EMS setting. (Tom)

Tom, like so many of his colleagues, suggested that ECPs abroad pursue postgraduate education not only to be relevant to the evolving EMS setting, but also to be appetizing for the South African setting. This was a rather interesting sentiment, particularly as many of the ECPs in South Africa openly expressed the concern of postgraduate education not being fit for purpose within the EMS profession.

When confronted with the reality shared by ECPs based in South Africa, particularly regarding the notion of postgraduate education lacking relevance within the profession, Tom and his colleagues suggested that the EMS profession in South Africa required:

... pathways and policies that enable ECPs to not only gain access to the postgraduate studies, but also ensure that they are user friendly within the workplace upon completion.

For those who have it, it is not just a piece of paper, it's an attained skill set that requires the appropriate platform for us to make a real-world difference. Sadly, back home that is not the case, our systems are too immature to recognize this need and give ECPs the opportunity (to use the skills attained) (Tom)

Tom's reality as an expatriate ECP, surrounded by postgraduate qualification holders who are purposeful within the workplace enabled him not only to draw on comparisons of the different settings (South Africa and abroad), but also provided meaningful suggestions of what is needed to develop the profession to the point of being able to operationalise these qualification holders. Through all the experiences shared by ECPs applying their trade abroad, it was evident that the concern of relevance within the EMS profession for postgraduate education holders was one primarily experienced within the confines of South Africa. The role of ECPs in returning to contribute actively to the development of the profession, has never been more valuable in this regard.

It is evident that on a local scale, the lack of relevance within the EMS profession associated with the current postgraduate education programmes accessed by participants was highlighted as motivating ECPs to eschew postgraduate education. While valuable arguments have been made for the role of autonomy and self-derived relevance among ECPs, the conditioned nature of the profession and by extension, its ECPs, requires purposeful strategies that enable ECPs to be fit for specific purpose as postgraduate qualification holders.

Throughout the discourse, it became evident that a common perception shared by participants was the notion that the primary role and current needs of the EMS profession are not aligned to the product of postgraduate education offered to ECPs as end-users within industry. It was evident that the generative mechanism of this empirically observed phenomenon may well be experienced by ECPs within the industry. However, these causal factors may not result in all ECPs within the profession succumbing to eschewing postgraduate education as other factors may further influence their agency in this regard.

5.2.3 THEME THREE: ACADEMIC

This theme deals with the generative mechanisms stemming from the academic-related conditions experienced by participants, which was identified as the third most occurring theme. These generative mechanisms or causal factors of an academic nature were suggested to influence the postgraduate education seeking behaviours of ECPs. This theme encompassed two sub-themes, namely the relationship between industry and the academic world and that of the academic challenges experienced by ECPs.

5.2.3.1 THE RELATIONSHIP BETWEEN THE EMS PROFESSION AND THE ACADEMIC WORLD

The disproportionate relationship between the academic world and the profession was identified as a common discussion point during the focus group discussions. Throughout the discussions, it was evident that the absence of dialogue between the profession and

the academic world, the poor academic presence and influence within the profession and the disproportionate growth between the profession and the academic world were perceived as generative mechanisms that motivate ECPs to eschew postgraduate education.

Sizwe provided some insight into the disproportionate nature that exists between the profession and the academic setting, particularly owing to career progression within the public sector.

What we need to understand is there's a structure that is in place, but it is not perfect. Let me give an example, you see as a PhD holder or a master's holder in a university setting, that gets acknowledged even though I might not be a head of department because there's only one head of department. I can be a prof (example), but not a head of department or a doctor, but not a head of Department, but be remunerated accordingly. However, the OSD salary scale for all from the aspect of the provincial settings. It is very ... it's very difficult to the actual progression (by attaining postgraduate qualifications) outside of a post (without getting a higher-level position).

The problem ... so progression to a larger extent is linked to a post, which it shouldn't be. Progression should be linked to (a) qualification and to growth, not necessarily a post because posts are limited. We are not going to get everybody as a manager, you're not going to get everybody as a principal in a college but there is nothing stopping John as a senior lecturer within a particular college to have a PhD and be remunerated as such...

So it's a shortcoming that the current public sector (has). (Sizwe)

Sizwe suggested that within the public sector, progression is determined by the posts that ECPs occupy and not the qualification they hold, which is not the case within the academic world. In the academic setting, the qualification holders are remunerated as such, their progression is not based merely on the availability of certain positions, as the academic setting recognises postgraduate education qualifications within its structures. Participants further suggested that the provisional EMS-specific academic settings progression pathways do not resemble those experienced at the university, despite the

inclusion of postgraduate qualifications as minimum requirements in their recruitment process.

While the provincial EMS academic settings are slowly following suite with the universities offering EMS undergraduate education programmes, industry lags behind. Owing to the need for ECPs to be problem solvers within the profession, many participants alluded to numerous conditions that motivate ECPs to eschew postgraduate education. Demonstrating capacity as the likely problem solvers for the EMS profession, participants subsequently went on to explore the associated solutions.

Robert suggested that one of the conditions that motivated ECPs to eschew postgraduate education was the lack of dialogue between the profession and the academic world. He stated:

... this conversation needs to happen; I do not see why it's not taking place. Here (abroad) we have an academic department, which in essence is an extension of the service. These two entities converse. Here operations (industry) and the data being drawn inform our academic initiatives. EMS basically tells us, (that) these are the things, the big gaps within EMS that we (industry) need these addressed.

....because how often do you get people rocking up at university? I want to do my master's, but I don't know what to do it in. I do not have a research question or a topic.

Okay, well we have these topics and there's actually a website that you can see what's being researched and things like that. I just have to look for it. You can say once it's like somebody is taking up the topic and they're working on it, or it's been published by now and feedback goes back into EMS where the answers to these questions are needed.

It's going to be a forever problem as there is not enough staff to run the system adequately and you just plugging holes through(out) the year keeping the wheels on the bus.

(Robert)

Robert, like so many of his colleagues, advocated for this dialogue to take place. He reflected on his time within the South African setting and then went on to share his current

reality during the discussion. Robert reported on how advantageous the dialogue between the profession and the academic world is in his setting. Owing to the presence of such a dialogue, it enabled the needs of the EMS profession to inform academic activities, which not only identified the gaps, but cultivated a change mechanism within what can be empirically observed as a closed system. He compared the South African system to that of a perpetual problem, in which he suggested that we are currently just plugging the holes rather than streamlining the components. Zara's reality, which she experienced within the rural regions of South Africa, suggests that the absence of this dialogue had profound implications for the entire prehospital health care system.

....the universities, (and) the colleges they have all improved, they have rapidly developed by changing from the short courses and started professionalizing things. They have moved forward nicely, we are no longer seen as a product of vocational training, we are products of professional training...

Human resources and other support services have followed on nicely and have also developed and improved, but partially only. The operations (industry) has really not changed at all, they have more been on the receiving end and are more caught up in trying to keep afloat. The entire concept of EMS in SA is flawed, it is not (a) single unit moving forward together, it's more like a bar graph, one's development is radical, and the other is moving at the pace of a snail. (Zara)

Zara echoed sentiments shared by her colleagues, who all alluded to the disproportionate growth and development between the profession and the academic world. While her worldview suggested a much larger landscape, the scope of this investigation encouraged us to dissect what can empirically be noted between the two to get to the level of actual and real. Her affiliation to the academic setting as a postgraduate learner allowed her to contrast the evolution of EMS training from being that of vocational to professional. Furthermore, her sentiments shared throughout the discourse alluded to the lack of proportional development within the profession owing to that of the academic world. This is not to say that no development has taken place, but rather that the pace and empirically observed end points in her reality seemed not to be proportionate.

Zara and her colleagues' views were further shared by those within strategic positions within the profession. Tim stated:

.... I agree there, there is no real dialogue between industry and academia. Yes, they know each other, but there is no real engagement.

We don't have a real academic presence within operations which feeds this problem. Once again, I don't think that this (is) anyone's fault specifically...

I think that what we should be having is something that's probably really needed for our organisations within industry to actually speak to our educational organisations and say OK, let's chat about your needs, the structures you need capacitated. How can our research and even the programmes we offer improve your ability to render a service?

(Tim)

Tim, in his capacity as the strategic planner for an EMS organisation, suggested that these are long standing issues that had not yet been addressed. His awareness of this contentious issue drew him to believe that there was 'no real engagement' between the two entities in question. He drew on his experiences of being involved in an attempt from undergraduate EMS education providers to establish a degree of dialogue, which he deemed to be more of a 'show and tell' rather than a purposeful conversation. In addition to alluding to the needs of organisations, that should drive the EMS profession and the academic world to converse in an objective driven manner, Tim suggested that the lack of academic presence within the profession may well compound the delay in establishment of this much needed dialogue.

Yeah, just going back in the point we talked about is being excluded from the education system. So, majority, and we know that we previously mentioned everybody in education is now doing master's and PhDs for progression. What about us that are working operations? And there's a lot of guys that are working operations and would like to advance to a point where they could now go work in the university. I sometimes feel that (the) absence of academic people or even the academic voice in the field (industry) makes us feel excluded from going to do this. If you look at how many operational staff

are really studying further then you will see, it's those who have the social networks or have some form of academic interaction in their personal lives and not here at work.

(Percy)

Percy asserted that the lack of academic presence within the profession had profound repercussions on the postgraduate seeking behaviours of ECPs. In sharing his feelings on the matter, Percy alluded to notions that operate on the level of real. He suggested that owing to the lack of academic presence within the profession, it encouraged ECPs to feel excluded from the postgraduate seeking behaviours noted among ECPs within the academic world. He further alluded to the influence structural conditions within the profession had on motivating ECPs to pursue postgraduate education. Like many of his colleagues, Percy recognised the value that cultural conditions such as social networks had on the agency of ECPs. This is not to say that cultural conditions supersede that of the structural in cultivating agency, a notion discussed in the chapter that follows.

Dialogue between the EMS profession and the academic world, academic presence, and disproportionate development were discernible areas of concern among participants. It was evident that these are generative mechanisms in motivating ECPs to eschew postgraduate education within the industry, rather than that of those within the academic world.

5.2.3.2 ACADEMIC CHALLENGES

This sub-theme deals with the structural conditions experienced owing to the academic challenges alluded to by participants. It goes on to explore the generative mechanisms and causal powers of the articulation gap and the paucity of academic presence and support within the industry, which were identified by participants to eschew postgraduate education. Edward, a postgraduate learner stated:

... I mean, I can tell you now when I finished at the university (undergraduate education) I felt, well today I still feel ill prepared for the postgraduate journey. I feel my BTech did not prepare me, like I am continuously building capacity to deal with the tasks in front of me. That transition from the didactic method used in our vocational education

(undergraduate training) to what we experience during postgraduate education is chalk and cheese, well, maybe that's just a result of the learning taking place. (Edward)

Edward, like so many of his colleagues suggested that the transition from undergraduate training to that which he experienced during his postgraduate studies, was challenging. He shared his reality of feeling ill prepared and needing constantly to build capacity to engage with postgraduate studies. Edward also highlighted the didactic methods often experienced during his undergraduate training, a phenomenon that scarcely exists within the postgraduate education realm. In a different discussion, Samantha echoed the sentiments shared by Edward. She stated:

I agree to a certain extent. The diploma and BTech training received was didactic and specific to the requirements of an ECP. The fundamentals of providing emergency medical care were hammered into us, to the point where we could regurgitate it. This worked to get us job ready, but does not get us master's and PhD ready. (Samantha)

Samantha suggested that the didactic teaching and learning methods she experienced during her undergraduate training were appropriate for ensuring that the requirements for being an ECP were met, particularly as undergraduate training offers participants an overall learning experience, whereas postgraduate degrees offer a more intensive and personalised experience. She went on to describe one of the hall mark features of the former, which she deemed was aligned to the needs of ECP students. Samantha also pointed out that this learning method is not appropriate for higher education, particularly in capacitating ECPs to engage with studies at a master's and/or PhD level. Later in the same discussion, Samantha asserted that this method of teaching and learning in conjunction with the setting ECPs find themselves in, contributed to the readiness to engage with postgraduate education.

... look at the environment we work in. We are in an ambulance all day, interacting with members of the public, people who access EMS, (the) majority of whom do not have formal education – this conditions us to engage at a certain level. Those of you who are lecturers (academic setting) have something that makes this transition easier, you are dealing with formal documents every day, you are setting up lessons and engaging with

research. Your context prepares you for that setting, where ours (operational setting) actually handicaps us. How many of those who start master's but never finish, who drop out because the workload is too intense? How many of these people come from operations (industry) as compared to those working in education? (Samantha)

Here, Samantha further alluded to the disproportionate nature of readiness among ECPs within industry and the academic world, a notion discussed in the preceding sections. She shared her daily reality and suggested that the transition is easier for those who are in an academic setting. She further asserted that her setting handicaps ECPs from transitioning between the two, thus further broadening this articulation gap. She further posed a question relating to the extent of this conditioning, particularly as it relates to those working within industry as operational ECPs, a question that this study tries to understand in the subsequent phase: How many ECPs from operations, as compared to academia, pursue postgraduate education and never finish? This is a question this research aimed to answer in an attempt to understand the current postgraduate education seeking behaviour of ECPs.

Sizwe shared his reality of the academic presence and support within the profession. Sizwe stated:

If you look at what gave us all that hope, all those ideas, all that fire to create change. It was academia, it was the presence of it, the support for academic related activities, the constant sharing of evidence-based practices, the sharing of information, that's only present at the universities and not within operations. So now we need to ask ourselves, why has academia not been welcomed into operations? Because then they lose the sheep to do as they (industry) want us to. (Sizwe)

Sizwe's sentiments echoed the remarks shared by many of his colleagues. He suggested that the EMS profession had not yet overcome the challenges of the past by outgrowing the herd mentality (sheep who merely follow orders) that was conditioned to get maximal results out of a work force. He further alluded to the lack of academic presence and support within the profession. While his rationale for this may be rather contentious, it reflected the sentiments shared by many of his colleagues.

Robin, a postgraduate course convener reported:

...we still have the issue of having to mentor master's students to be able to do proper academic writing.

Just recently, I have seen instances where ECPs aren't able to sell themselves to a future employer. ... CVs that are very poorly constructed, and that's not because they haven't been taught how to construct a CV. That's because there's a lack of constructing documents or formatting documents within their daily roles. (Robin)

Robin further echoed the sentiments shared during the disclosure by providing simple examples of the articulation gap present among ECPs. He asserted that this contentious issue not only remained a challenge for postgraduate education providers, but also for ECPs engaging with the various components of the profession. Later on, during the discussion, when probed about measures required to overcome this articulation gap, he suggested:

There is very little collaboration. Point blank.

We have very little collaboration from the undergrad(uate) education provider, not just here, but from any undergrad(uate) university and even industry, which is sad because we are seeing a massive growth in postgraduate education and research and it would be very nice to actually get to a point where the undergraduate programmes feed the postgraduate programmes with (students), I mean, you as a mentor at the undergrad(uate) university will understand when your student that you have now been involved with for four years is an academic clinician or a researcher, right? And it would be nice for them to then help that researcher.

Yeah, so it would be actually quite nice to have the postgraduate person that's actually going to oversee your master's and maybe a PhD to be involved in your undergrad(uate) ... research, right? Because then it just becomes a step-up process. (Robin)

Robin alluded to the lack of collaboration between undergraduate educators, the EMS profession and postgraduate education providers. The limitation this has on scaffolding

the learning journey of those entering the profession in conjunction with the chance to cultivate areas of specialty, were further noted as consequences. Despite this lack of collaboration, he reported a growth in the postgraduate and research component. While this was remarkable, it hinted to the notions shared in the preceding themes and sub-themes, namely that of disproportionate growth between the profession and the other EMS-specific components, or in this case, the respective educational structures.

Throughout the discussion it became evident that the challenges experienced by ECPs owing to the articulation gap and lack of academic presence within the profession, were contentious issues that they were confronted with during their decision-making process to either pursue or eschew postgraduate education. While many of the ECPs shared similar concerns, only a few were able to acknowledge the causal powers these have in motivating ECPs to eschew postgraduate education.

5.3 CONCLUSION

Throughout the discourse and experiences shared by participants, it became evident that the structural conditions experienced by ECPs within South Africa do not copy those experienced by ECPs applying their trade abroad. Structural conditions owing to the socio-economic, the profession and an academic nature present within South Africa were predominately perceived to motivate ECPs to eschew postgraduate education. Interestingly, the same concerns that ECPs in South Africa have, and that ultimately motivate them to eschew such activities, were adopted as encouraging factors for those abroad to pursue postgraduate education. The invaluable role that these ECPs can potentially play in returning to South Africa and challenging the status-quo cannot go unnoticed.

In the following chapter, I will discuss the cultural conditions and their generative mechanisms that were identified during phase one of this study.

CHAPTER SIX: CULTURAL CONDITIONS

6.1 INTRODUCTION

The focus of this chapter is the cultural conditions that were identified from the qualitative findings captured during phase one of this study. As in the previous chapter, here I attempt to report, deduce, and contextualise the findings to answer the research question: What cultural conditions motivate ECPs to pursue or eschew postgraduate education? I go on to report the themes and respective sub-themes that were identified during the inductive thematic analysis of the discourse shared by participants. Where appropriate, I include selected aspects of these contributions to support the themes and sub-themes, and to understand the phenomena under investigation. Finally, I conclude with the pertinent points that were carried over into phase two of this study.

6.2 CULTURAL CONDITIONS

As discussed in the preceding chapters, culture refers to constructs such as beliefs, values, and perceptions, all of which are not easy to change and have lasting conditional influence. Cultural conditions refer to the overall conditions or circumstances experienced due to the presence or absence of culture being in place. In the case of this study, the adapted definition provided to participants was:

Cultural conditions: represent the individual or collectively held ideals, values, beliefs that influence our daily lives and/or decisions made. (Social norms, expectations and practices are a few examples of this)

The above-mentioned definition was well received by participants who were willing to discuss the circumstances and/or conditions they experienced owing to the presence or absence of aspects of culture in their everyday lives. The inductive thematic analysis enabled me to identify three themes related to the cultural conditions experienced by participants, namely, self-actualisation, and the shared values and beliefs among ECPs. In keeping with Archer's (1995, 2007) guidance on the application of analytical dualism, cultural conditions are further divided into the notions of cultural systems (parts) and the

socio-cultural interactions or systems (other people), which are both logically and sociologically distinct for analysis. Thus, this enabled me to explore the situational logics experienced by ECPs. Figure 6.1 offers a visual representation of the themes and sub-themes discussed in this chapter.

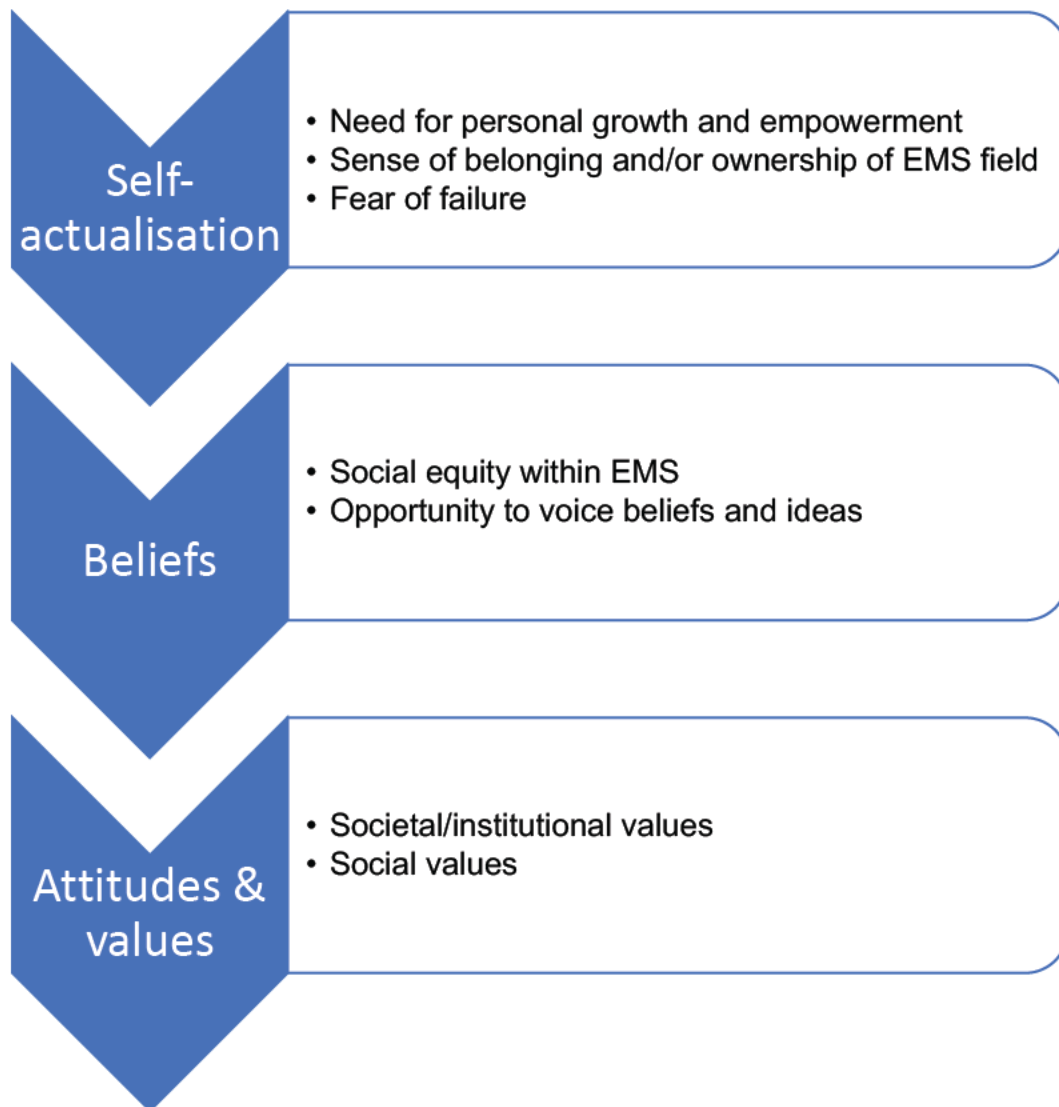


FIGURE 6.1: Cultural conditions motivating ECPs to either pursue or avoid postgraduate education: Themes and sub-themes

The most commonly occurring theme relating to cultural conditions, was the generative mechanisms and causal powers owing to the notion of self-actualisation. The participants'

contributions during these discussions suggested that this largely motivated ECPs to pursue postgraduate education.

Self-actualisation is the pinnacle of Maslow's hierarchy of needs, which was developed to address the basic and esoteric needs of human existence. As depicted in Figure 6.2, the levels include the physiological needs, the need for safety, love and belonging, the need for self-esteem and lastly, that of self-actualisation. For Maslow, self-actualisation describes the desire that leads to the realisation of one's full potential. Despite the widely adapted nature of this definition, and while many people may not actively be seeking to attain this state of being, many people and cultures have different opinions and ideas of what constitutes a self-actualised state of being.



FIGURE 6.2: Maslow's hierarchy of needs (Mcleod, 2007)

Self-actualisation is suggested to be best conceptualised as the sum of its parts, rather than a trait seen in isolation (Henwood *et al.*, 2015). Its resultant theory deals more with how open one is to growth and health rather than achieving ideals such as perfection, success and/or happiness. Because self-actualisation involves a sense of purpose and

self-awareness, in addition to that of one's basic needs being met, it can be a challenging goal to reach. In the case of this study, its parts (the cultural system), namely the need for personal growth and empowerment, fear of failure and sense of belief and ownership of the field of EMS as an ECP, are discussed in relation to their intertwined nature as opposed to the previous sections that explored entities in isolation.

Throughout the discourse, participants openly projected their realities and alluded to the causal powers and the generative mechanisms of being self-aware, the degree of autonomy established throughout their ECP journey, as well as the ongoing desire for personal growth and empowerment.

Sizwe stated:

... personally as a guy who's always wanted to seek growth and development, and that's the reason why I find myself time and time really pushing up with the ladder – for personal growth and to challenge myself to see if I can really reach my full potential. You know it's there, why not explore it? I want growth. I want to challenge myself and I want to see how far I can take this thing. (Sizwe)

Sizwe, who earlier in the discussion suggested that, while the structural conditions he experienced in the South African EMS setting motivated him and many other ECPs to seek employment abroad, those same conditions cultivated a sense of realisation, a notion of understanding and subsequently a desire that would not (as he deemed) be a reality if he originated in any other setting. He further stated:

... I think it's more internal self-actualisation. Yeah. Wanting to be the best for yourself and actually reaching that point day in and day out.

What is really funny here, we all left home, we all hated certain conditions in Mzansi (South Africa), but it is those exact conditions that instilled in us the want and need to be the best versions of ourselves. Without experiencing all those issues, going through all those struggles, having to climb the ladder while battling social discriminants that many around the world don't face, I don't think (that) half of us would have been as resilient and ambitious as we are now. (Sizwe)

Sizwe reflected on his time as an ECP within the South African setting, by making specific reference to the unique social determinants he experienced. He further pointed out that the consequences and his degree of self-actualisation were born from each other, almost as if they were directly proportional to each other.

Lerato, who echoed similar sentiments, stated:

... but it was more, improving myself than the service. Like the transition from being (a) diploma to a BTech (undergraduate degree), (which) was actually to change my scope of practice, it kinda (kind of) does benefit the service, but more so me, my understanding and abilities to treat patients, something that nobody can take away from me.

... I didn't feel ready for a master's so through my postgraduate diploma I started to acknowledge the whole package and the research component, and how all these things came together, so it was for my benefit. So, the belief and ideas was not just to change the scope of practice, but also to empower and position myself in such a way that I could go further, to study further. (Lerato)

Here, Lerato suggested that her desire to be the best version of herself superseded that of wanting to improve or contribute to the EMS profession. By reflecting on her transition through the various undergraduate qualifications, she alluded to being fuelled by her own need for personal growth and development, which at an undergraduate level, was often aligned to being able to render a higher level of emergency care to patients within the prehospital setting. In the latter part of the discussion, Lerato asserted that the exposure to the higher education setting had further motivated her to want to study further. Owen personalised the discussion by sharing his reality:

Motivating me to pursue postgraduate education is definitely growth as an individual, with attached benefits, especially as it concerns me growing and as a knock-on effect (to) my family growing up in better conditions. You see, I come from a poor family, where we all wanted to reach the top to ensure generational change, general wealth, generational access. The big problem is that we did not know how to handle the subtle changes that

we see around us. We have a never-give-up attitude, but were never given the tools to share these beliefs or ideals in the workplace. (Owen)

Owen alluded to how the structural conditions he experienced, owing to the unique history of South Africa, had conditioned his self-belief, his need for self-growth and development and even the sense of ownership he posed for his family's development in this regard. Owen asserted that while creating generational change further fuelled his need for personal growth and his 'never-give-up' attitude, he felt that the present cultural system (parts or settings) prevent these sentiments from being shared within the socio-cultural system (people) he and his colleagues find themselves in.

Sizwe further highlighted a reality that is rather unique to the landscape of South Africa. He alluded to his need to build capacity during an era of transformation. Sizwe said:

I'll be honest with you, it is, I'm a strong believer of if I sit in your position I cannot just sit and be a beautiful looking black guy in a suit, who got there because of transformation practices.

But I should be able to also articulate and be able to perform, based on what is needed and the unfortunate thing, or the fortunate thing, is that postgraduate education (programmes) allows me to do that. If I'm gonna (going to) sit as the head of an institution or a head of a service, I need to be able to deliver and if I am gonna (going to) be able to do that, I need to capacitate myself and the only way to do that is to go (and) get educated.

That's my yeah, that's my drive. Why I actually go for this. Having had the opportunity to sit in in certain positions and you really see that being the person of the right colour is not only enough, but you also still have to deliver, and you can't deliver on what you don't know or aren't able to do. (Sizwe)

You know, we all have these deep underlying issues. OK, I can't speak for the masses, but only for myself. I had and saw a deep underlying issue and that's what motivates me ultimately. The motivation is giving you the fuel to write a new narrative. Will it be the first person in your family to graduate with a postgraduate education qualification? Will it be the first person in your neighbourhood?

But you are writing the narrative for the next person to possibly follow. You are making it a possibility for the next person. How many people are there who wake up and, they don't see in the morning my father figure, a male figure getting ready for work, with suit and tie; they see a male figure coming in because they (male/father figure) you spend all night outside doing x, y and z.

But now your narrative, your actions, write or spills out into other people's lives and becomes something they see and it becomes a possibility for them and I think this is where agency is influenced. (Ryan)

Sizwe shared notions that speak to the unique South African landscape, particularly owing to the post-apartheid era in which we find ourselves. Here, he provided some valuable insight into the generative mechanisms owing to his reality, which may or may not be discernible to a large proportion of those aiming to pursue postgraduate education. Sizwe highlighted the importance of not only gaining access through transformation-related practices but using this as an opportunity to capacitate oneself to be able to articulate at the desired level.

Ryan alluded to the reasons for his motivation, the opportunity that postgraduate education provided him in rewriting the narrative, not only for himself, but for those who follow. His reality of being the first person in his family to graduate from university with a postgraduate qualification was such a motivation, which he suggested influenced his degree of agency. He alluded to this not only being a motivation for him to further pursue postgraduate education, but for those in his family, in his community, in his social world as well. Pam, who hails from a similar setting to that of Ryan, shared her feelings of fear of failure. Pam stated:

... and I almost feel too shy to raise this point.

How many of our ECPs have gone through hell, have struggled countless years to become an ECP. The struggles are not easily forgotten and because this is not forgotten, we remember the feeling of not being good enough, not being able to do something.

I can tell you now, I do not feel ready for postgraduate studies. I fear I will fail. I have seen too many drop out of training programmes. I fear wasting time, money and effort in something that I have no skills in, something that I was never prepared for. Many people avoid it because it's very likely that we can fail this thing, an elite group of people usually only make it. (Pam)

Here, Pam suggested that the fear of failing may motivate ECPs to eschew postgraduate education. Like many of her colleagues, Pam openly shared her reality and the academic challenges she experienced during her undergraduate training, which she described as 'hell'. These feelings are not often forgotten and may likely condition a feeling of uncertainty or reservations with regard to taking on subsequent learning opportunities. Her notion of 'an elite group of people that only make it' was not favoured among many of her colleagues, who believed that hard work and perseverance had a greater impact for success than that of being within a certain setting or hailing from a specific background. Despite this, her reservations and opinions on the matter are a real concern, which may be shared among other ECPs as well, a notion that phase two of this study is geared towards understanding.

It is evident that self-actualisation and/or the sum of its parts are generative mechanisms in motivating ECPs to pursue postgraduate education. Born from the unique landscape of South Africa, ECPs shared a desire for personal growth and empowerment. Despite this, the conditioning as a result of undergraduate experiences shared by ECPs, in certain instances, motivated ECPs to eschew postgraduate education.

6.2.2 THEME TWO: BELIEFS

ECPs are ultimately individuals bound together through the sharing of a certain qualification, their common interests and specified role as the most sought-after skilled prehospital care providers in both the local and international settings. Their qualification which is aligned to the NQF provides them with access to postgraduate education. Certain arguments can be made that ECPs inherently form a society, and as such, go on to share values.

The second most commonly occurring theme related to the cultural conditions experienced by ECPs, was the causal powers and generative mechanisms owing to the individual and/or shared beliefs of ECPs, which, from the discussions, have been identified to influence the postgraduate-education-seeking behaviours of ECPs. Throughout the discourse, participants alluded to various commonly shared beliefs that almost appeared to have conditioned their outlook, because of the cultural conditions they experience. In the case of this study, these beliefs are explored in the two sub-themes, namely social equity and voicing belief and/or ideas as ECPs within the prehospital field of emergency medical care.

6.2.2.1 SOCIAL EQUITY

Throughout the discussions shared, it became evident that ECPs have a shared belief regarding the power of postgraduate education as a tool for change, a tool to be used to correct the issues of social equity and injustices prevalent within the unique landscape of South Africa.

John shared his beliefs of how postgraduate education is the key to overcoming the challenges of social equity in his reality. He stated:

Inequality is still at large, and the apartheid times' devastating effects can still be felt within South Africa. How many kids in townships still have no hope? How many families rely on a single bread winner who might not make his 30s? We have very real problems in the black communities, but not that many advocates.

Why do recruitment strategies start in affluent areas? Is the service not needed more in the informal settlements? Black excellence is (an) idea or term that many use, but not that many strive for.

I want to see myself reach those heights, whereby I am capacitated to the point where I can make the necessary change needed among our people. Where I can see EMS projects active in the areas that need them. Unfortunately, to get to the point where I can make these things happen, I need to hold those qualifications and be in the right seat, be

capable of doing what is expected (of me) and also advance the narrative, because postgraduate (education) allows us to research what we believe in. (John)

Here, John alluded to the role that postgraduate education has in redressing issues of the past, in capacitating societies and communities. He made mention of real-life challenges that plague the South African population, and he highlighted the power postgraduate education can have if directed in a manner that enabled sustainable development initiatives, rather than merely pushing out postgraduate numbers. John shared his beliefs based on the cultural conditions he experienced in his reality, the generative mechanisms these beliefs have, that motivate him to pursue postgraduate education to be part of the cohort who suggests the narrative, rather than to merely be directed or subjected to it.

Sam, like so many of her colleagues echoed similar sentiments. She, however, went on to share notions that are specific to creating capacity for postgraduate activities within her reality. She stated:

The issue of equity and injustice is still very much real, and you will find you go to an institution because now with postgrads (postgraduate studies) ... it might not be something that is done physically, but the system is there to sort of excluding us. I will use a simple example: I am the first black one to graduate from university in my family and then you go register a master's. They (the university) say you must look for your own supervisor.

(Others have) has like uncles, aunties, sisters in law, brothers in law and all those in-laws who have their master's and whatever. He just has to pick up the phone and choose one.

So for me, who doesn't have an auntie or uncle? I must go look at strangers ...

Now what about those who follow in my footsteps, this causes them to be excluded from going through this successfully. My journey is not only for me to develop and progress, I do this so that my family, my community, my circles can also one day have those resources. (Sam)

Sam asserted that the challenges of social equity and injustices were very real issues within her reality and society. She further shared a feeling of exclusion for those who lack the capacity and social support structures required when engaged with postgraduate education. It became evident that these contentious issues have cultivated a desire to redress issues of the past within her, to become part of the solution and to capacitate her family, her social circles and by extension her community. In addition to a role-modelling strategy, she acknowledged the power postgraduate education has in being a tool for change within the various components of her cultural system.

Percy engaged with Sam about the notion of cultivating generational change. He, however, attempted to hold ECPs accountable for not making sufficient changes to the status quo. He stated:

I have no people (that) I know or I can use as resources (which are) available to assist me with research, to assist me in the journey to master's or PhD. In my neighbourhood, having a secure job is like (having) gold.

I am the first person to go to university in my family (and) in my household and that's great because I am setting the bar high for my kids (and) my family as a whole. I am becoming that resource for them. But so many people I studied with, their parents are in academic posts, so they not only had help along the way, but they were also given opportunities that I would never get, because my daddy is a plumber and does not have the contacts theirs does. We need to realise that there are discrepancies among various groups of people.

I am here, I am present and working in the communities every day, trying to make a difference. Where are those people who had that lekka support system? They are part of the brain drain, they are in Qatar or UAE, getting big money and not giving back to our country, nor our EMS. (Percy)

Percy suggested that while postgraduate qualification holders can change the narrative within the industry and subsequently their realities, he further encouraged a different approach to be explored. He suggested that in our aim to create resources and capacity

within a developing South Africa, incorrectly explored tactics have resulted in many of these ECPs now contributing to the development of the EMS profession internationally, rather than locally, where it is required. He further alluded to notions discussed in the preceding themes and sub-themes, which collectively speak to the shared beliefs of postgraduate education being a tool to combat social inequity and injustices within the South African context.

Siya's contribution to the discussion synthesised the key discussion points made by his colleagues. He stated:

I believe that we cannot change the status quo by only playing the black card without black capability and using postgraduate qualification to get to that point. Not only does it afford us the opportunity to really sit in positions and be capable of doing what is expected, but also advances the narrative, because postgraduate (education) allows us to research what we believe in. As a group of people, which might not necessarily be the same as what has consistently been looked at or the view that has been or the narrative that is being pursued, you know, so my belief is that we need to pursue postgraduate qualifications within our particular profession to address the challenges that are specific to us and our communities to advance the profession, our communities, our people.

While the government introduces certain policies that advantage us as the people of colour, we as the people of colour are unable to advance our own in terms of ensuring that we are able. (Siya)

Here again, Siya's contribution alluded to the shared belief of using postgraduate education as a means of redressing issues of the past. He highlighted the collaborative nature of postgraduate education and the constructive methods employed at a national level, that ensure people from previously disadvantaged ethnic groups are capacitated by means of equity. Continuous reference was made to "changing the narrative", which basically means the story line of our realities. Participants demonstrated their frustration

and disbelief in the same story line being narrated: the challenges of social equity and injustices, the need for capacity and opportunity.

Owing to the informality of the relationship between ECPs, their self-derived societies, the generative mechanisms as a result of the cultural conditions, have fostered a greater deal of uniformity as opposed to the structural conditions experienced. This is likely due to the ethos of them operating beyond the control of structure (e.g. corporations and government). It is evident that the shared beliefs among ECPs, the nature of these concerns shared and their desire to use postgraduate education as a tool for meaningful change, not only classifies them as a modern-day community of practice borne from both formal and informal interaction but alludes to the value the various media of collaboration have on motivating ECPs to address real-life issues.

The generative mechanism of these shared beliefs, owing to the cultural conditions experienced by ECPs evidently motivated ECPs to pursue postgraduate education. The majority of the ECPs within the South African context asserted that the challenges of social equity and injustices have fostered a common belief that postgraduate education is the tool they require to capacitate themselves to change the narrative.

6.2.2.2 OPPORTUNITY TO VOICE BELIEFS AND/OR IDEAS

ECPs are considered highly skilled practitioners, who provide the most extensive emergency care in the prehospital field (HPCSA, 2018). They possess a four-year degree qualification which is proclaimed to have instilled knowledge, skill and attributes required for professionals who have the capacity to act as clinical leaders within the field of prehospital emergency care. Similar thoughts and sentiments are shared by an EMS director, who suggested:

They (ECPs) are the custodians of this service, yet all I ever hear from them is equipment this, equipment that. I need them to step up to the plate and tackle real issues like to red zones and strategic placement, I need them to be the leaders this service needs ...

Those (ECPs) that are studying or have completed their master's – they are silent participants of the system and not actively participating in the conversations. (Rassie)

Rassie's reality is conditioned by the fact that ECPs are sound clinicians who possess the most extensive skills set and knowledge base within the field of prehospital emergency care. He, however, went on to share his concerns with ECPs who have postgraduate qualifications and them not stepping up to take on their role and be part of the 'conversation' as the leaders within the field, an attribute one would assume that these professionals would openly display in the workplace. Rassie drew on their inability to transition from the point of complaining about the lack of equipment within a resource limited setting, to that of helping their organisations address pressing issues.

It is interesting that this is a notion shared by the director of a well-established emergency medical service, as it became evident throughout the discourse that ECPs felt that they were not yet recognised as individuals who were welcomed to play that role. Participants openly shared their belief in the power and/or authority bestowed upon them through attaining postgraduate qualifications, and how they perceived this to provide them with the opportunity to voice their ideas and beliefs within the workplace.

Zara stated:

My ECP training prepared me to deal with sick patients, not take on EMS issues. Here we have managers, a doctor as a director, planners with business degrees, what must I as a paramedic go sit there and do? I do not have a title. We are seen as ambulance drivers and the workers. How do we start to have a voice without getting the right qualifications behind us? My station manager will not even listen to my suggestions, (much less) where will the director? (Zara)

Zara, who worked within Rassie's organisation, painted a vastly different picture. She, like some of her colleagues suggested that postgraduate education empowered ECPs in terms of status and accolades to be able to engage with the managers, strategic planners and directors regarding matters related to system issues. Robert's contribution alluded as to why this may be a belief among ECPs.

I actually don't think it's the case anymore, well at least here on this side. Historically, those who have kinda (kind of) been invited to (the) inner circle are those that completed their master's and so on. I think that is something that we accepted as the norm, but the youngsters coming in now are making their presence known and trying to get a seat at the table, well at least that's what I saw in SA before I left.

On this side, if you are not part of the research or clinical management teams, you won't get the time of day outside of performing your usual function. (Robert)

Robert alluded to why this may be the perception among ECPs, particularly those who have been within the field for a while. He suggested that the structural conditions and autocratic leadership structure that was previously imposed within EMS may have conditioned those who have been in the system for a while to feel that way. However, those who have recently completed their university degrees and who have been exposed to a setting where dialogue is encouraged, regardless of qualification or titles, are taking full advantage of the opportunity to engage with management and share their ideas or beliefs. He further provided some valuable insight into the situation abroad, where specific components are entrusted to perform certain functions, instead of cultivating an open dialogue type setting.

Eric, who applied his trade in a rural province of South Africa, suggested:

Education is power chief¹³ and those who say differently have not operated in this setting. If I introduce myself as doctor, then I get the attention, but if I say I'm a paramedic, then I'm just seen as an ambulance driver...

... unless you have a master's or a PhD, do you think you can go sit on the HPCSA board? Do you think you can go sit on a skills committee or task team? No chance in that happening. We have to go get those qualifications to be able to stand up and make ourselves heard, to change this narrative. (Eric)

¹³ Colloquial term used in the townships when addressing a stranger.

Eric openly shared his belief of education being an empowering force that can enable ECPs to have their voices and beliefs heard. He drew on real-life examples of positions that are instrumental in the development of the profession within his setting, positions that would provide the optimal opportunity for the views, ideas and beliefs of the general workforce and not just ECPs to be heard and resolved. He suggested that postgraduate education is the only way that ECPs can gain access to those platforms, to be able to evoke the change that industry needs.

Liam, who agreed with the sentiments shared by Eric, further shared how this contentious issue motivated him not only to pursue postgraduate education, but to relocate from South Africa as well. He stated:

Within our structures, our personal beliefs and ideals were only experienced by us, these were not encouraged, nor did we receive the opportunity to voice them. There were those select few, who were well connected and held good positions. These people's ideas and beliefs were heard, (they) were given room to express (themselves) and they progressed without an issue. Many of us (who were) subjected to this had to either equip ourselves to get to their level or remain silent.

My wife and I decided that we could no longer go through with being overlooked or silenced. We decided to empower ourselves by getting the right qualifications and even when we did achieve them, we were still merely just part of the workforce. So, we left and here we are, contributing to the development of the XXXX service and loving it. I would much rather prefer to be doing these things back home, but we have never been given the chance. (Liam)

Liam shared his insight and experience, that not only saw two ECPs (Liam and his wife) leave the South African EMS setting to contribute to another country, but his reality told a tale of two ECPs who felt unheard, ill-equipped to be heard by the key role players of the EMS for whom they worked. Liam suggested that while in South Africa, their beliefs and ideas remained personal ones as they were not enabled to share it within the workplace. He further alluded to the role postgraduate education has in enabling ECPs to contribute actively to an organisation other than in a capacity of merely treating

patients. While this may only have become his reality outside of South Africa, it remains a reality owed to the process of seeking out education none the less.

The generative mechanisms owing to cultural conditions experienced by ECPs have had serious consequences for those who once called the South African EMS setting their home. The shared beliefs among ECPs that attaining a postgraduate education would enable them to have their voices and ideas heard have motivated ECPs to pursue postgraduate education. While some have done so, the conditioning these experiences have had on ECPs may have had lasting effects, which in some instances can be seen as the migration of ECPs to more developed nations. What was rather interesting, is that a number of the ECPs present within the South African setting acknowledged the value of postgraduate education and are motivated to pursue it, not only to gain access to the so-called inner circle to evoke change, but also to change the narrative of the EMS profession.

6.2.3 THEME THREE: VALUES

CoPs have become increasingly popular within the health care sector, likely due to their ability to generate and share knowledge, while simultaneously improving organisational performances (Ranmuthugala, Plumb, Cunningham, Georgiou, Westbrook & Braithwaite, 2011). Wenger and colleagues (Wenger & Synder, 2000; Li *et al.*, 2009a; Ranmuthugala *et al.*, 2011) suggest that CoPs within the health care sector vary in form and purpose, often as a result of informal inception and the paucity of purposeful structure allocated to these individuals within the organisation. This is not to say that through their informality, CoPs do not have the potential to improve health care, but rather to suggest that through their informality, the sharing of ideas, values and aims would most likely be aligned to addressing the required change as perceived by the CoP.

Values are guiding principles that underpin what people believe to be important when making decisions, whereas attitudes are underpinned by these values and influence behaviour. When considered as intertwined entities, values and attitudes refer to the principles that influence our choices, judgement, behaviour and even actions on the path

towards individual and societal wellbeing. Strengthened and renewing trust in institutional visions, or in the case of this study, among communities of practice (ECPs) centres on developing core shared values, which could not be more important within the rapidly developing field of prehospital emergency care. While approaches to developing these values often draw on the cultural and societal traditions, understanding the status quo and the potential consequences of what is prevalent, may be a good starting point.

Another commonly occurring theme which was identified from the discourse shared among participants owing to the cultural conditions they experienced, are the causal powers and generative mechanisms owing to the values of the CoP, which were suggested by participants to motivate ECPs to pursue postgraduate education. Throughout the discourse, participants alluded to various commonly shared values that almost appeared to have conditioned their outlook because of the cultural conditions they experience. In the case of this study, these values are explored in the two sub-themes, namely EMS or institutional values (EMS community [institutional] culture and ethos) and that of social values (social responsibility, social recognition and influences and altruism).

6.2.3.1 EMS OR INSTITUTIONAL VALUES

Shared values, otherwise projected as EMS or institutional values, are ultimately the cultural values, grounded in heritage and practices of what is worthwhile and meaningful, to a society (Kenter, O'Brien & Hockley, 2015). EMS or institutional values reflect how we relate to society or, in the case of this study, how ECPs relate to the EMS or institution. These values and attitudes are derived from the shared principles and guidelines that frame the social order and institutional life. The South African Health Department (2021) commits to the values of consultation, service standards, access, courtesy and information, whereas on a provincial level the Western Cape Health Department (2011), as an example, commits to the values of competence, accountability, and integrity, while valuing care, responsiveness in the health care provision and health outcomes. There is evidently a paucity of a unified value statement for the South African EMS setting, which may likely be owing to the disproportionate nature of health care across the country, a notion that has been a contentious issue in recent years. None the less, the EMS setting

is an extension of the health care system, and while the only variation may be the inclusion of the rendition of quality emergency medical care through equitable and accessible means, the only value that ECPs and other EMS staff alike are faced with, is that of a clinical nature.

EMS or institutional values ultimately define the priorities of cultural and societal conditions which ECPs experience, which, according to the discourse shared, varies among the respective regions. Edward, who hailed from an urban province in South Africa stated:

...ECP is the clinical ceiling of EMS, there is no higher clinically orientated qualification for EMS. Our services work towards providing emergency care, so them wanting to get staff to an ECP level is the goal and not beyond that. We have too many entry level qualifications (holders) that need to be upskilled, our services do not favour the idea of us progressing, and this spills over into us not wanting to progress as well, because I mean: what is the use? (Edward)

Edward alluded to the stated values of his setting and reality, particularly how his progression past the point of being an ECP may not be aligned to the EMS or institutional values that he, like so many other EMS practitioners are conditioned by. In addition to questioning the use of progression past the point of becoming an ECP, which he discussed in relation to being fit for purpose (see previous chapter), Edward suggested that the goal of his organisation is that of getting “entry level qualification (holders)” to a level which is acceptable and aligned to its goals (rendering an appropriate level of emergency medical care). He associated the values of his EMS or institution to that of its aims, which was based on the notion of being fit for purpose (discussed in the previous chapter) but has also conditioned him to question the role of pursuing postgraduate education and how this would be supported by the EMS or institution he serves. Osman, an ECP who applied his craft in a rural region of South Africa, shared his perceptions of how the EMS or institutional values has conditioned his reality. He stated:

There is a thing, almost like a culture in EMS to upskill, to progress from one qualification to another, from BAA to AEA and then CCA and now with the later qualification structures the names slightly change, but the process is the same. It's a process we have burnt within us, I mean I had to go from BAA to an ECP level, I did five courses to get to this level. It's habit to want to go to the next level. That culture instilled in me is one of the things keeping me at it. I do not think that we will find that level of conditioning in any other profession to be honest. EMS is unique in that way, really it is. (Osman)

Osman alluded to the culture within EMS, particularly the habitual practice of emergency care workers progressing within the EMS-specific qualification or structures. This habitual practice is likely, because of the EMS or institutional values that frame the social order and its respective activities, in this case, the constant development of its practitioners. He suggested that this conditioning has imprinted the constant desire to want to develop, which has motivated him to want to pursue postgraduate education. He contrasts this behaviour with that of other professions and asserted that the unique nature of EMS has provided those within its structures, with an unprecedented amount of opportunity. The unique nature of EMS and its EMS or institutional values surely have cultivated cultural conditions that are not only unique to the field of prehospital emergency care, but have subsequently conditioned a type of workplace value for those progressing within its structures.

Owen contrasted this with his reality. He stated:

I personally feel that EMS has conditioned many of us to be lazy and just wait for opportunities to fall in our lap. What other profession offers its employees in-service training like EMS? A doctor who wants to upskill must do it on his own, an oral hygienist who wants to be a dentist must do it on their own. Here we want our employer to send us to go from ECT to ECP while being employed and even to a master's level, while still working. Our profession does cater to this to a certain degree, but when it's not possible we sit back and complain, instead of doing what everyone else in other professions are forced to do: get up and go do it on your own. I had to make my own way to be able to

afford the money and time for my master's, it's tough, but nobody is going to give it to me, EMS has definitely spoilt us. (Owen)

Owen shared his reality and thoughts on the matter, and unlike Osman, Owen suggested that this level of conditioning present within the EMS structures made those within industry 'lazy and complacent'. He contrasted the culture of providing in-service training initiatives that have been presented as an extension of the profession since the inception of EMS in South Africa, with the operations of other professions within the health care sector. Owen further alluded to the fact that while in-service training may be beneficial to industry, it may have dulled the response to and the cultivation of the desire to pursue further studies, seen in so many other professions. He drew on his own reality, in which he had to pursue postgraduate education on his own, without the support of the EMS profession. He suggested that many would rather "sit back and complain" than follow his example.

Owen provided valuable insight into the likely consequences which result due to these initiatives implemented within industry, owing to EMS or institutional values (equitable and accessible education) of upskilling its prehospital practitioners. These values have directed EMS-training-specific institutions to cater for the needs of entry-level prehospital care providers, to capacitate them with the appropriate qualifications to professionalise the industry, which may have compounding effects on those who fall outside of this category (ECPs) and want to pursue postgraduate education. This is not to say that all ECPs would be motivated to eschew postgraduate education, as Owen is a prime example of an ECP who acknowledged this potential limitation within industry but continued down his habitual path of development.

Greg shared his reality, almost half a world away, he stated:

Here we feel valued, our aims of getting our master's and PhDs are valued, our companies' values relate to innovation, to being cutting edge, to progression, to developing what was either previously omitted or can be improved.

The day I stepped into my HOD's office and told him I want to start with a master's in health care management, he was more excited than I was. This is the shared culture this side, if this could be replicated in SA, then things would definitely be way more pleasant that side.

(Greg)

Greg, who applied his trade as an ECP abroad, suggested that the EMS or institutional values he experienced have motivated him to pursue a postgraduate education. He referred to his decision to take up the journey, as something that was celebrated by his Head of Department (HOD). He subsequently linked this to the EMS or institutional values, which he painted as being progressive and contagious to those within his setting. He further suggested that the replication of such EMS/institutional values would benefit the South African setting, as it relates to the feeling of pleasantness in the workplace. Unfortunately, Greg did not explore the notion of how each approach was relevant to the respective settings, a notion likely to be answered in the quantitative phase that follows.

Throughout the discussion it became evident that the causal powers and generative mechanisms owing to the cultural conditions experienced by ECPs have a significant impact on the agency of ECPs. The EMS or institutional values and the ability these principles and guidelines have on framing the social order and institutional life seem to influence ECPs' motivation to largely pursue postgraduate education. Participants who alluded to the role of EMS or institutional values projected their realities and described these to result in a degree of conditioning that motivated them to either pursue postgraduate education or resulted in a feeling of complacency. The latter, owing to the fact that the EMS or institutional values may not specifically speak to the non-clinical progression associated with postgraduate education within EMS.

6.2.3.2 SOCIAL VALUES

Social values refer to the values of a particular community, which have been more commonly referred to as social circles by the respective participants of our study (Kenter *et al.*, 2015). Social values reflect how we relate to the principles and beliefs that influence the quality of interpersonal relationships. These values include how one behaves towards others, and how one manages these interactions. Social values also reflect cultural

assumptions about social well-being, which, in the case of this study, can be described as what makes ECPs either within their social circles or within their ECPs derived societies, work together effectively. It is through these measures that agency may be developed or conditioned, particularly for ECPs who are motivated either to pursue or eschew postgraduate education.

Choices about either pursuing or eschewing postgraduate education are often social, because the preference ECPs hold are influenced by socialisation within a particular society. Vatn (2009) suggests that through the physical linkages existing in nature, a social interconnectedness is forced upon us. This is to say that ECPs will likely derive certain values, attitudes and behaviours owing to the social interconnectedness of the associated communities, societies, and social groups to which they belong.

George alluded to this notion by stating:

... and we are influenced by our social circles or interactions as well. Because I mean if everybody in your social circle you moving in is now pursuing it, are you not also going to be moving in a similar direction? Are you going to gravitate towards following in their footsteps? I think this has a major role to play and we need to start creating these circles if we want to inspire and encourage our people. I mean this has been something I want to do and that's because (of) my close friends, (by) what they have made me realise and how this can create opportunity for me. (George)

George alluded to the notion of shared social values, particularly as they relate to postgraduate education likely creating opportunity within the field of emergency medical care. George asserted that because those in his social setting have derived value from pursuing postgraduate education, their reality conditions his, to the point where he too starts to associate value with the pursuit of postgraduate education. This is not to say that their values are necessary forced upon him, but rather to suggest that the social values and shared realities are likely to produce a degree of conditioning that may influence his decision making to either pursue or eschew postgraduate education. George went on to

suggest that these types of social interconnectedness may be something that the profession needs to cultivate to encourage further development.

Astrid stated:

Not everyone has access to these types of conditions or social circles, how do they feed from this positivity? Notwithstanding those that break out of their own circumstances.

... but we need to start asking the questions, is (are) these the types of relations or circumstances we need to establish or welcome into the workplace? (Astrid)

Astrid engaged with George on the matter. While she acknowledged the causal power of shared social values, she asserted that many may not have access to these 'conditions or social circles'. She further suggested that in addition to those who break free from their own social conditions, many within the prehospital setting may not be able to latch on to the positivity or feed off the motivation derived from shared social values or interactions. Astrid further echoed the sentiments shared by George by suggesting that the infrastructure for strategies of informality may need to be accommodated within the industry to achieve certain conditions likely to influence members of the profession positively.

Tom argued with the notions shared by his colleagues. He stated:

I hear you guys, but I don't necessarily think it's a one size fits all kind of thing. My circles are diverse and filled with lone wolves. This is what I see to be possible, specifically at the postgraduate level, because it's not a buddy-buddy thing, but more of a you-thing.

... and I think to a large extent we have all seen it and we know that is sometimes needed to get you to where you want to be.

... take the people who have taken our service forward, who have really done big things to ensure we evolve, they were almost mavericks. They went against the grain, challenged the status quo and were not afraid to be different. So, for us to fulfil those roles, to be the ambassadors for change, we may need to be mavericks in a profession filled with followers and algorithmic thinkers. (Tom)

Tom shared his reality and in doing so, he contended with the suggestions made by his fellow ECPs. His reality was filled with what he deemed to be 'lone wolves', which likely conditioned him to see the value in operating as an unorthodox or independently minded person (maverick). He drew on the mavericks that have gone on to make significant contributions to the profession and suggested that at a postgraduate education level, the resilience and fortitude required stems from the individual and not the shared social values, or what he referred to as a 'buddy-buddy' system. Tom went on to suggest that in a profession filled with followers, taking on the role of a maverick, particularly in relation to postgraduate education, would encourage ECPs to operate more or less autonomously in advancing the profession. While he did not really allude to how this may motivate ECPS to pursue or eschew postgraduate education, it does show how his shared social values have conditioned his outlook on the matter.

It is evident that ECPs assumed that a thorough understanding of people requires a thorough understanding of the groups and/or communities with which they are associated. While ECPs are autonomous individuals seeking their own objectives, they are also members of a group or community, who ultimately sustain and guide themselves. The generative mechanisms and causal powers that were identified from the conditions experienced, particularly owing to the shared social values and the conditions (how and where) they are derived seemed to have a profound effect on motivating ECPs to pursue or eschew postgraduate education. Participants who alluded to the role of shared social values projected their respective realities and described these as not only motivating them to pursue postgraduate education, but also as a road map of what one needed or should resemble to fulfil the roles associated with postgraduate education within the profession. What does stand out in this section, is the value that participants assigned to something born from the realm of informality, so much so that they alluded to the role it could play if cultivated within the industry. Given the importance of shared social values for decision making among ECPs, further enquiry into this phenomenon was incorporated into the quantitative phase of this study.

6.3 CONCLUSION

Throughout the discourse and experiences shared by participants, it was evident that the cultural conditions experienced by ECPs within the borders of South Africa have conditioned certain characteristics that may not be experienced by prehospital emergency medical care practitioners in other parts of the world. Cultural conditions owing to self-actualisation and the shared beliefs and values of ECPs were suggested by participants predominantly to motivate ECPs to pursue postgraduate education, regardless of whether they were applying their trade within the borders of South Africa or abroad. Participants further alluded to how these cultural conditions were considered to be born from the unique landscape of South Africa.

In the chapter that follows, I go on to discuss the quantitative findings that were identified during phase two of this study.

CHAPTER SEVEN: QUANTITATIVE RESULTS

7.1 INTRODUCTION

This chapter focuses on the current postgraduate-seeking behaviours of ECPs, and how it emerges from the interplay between the generative mechanisms owing to the structural, cultural, and agential conditions identified during the qualitative phase of this study (detailed in the previous chapter). In this chapter, I present the quantitative findings obtained from the online questionnaire, which I used to aid me, as a social realist, in my exploratory search for causation.

7.2 RESULTS

In 2020, there were a total of 852 professionals who constituted the overall ECP population registered with the HPCSA. Of these, 256 ECPs completed the online questionnaire, which were all appropriately completed and eligible for analysis.

Table 7.1 provides a summary of the demographic characteristics of the study sample. There were twice as many male respondents ($n = 183$, 69.06%) as females ($n = 82$, 30.94%). Young socio-economically active ECPs between the ages of 25 and 30 years constituted the largest portion of the study sample ($n = 60$, 22.64%), further accounting for nearly double the accumulative portion of those respondents older than 45 years of age ($n = 33$, 12.45%). Male ($n = 72$, 27.17%) respondents accounted for the majority of older age groups (> 40 years), compared to females ($n = 15$, 5.67%)

Overall, 153 respondents identified their area of specialty to be operational (57.74%), followed by academics ($n = 77$, 29.06%). The median number of years as an ECP was 6 (3.00 – 8.00), with the largest proportion of the sample ($n = 67$, 25.28%) having between 8 and 11 years of service within EMS. ECPs applying their trade within the borders of South Africa constituted the majority of the study sample ($n = 188$, 70.94%) as opposed to the 29.05% ($n = 77$) applying their trade abroad. The Western Cape ($n = 78$, 29.43%) had the highest proportion of representation for the sample and Mpumalanga ($n = 3$, 1.13%) had the lowest.

Table 7.1: Demographic characteristics of the participants

Characteristics		Total Sample (n=265)	Males (n=183, 69.06%)	Females (n = 82, 30.94%)
Age Category*	18-24 years	7 (2.64 %)	6 (2.26%)	1 (0.38%)
	25-30 years	60 (22.64%)	37 (13.96%)	23 (8.68%)
	31-34 years	56 (21.13%)	34 (12.83%)	22 (8.30%)
	35-39 years	55 (20.75%)	34 (12.83%)	21 (7.92%)
	40-44 years	54 (20.38%)	41 (15.47%)	13 (4.91%)
	45-49 years	27 (10.19%)	25 (9.43%)	2 (0.75%)
	>50 years	6 (2.26%)	6 (2.26%)	
Years as an ECP**		6 (3.00 - 8.00)	6 (4.00 - 8.00)	5 (3.00 - 7.00)
Years of service within EMS*				
	0-3 years	33 (12,45%)	20 (7,55%)	13 (4,91%)
	4-7 years	40 (15,09%)	18 (6,79%)	22 (8,30%)
	8-11 years	67 (25,28%)	49 (18,49%)	18 (6,79%)
	12 -15 years	65 (24,53%)	47 (17,74%)	18 (6,79%)
	>16 years	60 (22,64%)	49 18,49%)	11 (4,15%)
Area of Speciality*				
	Academia	77 (29.06%)	49 (18.49%)	28 (10.57%)
	Managerial	35 (13.21%)	28 (10.57%)	7 (2.64%)
	Operations	153 (57.74%)	106 (40.00%)	47 (17.74%)
Province*				
	Western Cape	78 (29.43%)	58 (21.89%)	20 (7.55%)
	Eastern Cape	16 (6.04%)	12 (4.53%)	4 (1.51%)
	Northern Cape	9 (3.40%)	7 (2.64%)	2 (0.75%)
	Mpumalanga	3 (1.13%)	2 (0.75%)	1 (0.38%)
	Free State	9 (3.40%)	7 (2.64%)	2 (0.75%)
	Gauteng	42 (15.85%)	24 (9.04%)	18 (6.79%)
	KwaZulu-Natal	17 (6.42%)	9 (3.40%)	8 (3.02%)
	Limpopo	14 (5.28%)	13 (4.91%)	1 (0.38%)
	N/A#	77 (29.06%)	51 (19.25%)	26 (9.81%)
Area of work*				
	Urban	210 (79.25%)	139 (52.45%)	71 (26.79%)
	Rural	55 (20.75%)	44 (16.60%)	11 (4.15%)
EMS organisation of employment*				
	Private sector	71 (26.79%)	50 (18.87%)	21 (7.92%)
	Public-Private Partnership	17 (6.42%)	13 (4.91%)	4 (1.51%)
	Public sector (Government service)	177 (66.79%)	120 (45.28%)	57 (21.51%)
Educational institution				
	Cape Peninsula University of Technology	152 (57.36%)	106 (40.00%)	46 (17.36%)
	Durban University of Technology	51 (19.25%)	38 (14.34%)	13 (4.91%)
	Nelson Mandela University	9 (3.40%)	5 (1.89%)	4 (1.51%)
	University of Johannesburg	53 (20.00%)	34 (12.83%)	19 (7.17%)

n, %; **median, IQR, #NA applicable to practitioners working abroad

Table 7.2: Postgraduate seeking behaviours of ECPs in South Africa and abroad (n=265)

	South Africa (n = 188)	Abroad (n = 77)
<hr/>		
Area of speciality (n, %)		
Operational	96 (36.23%)	57 (21.51%)
Managerial	28 (10.57%)	7 (2.64%)
Academic	64 (24.15%)	13 (4.91%)
<hr/>		
Pursued postgraduate studies (n, %)		
Yes	90 (33.96%)	53 (20.00%)
No	98 (36.98%)	24 (9.06%)
<hr/>		
Postgraduate education specific to EMS (n, %)		
Yes	64 (24.15%)	36 (13.58%)
No	26 (9.81%)	17 (6.42%)
<hr/>		

In this study, 70,94% (n = 188) of the sample applied their trade in South Africa. The majority of the sample (n = 143, 53,96%) had pursued postgraduate education, of whom 90 applied their trade in South Africa. Among the study population, 122 ECPs eschewed postgraduate education, of whom 98 applied their trade within the borders of South Africa. The largest proportion (n = 90, 33,96%) of ECPs pursuing postgraduate education applied their trade in South Africa, whereas the majority (n = 98, 36,98%) of those who eschewed postgraduate education also applied their trade in South Africa.

Among ECPs pursuing postgraduate education, there were 17 fewer cases of ECPs working in South Africa per 100 compared to ECPs applying their trade abroad. ECPs who work in South Africa are 0.42 times less likely to pursue postgraduate education compared to those ECPs not pursuing postgraduate education. The Odds Ratio (0,78) suggests a negative association between ECPs pursuing postgraduate education and applying their trade in South Africa. Here, I concluded that ECPs pursuing postgraduate education are 22% less likely to work in South Africa, compared to those applying their trade abroad.

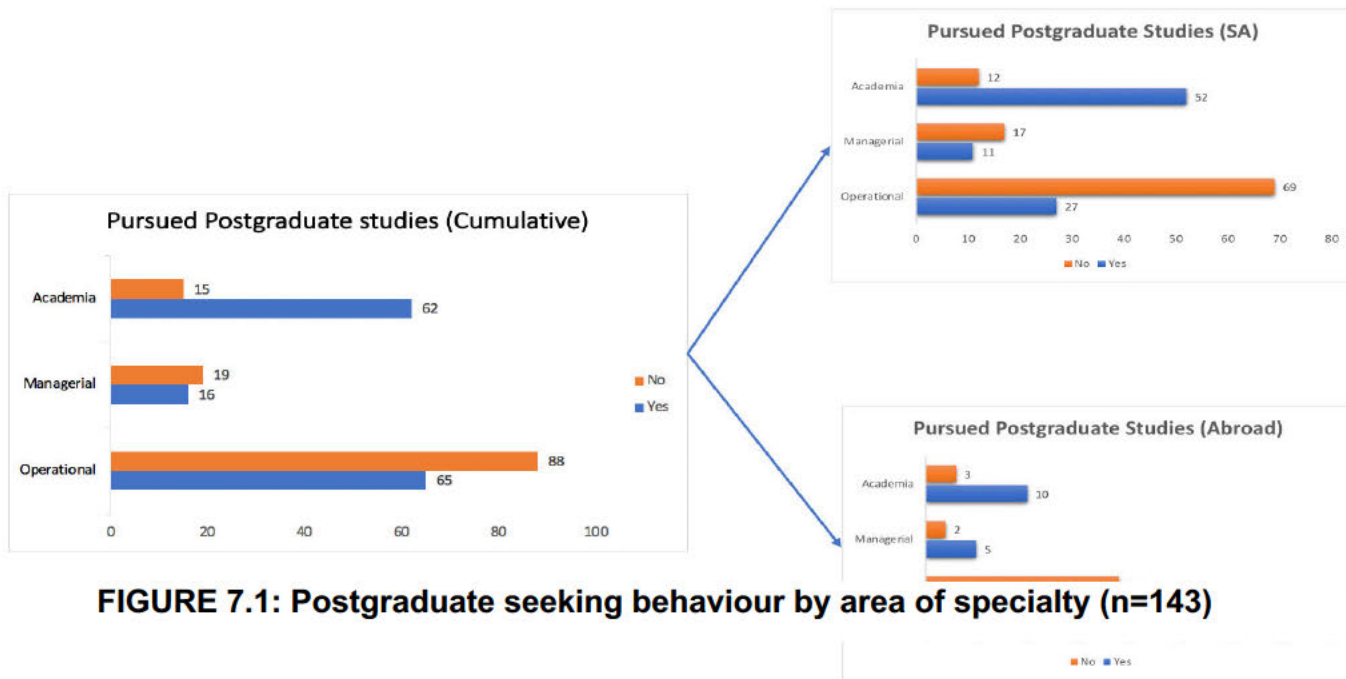


FIGURE 7.1: Postgraduate seeking behaviour by area of specialty (n=143)

As illustrated in Figure 7.1, accumulatively, ECPs within academic roles ($n = 62$, 80,52%) constituted the highest proportion of those pursuing postgraduate education. In contrast, ECPs within the operational setting constituted the highest proportion of those who eschewed postgraduate education in South Africa ($n = 69$, 70,41%) and abroad ($n = 19$, 79,17%) respectively. When stratified according to the area of work, those applying their trade abroad were more likely ($p < 0.01$) to pursue postgraduate education across all categories, compared to those within the borders of South Africa. Operational ECPs abroad ($n = 38$, 71,69%) and academic ECPs within South Africa ($n = 52$, 57,77%) constituted the majority of those pursuing postgraduate education. The prevalence ratio suggests a positive association between ECPs pursuing postgraduate education within academic roles and those within operations, with the Odds Ratio of 5,59. ECPs within academic roles are nearly six times more likely to pursue postgraduate education as opposed to those within operational roles.

TABLE 7.3: ECPs postgraduate education status stratified by area of employment and specialty (n=143)

South Africa (n=90)	Completed	Still busy	No longer pursuing
Operational (n=27)	7 (25.92%)	14 (51.85%)	6 (22.22%)
Managerial (n=11)	6 (54.54%)	0	5 (45.45%)
Academic (n=52)	29 (55.76%)	15 (28.84%)	8 (15.38%)
Abroad (n=53)	Completed	Still busy	No longer pursuing
Operational (n=38)	11 (28.94%)	16 (42.10%)	11 (28.94%)
Managerial (n=5)	3 (60.00%)	1 (20.00%)	1 (20.00%)
Academic (n=10)	9 (90.00%)	1 (10.00%)	0
Total	65 (45.45%)	47 (32.86%)	31(21.67)

Among respondents who have pursued postgraduate education (Table 7.3), those who have completed their postgraduate education constituted the largest proportion (n = 65, 45.45%) of the sample. The relative frequency of those pursuing postgraduate education was higher among those applying their trade in South Africa (62.94%) than those abroad (37.06%). Despite the frequency of those pursuing postgraduate education being higher among those applying their trade within South Africa (n = 90, 62.93% vs n = 53, 37.06%) as opposed to those abroad, the distribution among the categories in Table 7.3 were similar. Among ECPs applying their trade within South Africa, those within academic roles who completed their postgraduate education accounted for the highest proportion (n = 29, 32.22%), whereas it was those in operational roles (n = 11, 20.75%) abroad. ECPs still actively engaged in their postgraduate education (n = 47, 32.86%) were closely followed by those who no longer pursued it (n = 31, 21.67%).

TABLE 7.4: Pursuit postgraduate education by demographic variables (n= 265)

Pursuing postgraduate education	P value	Chi squared	Interpretation	Bonferroni-adjusted p-values
Sex	0.3861	0.75127	No association	N/A
Area of Speciality	<0.001	30.933	Significant association	<0.01 for each group of area of speciality
Applying profession	0.002957	8.8338	Significant association	<0.01 for each group of area of speciality
Area of Work	0.001978	9.5695	Significant association	N/A

As illustrated in Table 7.4, chi-squared tests were performed to assess if there was an association between pursuing postgraduate education and demographic predictor variables. Gender was found not to be statistically associated with pursuing postgraduate studies among ECPs ($p = 0.38$). The relationship between the area of speciality and pursuing postgraduate education was statistically significant ($p < 0.001$). Similarly, where ECPs apply their profession, and their respective specialities within the EMS profession were both statistically significantly associated with pursuing postgraduate education ($p < 0.001$) respectively. As with the category of area of work, applying profession and area of specialty has more than one predictor level. Therefore, the p-value was adjusted by producing Bonferroni adjusted p values which corresponded with a significant relationship for each of the predictor variables ($p < 0.001$).

TABLE 7.5: Pursuit of postgraduate education by socio-economic variables (n=265)

		Postgraduate education		P value
		Yes	No	
Being the breadwinner	Yes	110	26	< 0.001
	No	33	96	
Having dependents	Yes	108	72	< 0.001
	No	35	50	
Type of school	Home school	1		< 0.001
	Private School	25	16	
	Public (Model C)	66	55	
	Rural	27	39	
	Pubic (Township)	24	12	
EMS exposure prior to BEMC	Directly from school	45	36	< 0.001
	Worked outside of EMS first	17	17	
	Worked within EMS	81	69	
First family member to attain a degree	Yes	75	68	< 0.001
	No	53	69	

The postgraduate behaviour of ECPs was stratified by the socio-economic variables suggested during phase one (1) to influence the motivation of ECPs to determine if any associations existed. ECPs who were the breadwinners in their households (n = 110, 76,92%) and/or had dependents (n = 108, 75.52%) constituted the majority of those who pursued postgraduate education. ECPs who attended public schools (model C) constituted the largest proportion of the sample and subsequently also accounted for the largest proportion (n = 66, 46.15%) of those who pursued postgraduate education. The chi-square for independence test was performed to explore the relationship between the variables, concerning the outcome (i.e. pursued postgraduate studies). There was a significant association between the type of school the practitioner attended, and postgraduate-seeking behaviour ($p < 0.001$). Similarly, there was a significant relationship

between whether or not the practitioner was the first family member to obtain a degree, in relation to postgraduate seeking behaviour ($p < 0.001$). The distribution among ECPs who attended public schools in relation to those who attended private schools differed, with those who attended township schools and pursued postgraduate education nearly double that of those who did not. There was also a notable difference between ECPs who were the first member of their families to attain an undergraduate degree ($n = 75$, 52.44%), as opposed to those who were not ($n = 53$, 37.06%). The prevalence ratio further suggests a positive association between ECPs who were the first member of their family to attain a degree, as opposed to those who were not, with an Odds Ratio of 1.436. This is to say that ECPs who are the first in their family to attain an undergraduate degree are almost 1.5 times more likely to pursue postgraduate education as opposed to those who are not the first in the family to attain it.

As depicted in Figure 7.2, among ECPs pursuing postgraduate education ($n = 143$, 53.96%), staying relevant during the development of the EMS profession ($n = 99$, 69%) and personal growth and development ($n = 94$, 66%) were suggested to be the greatest motivators to pursue postgraduate education. A means of escaping employment pressure ($n = 29$, 20%) and fulfilling personal expectations of those who matter (e.g. family) ($n = 26$, 18%) were considered as the least likely motivators for this action respectively. A large proportion of ECPs pursuing postgraduate education also either strongly agreed and/or agreed that their pursuits were motivated by the fact that it would either enable them to make meaningful changes to the EMS profession ($n = 92$, 64%) or to find a better job ($n = 74$, 52%) respectively.

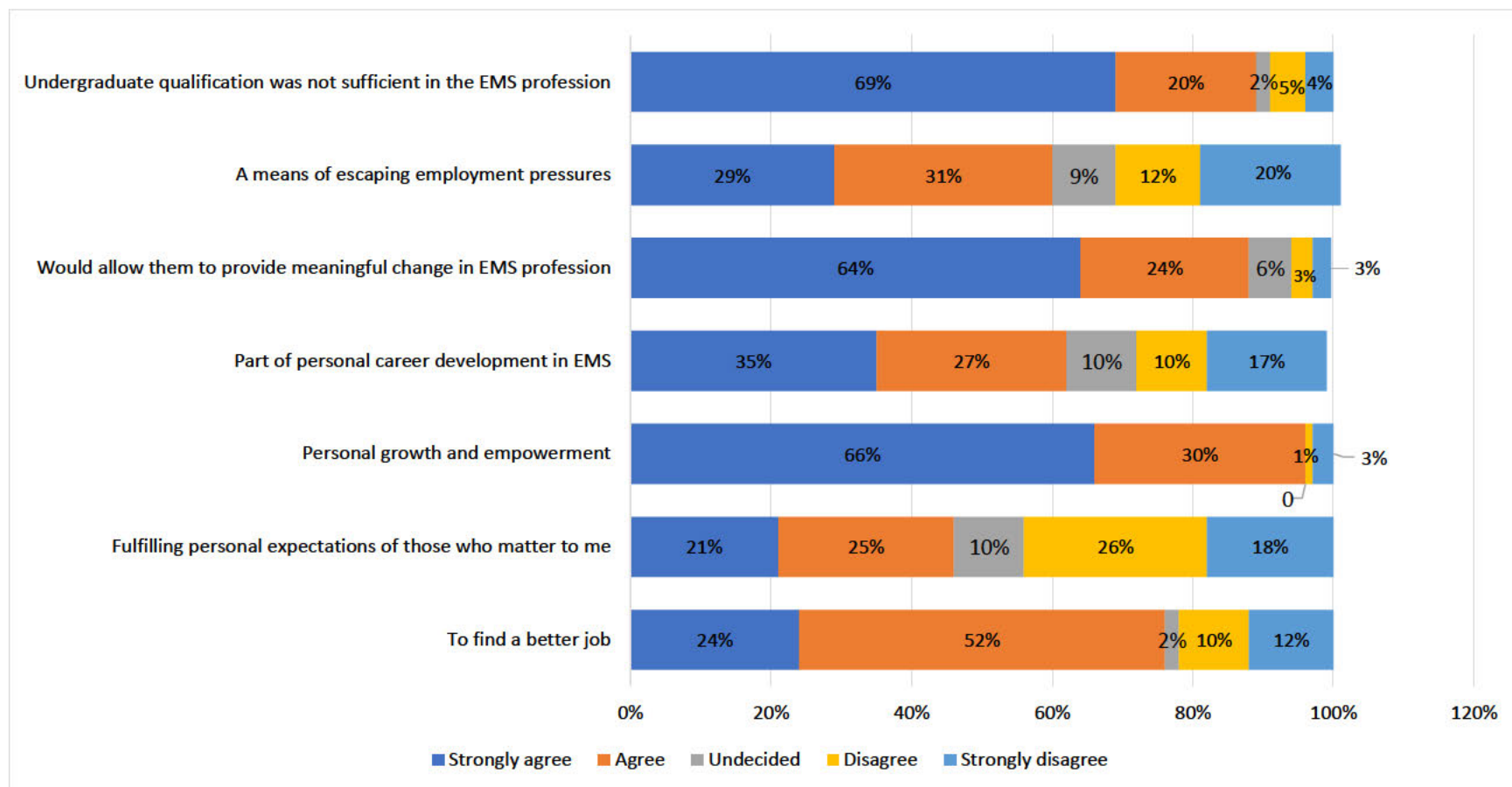


FIGURE 7.2: Participants' perceptions of how relevant the motivations identified during phase one were to their decision to pursue postgraduate education (n=143)

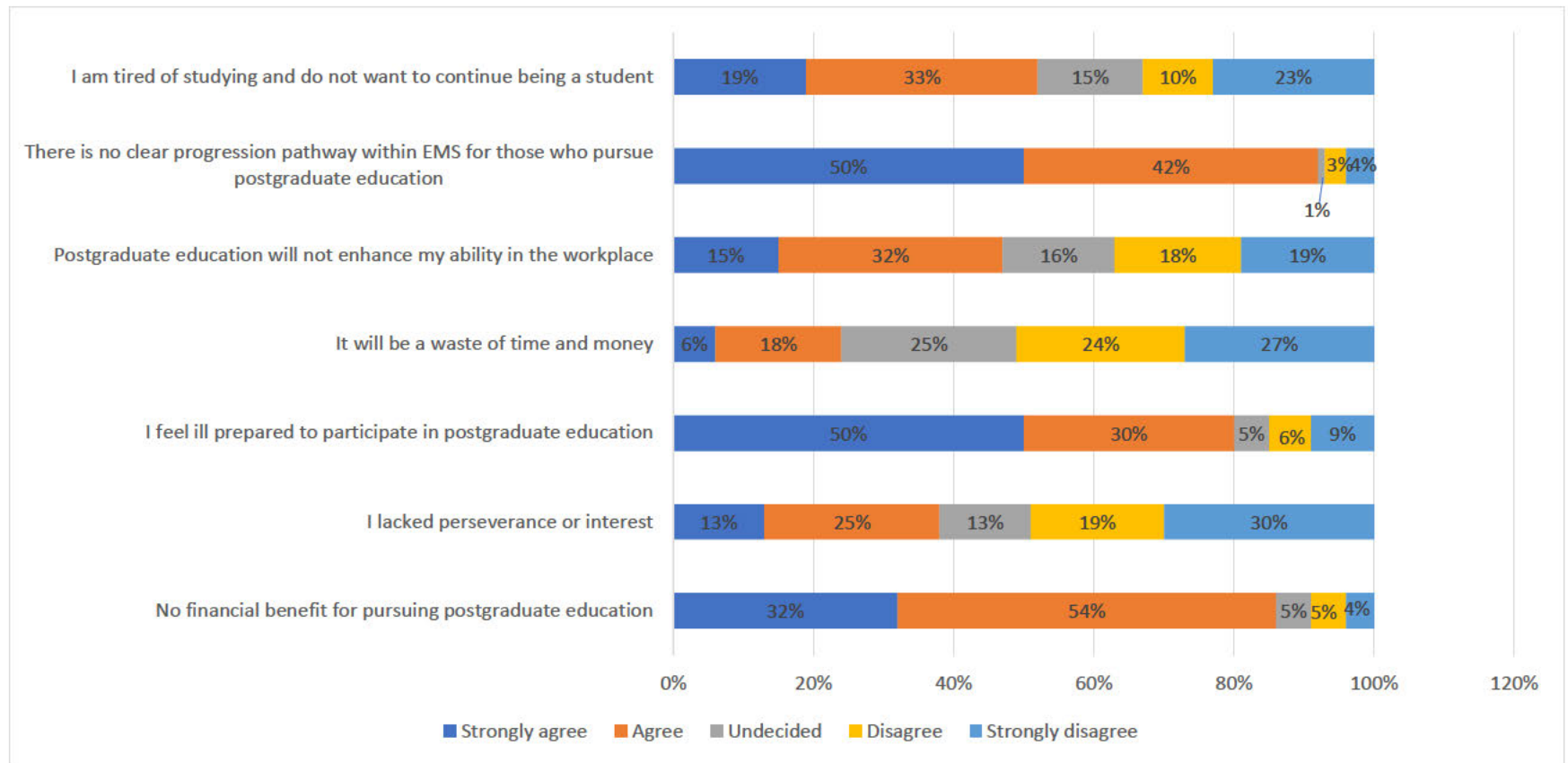


FIGURE 7.3: Participants' perceptions of how relevant the motivations identified during phase one were to in their decision to eschew postgraduate education (n = 122)

Among ECPs who have not pursued postgraduate education (n = 122, 46.03%), the largest proportions (n = 61, 50%) strongly agreed and agreed (n = 51, 42%; n = 66, 54%) that the lack of clear progression pathways and financial benefit for those who pursue postgraduate education motivated them to eschew such activities respectively. The data showed that 80% of ECPs who did not pursue postgraduate education either strongly agreed (n = 61, 50%) or agreed (n = 37, 30%) that they felt ill-prepared to participate in postgraduate education. The greatest proportions of ECPs who disagreed suggested that they did not lack perseverance or interest (n = 37, 19%) and did not feel it would be a waste of time and money (n = 33, 27%) respectively.

TABLE 7.6: ECPs' perceptions of the need and encouragement for postgraduate education within their respective settings (n = 265)

	Do you have the freedom to pursue postgraduate education?		Cultural conditions within your setting that may influence you to pursue postgraduate education?		Structural conditions within your setting that may influence you to pursue postgraduate education?	
	Yes	No	Yes	No	Yes	No
South Africa						
Area of speciality (n = 188, 70.9%)						
Operational (n = 96)	36	60	13	83	23	73
Managerial (n = 28)	17	11	9	19	12	16
Academic (n = 64)	57	7	19	45	40	24
Abroad						
Area of speciality (n = 77, 29.1%)						
Operational (n = 57)	42	15	12	45	22	35
Managerial (n = 7)	7	0	4	3	5	2
Academic (n = 13)	12	1	4	9	9	4

As depicted in Table 7.6, there was a notable disparity regarding the feeling of being encouraged to pursue postgraduate education experienced by ECPs in their respective roles. The majority of ECPs in South Africa (n = 120, 63.82%) indicated that their EMS setting did not encourage postgraduate education, whereas 57.14% (n = 44) of those abroad suggested that their setting encouraged it. Nearly half the operational ECPs (n = 81, 43.08%) in South Africa indicated no encouragement within their setting, whereas those in academic positions (n = 48, 25.53%) accounted for the largest proportion of those whose setting encouraged this activity. Abroad, ECPs within academic and managerial roles were predominantly supported (n = 11, 14.28%; n = 7, 9.09%), whilst those within the operational setting marginally suggest a difference (n = 26, 33.75% opposed to n = 31, 40.25%). Regardless of where ECPs were applying their profession or their respective areas of specialties, the need for postgraduate qualification holders were predominantly identified by all. Similarly, the majority of ECPs (n = 260, 98.11%) suggested that their undergraduate education did not adequately prepare them to engage in postgraduate-related activities.

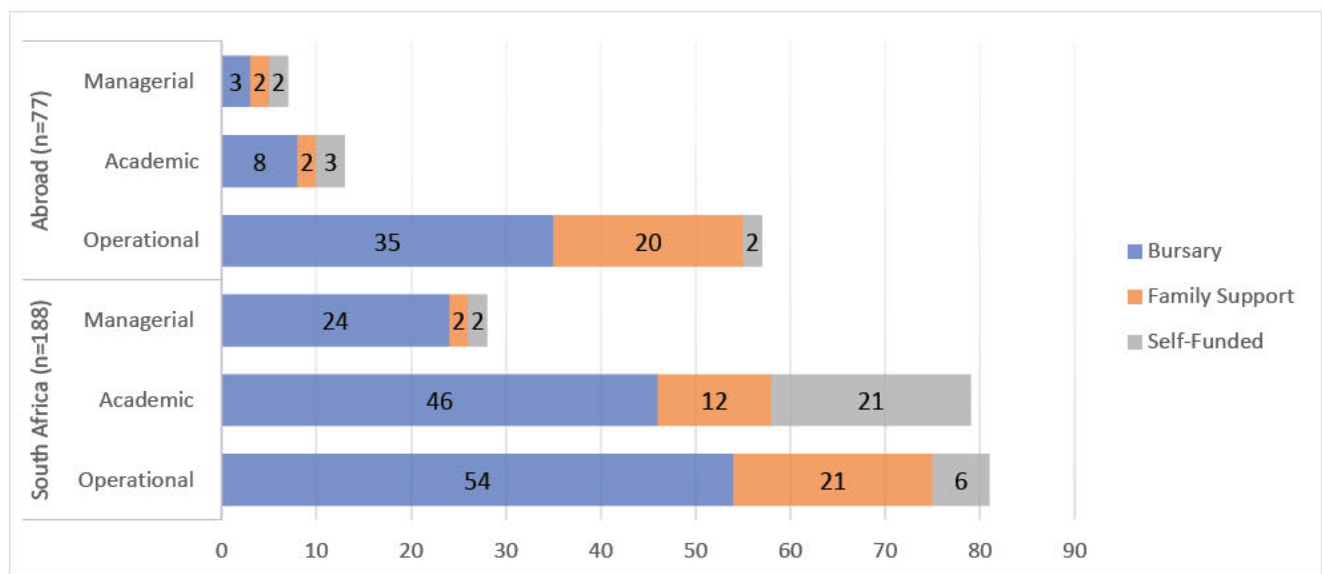


FIGURE 7.4: Determining the financial support for undergraduate education among ECPs (n = 265)

As depicted in Figure 7.4, the majority of ECPs, across all spectrums accessed financial support through bursaries (n = 170, 64.15%) as opposed to their undergraduate education being financed through self-funded models or assistance from family (n = 36, 13.58%; n = 59, 22.26%) respectively. When compared to expected postgraduate education (n = 2, 0.75.%) funding options (Figure 7.5), those receiving financial support from family during ECPs undergraduate training appears to be more common. The proportion of ECPs expecting to use self-funded models for postgraduate education is also significantly greater than that of undergraduates. When stratified by area of specialty, the proportion of South African-based ECPs within the academic world (n = 42, 22.34%) accounted for more than double that of ECPs within operational roles (n = 18, 9.57%) who access bursaries.

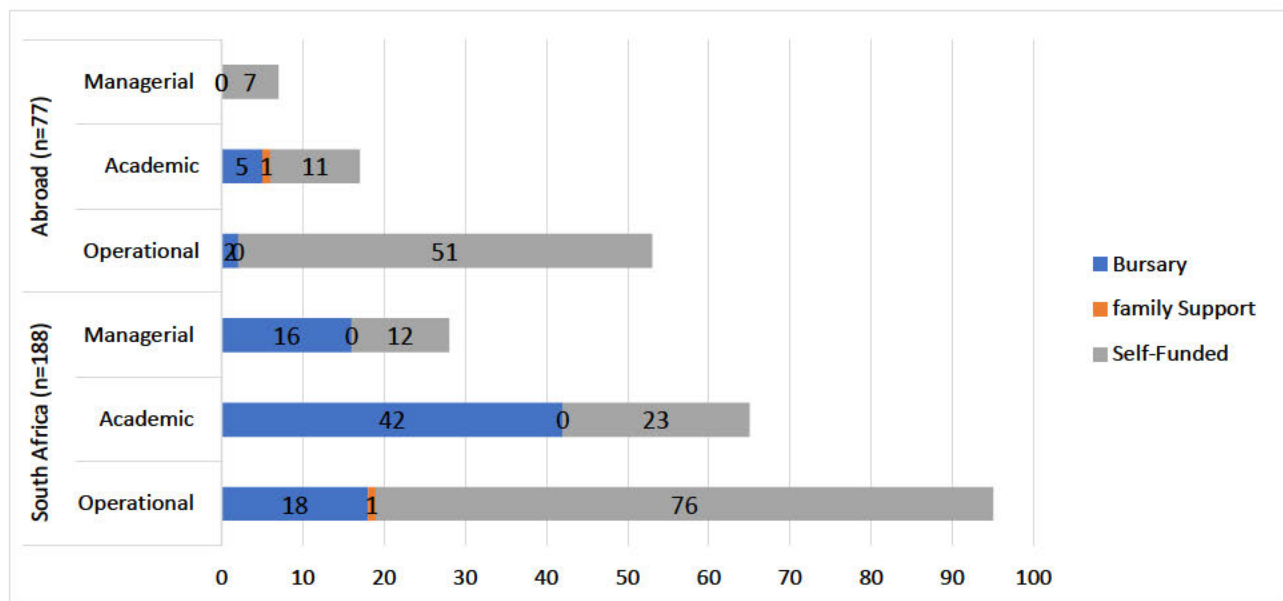


FIGURE 7.5: Determining the financial support for postgraduate education among ECPs (n = 265)

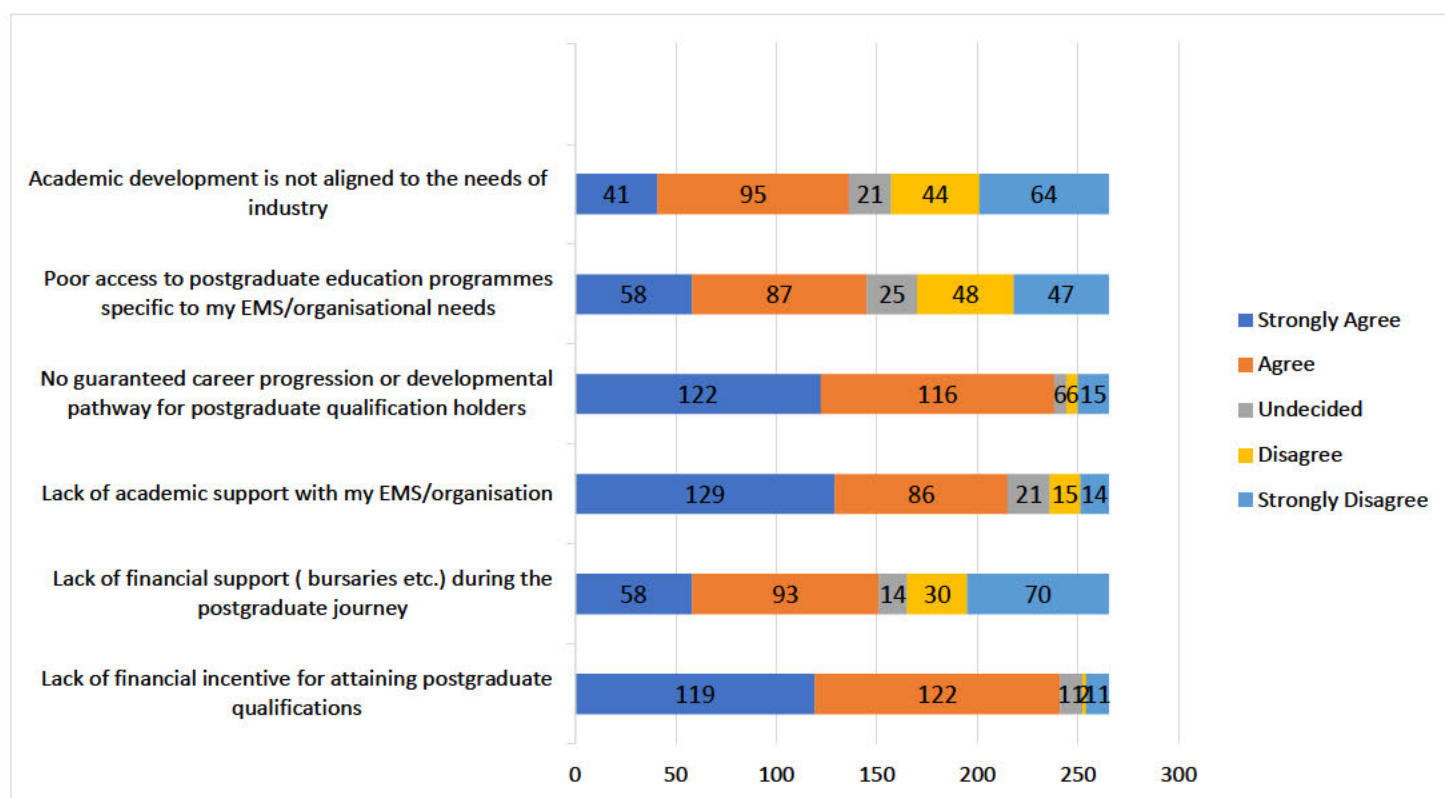


FIGURE 7.6: Participants' attitudes towards the structural conditions identified during phase one (1) that motivate ECPs to eschew postgraduate education (n = 265)

The participants were asked to rate the extent to which they agreed or disagreed on the structural conditions identified during phase one (1) of this study that contributed to ECPs eschewing postgraduate education. There were no deviations from the distribution when stratified by area of specialty or where ECPs were applying their trade. ECPs predominantly either strongly agreed or agreed that the lack of financial incentives (n = 119, 44.90%; n = 112, 42.26%), no guaranteed career progression (n = 122, 46.03%; n = 116, 43.77%) and the lack of academic support within EMS (n = 129, 48.67%; n = 86, 32.45%) were among the most identifiable motivators for eschewing postgraduate education. The majority of ECPs that either strongly disagreed or disagreed, did so towards the notions that the lack of financial support (n = 70, 26.41%; n = 30, 11.32%) was a motivator for ECPs eschewing postgraduate education.

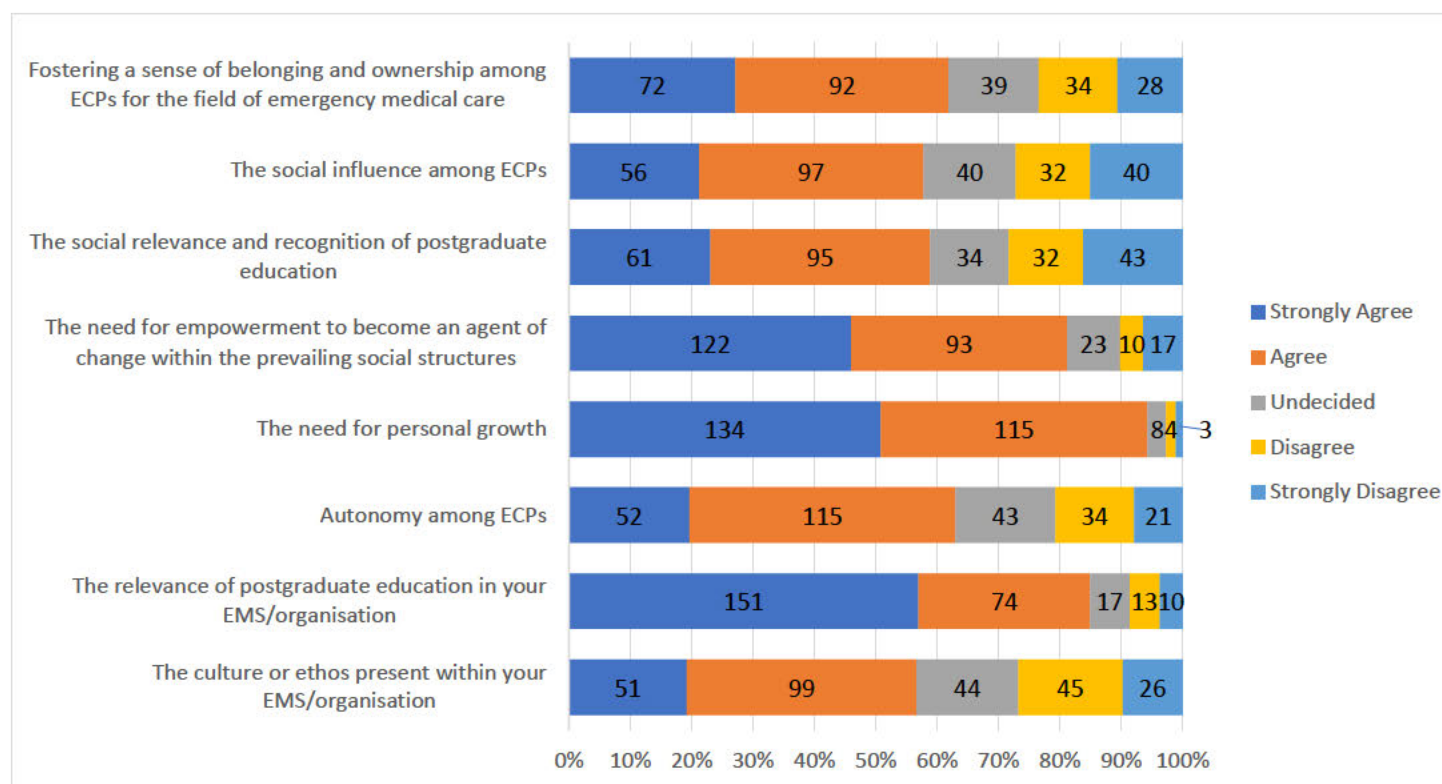


FIGURE 7.7: Participants' attitudes towards the cultural conditions identified during phase one (1) that motivate ECPs to pursue postgraduate education (n = 265)

ECPs were asked to rate the extent to which they agreed or disagreed with the cultural conditions identified during phase one of this study that contributed to ECPs pursuing postgraduate education. As depicted in Figure 7.7, 56.98% (n = 151) of ECPs strongly agreed that the relevance of postgraduate education within their respective EMS organisations was a motivating factor for the pursuit of postgraduate education, whereas 16.22% (n = 43) strongly disagreed with the fact that social relevance and recognition among fellow ECPs was a motivator. Accumulatively, the largest proportion of ECPs who either strongly agreed or agreed, suggested that the need for personal growth (n = 134, 50.56%; n = 115, 43.39%) followed by that of self-empowerment to become an agent of change within the prevailing social structures of South Africa (n = 122, 46.03%; n = 93, 35.09%) were the most likely motivators to pursue postgraduate education.

TABLE 7.7: ECPs' suggestions to improve postgraduate seeking behaviour among ECPs (n = 265)

	Capacitate EMS for the implementation of evidence-based strategies/practices	Cultivate the academic presence within my EMS	The financial incentive for postgraduate qualification holders	Implement specialized roles for postgraduate qualification holders	Predetermined development pathways aligned to postgraduate education	Provide academic support structures within EMS
South Africa						
Area of speciality (n = 188, %)						
Academic	3	5	15	24	11	6
Managerial	0	1	8	15	3	1
Operational	2	2	16	43	20	13
Abroad						
Area of speciality (n = 77, %)						
Academic	0	1	2	4	4	2
Managerial	1	1	0	3	0	2
Operational	1	6	13	24	8	5

When asked to choose between the proposed interventions identified during phase one of this study, that would likely aid in increasing the postgraduate seeking behaviours among ECPs, 113 ECPs (42.64%) suggested that the implementation of specialised roles for postgraduate qualification holders would increase the postgraduate education-seeking behaviour. When stratified by area of work and specialty, South African-based ECPs and those abroad demonstrated similar distributions for most of the proposed interventions. The proportion of ECPs abroad (n = 8, 10.39%) favoured the intervention of cultivating an academic presence within EMS twice as much as those within South Africa (n = 8, 4.25%), this being the only deviation from the equal distribution across all interventions.

7.3 MULTIPLE LOGISTIC REGRESSION

The logistic regression technique was used to determine the likelihood of pursuing postgraduate studies among the study participants. Logistic regression is a technique used to model a dichotomous outcome, given either categorical or numerical variables (Sperandei, 2014). An extension of the model is the multiple logistic regression, which explores how several predictor variables affect the odds of the phenomenon occurring.

The multiple logistic regression models in this section are informed by the sub-questions of this research. The dependent variable is having pursued postgraduate education coded as 1 = Yes and 0 = No. The models were run in the RStudio statistical package (version 4.2.3), at 95% confidence interval and at 5% significance level for establishing effect size. The table contains the log odd estimates, Odds Ratios, p-values and confidence intervals.

The sub-questions of this research were:

1. What structural, cultural and agential conditions within the South African prehospital emergency care field motivate ECPs to pursue or eschew postgraduate education?
2. How do the current postgraduate seeking behaviours of ECPs emerge from the interplay between structure, culture and agential conditions within the South African prehospital emergency care field?

7.3.1 MODEL 1: DO DEMOGRAPHIC FACTORS MOTIVATE ECPs TO PURSUE OR ESCHEW POSTGRADUATE EDUCATION?

A multiple logistic regression model to determine the likelihood of pursuing postgraduate education by using demographic predictors.

TABLE 7.8: Multivariable logistic model predicting the outcome of pursued postgraduate education using demographic predictors

Demographic predictors		Estimate			
		Coefficient (Log Odds)	Odds Ratio	95% CI [LL, UL]	P value
Gender (Male) ^a		-0.34936	0.71	(0.33 – 1.51)	0.37
Age category ^b					
	25 – 30	-0.69832	0.50	(0.06 – 10.99)	0.57
	31 – 34	-1.12534	0.32	(0.03 – 8.31)	0.41
	35 – 39	2.24905	0.11	(0.01 – 2.79)	0.10
	40 – 44	-2.00814	0.13	(0.01 – 3.80)	0.16
	45 – 49	-2.38574	0.09	(0.00 – 3.13)	0.13
	50 – 54	-3.10881	0.04	(0.00 – 2.34)	0.09
Area of speciality ^c					
	Managerial	1.91934	0.15	(0.05 – 0.44)	<0.001**
	Operational	-1.56360	0.21	(0.09 – 0.48)	<0.001**
Place applying profession (South Africa) ^d		-0.56388	0.57	(0.25 – 1.25)	0.16
Area of work ^e					
	Urban	0.38486	1.47	(0.63 – 3.51)	0.38
Nature of the current EMS /Organisation ^f					
	Public-private partnership	1.20116	3.32	(0.70 – 18.79)	0.15
	Public sector (government service)	0.10407	1.11	(0.50 – 2.45)	0.80
Years of service within EMS ^g					
	0 – 3 years	-0.13520	0.87	(0.10 – 7.30)	0.90
	12 – 15 years	0.78021	2.18	(0.61 – 8.04)	0.23
	4 - 7 years	0.41370	1.51	(0.25 - 8.89)	0.65
	8 - 11 years	0.72331	2.06	(0.44 - 9.55)	0.40
Years as an ECP		0.54104	1.72	(1.45 - 2.08)	<0.001**

^a Reference is *female*

^b Reference category is *18 – 24 years*.

^c Reference category is *academic*.

^d Reference category is *Abroad*

^e Reference category is *rural*

^f Reference category is *Private sector*

^g Reference category is *> 16 years*

Model 1 was fitted to predict the odds of pursuing postgraduate education, using the demographic predictors, namely gender, age category, area of specialty, area of work, nature of their current EMS organisation, years of service within EMS and years as an ECP, which was recorded as a continuous numerical variable. The model produces statistically significant associations for the variables years as an ECP and area of specialty. When all co-variants were held constant, the following results were obtained.

Gender

Being a male is associated with decreased odds of pursuing postgraduate education, compared to being a female. The odds of pursuing postgraduate education, if the participant is male is 0.71 times the odds compared to that of females. However, this association is not statistically significant ($p = 0.37$).

Age category

For the covariate age category, there is an insignificant association across all categories. Being in the 25 to 30-year-old age category is associated with a decreased odds of pursuing postgraduate education, when compared to those in the 18 to 24-year-old category, given that all other covariates are held constant. This association is not statistically significant ($p = 0.57$). Being in the 31 to 34-year-old category was associated with a decreased odds of pursuing postgraduate education, compared to the reference group. This effect is, however, not statistically significant ($p = 0.41$).

Those in the 35 to 39-year-old category were associated with decreased odds of pursuing postgraduate education, compared to the reference age group. This association is not statistically significant ($OR = 0.11$; $p = 0.10$). Being in the 40 to 44-year-old age category was associated with a decreased odds of pursuing postgraduate education, when compared to the reference age group. This association was not significant ($OR = 0.13$, $p = 0.16$). Similarly, both those in the 45 to 49 and 50 to 54-year-old age groups had decreased odds of pursuing postgraduate education. The model demonstrated that the association between the various age groups, and its ability to predict postgraduate

education seeking was not statistically significant (OR = 0.09: $p = 0.13$; OR = 0.04: $p = 0.09$ respectively).

Area of specialty

Those who worked in management had decreased odds of pursuing postgraduate education, compared to those who worked in an academic setting, given that all other covariates were held constant. This association was statistically significant (OR = 0.15, $p < 0.001$).

Similarly, those who worked operationally had decreased odds of pursuing postgraduate education. This association was statistically significant (OR = 0.21, $p < 0.001$).

Place of applying profession

Participants who worked in South Africa were found to be less likely to pursue postgraduate education. The likelihood of ECPs working in South African pursuing postgraduate education was 0.57 times the odds of ECPs working abroad. However, this association was not statistically significant ($p = 0.16$).

Area of work

Participants who worked in urban areas had an almost two-fold increased odds of pursuing postgraduate education, compared to those who worked in rural areas. However, this association was not statistically significant (OR = 1.47: $p = 0.38$).

Nature of current EMS or work organisation

ECPs who work in a public-private organisation had a more than three-fold increased odds of pursuing postgraduate education, compared to those who work in the private sector (OR: 3.32). This association was not statistically significant ($p = 0.15$). Similarly, those who work in the public sector were more likely to pursue postgraduate education, compared to those who work in the private sector (OR: 1.11). This association is not statistically significant ($p = 0.82$).

Years of services working within EMS

For those who had worked between 0 and 3 years there was decreased odds of pursuing postgraduate education, when compared to those who had worked for more than 16 years within EMS. Conversely, for all other years of service categories there was increased odds of pursuing postgraduate studies, when compared to the reference group. However, none of these associations were statistically significant ($p > 0.05$ across all groups).

Years working as an ECP

Years of work experience as an ECP was a significant predictor of the odds for pursuing postgraduate education. On average, for every unit increase in the number of years of working as an ECP, the odds of pursuing postgraduate studies were 1.72 times the odds, when holding other covariates constant. This association was statistically significant ($p < 0.001$).

7.3.2 MODEL 2: DO THE STRUCTURAL CONDITIONS MOTIVATE ECPs TO PURSUE POSTGRADUATE EDUCATION?

This is a multiple logistic regression model to determine the likelihood of pursuing postgraduate education by using the structural conditions experienced by ECPs.

TABLE 7.9: Structural conditions as predictors for pursuing postgraduate education

Models	Estimate			
	Coefficient (Log Odds)	Odds Ratio	95% CI [LL, UL]	P value
Work status before having completed undergraduate degreeⁱ				
Worked first, but NOT within the prehospital setting	-0.47021	0.62	(0.26 - 1.46)	0.2798
Worked: prehospital setting first	-0.51716	0.60	(0.31 - 1.12)	0.1110
Postgraduate qualification before pursuing /BTech:EMSⁱⁱ				
Yes	0.52510	1.69	(0.26 - 13.88)	0.5838
First member of family to complete a degree/undergraduate courseⁱⁱ				
Yes	0.22655	1.25	(0.73 - 2.15)	0.4081
Breadwinnerⁱⁱ				
Yes	-0.45787	0.63	(0.33 - 1.20)	0.1690
Dependentsⁱⁱ				
Yes	1.03234	2.81	(1.49 - 5.46)	0.0018*

ⁱ Reference level is "Came directly from school"

ⁱⁱ Reference level is "No"

Model 2 explored the odds or likelihood of pursuing postgraduate education, given ECPs' working status before having completed their undergraduate degree, and whether they had a postgraduate qualification before completing the undergraduate EMC. The model also includes personal structural predictors such as whether they were the first family member to have an undergraduate qualification, whether they were the breadwinner and if they had any dependents.

The results of the model showed that in general, participants who worked prior to completing their EMC undergraduate qualification, were less likely to have pursued a postgraduate education. Participants who previously worked in an industry other than the prehospital setting were 0.62 times less likely to have pursued a postgraduate education, compared to those who completed their EMC degree directly after matriculation. Similarly, the odds of pursuing a postgraduate education among participants who previously worked within the prehospital setting, before obtaining their EMC degree, were 0.60 times less likely compared to those who completed their EMC degree directly after matriculation, given that all other covariates were held constant. The associations in both groups were not statistically significant ($p = 0.2798$ and $p = 0.1110$, respectively).

Participants who had a postgraduate qualification prior to completing their EMC degree, had increased odds of pursuing postgraduate education after working as an ECP, given that all other covariates were held constant ($OR = 1.69$, $p = 0.58$).

The model similarly predicts that participants who are the first family members to obtain an undergraduate qualification, and those who have dependents, are more likely to pursue a postgraduate qualification. The odds of pursuing a postgraduate qualification among those who are the first member in their family to hold an undergraduate degree, were 1.25 times the odds of those who were not ($p = 0.41$), given all other covariates were held constant.

The odds of pursuing a postgraduate qualification among those who had dependents was 2.81 times the odds of those who did not have dependents ($p = 0.0018$), given that all other covariates were held constant. The model shows that this association was

statistically significant ($p = 0.0018$). The model predicts that those who were the breadwinners of the family, were less likely to pursue postgraduate studies, compared to those who were not the breadwinners ($OR = 0.63$, $p = 0.17$), given all other covariates were held constant. This association was not statistically significant.

7.3.3 MODEL 3 – DO SOCIO-STRUCTURAL CONDITIONS MOTIVATE ECPs TO PURSUE POSTGRADUATE EDUCATION?

This is a multiple logistic regression model to determine the likelihood of pursuing postgraduate education by using the previously experienced structural conditions.

TABLE 7.10: Structural conditions and perceptions of ECPs as predictors for pursuing postgraduate education

Models	Estimate			
	Coefficient (Log odds)	Odds Ratio	95% CI [LL, UL]	P value
Previous postgraduate qualification[#] before completing BHSc/BTech:EMC?				
Yes	-0.2577	0.77	(0.09 -	0.82
Did the BHSc/BTech:EMC? Adequately[#] prepare practitioner for postgraduate studies				
Yes	1.0447	2.84	(1.42 -	0.00392*
How was the undergraduate studies^{##} funded				
By parents or family members	-0.1348	0.87	(0.43 -	0.70889
Self-funded	0.3740	1.45	(0.57 -	0.43711
Started as a bursary, then self-funded	-13.0386	0.00	(0.00 -	0.98822
Freedom to pursue postgraduate[#] studies in current EMS organisation?				
Yes	1.5063	4.51	(2.23 -	<0.001**
Current EMS organisation encourages employees to pursue undergraduate and postgraduate studies?[#]				
Yes	1.1099	3.03	(1.53 -	0.00155*

[#]Reference group is "No"

^{##}Reference group is "Bursary"

Model 3 predicts that those who had a previous postgraduate qualification before obtaining the EMC degree, were 0.77 times less likely to pursue postgraduate education ($p = 0.82$). To explore the predictive value of the participants' perceptions about how the undergraduate degree affected their postgraduate seeking behaviours, the model predicts that those who agreed that the EMC degree adequately prepared them for postgraduate studies had an almost three-fold odds of pursuing postgraduate studies, given all other covariates were held constant ($OR = 2.84$; $p = 0.00392$). This association was statistically significant.

When exploring the association between funding of undergraduate education, and how it predicts the likelihood of pursuing future postgraduate studies, the model predicted that those who were self-funded were more likely to pursue postgraduate education compared to those respondents with other sources of funding ($OR = 1.45$; $p = 0.43$).

Perceptions about how the current EMS working structure supported the practitioner, yielded significant associations for pursuing postgraduate education. ECPs who felt that they had the freedom in the current EMS organisation had more than four-fold odds of pursuing postgraduate studies ($p < 0.001$). Similarly, ECPs who felt that their current EMS organisation encouraged the pursuit of undergraduate and postgraduate education, were 3.03 times more likely to pursue postgraduate education ($p = 0.00155$).

7.4. CONCLUSION

The descriptive data regarding the structural and cultural conditions related to the postgraduate seeking behaviour of ECPs demonstrated several interesting end points. This data can further be considered to be novel, as this is the first study that explored these end points for ECPs. Demographic, structural and cultural conditions experienced by ECPs were presented according to frequencies and distributions. There were twice as many male participants as females, with young socio-economically active ECPs constituting the largest proportion of the study sample. Similarly, the majority of the ECPs were applying their trade within South Africa, within operational roles and had between 8 and 11 years of service in EMS. Of the 53.96% of ECPs pursuing postgraduate education,

there were 17 fewer cases of ECPs working in South Africa per 100 compared to ECPs applying their trade abroad. The majority of the sample suggested a paucity of structural conditions that support the pursuit of postgraduate education existing within the field of emergency medical care.

The three models explored how several predictors affect the likelihood of pursuing postgraduate education among ECPs. Significant associations showed a greater likelihood of pursuing postgraduate education, particularly among participants who felt that they had a supportive EMS work environment. Similarly, structural and socio-structural conditions were key factors in determining postgraduate seeking behaviours, such as the significant odds of pursuing postgraduate studies among ECPs respondents who had dependents. These statistical associations can be correlated with the qualitative data captured during the focus group discussions and interviews.

The occurrence of non-significant associations could be attributed to limitations in sample size or confounding factors during model fit and covariate selection. These factors should be considered by future researchers who may expand on the scope of this study.

CHAPTER EIGHT: ESCHEWING POSTGRADUATE EDUCATION

8.1. INTRODUCTION

The agency of ECPs can be described as the action or motivations derived from their internal conversation. This study argues that the internal conversations of ECPs are influenced by the structural and cultural conditions they experience. Archer refers to this as the 'parts' that influence 'people'. This chapter uses the social realism approach to synthesise and discuss the qualitative and quantitative data to explain why ECPs eschew postgraduate education. I begin by describing ECPs' avoidance tendencies. Thereafter I interpret these findings concerning the most common conditions that motivate ECPs to eschew postgraduate education.

8.2 MOTIVATORS FOR ESCHEWING POSTGRADUATE EDUCATION FROM WITHIN THE PREHOSPITAL MILIEU

Eschewing postgraduate education in this study refers to the process of not or no longer pursuing postgraduate education. Among the study sample, 122 (46.0%) ECPs eschewed postgraduate education, of whom a majority ($n = 98$, 80.3%) worked in South Africa. The study found that owing to the structural conditions experienced within the prehospital milieu (discussed throughout this chapter), there was a decreased likelihood of pursuing postgraduate studies among ECPs working in South Africa, compared to ECPs working abroad (OR 0.57, CI: 0.25 – 1.25).

Structural conditions predominantly motivated ECPs to eschew postgraduate education. As a social realist, I evolved (in terms of my ontology and epistemology) throughout my interaction with the sample under investigation. In so doing, the phrase structure evolved from Archer's (1995, 2007) work, merely referring to tangible or material resources, recurring patterns of social behaviour, or interaction between different elements of society, to that deemed more EMS-specific by the participants. The overall conditions arising from the presence or absence of structures within the prehospital milieu became

the focus. This approach would enable an analysis of what appears at the level of real for ECPs, moving beyond what is merely observed, to understand why these events occur.

In any social context, there will inevitably be multiple conditions interacting with one another in complementary or contradictory ways (Archer, 1995). This, in turn, will interact with the mechanism of other orders. For example, the conditions identified in this study and discussed in this chapter may affect the agency of ECPs. Still, these will intersect with issues such as conditions brought about by the Covid-19 pandemic and the humanitarian crisis in Syria, for example. Therefore, while an investigation of these variables alone cannot fully explain ECPs' activities, understanding the effects of these conditions is critical to social transformation (Archer, 1995). Critical realism encapsulates the consensus that reality is differentiated, structured, and ever-changing and that our knowledge of reality is fallible (Danermark *et al.*, 2005). Bhaskar (2008) describes knowledge as being transitive, which is interpretable and something humans learn and come to know and understand. In the case of this study, the emergency care education system can be used to illustrate the transitive (ever-changing knowledge of things) feature of the knowledge (Gorski, 2013). The prehospital emergency medical care education system has experienced significant changes over the last two decades, and as we (those within the field of emergency medical care) gain more knowledge and insight, further development or change is likely to occur. With this understanding, I sought to identify and explore the structural conditions that influence the agency of ECPs.

As depicted in Figure 8.1, throughout the various phases of this study and while exploring the situational logic experienced by ECPs, three key themes emerged as having significant causal powers in motivating ECPs to eschew postgraduate education. I found structural conditions from socio-economic circumstances, the EMS profession, and the academic world to govern structures and influence the internal conversations of ECPs. While logically and sociologically presented distinctly for this analysis, they may have synergistic properties.

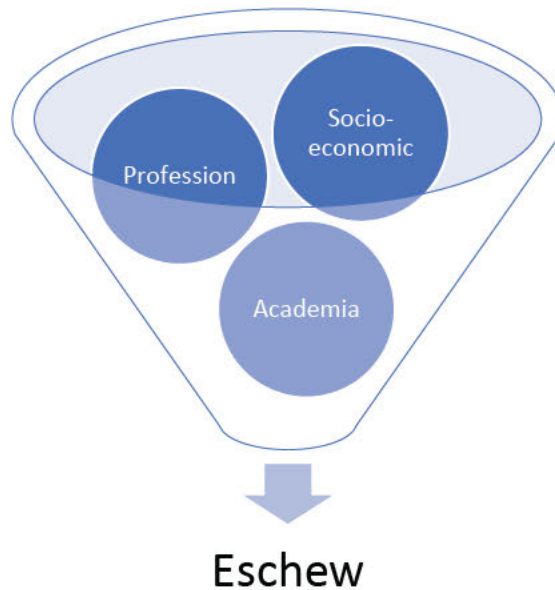


FIGURE 8.1: Conditions that predominantly motivate ECPs to eschew postgraduate education.

8.3 SOCIO-ECONOMIC CONDITIONS

As presented in Chapters Five, Six and Seven, this study found that the generative mechanisms of a socio-economic nature motivated ECPs to eschew postgraduate education. Here, I identified financial incentives, financial support, and social support structures as the most prevalent conditions influencing ECPs to eschew postgraduate education. I placed these real existing entities in the domain of real, mainly as ECPs reported these to possess causal powers that produce events or experiences in their social worlds. These structural conditions can further be considered to constitute the ‘parts’ that influence the internal conversations of the ‘people’.

Socio-economic conditions play a significant role in motivating postgraduate-seeking behaviour worldwide (Marginson, 2016; Boneva, Golin & Rauh, 2022). The socio-economic factors challenging the South African education system (DBSA, 2020), the subsequent influence on learners going to university (Case, Marshall, McKenna & Mogashana, 2018) and academic success (Taylor & Yu, 2009; Van Zyl, 2016; Sobuwa & Lord, 2019; Naidoo & Van Schalkwyk, 2021) have widely been reported. As discussed in Chapter Three, these conditions can further be suggested to condition at the first and

second stages of the morphogenetic cycle (Archer, 1995; Lockett, 2012), i.e. the context in which ECPs find themselves (first stage), and the response to the conditioning influences (second stage) (Behari-Leak, 2015). These findings offer the EMS profession something novel: what ECPs need to be motivated to pursue postgraduate education and further capacitate the EMS profession.

8.3.1 FINANCIAL INCENTIVES

While multiple complex factors influence the decision to pursue postgraduate education, personal interests cannot be disputed. While the internal conversations of ECPs in this regard are foremost internal, the professional motivation for such pursuits shapes the terrain of these conversations. One such reason is improved financial standing (remuneration) for attaining postgraduate education, which was found to be a concern among ECPs within the South African prehospital milieu.

This study identified a need for financial incentives aligned with becoming a postgraduate qualification holder within the prehospital milieu. An overwhelming majority of the study participants (n = 241, 90.9%) suggested that the absence thereof motivated ECPs to eschew postgraduate education. Interestingly, both the quantitative and qualitative data suggested this predominantly only to be the case within South Africa. An ECP based in South Africa disclosed the following:

John is absolutely spot on to say there is no financial remuneration beyond the degree holder within EMS. In industry, a sector occupied by the most ECPs, there is no financial incentive for them to upskill themselves, (and) there is no career progression plan affiliated with (a) master's or PhD studies for them; why should they then do it? (Sizwe)

Remuneration can reinforce positive behaviour, which may invariably aid in achieving high institutional performance (Mathis & Jackson, 2016). Kissoonduth (2017) argues that tangible rewards significantly influence employees' workplace engagement, the quality of their outputs, and retention, as financial incentives support the need for work autonomy. It is thus unsurprising that 86.0% of ECPs who failed to pursue postgraduate education (n = 122) reported this to be a result of "no financial benefit for pursuing postgraduate

education”. According to Archer (2007), people form ‘projects’ to advance the causes they are most passionate about. This is to say that ECPs (agents) are awarded powers, which can be noted in the pursuit of projects, and that the personal emergent properties of ECPs are exercised within the emergent properties of structural conditions they experience (Archer, 2007). For example, an ECP envisions the pursuit of postgraduate education as a ‘project’, and their power in this pursuit is attained from their internal conversation: do the emergent structural properties (socio-economic context) take priority over the emergent personal properties (postgraduate education without an improved socio-economic condition)? Here, I argue that the emergent properties of structural conditions in isolation may appear singular in nature. However, when the first two stages of the morphogenetic cycle (structural or cultural conditioning and socio-cultural interaction) are considered, and the agent’s historical and contextual nature are taken seriously, agency in this regard may be understood.

While the lack of financial incentives was a critical structural condition for South African ECPs to eschew postgraduate education, this was only the case for a small proportion (69.0%) of those working abroad (a disparity discussed later in this chapter). The data emerging from the FGDs suggested that the consequences of not financially incentivising postgraduate qualifications within the South African prehospital milieu may further exacerbate the migration trends among ECPs. A notion evident by the “brain drain phenomenon” and the rapid depletion of degree holders within the prehospital milieu (Govender *et al.*, 2012; Kaplan & Höppli, 2017; Tiwari *et al.*, 2021). This notion has plagued the South African prehospital setting for over a decade, despite the literature calling the current retention and remuneration strategies into question (Govender *et al.*, 2012; Mlambo & Adetiba, 2017).

Baum *et al.* (2013) present several benefits of pursuing postgraduate education. The most prominent is the increased probability of securing employment and attractive remuneration, which Pender and Welch (2016) suggest provided agents with the opportunity to experience economic well-being and a higher socioeconomic status (Baum *et al.*, 2013). Economists also believe higher education correlates directly with economic growth (Ma, Pender & Welch, 2016). Interestingly, the current findings suggest that these

benefits are not associated with the pursuit of postgraduate education within the South African prehospital milieu.

On a simplistic level, the organisational structure of EMS comprises an operational workforce (prehospital emergency care practitioners), a managerial delegation, and support services (information management, human resources, for example), all of which report to an EMS director. The qualitative findings of this study suggested that structural conditions within the prehospital milieu favour career and subsequent financial progression for those who pursue undergraduate degrees (operational workforce). Since BAAs make up about 75.6% of registered emergency care providers (Tiwari *et al.*, 2021), graduating as an ECP was not only seen as reaching the “clinical ceiling” in the prehospital environment, it was also not linked to any career development pathway within the existing South African EMS structures. This is to say that a practitioner who graduates as an ECP, enters as a member of the EMS workforce and does not have a clear career development pathway beyond this point. Furthermore, postgraduate education was not acknowledged as a requirement within these structures; not even the EMS director required a postgraduate qualification, thus eliminating the notion of financial incentives for such pursuits. (I will discuss later in this chapter the issue of industry and the capacity for postgraduate qualification holders).

ECPs widely reported on the lack of financial remuneration and clear career progression associated with pursuing postgraduate education, which was noted by the consistency between the quantitative and qualitative findings. The majority (92.0%) of ECPs who failed to pursue postgraduate education reported this due to there being no career progression affiliated with pursuing postgraduate education. This is a critical finding, especially given that postgraduate education should allow agents to improve their social and economic well-being. South Africa is plagued with unemployment, poverty, issues of inequality, and social injustice (Ikdaal, 2017; Francis & Webster, 2020; International, 2020; Naidu, 2020). Postgraduate education offers those who pursue it a chance to change the narrative and escape these conditions. While some of these ECPs may hail from disadvantaged backgrounds, the lack of financial remuneration and career progression opportunities (structural conditions) within the prehospital milieu appears not to capacitate

the notion of pursuing postgraduate education to improve social and economic well-being within society. This finding perhaps describes the infancy of EMS structures compared to allied healthcare fields in South Africa.

The nursing sector in South Africa resembles the EMS profession in that it is governed by a statutory body and has transitioned from the vocational-type training model to an NQF-aligned formal qualification model. Havenga and Sengane (2018) reported on the financial challenges faced by postgraduate education nursing students, which were often over shadowed by the likelihood of improved financial remuneration upon completion. The nursing fraternity has overcome numerous obstacles to restructure and professionalise its discipline. In doing so, their postgraduate qualification structures are integrated into the academic and industry sectors of the profession, and their postgraduate qualification holders are remunerated as such (Havenga & Sengane, 2018; Crowley & Daniels, 2023). In certain provinces of South Africa, the nursing and EMS fraternities are considered similar entities, almost being considered siblings within health care and educational structures. However, it appears EMS still needs to develop alongside its sibling.

It has been more than two decades since the then Minister of Education released the National Plan for Higher Education (NPHE) (South Africa: Ministry of Education, 2001), which provided the implementation framework to transform the higher education system in South Africa. This was an initiative in response to the proposal of the Council for Higher Education (CHE) to restructure the higher education system as a 'differentiated and diverse' system (Essop, 2020). While various institutions in South Africa offer EMC-related postgraduate education qualifications, the study findings suggest that this "differentiated and diverse" system may not have been embodied by the operational sector of the prehospital milieu, which has failed to develop remuneration strategies alongside academic institutions for postgraduate qualification holders.

The financial remuneration structures within the prehospital milieu, specifically the public operational sector, are governed by the Occupation Specific Dispensation (OSD) framework. The OSD is a retention-based policy introduced in 2007 and is a uniquely

structured pay progression framework aligned to the work experience of healthcare professionals (George & Rhodes, 2012). The framework centrally determines grades associated with specific job profiles. This framework aims to improve service delivery by establishing new salary dispensation and recognised career paths within specific health professions, including EMS (George & Rhodes, 2012).

Several authors (George & Rhodes, 2012; Ditlopo *et al.*, 2013; Thambura, 2016), suggest that the OSD framework benefits the notion of 'years of experience' or those who enter the EMS profession with undergraduate qualifications. Thambura (2016) reports that the omission of the OSD framework to recognise additional training was a major concern among radiographers. Naicker (2011) and Naidoo (2015) report similar findings among pharmacists, as the majority (more than 75%) of their study participants also reported being unsatisfied with the OSD implementation strategy. Ditlopo *et al.* (2013) applied the Hogwood and Gunn (1984) analytical framework to appraise the application of OSD within the nursing sector of South Africa. Their analysis brought forth the recommendation of improved management systems and planning to mitigate the lack of foresight this framework had beyond merely retaining healthcare professions, with the growth and development (postgraduate education) of professionals in each sector being an example of such.

While the implementation of the OSD was aimed at bolstering the public sector workforce by retaining and attracting healthcare professionals, Thambura (2016) suggests that its implementation could have benefited radiographers at some levels (postgraduates included). Similarly, this researcher found that the OSD remuneration framework only rewards the prehospital workforce at some levels, particularly ECPs who pursue postgraduate education and become postgraduate qualification holders. Crowley and Daniels (2023) go on to recommend that due to the relatively low remuneration status occupied by postgraduate nurses, the Department of Health should explore the possibility of dual appointments to ensure that these professionals not only add value to both the operational and academic spheres of their profession, but are remunerated appropriately because of it. Likewise, a competitive financial remuneration system should be a key

focus within the prehospital milieu to improve ECP postgraduate education-seeking behaviour and even retain its highly sought-after prehospital practitioners.

8.3.2 FINANCIAL SUPPORT

Economic conditions influence people's motivation, internal conversations, and educational pursuits worldwide (Benton, 2007; Vykopalová, 2014; Ugwuozor & Ngwoke, 2021). This study found this to be no different among ECPs, as poor access to financial support in South African economic conditions was identified as a generative mechanism motivating ECPs to eschew postgraduate education.

South Africa has the highest income gap (the Gini index ¹⁴ is 63.0%) globally as of 2018, with more than 18.2 million citizens living in extreme poverty based on the threshold of 1.9 USD daily (Statista, 2022). While South Africa continues to bear the burden of an alarmingly high national unemployment rate of 32.9%, those that are employed suffer from the rapidly rising cost of living (StatsSA, 2023). South African-based ECPs shared similar sentiments, saying "... we live month to month", and "We can't save and give up our second source of income to go study". Postgraduate education in the absence of employment is rare in South Africa (Mouton *et al.*, 2015), and financial support in the form of bursaries is often needed.

Despite the transformations in South Africa over the last two decades, too many people have been trapped in poverty, and South Africa remains a highly unequal society (National Planning Commission, 2012; Francis & Webster, 2020). Nearly 36.0% of postgraduate qualification holders in South Africa belong to the wealthiest household income quantile (Statistics South Africa, 2019). Visagie and Black (2020) question who is the "ideal postgraduate student" as they suggested the South African postgraduate funding model is skewed. They further argue that postgraduate funding structures

¹⁴ The Gini index measures the extent to which the distribution of income among individuals or households within an economy deviate from a perfectly equally distribution. An index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

assume that postgraduate applicants can access intergenerational wealth, have no dependents, have supportive (earning) spouses, and suffer no ill health (Visagie & Black, 2020). These assumptions stack education in favour of students with access to family money, students who are still young and child-free, and those who already reside in cities near universities. Based on the study findings, these assumptions do not favour ECPs, who are primarily breadwinners and guardians and, in certain instances, reside in rural regions of South Africa. According to Archer's (1995) and Lockett's (2012) morphogenetic cycle of conditioning, society has no pre-set form or preferred state and is formed by agents and their activities (1995, 2003). I argue that these conditions relate to the first two stages of Archer's morphogenetic cycle, thereby having structural and socio-cultural (morphogenesis) influences on the internal conversations of ECPs (similar to the intersection described in the previous section). While morphogenesis may apply to all levels (society, prehospital milieu and ECP), I agree with Archer's (1995, 2007) arguments that the relationship between agency and these conditions may only be characterised by the emergent properties and powers they possess, as determined by the ECP as agent.

In what has been described as a challenging higher education funding landscape, the Department of Science and Technology (DST) aimed to provide 42 620 (27 411 master's and 15 209 doctoral) bursaries by 2019 (Statistics South Africa, 2019). It is, however, unclear if this target has been met. Departments such as the DST, universities, and various components of the EMS profession in South Africa offer financial support through a postgraduate student-centred platform. While this support is aimed at attracting and supporting the delivery of quality research outputs and subsequently absorbing these highly skilled problem solvers into the workspace, the study findings suggest that the prehospital milieu is excluded from this. Discourse shared during the FGDs suggested that operational ECPs felt they were not afforded access to these support measures, although these funding measures are widely accessible through various public and institutional platforms. While operational ECPs may feel this way, it is likely that the structural conditions experienced and the closed-loop makeup of the EMS structures have resulted in ECPs either not being openly exposed to the various support measures

or that the financial support models available, favour a select component of ECPs within the prehospital milieu (a disparity discussed throughout this chapter).

In the absence of such financially supportive conditions within the prehospital milieu, one of the participants shared his reality and suggested:

I had to leave South Africa, find better employment opportunities and create the possibility for myself to study further while raising a family, as the financial situation in South Africa does not make it possible. (John)

The study findings suggest that most participants (57.0%) had poor access to financial support within the prehospital milieu. Likewise, Mmadi and Sithole (2019) and Mbombi and Mothiba (2020) identified the lack of funding to influence the pursuit of postgraduate education among South African social workers and nurses, respectively. However, this study found this phenomenon predominantly among operational ECPs, as those within academic positions accessed bursaries twice as frequently as those within operations for postgraduate education. Within the South African prehospital milieu, operational ECPs suggested that they were afforded different access to financial support than those within academic roles, as highlighted by a few participants below:

Some people (ECPs) have access to bursaries, where(as) most of us within operations do not. (John)

There are no (postgraduate) bursaries for operation(al) staff. (Richard)

I feel that it's unfair that I have been here (operations sector of EMS) for four years now and can't get a bursary, but someone here (referring to someone in the discussion) has just qualified (as an ECP) and got a bursary because they work at the college¹⁵ (within academia). (Sam)

¹⁵ College – refers to a state funded training facility that provides the EMS profession and its workforce within service education and training.

These participants' views are consistent with the quantitative findings which found that a large proportion (81%) of the participants pursued postgraduate education to occupy academic roles. According to Archer (2007), structure and culture possess properties and exercise power over agency. Even though structural conditions (parts) and ECPs (people) do not interact independently, when artificially separated to understand the interplay between the two, the distinct powers of each operate at the level of real. This is to say that there are certain causal powers at play at the real level, which, when activated, shape the events in the world. The powers awarded to the structural conditions may not be exercised upon the internal conversations of ECPs at specific times (operational ECPs' poor access to bursaries vs ECPs in the academic world with good access, serves as an example). More importantly, these powers may also be exercised, but not become apparent due to the compensation of other mechanisms, such as the emergent properties of cultural conditions.

Nonetheless, empirically, the findings of this study depicted this as the disproportionate nature of structural conditions (access to financial support) experienced by ECPs within the various roles, which may very well be a reason why the largest proportion of those pursuing postgraduate education and accessing bursaries are found within academic positions. This phenomenon is not shared by other healthcare professions, such as the South African nursing profession (Havenga & Sengane, 2018; Crowley & Daniels, 2023).

At each ontological level, the findings of this study suggest that the generative mechanism owing to the structural conditions (availability of financial support) experienced by ECPs influences their agency, which, in this case, was primarily seen as them being motivated to eschew postgraduate education.

8.3.3 SOCIAL AND SOCIETAL SUPPORTIVE STRUCTURES

Similar to the notion of student success, I assume that pursuing postgraduate education predominantly emerges from learners' inherent attributes such as intelligence, work ethic, and determination, amongst other factors (Boughey & McKenna, 2016). In doing so, there is a risk of causally labelling ECPs pursuing postgraduate education with predefined

characteristics, thus legitimising social inequality (Mijs, 2018). Furthermore, this may omit the notion that they are members of society whose agency is influenced by the intersection of the structural and cultural conditions they experience. Even though previous work (Archer, 2007; Joseph, 2014; Behari-Leak, 2015) in this realm has suggested that realities are constructed or brought into being by individuals at the level of real, I feel this sentiment omits a vital characteristic of the power of society. As social beings, their internal conversations are influenced by the interrelatedness of social, societal, and institutional structures. Archer's (2007) work entails understanding that the social world emerges from the complex interplay of powers between structure, culture, and agency. Unsurprisingly, in one of the most unequal countries in the world, this study identified South African-trained ECPs as having vastly unequal opportunities, which were noted as generative mechanisms that influence ECPs' motivation for pursuing or eschewing postgraduate education.

Furthermore, the postgraduate-seeking behaviours of ECPs is influenced by the emergent properties and powers of the social circumstances and support they experience. Interestingly, I found that conditions within the second stage of the morphogenetic cycle (socio-cultural interaction), emerging from their socioeconomic and social support context, predominantly motivated ECPs to eschew postgraduate education. The challenges perceived to occur due to social circumstances almost appeared to be a determinant of postgraduate-seeking behaviour.

Against the backdrop of social inequality experienced in South Africa, it was found that the emergent properties and powers attributed to the degree of access to postgraduate education differed among ECPs. The advantages, disadvantages, and privileges experienced operate at every ontological level (Bhaskar, 1975) and determine the degree of access, support, and by extension, the agency ECPs have for activities such as postgraduate education. Participants alluded to the challenges faced within their work environment, particularly those within the operational setting, who shared the following:

When I think about postgraduate studies, I think about where and when? Finding the time and the proper environment prevents me from studying further. At work (operations

setting), I spend my time in an ambulance, not behind a desk or PC. My station does not provide internet access; there are no PCs, books, or research journals. (Pam)

Various advancements have been made to integrate technology into the healthcare sector and, in so doing, improve access to emergency medical care for the South African population (FTI Consulting, 2019; Darwish, Korouri, Pasini, Cortez & Ishak, 2021; Ibeneme, Karamagi, Muneene, Goswami, Chisaka & Okeibunor, 2022). However, some challenges raised by ECPs suggest that these advancements may have needed to be adequately introduced into the prehospital milieu. While Archer (1995) argues that society has no pre-set form and is formed by the agent's interaction, the findings imply that these structural conditions can be viewed as components of a system (parts) into which ECPs were introduced before their interaction. Acknowledging that this is not an environment of their own making, these situational logics have the emergent properties to condition their daily lives at both the structural conditioning and socio-cultural interaction levels (Stages 1 and 2 of the morphogenetic cycle). Throughout the discourse, operational ECPs reported being exposed to settings with poor or limited infrastructure, which they deemed not conducive to postgraduate education-related activities. Through a social realist's lens, it becomes evident that the ECPs do not determine these emergent properties and powers, but it is rather something they are subjected to, an imposing power that determines the setting for which this internal conversation takes place. There was a threefold increase in the number of South African ECPs who identified the absence of structural conditions that would support further study within their respective EMS settings. Unsurprisingly, ECPs within operational roles again constituted the largest proportion (n = 73, 38.8%).

Interestingly, ECPs abroad shared similar sentiments to their South African-based colleagues, further suggesting the scarcity of these conditions with a much narrower margin. While ECPs abroad shared similar views, they were more likely (OR: 0.57) to pursue postgraduate education than their local colleagues. I postulate that, abroad, ECPs need to experience the degree of structural and system omission that their local colleagues do.

Several authors have concluded that family commitments and social responsibilities are common barriers to improving one's education status within society (Baharudin, Murad & Mat, 2013; Ronnie & Wakeling, 2015; Cobbing, Maddocks, Govender, Khan, Mbhele, Naidoo, Tootla & Weston, 2017; Dlungwane, 2020). The commitment to a family can either motivate ECPs to pursue or eschew postgraduate education. Spaulding and Rockinson-Szapkiw (2012) argue that balancing the quest for postgraduate education with family and work commitments is challenging across disciplines. The study findings are not indifferent to what has already been described in the literature, with one participant disclosing:

At home, I need to be a mother to my kids; I am their father and their mother. I have to run a household. How do I start something that will require lots of time without improving my financial situation? I don't have time to waste on something that will not immediate(ly) benefit my family. Where do I study and get research done? After putting my kids to sleep (while) knowing that I must be ready for work early the next day. (Pam)

When will I ever enjoy some time with my family and raise my kids if I continue studying? (Peter)

We are living from month to month, and I can't progress at the expense of my family. Some people in this service (industry) get the opportunity to study with time off, without losing their 8 hours (a portion of income) and know that once they complete it, there will be incentives. As an operational person, I have come to realise that this is not the case. (Dave)

This study identified the ongoing concerns of basic and social needs that ECPs carried for their families – with time spent away from their families often compared to the notion of progressing within the field at the expense of their families. Some authors (Fang, Bednash & Arietti, 2016; Lin, 2016; Mbombi & Mothiba, 2020) have indicated that postgraduate students frequently face obstacles due to the burdensome obligations of being a breadwinner, having a spouse and playing a parental or employer role. Certain aspects of the discourse shared by ECPs support these findings, as ECPs relate to the

imbalance between family life, employment and being a student, which needs to be factored in before considering pursuing postgraduate education.

Chetty and Pather (2016) assert that equity remains challenging for the South African higher education and training departments. The lack of supportive social structures due to the widely reported challenges with social equity and systemic inequalities within South Africa may likely motivate ECPs to eschew postgraduate education. One such participant disclosed:

The (education) system is there to sort of exclude us. I will use a simple example: I am the first black one to graduate from university in my family, and then you register for a master's. They (the university) say you must look for your own supervisor. (Others have) has like uncles, aunties, sisters-in-law, brothers-in-law and all those in-laws who have their master's and whatever. He just has to pick up the phone and choose one. So, for me, who doesn't have an auntie or uncle? I must go look at strangers ... Now what about those who follow in my footsteps? This causes them to be excluded from going through this successfully. (Sam)

While societal conditions and implications may only sometimes be known, this study aids in identifying these existing challenges, which may not have been empirically noted, but are trans-empirical and real entities requiring attention. The implications of bringing such challenges to light and the influence they may have on postgraduate-seeking behaviour if addressed, may not be immediately known. However, as with many interventions aimed at capacitating societies to overcome systemic inequalities, strategic and purposeful intervention is required. Through collaborative efforts, EMS-specific training institutions and stakeholders within the EMS profession need to move beyond merely providing access, but rather towards providing equitable access to postgraduate education by using purposeful roll-out strategies aimed at capacitating local communities that require professionalised EMS ambassadors within society.

Throughout the various phases of this study, it became evident that the generative mechanisms and emergent powers owing to the social and socio-economic conditions experienced by ECPs varied across work settings (operations versus academic, South

Africa versus abroad). The socio-economic conditions experienced by ECPs applying their trade abroad motivated them to pursue postgraduate education. In contrast, the emergent properties owing to the social or societal constructs and socio-economic conditions proved to be notable challenges for those within South Africa. This is not to say that it motivated them to avoid these activities altogether, as my findings suggested that ECPs often break free from their circumstances. I also concluded that while this phenomenon may be empirically observed, its causal powers may not be exerted upon each ECP. Not everyone who experiences these conditions may eschew postgraduate education as other factors may have significant influence over their agency in this regard.

8.4 THE PROFESSION

The EMS profession is comprised of various components that collaboratively support each other to provide South African citizens with access to emergency medical care. In the case of this study, the term profession refers to the operational setting of EMS, the specific components of the workforce that are primarily responsible for the rendition of emergency medical care in the prehospital milieu.

The findings of this study suggest that ECPs in operational roles in South Africa accounted for 70.4% of those who eschewed postgraduate education. Of ECPs in South Africa, the largest proportion (51.0%) are in operational roles, but they felt that they did not have the freedom (31.9%), structural conditions (44.1%), and cultural conditions (38.8%) within their setting to pursue postgraduate education. In contrast, those within academic roles constituted the largest proportion of those who felt they did have the freedom (30.3%) and structural conditions (21.2%) to pursue postgraduate education. Interestingly, operational ECPs working abroad accounted for the largest proportion of those who felt they did have the freedom to pursue postgraduate education: nearly four times as many as those within the academic roles (54.5% vs 15.6%) within the same setting (abroad). These findings further suggest that the structural and cultural conditions experienced by ECPs may likely depend on both the location and area of speciality within the prehospital milieu.

The key findings of this study suggested that the prevailing conditions within the EMS profession motivated ECPs to eschew postgraduate education. These findings relate to the support for postgraduate education, the capacity for postgraduate qualification holders, and the industrial relevance of postgraduate education. Similar to how discourse may emerge from a particular context (Boughey & McKenna, 2021), in this section, I go on to argue that these conditions arise either as a result of structural omissions or as by-products of a pre-dated system that ECPs have entered into, and are not products of their interaction.

8.4.1 SUPPORT FOR POSTGRADUATE EDUCATION WITHIN THE EMS PROFESSION

Unsurprisingly, ECPs working within the EMS profession (operational and managerial but excluding academic roles) accounted for the largest sample proportion (n = 188, 70.9%). This study found that, accumulatively, ECPs within operational (n = 88, 72.1%) and managerial (n = 19, 15.6%) roles constituted the largest proportion of those who eschewed postgraduate education. While the distributions noted when contrasted by area of work were similar, those within the South African EMS profession constituted the highest proportion (n = 86, 70.5%) of those who eschewed postgraduate education. Empirically, the discourse from the FGDs suggested that this phenomenon primarily occurs due to the lack of support for postgraduate education and its related activities within the industry. This was particularly the case for those working within South Africa, as highlighted by Sarah:

To be honest, the idea of postgraduate education is not actually supported for us on the road (operations). It is not even recognised for us, whereas it is more recognised in the educational field, but for (what about) us on the road? Practically nothing changes, so people go like, why should I go and study again while I will continue doing the very same thing?
(Sarah)

The agency of ECPs within the prehospital milieu is worrisome due to the structural conditions prevalent in the EMS profession: the perception that postgraduate education

is not supported or acknowledged. This is particularly important as postgraduate education aims to capacitate ECPs within the profession to be real-world problem solvers. Participants contrasted the lack of support for postgraduate education and that received to upskill practitioners with non-NQF-aligned qualifications (short courses) to that of a bachelor's degree holder, largely referred to as the clinical ceiling of the prehospital setting. Albert highlighted this point as follows:

EMS or the organisation will support everyone beneath an ECP. They will upgrade everyone, BAAs to go to diploma, AEAs to do diploma, ECTs to do BEMC, everyone besides the ECP. The ECP qualification is the ceiling in the operational field, and there is no room or allocated place for anything above an ECP. Our service and the HPCSA¹⁶ have not made provision for that, and our EMS will not. So, what is the use?

(Albert)

The emergent properties and powers of structure that govern the reality of ECPs within the prehospital milieu are noted here. Participants perceived the EMS profession and its associated statutory body (the HPCSA¹) to be predominantly concerned with the rendition of emergency medical care through capacitating primary and intermediate-level practitioners (products of the vocational training era). This perception influences the agency of ECPs. Crawford and Hagemeister (2021) suggest more support for such initiatives within the prehospital milieu due to current postgraduate education programmes failing to enable progression in the professional registration and clinical abilities in the current South African EMS setup. I found this to be a rather interesting explanation, particularly as education encapsulates the notion of changing the end users' internal environment, thus enabling them to change their external environments efficiently. However, the findings suggested the opposite. Due to the lack of support for postgraduate education within the South African setting, ECPs started questioning or losing interest in the power of postgraduate education.

¹⁶ HPCSA – Health Professions Council of South Africa

This study found that support for postgraduate education within the EMS profession extends beyond what Crawford and Hagemeister (2021) argued to be EMS systems' omissions for postgraduate qualification holders: a lack of professional progression, pathways and improvement in clinical ability. The findings further highlighted the lack of infrastructure, academic presence, and the associated feelings of loneliness within the EMS profession to influence the internal conversations and motivations of ECPs.

I have first-hand experience with this. I am a master's student, and I sit on shift alone in a corner and work on my assignments. There is no safe working space that allows for these activities, and I need to sit in a communal noisy space or in the ambulance to get work done. When I need help or guidance, there is no person within my workplace that can aid me.

(Owen)

The quality and success of postgraduate pursuits primarily rely on adequate supervision, which several authors report being an ongoing challenge (Ronnie & Wakeling, 2015; Kisansa & Lubinga, 2020; Muraraneza, Mtshali & Bvumbwe, 2020; Ramchander, 2021; Igumbor, Bosire, Karimi, Katahoire, Allison, Muula, Peixoto, Ot wombe, Gitau, Bondjers, Fonn & Ajuwon, 2022; Craig *et al.*, 2023). Africa accounts for much of the world's population and injury burden, but is producing less than 1% of the emergency care research (Van Hoving & Brysiewicz, 2017). The postgraduate output in South Africa remains a concern, with supervision and research mentorship being cited as barriers (Cloete *et al.*, 2015; Talib, Narayan & Harrod, 2019; Van Schalkwyk *et al.*, 2020; Craig *et al.*, 2023). To meet the NDP 2030 goal of 100 doctorate graduates per million of the population, South Africa would have to double its current output to 5 000 more doctorates per annum. Craig *et al.* (2023) report on the paucity of emergency medicine postgraduates from one of the largest emergency medicine research divisions on the African continent. In EMS, I postulate that the situation is more dire. An overwhelming majority (94.2%) of the EMS workforce is comprised of non-NQF-aligned practitioners: BAAs (75.6%) and AEAs (18.5%) (Tiwari *et al.*, 2021). Anecdotally, there are only eight doctorate graduates within the South African EMS profession. Research supervision and support within the prehospital milieu is there for a concern.

In addition, ECPs within the South African prehospital milieu alluded to the various structural conditionings (parts) that either govern or influence their interactions. The lack of academic presence and appropriate workspace or setting showed how the EMS profession should have included supporting these pursuits. The majority of the sample (81.1%) reported the need for more academic support within the profession to motivate ECPs to eschew postgraduate education. Internationally and on a more local scale, academic presence within the profession has been reported as a challenge for postgraduate education collaboration between academics and the industry (Bruneel, D'Este & Salter, 2010; Dlungwane, 2020; Mbombi & Mothiba, 2020; Ahmed, Fattani, Ali & Enam, 2022). Generically, Ahmed *et al.* (2022) argue for the academic and, conversely, industrial presence in their proposed Academia-Industry Collaboration Plan Design Model. They report that while academics and industry are the two sides of a river that must flow independently, the interlinking nature requires continuous attention. This is not to say that there is or was never an academic presence within the industry, but rather that the need for purposeful academic presence to support and cultivate postgraduate activity within the profession has been identified by ECPs. Integral to their triple helix model, Dooley and Kirk (2007) encourage the academic presence within the EMS profession, as it bolsters knowledge generation and economic (or, in the case of this study, health) prosperity.

Postgraduate education is often called a lonely journey (Fergie *et al.*, 2011). South African-based ECPs pursuing postgraduate education frequently shared the notion of loneliness and isolation within the EMS profession, which is likely owing to the intersection of multiple structural and cultural conditions. McLaughlin and Sillence (2018) identified that postgraduate students benefitted primarily from specialised support from academic peers through informal interaction. Fergie *et al.* (2011) propose implementing a dedicated or defined space to develop the postgraduate academic identity and establish an educational peer learning setting to ensure the postgraduate walk is manageable. While these findings are consistent with those of Fergie *et al.* (2011), I argue that in addition to the unique landscape of South Africa and, more importantly, the prehospital milieu, the scarcity of academic presence, resource constraints, and infrastructure omissions may be likely reasons for ECPs feeling isolated during their postgraduate education journeys

and potentially giving up along the way. While these findings may not be unique to the postgraduate space, owing to these systemic omissions within the South African milieu, these findings may likely be unique to those within the South African prehospital milieu (as opposed to those abroad). Thus, it offers insight into why ECPs in South Africa account for the highest proportion ($n = 19$, 61.3%) of ECPs who no longer pursue postgraduate education.

8.4.2 CAPACITY FOR POSTGRADUATE EDUCATION

The knowledge economy aims to produce knowledgeable ECPs who can synthesise information, solve problems, and advance EMS goals. The industry, desirous of solutions, seeks a knowledge source for ideas, which, in this case, is provided by universities linked to the profession (Dooley & Kirk, 2007; Danjuma & Rasli, 2013; Sihlobo & Mbatha, 2022). It is only appropriate that a hallmark feature of this era is improving the interface between the EMS profession and research, which is largely reliant on each component having the capacity to accommodate and engage with the other. I argue that this study found limited evidence of this being present within the South African prehospital milieu.

Ahmed *et al.* (2022) assert that innovation requires a breeding ground, which is furnished by a welcoming, innovative environment. In the case of the prehospital milieu, I envision a setting that provides opportunity by welcoming these potential innovators into its respective structures. A concerning finding is that ECPs throughout South Africa suggested that the prehospital milieu has limited or no capacity for postgraduate qualification holders or their related activities. It was unsurprising to find later that ECPs within the profession constituted the most significant proportion (79.5%) of those who eschewed or were no longer pursuing postgraduate education within South Africa. These findings suggest that ECPs pursuing postgraduate education are 22% less likely to work in South Africa. I argue that the structural conditions owing to the lack of support for postgraduate education within the profession influence ECPs' internal conversations and agency.

Empirically, and similar to those described by allied healthcare practitioners in the South African context (Kisansa & Lubinga, 2020; Hansraj & Rampersad, 2022), ECPs pursuing postgraduate education were motivated by the fact that their undergraduate education was not sufficient to stay relevant (n = 99, 69.2%) and the need to be capacitated to make a meaningful change (n = 92, 64.3%) during the development of the EMS profession. It is concerning that South African-based ECPs suggested that the profession needed more fundamental structures and capacity to support and enable postgraduate qualification holders, with many questioning the use of such endeavours. The overburdened nature of the South African EMSs, resource limitations, lack of staff, and challenges associated with providing South African citizens with timeous emergency medical care were likely explanations for why this was the case. One of the participants provided insight into their reality to expound on this issue:

I completed my master's almost four years ago now, and what has changed since then? I was able to help with policies and some projects because of my ability to produce quality documents, (and) nothing more. I am still just an ambulance driver. The operations component of EMS needs to have specific positions where they can use me effectively. I do not want to go to the college or the university to lecture. (Jenny)

While remaining relevant by being adaptable within the context of one's field is a theme closely linked to the desired innovative practices of postgraduate qualification holders, this study found this was not the case for operational ECPs. The agency of ECPs was influenced mainly by the fact that operational postgraduate qualification holders were not openly provided with the opportunity to plough back into the EMS profession and aid in its development. Participants echoed the arguments of Crawford and Hagemeister (2021), that the prehospital milieu and its associated governing structures (HPCSA) had failed to capacitate the EMS profession with the necessary registrations and roles that would not only use these qualification holders effectively, but also encouraged more ECPs to pursue postgraduate education. I support Crawford and Hagemeister's (2021) arguments that the omission of the profession to operationalise these qualification holders within the prehospital milieu certainly has implications. ECPs deem the current postgraduate education options unsuitable, as the EMS profession has no specific

purpose for these graduates. Nearly half (42.6%) of the sample recommended the implementation of specialised roles for postgraduate qualification holders to improve the postgraduate-seeking behaviours of ECPs. This was another insightful finding, as the qualitative findings suggested this to be a strong motivation among those who eschewed such endeavours.

The majority (n = 112, 91.8%) of those who eschewed postgraduate education did so owing to the need for clearer progression pathways or the perception of not enhancing their ability within the workplace. The latter is a rather interesting motivation, as postgraduate education within the South African EMS setting is not explicitly aligned to increase one's clinical ability. Still, it predominantly relies on creating knowledgeable members of society who can advance the goals of the profession and aid in industry development through research. In contrast, allied healthcare fields in South Africa that resemble the EMS profession in that it is governed by a statutory body, i.e. nursing and emergency medicine, offer postgraduates the potential to enhance their clinical abilities as specialists (Craig *et al.*, 2023; Crowley & Daniels, 2023). Abroad, the Australian, Irish and UK EMS milieus resemble that of the South African EMS profession, as they too are governed by a statutory body and have transitioned from a vocational-type training model to an NQF-aligned formal qualification model. In these countries, prehospital EMS professionals fulfil a multifaceted role and, as such, can specialise in areas such as primary health care or advanced critical care retrieval upon completion of postgraduate education (Peate, 2015; Brooks, Grantham, Spencer & Archer, 2018; Feerick *et al.*, 2018; Eaton, Wong, Williams, Roberts & Mahtani, 2020, 2021). Owing to the findings of this study, I question whether the structural conditions of the prehospital milieu have prevented ECPs from being exposed to the actual value and aim of postgraduate education. Has the lack of postgraduate education qualification holders within the EMS profession mitigated the translation of characteristics of the knowledge economy era into the prehospital milieu?

There is a disproportionate experience of structural conditions among ECPs. Not all ECPs are afforded the same support or are exposed to the degree of capacity for postgraduate

education within their settings. Operational ECPs associated feelings of omission or exclusion due to their roles within the profession, as the following participant highlighted:

The college (or university) is the only place to go if you want to do master's, but they not taking on people, so what must we do but move rather (out of South Africa)? Even if you do master's at the college, they have no positions for research, so what is the use you are there also (at the college with a postgraduate qualification)? Does a master's or PhD make you a better lecturer? Our EMS does not know what to do with a master's or doctorate yet. EMS is developing like you all say, but it's not aligned with academia (EMS-specific); there are no quality indicators other than response times (and) no quality assurance, no EMS-specific research departments. EMS is not aligned to academia; it's aligned with plugging holes, moving people from point A to point B; we are a taxi service.

(Fagri)

ECPs contrasted the disproportionate nature of structural conditions affiliated with the roles occupied in the profession. Throughout South Africa, ECPs alluded to the failure of the EMS profession to recognise the value of postgraduate qualification holders and to provide purposeful roles for them to occupy. More than half ($n = 104$, 55.3%) of the South African-based ECPs reported that the EMS profession did not encourage postgraduate education. The findings, which demonstrated that operational ECPs had decreased odds of pursuing postgraduate education compared to those within academic roles ($OR = 0.21$, $p < 0.001$), were thus unsurprising. In contrast, ECPs within academic roles constituted the highest proportion ($n = 48$, 25.5%) of those who felt that the structural conditions within their setting encouraged the pursuit of a postgraduate education.

Similar to the findings within the nursing fraternity (Havenga & Sengane, 2018; Mbombi & Mothiba, 2020), ECPs suggested the nature of discourse and engagement present within EMS training institutions (the academic world) capacitated ECPs to engage at a postgraduate level appropriately. In contrast, ECPs indicated that the structural and socio-cultural conditioning experienced within the profession essentially differ, almost handicapping them from developing or being able to do the same. The National Development Plan (NDP) goals are aligned with improving the saturation of real-world

problem solvers, i.e. postgraduate qualification holders, which will grow the South African knowledge economy. While I see value in the aims of the NDP for 2030 (DHET [SA], 2020), I am concerned that achieving the 75% postgraduate saturation levels within higher education has shifted the focus primarily to capacitating academics, which may have resulted in the industry component of the EMS profession being omitted.

The findings of this study further affirm the recommendations by Crawford and Hagemeister (2021), that the EMS profession urgently requires the implementation of specialised roles aided by throughput from EMS-specific tailored postgraduate education programmes. In learning from our allied healthcare sectors in South Africa (Fang *et al.*, 2016; Havenga & Sengane, 2018; Mbombi & Mothiba, 2020), this can only be achieved through collaborative efforts between the academic world and industry. The study findings suggest that the omission of academic role players to provide purposeful postgraduate packages aimed at meeting the needs of the profession influences the agency of ECPs motivated to eschew postgraduate education. Nonetheless, while academic institutions can provide specialised postgraduate courses, specialist registration must be approved by the regulatory body, the HPCSA and the Minister of Health. The public service would also need to cater for these newly created specialist registrations within EMS in the OSD. Otherwise, creating specialised programmes by the academic world becomes a futile exercise, as highlighted by the following participant:

What are people going to do with the qualification? The system has not adapted to the point where they are providing a specialised service or doing anything else (other) than work in an ambulance. (Tariq)

The brain drain phenomenon experienced in South Africa fuels the widely held belief that pursuing postgraduate education is associated with ECPs leaving the industry. Gangaram (2015) asserted that the South African EMS financial remuneration systems have no provisions for postgraduate education, which may be why the structures have yet to capacitate these graduates. In addition to the socioeconomic gains, ECPs were suggested to migrate when they were unable to achieve success in their personal goals (the pursuit of postgraduate education serves as an example) (Gangaram, 2015). In

addition, Govender *et al.* (2012) further identified numerous push and pull factors that influence the migration practices of ECPs, which they deem to not occur in isolation, but rather interact with each other to influence their internal conversations. Similarly, they report that the opportunity to pursue postgraduate education, equity, improved financial standing and improved quality of life as an active contributing citizen influences ECPs' migration practices. These are reported as motivations for postgraduate education throughout the literature (Incikabi *et al.*, 2017; Skakni, 2018; Li *et al.*, 2020; Craig *et al.*, 2023). Interestingly, the qualitative findings suggested that ECPs applying their trade abroad reported a keen interest in returning to South Africa and ploughing back into the EMS profession, but shared a concern of relevance to the EMS profession, that is, whether the South African EMS profession was ready to accommodate them as agents of change or merely as ambulance drivers.

Nearly half the sample (n = 124, 46.8%) applied their trade within the South African EMS profession and echoed similar sentiments regarding the lack of support for postgraduate education. While the exact proportions of ECPs in South Africa vs abroad and the profession vs academic roles are unknown and based on the premise that similar distributions as seen in this study occur, the development of the EMS profession is somewhat concerning. This is to say that the largest proportion of its ECPs is exposed to a milieu that needs more capacity for postgraduate education qualification holders.

8.4.3 RELEVANCE WITHIN THE EMS PROFESSION

Postgraduate education is often sought to improve employability (Cheng, Adekola, Albia & Cai, 2022). Internationally, and more recently, locally, the emergency care nursing profession has harmonised the process of ensuring that the content and level of learning not only remain congruent with the postgraduate programmes, but are aligned to the systematic preparation for speciality emergency practice (Havenga & Sengane, 2018; Theobald, Coyer, Henderson, Fox, Thomson & McCarthy, 2021). According to Crawford and Hagemeister (2021), within the South African prehospital milieu, no specialist role or position awaits these postgraduate holders. In other words, there is no specific purpose for ECPs with postgraduate qualifications. While postgraduate holders are capacitated

through research-based programmes, one is left questioning what specific purpose underpins the current postgraduate programmes pursued by ECPs. What is the industrial relevance of ECPs as postgraduate qualification holders?

Empirically, among ECPs who pursued postgraduate education, this study identified 'staying relevant' during the development of the profession as the most frequent motivator (89.0%). At the level of real and when stratified by demographic variables, the findings suggested that the perceived relevance of postgraduate education motivated ECPs within the South African prehospita milieu (n = 86, 45.7%) to eschew postgraduate education. In contrast, those within the same roles abroad (n = 43, 55.8%) felt motivated to pursue it. While postgraduate education is aimed at priming students for real-world success after graduation (Altbach, Reisberg & Rumbley, 2009; Cloete, Mouton & Sheppard, 2015), the emergent properties owing to structural conditions experienced within the prehospita milieu have influenced the internal conversations and, subsequently, the agency of ECPs, so much so that they question the relevance of postgraduate education and, in doing so, are motivated to eschew it.

Within higher education, curriculum design and real-world application of postgraduate programmes are centred around being fit for purpose (Wass, 2005; Theobald *et al.*, 2021; Sarrico, 2022). Participants reported the notion of being fit for purpose as a strong motivator in their daily lives. While this may be reported in certain instances as trans-empirical, how they influence ECPs' decision-making suggests that they are real existing entities that produce events in their social worlds. A South African ECP, who had been motivated to eschew postgraduate education, stated:

I studied and put in countless hours to complete my (undergraduate) degree, became a competent clinician; this allowed me to enter into EMS and have a purpose. This purpose is transparent, and all ECPs know this. From the start, it is clear how our training will help us fulfil this role. What are the roles of postgrad(uate) qualification holders in EMS? What is their purpose? These are not really well defined. As an ECP, I am fit for a purpose. If I go study for a master's, what purpose will I (exactly) be fit for? (Fagri)

The findings from this study suggest that the need for a more specific purpose for postgraduate qualification holders within the profession is mainly instrumental in motivating them to eschew postgraduate education. Throughout the discourse shared, ECPs contrasted their undergraduate and postgraduate degrees, the former being aligned to a specific role and function, thus providing ECP learners with a purpose. In contrast, the same could not be said for postgraduate education learners. A postgraduate qualification holder who navigated the structural conditions within the prehospital milieu said:

I have a master's (postgraduate qualification). I did the coursework. It was amazing; I learnt so much, very little that can be used in this setting (operations). I looked for opportunities to use small things here and there, but I have never appropriately used those tools in the workplace; maybe that was because I was never really afforded the opportunity. I can conduct research, but I can't fix the issues of staffing levels. I have a master's and run around in an ambulance, transferring patients all day. I am not the EMS problem solver the university wanted us to become. (Ann)

Postgraduate education aims to capacitate graduates to be real-world problem solvers to reshape and drive change within the profession. Here, the findings suggest that even those who have attained the qualification either question the relevance of their newly acquired skillset or need to be afforded the opportunities to be agents of change within the profession. The personalised nature of postgraduate education is thought to enable the qualification holders to make meaningful changes within the EMS profession, a sentiment shared by many ECPs applying their trade abroad and pursuing postgraduate education. This outlook may be conditioned by the support, relevance and opportunity to be fit for purpose within their context. When further probed as to why so many ECPs abroad are pursuing postgraduate education, the following response was largely echoed:

ECPs working abroad are pursuing this form of studies to stay relevant and to be appetising for the South African EMS setting. (Tom)

This was a rather interesting finding, particularly as many of the ECPs in South Africa openly expressed the concern of postgraduate education not being fit for purpose within the industry.

On a local scale, the findings suggest that the lack of industrial relevance associated with the current postgraduate education programmes accessed by ECPs motivated them to eschew postgraduate education. While valuable arguments have been made for the role of autonomy and self-derived relevance among ECPs, the conditioned nature of the EMS profession and, by extension, its ECPs, requires purposeful strategies that enable ECPs to be fit for a specific purpose as postgraduate qualification holders. The findings further highlight a concern of industrial relevance for postgraduate education holders within South Africa. The role of ECPs returning to South Africa and actively contributing to the development of the profession, has never been more valuable in this regard.

8.5 THE ACADEMIC WORLD

Universities and Higher Education Institutions (HEIs) serve the prehospital milieu in two ways. It provides the workforce necessary to run the profession. Secondly, it furnishes the profession with innovative ideas and guidance on new ventures (systems that improve the quality of care delivered) (Wohlin, Aurum, Angelis, Phillips, Dittrich, Gorscheck, Grahn, Henningsson, Kagstrom, Low, Rovegard, Tomaszewski, Van Toorn & Winter., 2012; Ahmed *et al.*, 2022). The apparent simplistic relationship does not work simplistically, because of inherent differences between the academic world and the profession. Universities desire to contribute to the theory, the body of knowledge, which exists to inform, rather than elicit actions.

On the other hand, the profession is restrained by service delivery and profitability. In the context of this study, it could be argued that EMS is controlled by getting more practitioners into ambulances (increasing resources) and improving access to emergency medical care for the respective populations. Therefore, the academic world and the profession are two sides of a river that must flow independently. Creating linkages

between the two sides of the river can improve the EMS profession and the academic world with regard to prehospital emergency medical care.

The findings of this study suggest that the emergent structural conditions within the academic world motivate ECPs within the prehospital milieu to eschew postgraduate education and, conversely, those within the academic world pursue such education. These findings relate to the conditions owing to the relationship between the academic world and the profession, and the academic challenges experienced by ECPs are discussed in the sections that follow. While individuals have the power to act, they are not entirely free merely to do, as they are always conditioned by (not determined by) the structures to which they are exposed (Archer, 2007; Boughey & McKenna, 2021). This is to say that the emergent properties of their settings (the academic world versus operations) may influence the internal conversations regarding their projects by their position within society and, as determined by this study, within the prehospital milieu.

8.5.1 RELATIONSHIP BETWEEN THE EMS PROFESSION AND THE ACADEMIC WORLD

The pharmaceutical industry is one of the major employers of postgraduate scientists in the world (Ekins & McGowan, 2002; Fogt & Kitzmiller, 2018). In the pharmaceutical industry, innovation, development, and the ongoing pursuit of education are required to serve humanity by the provision of therapies. Biomedical research and its forward march increasingly depend on the industry-academic proximity (Singh & Singh, 2005; Lewis, 2020). Ekins and McGowan (2002) assert that owing to good collaborative relations between industry and academics, those within the profession are exposed to the prospect of furthering their educational standing and capacity within the workplace, contributing to various advances in the field and the ability to stay relevant alongside all the current innovative trends (Patel, Guy, Han, Paraoan, Marsh & Johson, 2018). Through these relations, research and development funding is shared between the academic world and the profession (Patel *et al.*, 2018; Lewis, 2020). Depending upon the power that the profession and academics exert, the unquenchable thirst of the industry for talent and support is satisfied by academics' innovative need for knowledge dissemination, research

activities, and available data sources (Fogt & Kitzmiller, 2018; ABPI, 2023). As the symbiotic nature of this relationship between the profession and the academic world becomes more tangled, if not inseparable, members of the profession become encouraged, almost enticed, further to participate in postgraduate education (Patel *et al.*, 2018).

Ahmed *et al.* (2022) argue that industry-related research paves the way for easy dissemination of knowledge, as universities have access to real-time data, eliminating the dichotomy arising from the characteristic differences between the two. Several authors (Dooley & Kirk, 2007; Bruneel *et al.*, 2010; Wohlin *et al.*, 2012; Ahmed *et al.*, 2022) have drawn attention to the prevailing difference between the two, which has hampered the coherence between the two as a single unit. South African EMC-specific universities, as part of their governance processes are required to convene external advisory committees – which enable the engagement with industry. This study found that this mechanism enabled the engagement between the EMS profession and academia related to operational strategic planning purposes. At the level of real, this appears ineffective in cultivating an academic presence felt by the prehospital workforce to influence their structural conditions and by extension- their agency. Here, this discourse shared, alluded to the likely disjointed nature between the management structures within the EMS profession and the clinical workforce – furthering the distance between ECPs and the academic presence. According to Lang (2002) and Ahmed *et al.* (2022), due to the gap between researchers in the academic world and practitioners within the industry, research findings often do not directly or indirectly relate to the professionals and their challenges within the industry. The results from this study suggested an absence of dialogue between the EMS profession and the academic world, the poor academic presence and influence within the industry, and the disproportionate growth between the profession and the academic world, predominantly motivated ECPs within the profession to eschew postgraduate education.

In South Africa, the Helix model has been slow to gather traction, unlike the rest of the world (Gachie, 2020; Ahmed *et al.*, 2022). Owing to the lack of collaborative efforts between the academic world and industry, Sihlobo and Mbatha (2022) argue that the

ability of universities to produce relevant new knowledge may be limited. While limited research on these effects has been published for the prehospital milieu in South Africa, my findings suggest a disproportionate nature between the profession and the academic setting. One such instance is that of career progression within the prehospital milieu.

Boughey and Mckenna (2021) suggest that the power associated with personal projects may likely be derived from the power accorded to them by their position within society. In this study, the likely ability to achieve a postgraduate education (personal project) differs between ECPs within their respective roles (the academic and operational contexts of the South African prehospital milieu). ECPs within the profession alluded to the fact that career progression was aligned to specific positions available – which did not consider postgraduate education. In the academic setting, postgraduate qualification holders are remunerated as such as advancement is not based merely on the availability of certain positions, since universities recognise postgraduate education qualifications within their structures. This is to say that the emergent properties of the structural conditions (parts of their organisational structure) experienced within their societies influence their agency or the power they associate with pursuing postgraduate education. This may not be the case for all within the prehospital milieu. ECPs suggested that the local EMS academic settings are slowly following suit, with the universities offering EMS undergraduate education programmes while the EMS profession lags.

The academic–profession collaboration can be particularly beneficial in producing new knowledge, capacitating the industry workforce within the emergency medical care context, ensuring that its practices are relevant and aligned to improved patient outcomes. Worldwide and across various disciplines (economics, medicine and technical sciences serve as examples), such collaborations have resulted in scalable programmes for crucial public health issues (Liu, Shao, Liu, Bennett, Prvu Bettger & Yan., 2019; Kotiranta, Tahvanainen, Kovalainen & Poutanen, 2020). Within the South African prehospital milieu and based on the discourse among participants, the findings suggested very little evidence of such collaborative efforts that motivate postgraduate-related activities among ECPs. Participants reported several structural conditions concerning the lack of dialogue between the profession and the academic world, encouraging ECPs to eschew

postgraduate education. This is to say that societal conversations and communication with the various structures also influence the emergent structural conditions experienced by ECPs.

... this conversation needs to happen; I do not see why it's not taking place. Here (abroad), we have an academic department, which is an extension of the service. These two entities converse. Here operations (industry) and the data being drawn inform our academic initiatives. EMS basically tells us, (that) these are the things, the big gaps within EMS, that we (the industry) need these addressed. (Robert)

Empirically, the prehospital milieu and, more importantly, the potential future postgraduate qualification holders reported the need for more dialogue and collaborative efforts. At the level of real, South African ECPs advocate for and almost appear to salivate for this dialogue, with those abroad reporting on how fruitful the dialogue between the profession and the academic world is in their setting. Such a dialogue enabled the needs of the profession to inform academic activities, which not only identified the gaps, but cultivated a change mechanism within what can be empirically observed as a closed system.

ECPs in the rural regions of South Africa suggested that the absence of this dialogue had profound implications for the entire prehospital healthcare system.

....the universities, (and) the colleges they have all improved, they have rapidly developed by changing from the short courses and started professionalising things. They have moved forward nicely; we are no longer seen as a product of vocational training; we are products of professional training. The operations (industry) has really not changed at all; they have been more on the receiving end and are more caught up in trying to keep afloat. The entire concept of EMS in SA is flawed. It is not (a) single unit moving forward together. It's more like a bar graph, one's development is radical, and the other is moving at the pace of a snail. (Zara)

ECPs acknowledged the disproportionate growth and development between the profession and the academic world, with nearly half the sample (n = 136, 51.3%) reporting

that academic development needs to be aligned with the needs of the profession. This is not to say that no development has occurred; instead, the pace and empirically observed endpoints appear disproportionate. Key role players within the EMS profession suggested that these are long-standing issues yet to be addressed. In addition to alluding to the needs of organisations, which should drive the profession and the academic world to converse objectively, ECPs reported that the lack of academic presence within the EMS profession might well compound the delay in establishing this much-needed dialogue.

I sometimes feel that (the) absence of academic people or even the academic voice in the field (industry) makes us feel excluded from going to do this. If you look at how many operational staff are really studying further, then you will see it's those who have the social networks or have some form of academic interaction in their personal lives and not here at work.

(Percy)

Scandura and Iammarino (2022) describe the positive association between academic quality and engagement with the profession of applied sciences. The lack of academic presence within the profession has had profound repercussions for the postgraduate-seeking behaviour of ECPs, with the majority of ECPs (n = 216, 81.1%) identifying this as motivating them to eschew postgraduate education. This can be noted as operational ECPs feeling excluded from the postgraduate-seeking behaviours reported among ECPs within the academic world.

Dialogue between the EMS profession and the academic sector, academic presence, and disproportionate development were discernible areas of concern among participants. These generative mechanisms motivate ECPs to eschew postgraduate education within the profession rather than the academics.

8.5.2 ACADEMIC CHALLENGES

Worldwide, postgraduate students experience various academic challenges (Ramchander, 2021). In LMICs, these challenges are explored as part of a multifaceted approach to improve the access and, subsequently, the quality of graduates, particularly as bolstering the postgraduate workforce would aid in sustainable economic development

(Phakiti & Li, 2011; Schendel & McCowan, 2016; Adeyimika & Eme, 2018). Yasmin *et al.* (2018) argue that academic challenges, besides dispositional, situational, and institutional barriers, hinder postgraduate students' success. The findings of this study suggested that these academic challenges may go as far as to influence the agency of ECPs regarding the pursuit of postgraduate education. Owing to the structural conditions experienced by ECPs, I found that the generative mechanisms and causal powers of the articulation gap and the paucity of academic presence and support within the profession, were among the most prevalent academic challenges.

This study found a narrow margin between ECPs actively pursuing postgraduate education ($n = 47$, 32.9%) and those who no longer sought it ($n = 31$, 21.7%). This finding is unsurprising as South Africa has been reported to have one of the lowest global graduation rates at 15% (Letseka and Maile, 2008), nearly a four-fold difference compared to the highest graduation rates in the world in Canada (56.7%). In 2021, in South Africa the tertiary enrolment as a percentage of the total population of all learners was 19%. When compared to the tertiary enrolment rates of America (91.4%), Europe (59.8%), and Austria (72.3%) for the same year, it becomes evident how far South Africa lags behind (Roser & Ortiz-Ospina, 2018). South Africa has a reported average annual tertiary enrolment rate of 8.5%, seeing growth from 11.8% in 1989 to the 23.8% noted in 2020, which is nearly half that of the global average rate of 40% (Knoema, 2019; The World Bank, 2022). The struggle for Higher Education Institutions (HEIs) in South Africa to develop strategies to minimise drop-out rates of postgraduate students and achieve the DHET 80% success rate is a phenomenon widely reported on (Letseka & Maile, 2008; Styger *et al.*, 2014; Mouton *et al.*, 2015; Zewotir, North & Murray, 2015; Myburgh, 2020).

Participants in this study and findings from other sources have identified the lack of baseline research literacy and various competency gaps related to the pursuit of postgraduate education (Nakanjako, Katamba, Kaye, Okello, Kamyia, Sewankambo & Mayanja-Kizza, 2014; Okewole, Merritt, Mangezi, Mutiso, Jack, Eley & Abas, 2020; Fetene & Tamrat, 2021; Igumbor *et al.*, 2022; Craig *et al.*, 2023). Scott (2018) asserts that the articulation gap is a systemic fault arising from the South African significant educational inequalities, which he further describes as the severe mismatch between the

assumptions regarding academic preparedness made by higher education institutions and the actual knowledge, skills, and attributes of learners. Van Hoving and Brysiewicz (2017) and Craig *et al.* (2023) describe this articulation gap and the lack of research training as one of the top barriers to conducting emergency care research on the African continent. Madinga (2015) argues that South Africans experience a unique challenge with the articulation gap at the undergraduate level. The finding suggests that the articulation gap has manifested at the postgraduate level and can now influence the postgraduate-seeking behaviours of those who have completed their undergraduate degrees. While Archer (2007) refers to the influence that parts have on the intentions and actions of people, I explored a particular characteristic of structural conditions (parts) experienced by ECPs. While the articulation gap may not be a tangible entity that can be physically interacted with, it stems from a system omission that ensures the capacity of ECPs to engage at the postgraduate level. Beyond what is observed, this study shed light on the trans-empirical notions that influence the agency of ECPs and require systemic attention to ensure that the postgraduate education-seeking behaviours of ECPs within the prehospital milieu improves.

Well, today, I still feel ill-prepared for the postgraduate journey. I feel my BTech (undergraduate degree) did not prepare me like I am continuously building education to deal with the tasks in front of me. That transition from the didactic method used in our vocational education (undergraduate training) to what we experience during postgrad(uate education) is chalk and cheese. (Edward)

Brown and Niemi (2007) found that many learners that enter higher education feel underprepared for their undergraduate degree. Similarly, Craig *et al.* (2023) found that South African paramedics and emergency physicians felt underprepared for their postgraduate education regarding their baseline research literacy. Within the prehospital milieu, the findings suggest that this remains unchanged despite ECPs having completed their undergraduate degree. The preponderance (n = 98, 80%) of those who eschewed postgraduate education reported feeling ill-prepared to participate in postgraduate education. The study findings are further supported by Fisher and Scott (2011), who found that poor academic preparedness of students, particularly those who are the first in the

families to pursue higher education, leads to poor graduation rates and high dropout rates. Similar to the findings by Jamshidi, Molazem, Sharif, Torabizadeh and Najafi Kalyani (2016) and Craig *et al.* (2023), among nursing students and doctoral emergency medicine graduates, ECPs found transitioning from the didactic education methods they were exposed to during their clinically based education training programme to that of the more intensive personalised postgraduate education, somewhat intimidating. Despite the significant progress in expanding access to postgraduate education in South Africa, high attrition and low completion rates remain (Fisher & Scott, 2011; Case *et al.*, 2018). Therefore, to ensure that more ECPs embark on postgraduate journeys, EMS higher education should respond comprehensively to ensure ECPs are appropriately prepared for the demands of postgraduate education.

... look at the environment we work in. We are in an ambulance all day, interacting with members of the public, people who access EMS, (the) majority of whom do not have a formal education – these condition us to engage at a certain level. Those of you who are lecturers (academic setting) have something that makes this transition easier: you are exposed to formal documents every day and setting up lessons, and engaging with research. Your context prepares you for that setting, where ours (operational setting) actually handicaps us. How many of those who start a master's but never finish, drop out because the workload is too intense? How many of these people come from operations (industry) compared to those working in education? (Samantha)

Owing to the disproportionate nature of structural conditions experienced by ECPs, I noted a discrepancy in readiness among those within the profession and in the academic sector. Empirically, ECPs perceived the transition into postgraduate education as easier for those within the academic world. Beyond that, the prehospital milieu was suggested almost to handicap ECPs from transitioning between the two, owing to the lack of academic presence which may likely be the reason for the large discrepancy noted among those within the EMS profession (n = 107, 87.7%) who eschew postgraduate education and those within the academic sector (n = 15, 12.3%).

Participants also alluded to EMS-specific institutional context challenges, particularly the need for more appropriate research supervisors within the field, whom they felt needed to be more prepared to provide proper academic support. Craig *et al.* (2023) reported that doctoral emergency medicine graduates reported needing the level of student-supervisor engagement they desired during their postgraduate journey. Muraraneza *et al.* (2020) reported similar concerns imposing negative consequences for the quality of nursing graduates and their research in South Africa. Among postgraduate medical learners, Kisansa and Lubinga (2020) found that nearly half of their sample identified supervision as inadequate. In a recent meeting of the South African Universities Community of Practice on Postgraduate Education and Scholarship (CoP PGES), McKenna (USAF, 2022) went as far as to question whether postgraduate education and the current support offered to learners were only supervisor friendly or student friendly? This is to say that the concern regarding postgraduate supervision not only appears to be an issue within the prehospital milieu, but transcends across various disciplines (Adeyimika & Eme, 2018; Çepni, Kılınç & Kılcan, 2018; Talib *et al.*, 2019; Kisansa & Lubinga, 2020; Muraraneza *et al.*, 2020), so much so that it is a common discussion point at various strategic meetings regarding postgraduate education.

Lewin and Mawoyo (2014) reported on the articulation gap among the most frequent academic challenges experienced by South African university learners. Undergraduate and postgraduate convenors identified the articulation gap as a long-standing concern among ECPs pursuing postgraduate education or entering the academic space. When probed about the lack of collaboration between undergraduate, the profession and postgraduate education providers, a postgraduate convenor disclosed:

We have very little collaboration from the undergrad(uate education providers), not just here, but from any undergrad(uate) university and even industry, which is sad because we are seeing massive growth in postgraduate education and research. It would be very nice to get to a point where the undergraduate programmes feed the postgraduate programmes with (students). (Robin)

The limitation this has had on scaffolding the learning journey for those entering the profession and the chance to cultivate speciality areas were further noted as consequences. Despite this lack of collaboration, the findings reported growth in the postgraduate and research components. While remarkable, it supports the disproportionate growth between the profession and the other EMS-specific components, or the respective educational structures, in this case the academic presence within the profession and the collaborative efforts.

8.6 CONCLUSION

This study found that the South African prehospital milieu primarily motivated 64% of its ECPs to eschew postgraduate education. The multiple logistic models registered a four-fold ($p < 0.001$) increase in the odds of pursuing postgraduate education for those who felt they had the freedom to do so. At the same time, those who experienced the necessary structural conditions were 3.03 times more likely to pursue postgraduate education. The structural conditions within the South African prehospital milieu predominantly negatively influenced the agency of ECPs to eschew postgraduate education. More than half of the sample ($n = 154$, 58.1%) reported the absence of structural conditions that supported the pursuit of postgraduate education, which predominantly (72%) were described by South African-based ECPs. Nearly half (42.6%) of the sample recommended the implementation of specialised roles for postgraduate qualification holders to improve the postgraduate-seeking behaviours of ECPs. Using a realist ontology (Danermark *et al.*, 2002; Bhaskar, 2008), I argued that these mechanisms of structural conditions experienced have causal powers and operate in all three ontological domains (empirical, actual, and real). This is not to say that cultural conditions did not influence their motivations, but rather to suggest that those who eschewed such activities openly shared the influence of the structural conditions in this regard.

The emergent properties of structural conditions experienced by ECPs within South Africa are different from those experienced by ECPs working abroad. Structural conditions owing to the socio-economic, industrial and academic nature present within South Africa were predominantly associated with negatively influencing the agency of ECPs, which

motivated ECPs to eschew postgraduate education. Interestingly, the same concerns that ECPs in South Africa have, which ultimately motivate them to eschew such activities, were adopted as encouraging factors by ECPs abroad to pursue postgraduate education.

CHAPTER NINE: PURSUING POSTGRADUATE EDUCATION

9.1 INTRODUCTION

Archer (1995, 2007) proposes that the emergent properties of structure and culture culminate to condition, but do not determine the action of agents. Simplistically, the components of what Archer deems ‘parts’ (structural and cultural conditions) influence ‘people’ (agency) or, in the case of this study, the internal conversations of ECPs to motivate the pursuit of postgraduate education. This chapter uses the social realism approach to synthesise and discuss the qualitative and quantitative data to explain the social phenomena of why ECPs pursue postgraduate education. I begin by describing the trends noted among ECPs who pursue postgraduate education. After that, I interpret these findings about the most prevalent conditions (parts) that motivate the actions and interactions of ECPs in this regard. Where appropriate, I include the recommendations made by participants that would likely improve postgraduate-seeking behaviours among ECPs.

9.2 MOTIVATORS FOR THE PURSUIT OF POSTGRADUATE EDUCATION

AMONG ECPs

Pursuing postgraduate education in this study refers to actively engaging in or applying to a master’s or doctoral programme, which requires prehospital care providers to hold a bachelor’s degree for admission. This section explores the emergence of postgraduate education-seeking behaviours among ECPs, mainly, how the pre-existing structural and internalised cultural conditions influence their internal conversations in motivating the pursuit of postgraduate education.

This study found that pursuing postgraduate education is fairly common among ECPs. More than half (54.0%) of all study participants pursued postgraduate education, with the largest proportion (45.5%) having already completed a master’s or doctoral programme. This is an interesting finding, particularly when one considers that only 6% of South

Africans have a university degree (Khuluvhe *et al.*, 2021), and the widely reported consensus regarding the scarcity of medical postgraduate education capacity in sub-Saharan Africa (Clinton *et al.*, 2010; Greysen *et al.*, 2011; Chen *et al.*, 2012; Qureshi *et al.*, 2013; Tankwanchi *et al.*, 2013; Van Hoving *et al.*, 2015; Mengistu *et al.*, 2017; Kilmarx *et al.*, 2019).

Cultural conditions, which can be described as an internalised influence on the internal conversation, predominantly motivated ECPs to pursue postgraduate education. Interestingly, owing to the structural conditions experienced by ECPs, the qualitative and quantitative findings suggested that the postgraduate-seeking behaviours of ECPs are different between those in South Africa and those abroad. While ECPs within South Africa constituted 71.0% of the sample, of the participants working abroad, 69.0% pursued postgraduate education. At the same time, only 47.9% of participants working in South Africa pursued postgraduate education. This means that among the 54% of the sample who pursued postgraduate education, 17 fewer cases of ECPs were working in South Africa per 100, compared to ECPs applying their trade abroad. As described in Chapters Five, Six, Seven and Eight, ECPs who experience the structural conditions within the prehospital milieu abroad were more likely to pursue postgraduate education, a notion discussed throughout this chapter. Interestingly, the recommendations put forward by participants most likely to improve the postgraduate seeking behaviours, were predominantly aligned to forming structural conditions by their interaction as opposed to being subjected by them within a pre-dated system. This is discussed within the relevant sections that follow.

Archer (1995) described the social world as having two domains: people and parts. What she refers to as parts consist of structure and culture that influence patterns of social phenomena, the latter accounting for the context, history, and facts that cannot be known without further inquiry (Archer, 1995, 2007). Cultural conditions represent the individual or collectively held ideals, values, and beliefs that influence our daily lives and decisions. Archer (2007) further describes culture as referring to constructs that are not easy to change and have long-lasting conditional influence. Structural conditions (as discussed in Chapter Eight) refer to the interaction between different elements of the society (in this

case the prehospital milieu). The overall conditions and circumstances experienced due to the structure and culture within the prehospital milieu were explored. This enabled an analysis of what appears at the level of real for ECPs. As discussed in Chapter Eight, an analysis of these conditions alone cannot fully explain the pursuits of ECPs, but understanding the effects of these conditions is central to social change (Archer, 1995).

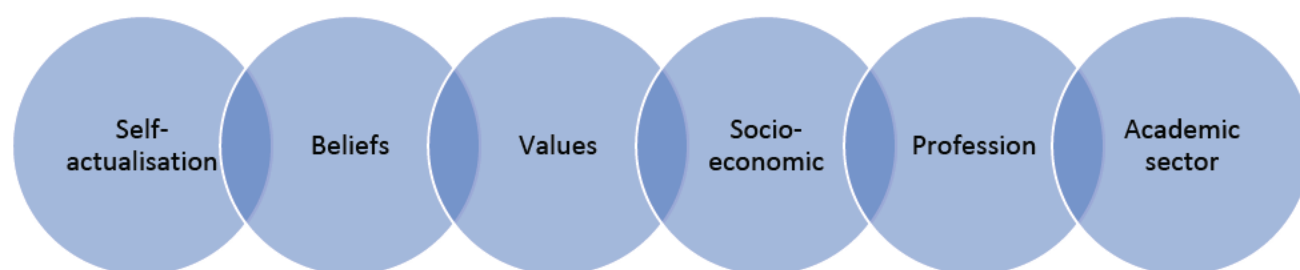


FIGURE 9.1: Conditions found to predominantly motivate ECPs to pursue postgraduate education.

Research indicates that learners pursue postgraduate education due to various motivational factors (Tarvid, 2014; Incikabi *et al.*, 2017; Amani *et al.*, 2022). Similar to what has been previously reported (Amani *et al.*, 2022), the analysis of the qualitative and quantitative data and how these were situationally and sociologically experienced by ECPs, led to the emergence of six key themes (Figure 9.1) that had significant causal powers in motivating ECPs to pursue postgraduate education. The findings suggested cultural conditions from self-actualisation and the constructs emerging from the collectively held beliefs, attitudes, and values shared among ECPs, to cultivate the landscape for their internal conversations. Conversely, structural conditions from socioeconomic, industry, and the academic world were identified to govern structures that influence these internal conversations. While they are logically and sociologically presented distinctly for this analysis, they often have synergistic properties. Throughout

the various phases of this study and while exploring the conditions experienced, these findings suggested that cultural conditions that influence ECPs were either that of cultural systems (parts) or sociocultural interactions (other people). These findings offer the EMS profession something novel: what motivates ECPs to pursue postgraduate education and further capacitate the EMS profession.

9.3 SELF-ACTUALISATION

As presented in Chapters Five, Six and Seven, this study found that the generative mechanisms and causal powers of self-actualisation motivated ECPs to pursue postgraduate education. Self-actualisation, the tendency of ECPs to become actualised in what they are or could potentially be, was predominantly reported to motivate ECPs to pursue postgraduate education. Thiermann and Sheate (2020) suggested that agents can shape their own lives and, in so doing, argue that one of the most important motives that determine human behaviour is that of self-actualisation. The qualitative findings suggest that this motivation is best conceptualised as the sum of its parts, rather than a trait seen in isolation among ECPs, a notion that Henwood *et al.* (2015) argue would enable investigators to see beyond merely the capacity or beliefs of participants. It is these parts, or which Maslow (1970), Mathes (1981) and McLeod, (2007) refer to as the desires that lead to the realisation of one's full potential, which several authors have suggested to play a significant role in motivating postgraduate-seeking behaviours worldwide (Spaulding & Rockinson-Szapkiw, 2012; Gaunt *et al.*, 2018; Dlungwane, 2020; Mathews, 2022). The influence of these self-derived motives and various intrinsic factors on the motivations of learners have been widely reported (Tekkol & Demirel, 2018; Amani *et al.*, 2022; Mathews, 2022; Xi *et al.*, 2022). As discussed in Chapter Three, these conditions can further be suggested to condition at the first two stages of the morphogenetic cycle (Archer, 1995; Lockett, 2012), the context ECPs find themselves in (first stage) and the response that the conditioning influences (second stage) (Behari-Leak, 2015).

The majority (94.0%) of the study participants identified their need for personal growth and empowerment to influence their internal conversations. Among those who pursued

postgraduate education, 96.0% of ECPs reported being motivated by the need for personal development and empowerment. Similarly, Amani *et al.* (2022) concluded that the desire to develop oneself and achieve self-actualisation were among the predominant motivators noted among those who pursued postgraduate education.

Based on the quantitative and qualitative findings, the need for personal growth and development can be considered to emerge from aspects of the cultural systems (parts) and socio-cultural interaction (other people) that influence the internal conversations of ECPs. In support of these findings, numerous authors across various disciplines report personal growth and various aspects related to self-actualisation as a motivator for postgraduate education (Skakni, 2018; Blazhevich, Nikitina, Rodionova & Smirnova., 2020; Kotera, Taylor, Fido, Williams & Tsuda-McCaie., 2021; Amani, Myeya & Mhewa, 2022; Hansraj & Rampersad, 2022; Mathews, 2022). In addition to what has already been reported, the overall study sample alluded to several possible context-specific motivations. Becoming an agent of change within the prevailing social structures (81.0%) and fostering a sense of belief and ownership of emergency medical care (62.0%) were identified as crucial parts of the cultural system that influenced the internal conversations of ECPs. The findings further suggest that the realities of ECPs are often socially constructed.

What is really funny here, we all left home, we all hated certain conditions in Mzansi (South Africa), but it is those exact conditions that instilled in us - the want and need to be the best versions of ourselves. Without experiencing all those issues, going through all those struggles, and having to climb the ladder while battling social discriminates that many around the world don't face, I don't think (that) half of us would have been as resilient and ambitious as we are now. (Sizwe)

Interestingly, while structural conditions experienced within the South African prehospital milieu may likely motivate ECPs to seek employment abroad (as discussed in Chapter Eight), those conditions have been suggested by participants to cultivate a desire that would not be a reality if ECPs hailed from different circumstances. Participants often alluded to the cultural conditions of the unique South African landscape, which several

authors refer to when explaining conditions of the post-apartheid era (Mattes, 2012; Maphumulo & Bhengu, 2019). South African-based ECPs awarded power to the emergent properties of attaining a postgraduate education qualification. ECPs referred to it as a tool for change within their realities by capacitating generational change to uplift those they are responsible for, which may or may not be discernible to a large proportion of those aiming to pursue postgraduate education. For example, Mattes (2012) suggests that generational change may not account for differences in education content, but rather the quality and quantity of the education received by the new generations, which Mattes (2012) postulates would result in higher cognitive sophistication for everyday life. Jonck, Van Der Walt and Sobayeni (2017) found this related to social interaction and workplace values. At the level of real, the findings suggest that creating generational change further fuelled ECPs' need for personal growth.

Among ECPs who pursued postgraduate education, an overwhelming majority (88.0%) identified the ability to make meaningful changes to the EMS profession as a strong motivator for pursuing postgraduate education. Similarly, Green, Zugelder, Warren and L'Esperance (2020) found that teachers are motivated to pursue postgraduate education by becoming agents of change within the field. ECPs who pursued postgraduate education openly projected a vested interest and a sense of belonging and ownership of the profession, which they also identified to influence their internal conversations. This notion was more common among those who had spent more than eight years within the profession.

ECPs with more than eight years within the profession accounted for 72.5% of the overall sample. The quantitative findings further suggested that years of work experience as an ECP significantly determined the odds of pursuing postgraduate education. On average, for every unit increase in the number of years worked as an ECP, the odds of pursuing postgraduate education were 1.72 times more ($p < 0.001$), in the absence of any substantial relationship being drawn between years of service and intrinsic motivators in the literature, which this study can be compared to. The qualitative data of this study suggests that ECPs who avoid the common migration practices noted among EMS practitioners, and who endure the South African structural conditions do so, owing to a

deep-seated interest in capacitating a setting they have come to feel a part of. This is to say that as agents, ECPs connect with their social worlds owing to the cultural conditions they experience.

Self-actualisation emerges to motivate ECPs to pursue postgraduate education. Born from the unique landscape of South Africa, ECPs shared a desire for personal growth and empowerment, a vested interest, and a sense of ownership in the EMS profession, which this study found to be a motivation that matured over their years of service. This means that the emergent properties awarded to these cultural conditions and how they cultivated the landscape for this internal conversation, were associated with a greater value and seemed to aid ECPs in navigating the structural conditions they experience.

9.4 BELIEFS

The qualitative findings of this study suggest that shared beliefs among ECPs influence their internal conversations and, thus, their postgraduate-seeking behaviours. Similarly, Mosca and Kruger (2022) suggest that the organisational culture within the South African EMS setting encourages a shared set of values and beliefs among ECPs. Throughout the discourse shared, participants alluded to various commonly shared beliefs that almost appeared to have conditioned their outlook or how they saw the world, owing to the emergent properties and causal powers of the cultural conditions they experienced. Their shared beliefs regarding the power and role of postgraduate education in addressing social equity and injustices within society were identified to influence their internal conversations, which this study found predominantly to motivate the pursuit of postgraduate education.

Bhaskar (2008) suggests that our beliefs are underpinned by our historical and social context. Based on Bhaskar's (2008) epistemic relativism, Keane Field (2017) found that personal and philosophical commitment to social justice motivates students to pursue postgraduate education. Similarly, this study found that ECPs share a common belief in the power of postgraduate education as a tool for change, a tool to remedy the issues of social equity and injustices prevalent within the unique landscape of South Africa. Almost

three decades after apartheid, Maphumulo and Bhengu (2019) argue that the South African healthcare system still experiences a significant divide in access to and quality of healthcare services. Sub-optimal education has been cited as a root cause of the health workforce crisis, which has subsequently been acknowledged as one of the developmental needs in South Africa (Essack, 2012; Rispel, 2016; Maphumulo & Bhengu, 2019; Van Staden, 2021). Van Staden (2021) further argues for implementing more sustainable models within health professions education, which align with the NDP goals of using education to eliminate poverty and reduce inequality by 2030. A participant who successfully navigated the structural and cultural conditions within the South African prehospital milieu disclosed:

Inequality is still at large, and the apartheid times' devastating effects can still be felt within South Africa. How many kids in townships still have no hope? How many families rely on a single breadwinner who might not make his 30s? We have real problems in the black communities, but not many advocates.

I want to see myself reach those heights, whereby I am capacitated to the point where I can make the necessary change needed among our people. Where I can see EMS projects active in the areas that need them. Unfortunately, to get to the point where I can make these things happen, I need to hold those qualifications and be in the right seat, be capable of doing what is expected (of me) and also advance the narrative because postgraduate (education) allows us to research what we believe in. (John)

This study found that while ECPs may well see and experience the world differently, specific profound motivations commonly occurred according to their particular context and experiences (social, economic, and cultural). An overwhelming majority (81.0%) of the study sample suggested that their need for empowerment and to become an agent of change within the prevailing social structures of South Africa influenced their internal conversations regarding the pursuit of postgraduate education. Participants continuously alluded to the role that postgraduate education has in redressing issues of the past and capacitating societies and communities, which various authors regard as critical challenges that South Africa needs to overcome to build a healthy nation (Hill, Baxen,

Craig & Namakula, 2012; Hlalele, 2012; Subreenduth, 2013; Van der Westhuizen & Swart, 2016; Levy, Hirsch, Naidoo & Nxele., 2021). Lechuga, Clerc and Howell (2009) assert that the power, privilege, and learning models of postgraduate education aim to develop learners into active citizens committed to social justice and system changes.

ECPs alluded to the need for role-modelling mechanisms within their societies, which the qualitative findings identified as a generative mechanism for pursuing postgraduate education. This is a mechanism that Mosca and Kruger (2022) argue that South African paramedics already employ to improve clinical abilities and living values and beliefs of work ethic within their shared work environments. Participants further attributed the emergent properties of postgraduate education as a tool for change within the various components of their cultural and social systems. In addition, the findings of this study suggest that the issues of equity and inequality motivate the preponderance of ECPs to pursue postgraduate education. Volmink and Dare (2005) suggest that these inequalities in health research outputs seen with the paucity of healthcare-related postgraduates contribute to the disparities in health. While these omissions and lack of capacity in the healthcare systems and research output of LMICs have been reported on for the better part of the last two decades (Volmink & Dare, 2005; Craig *et al.*, 2023), this study found that the structural and cultural conditions experienced by South African ECPs remain relatively unchanged.

The findings suggest that ECPs who are the first in their families to attain a university degree are almost 1.5 times (OR 1.436) more likely to pursue postgraduate education. The qualitative findings suggest that the opportunity that postgraduate education provides ECPs with is to rewrite their narratives for themselves and those they interact with: the reality of being the first person in their families to graduate from university with a postgraduate qualification influenced their agency. While most of the literature on university access and participation focused on those from disadvantaged backgrounds, O'Shea, Stone, Delahunty and May (2018) suggest that first-in-family students position the higher education sector as a possibility for betterment and opportunity within their lives and for their families. Similarly, this study found that the degree of motivation drawn from being able to motivate those within their families, communities, and social worlds

also emerges as a notion born from the cultural systems to which ECPs are exposed. For example, ECPs envision pursuing postgraduate education as an opportunity to change the context or reality of their society. The power to so do is attained from their internal conversation: Do the emergent structural properties of society take priority over the personal emergent properties (being an agent of change within prevailing conditions within their societies)?

Chetty and Pather (2016) assert that equity remains challenging for the South African higher education and training departments. The previous chapter discussed the influence of social equity and systemic inequalities on ECPs eschewing postgraduate education. Conversely, it found that the same emergent properties and power of social inequality were internalised by ECPs and motivated the pursuit of postgraduate education. One such participant who internalised these inequalities as a motivation to pursue postgraduate education said:

I have no people (that) I know or I can use as resources (which are) available to assist me with research, to assist me in the journey to master's or PhD. In my neighbourhood, having a secure job is like (having) gold.

I am the first person to go to university in my family (and) in my household and that's great because I am setting the bar high for my kids (and) my family as a whole. I am becoming that resource for them. But so many people I studied with, their parents are in academic posts, so they not only had help along the way, but were also given opportunities that I would never get because my daddy is a plumber and does not have the contacts theirs does. We need to realise that there are discrepancies among various groups of people. (Percy)

The findings of this study (discussed in Chapter Eight) identified the ongoing concerns of basic and social needs that ECPs deliberated with during their internal conversations before considering pursuing postgraduate education. Among those who eschewed postgraduate education, the endpoints of this internalised conversations were frequently expressed as "... progressing within the field at the expense of my family". Interestingly, research shows that families are a vital source of inspiration for the decision to pursue

postgraduate education (Amani, Myeya & Mhewa, 2022). Several authors have reported on the motivations attained from being a parent to pursue education (Lovell, 2014; Van Rhijn, Lero & Burke, 2016). Similarly, the quantitative findings suggested that ECPs who had dependents were 2.8 times more likely to pursue postgraduate education ($p < 0.001$). When considering the views expressed in the qualitative phases (Chapter Six) and when confronted with the opportunity to improve their standing through postgraduate education, ECPs likely draw on their parental responsibilities as motivation.

The (education) system is there to sort of exclude us; I will use a simple example: I am the first black one to graduate from university in my family, and then you register for a master's. They (the university) say you must look for your own supervisor. Others has (have) like uncles, aunties, sisters-in-law, brothers-in-law and all those in-laws who have their master's and whatever. He just has to pick up the phone and choose one. So for me, who doesn't have an auntie or uncle? I must go look at strangers ...

Now what about those who follow in my footsteps? This causes them to be excluded from going through this successfully. (Sam)

ECPs who contended with the real issues of social equity and injustices within their realities appear to have internalised these as motivations for pursuing postgraduate education. Similarly, the quantitative findings of this study suggest that ECPs who attended township schools were nearly twice as likely ($p < 0.001$) to pursue postgraduate education than ECPs who attended other schools. In South Africa, as is in most of Africa, structural and social inequality typically translates into people who do not have access to or do not benefit optimally from formal services – those in South African townships (Leibbrandt *et al.*, 2013; International Bank for Reconstruction and Development and The World Bank, 2018; Economic Policy National Treasury, 2019). Here, I gravitate towards Theron and Theron's (2014) findings on the resilience of South Africans enduring challenging structural conditions, since ECPs are motivated by the emergent cultural properties, the power awarded to the shared belief of postgraduate education being a catalyst in their journey to breaking free from these circumstances and build towards a better life.

Throughout the discourse shared it became evident that the commonly shared beliefs among ECPs foster greater uniformity and emergent properties than the structural conditions experienced. Although knowledge of what characterises success and development owing to postgraduate education within the prehospital milieu is limited, ECPs share an informed belief in the power of postgraduate education as a tool for meaningful change within their realities. The findings of this study further allude to the value that ECPs award to social media and interactions in deriving motivations to address real-life issues.

9.5 VALUES

Attitudes and values have increasingly become integrated into curriculum frameworks, as competencies to address global challenges require more than mere knowledge and skill (OECD, 2019). The Organisation for Economic Co-operation and Development (OECD) further asserts that these are not competing concepts; they are developed interdependently by often drawing on cultural and societal traditions (OECD, 2019). Values are guiding principles that underpin what ECPs believe to be important when making decisions, whereas attitudes may be observed and are underpinned by these values and influence behaviour (Tsai, 2011; OECD, 2019). The participants of this study considered these as intertwined entities. They often alluded to them as the principles influencing their choices, judgment, behaviour and even actions toward individual and societal well-being. This study identified various commonly shared values that almost appeared to have conditioned their outlook because of the cultural conditions they experienced. ECPs reported that the EMS or institutional values (institutional culture) and social values predominantly motivated them to pursue postgraduate education.

9.5.1 SOCIETAL AND INSTITUTIONAL VALUES AND ATTITUDES

Kruk *et al.* (2018) assert that worldwide, healthcare systems need to inspire and sustain values of professionalism and excellence that promote high-quality healthcare. Mosca and Kruger (2022) further suggest that the professionalism of EMS requires promoting good quality patient care by supporting a safe clinical environment, which relies on the

animation of necessary values, beliefs, and attitudes. Participants suggested that the cultural values of the EMS society encourage development, growth and commitment to values of excellence and quality. The findings of this study further alluded to a cultural tradition within EMS of a longstanding culture of progressing within its clinical structures. Participants contrasted this to the progression within the three-tiered EMS education and training framework. While the actual examples provided by participants allude to the framework that has been revised, Tier 1 would encompass the entry-level emergency care qualification (Basic Ambulance Assistant or Emergency Care Assistant), which provides entry into the profession under supervision. Tier 2 is the intermediate or mid-level emergency care qualification (Ambulance Emergency Assistant or Diploma in Emergency Medical Care) would enable an independent practitioner's rendition of emergency care. Tier 3 is an advanced qualification that would produce a highly skilled emergency care practitioner (undergraduate degree holder).

Calder (2014) asserts that institutional values are usually a result of several key processes of strategic planning, which are aligned to achieving institutional success. Even with the literature by Calder on the matter, the discourse shared by ECPs suggests this is different from the case within their milieu. This is likely because the findings are either different from the traditionally stated values of the health care departments or the paucity of a unified value statement for the South African prehospital milieu. The findings of this study echoed those of Kenter *et al.* (2015), whose outlook gravitates towards that assigned to cultural values, as they are grounded in the heritage and practices of what is worthwhile and meaningful. This means that ECPs perceive institutional values to define the priorities of cultural and societal conditions they experience, derived from practices the ECPs found worthwhile and meaningful. The findings further suggest that these shared principles and guidelines frame the social order and institutional life, and are considered long-standing features of society.

There is a thing, almost like a culture in EMS, to upskill, to progress from one qualification to another, from BAA¹⁷ to AEA¹⁸ and then CCA¹⁹, with the later qualification structures, the names slightly change, but the process is the same. It's a process we have burnt within us. I mean, I had to go from BAA to an ECP level. I did five courses to get to this level. It's a habit to want to go to the next level. That culture instilled in me is one of the things keeping me at it. I do not think we will find that level of conditioning in any other profession, to be honest. EMS is unique in that way; really, it is. (Osman)

Participants often alluded to the culture and habitual practices of being clinically up-skilled within the prehospital milieu, likely because this is what they deemed worthwhile and meaningful, a behaviour that is observed to frame the social order. ECPs widely acknowledged the unique nature of EMS and the associated values, which they considered to have cultivated cultural conditions that may not only be unique to the prehospital milieu, but have subsequently conditioned a type of workplace attitude for those progressing within its structures. Owing to the nature of cultural conditions, as stated by Archer (2007), it becomes apparent why this level of conditioning may not easily be undone. While this may be advantageous to professionalising the current qualification structures, this study found that these values and attitudes within the South African prehospital milieu may not specifically speak to the non-clinical progression associated with postgraduate education within the EMS profession. A participant expounded on the notion of shared values, as follows:

Here (abroad), we feel valued, our aims of getting our master's and PhDs are valued, and our companies' values relate to innovation, cutting edge, and developing what was either previously omitted or can be improved. The day I stepped into my HOD's office and told him I want to start with a master's in health care management, he was more excited than

¹⁷ BAA – Basic Ambulance Assistant – Tier 1 qualification

¹⁸ AEA – Ambulance Emergency Assistant - Tier 2 qualification

¹⁹ Critical Care Assistant – previously considered a Tier 3, however now deemed a Tier 2 qualification

I was. This is the shared culture (on) this side; if this could be replicated in SA, then things would be way more pleasant (on) that side. (Greg)

This study found that ECPs applying their trade abroad were more likely to pursue ($p < 0.01$) postgraduate education across all categories of speciality. Among ECPs abroad, who constituted the largest proportion of those pursuing postgraduate education, this study found that the EMS or institutional values they experienced motivated them to pursue postgraduate education. What is a concern is that 72.8% of those within South Africa did not share the same sentiments. The disproportionate nature of the prehospital milieu in South Africa and abroad clearly transcends the mere structural deficits. The cultural conditions experienced and the subsequent impact on the agency of ECPs are rather profound. The ability of EMS or institutional values, underpinning principles, and guidelines to frame social order and institutional life largely influence ECPs' motivation to pursue postgraduate education.

The qualitative findings suggested that the attitudes of ECPs abroad, who applied their trade within organisations accommodating postgraduate qualification holders, differed from those of ECPs in South Africa. ECPs abroad reported being encouraged to pursue postgraduate education and that this was an initiative celebrated within their departments, whereas those within South Africa questioned the rationale behind such pursuits (Chapter Eight). Abroad, institutional values are clear, and all within the industry celebrate and encourage the desire to pursue postgraduate education. The same cannot be said about the South African prehospital milieu. This means that institutional support for such an activity and how institutional structures receive it, may influence the value associated with the emergent cultural properties ECPs contend with when making such a decision. This is an important finding, as it gives the EMS profession insight into a critical factor that influences the internal conversations of ECPs and is an initiative (clearly stated institutional value) that requires very little from an overburdened healthcare system to ensure the development of those within the prehospital milieu.

9.5.2 SOCIAL VALUES

It was found that the internal conversations of ECPs are influenced by the interconnectedness of their social interactions and the subsequent shared social values derived from these interactions.

Kenter *et al.* (2015) refer to shared social values among the members of a particular community. The participants in this study commonly referred to this as the values shared in social circles, likely due to the interconnectedness of their social worlds and the phenomena under investigation. The qualitative findings of this study suggest that these values reflect how ECPs relate to the principles and beliefs that influence the quality of interpersonal relationships. Kapur (2019) asserts that as students aim to attain good education and employment, the inculcation of social values enables them to achieve these objectives and maintain good relationships with those around them. Social values also reflect cultural assumptions about social well-being (Tsai, 2011), which in the case of this study, can be described as what makes ECPs work together effectively within their social circles or their ECP-derived societies.

The qualitative findings of this study further suggested that decisions to pursue postgraduate education were often social, as the preferences ECPs hold are influenced by socialisation within a particular society. These findings are supported by Vatn (2009), who suggests that owing to the physical linkages existing in nature, a social interconnectedness is forced upon agents. This means that ECPs will likely derive specific values, attitudes, and behaviours owing to the social interconnectedness of the associated communities, societies, and social groups to which they belong.

... and we are influenced by our social circles or interactions as well. Because I mean, if everybody in your social circle you moving in is now pursuing it, are you not also going to be moving in a similar direction? Are you going to gravitate towards following in their footsteps? I think this has a major role to play, and we need to start creating these circles if we want to inspire and encourage our people. I mean, this has been something I want

to do, and that's because (of) my close friends, (by) what they have made me realise and how this can create opportunity for me. (George)

This study found social values to influence the postgraduate-seeking behaviours of ECPs. Participants asserted that because those in their social setting derived value from pursuing postgraduate education, their realities almost became conditioned to the extent that they, too, started associating value with the cultural and personal emergent properties of pursuing postgraduate education. This is not to say that these values are necessarily forced upon them, but rather to suggest that the social values and shared realities are likely to produce a degree of conditioning that may influence their decision making.

The disproportionate nature of support and academic encouragement reaches far beyond the tangible or material constructs that ECPs are exposed to daily. While participants acknowledged the emergent properties and causal powers of these socially derived values, they often alluded to the absence of such sentiments for most of those bereaved by the social challenges or determinants owing to the socio-economic and communicable conditions experienced in South Africa.

Not everyone has access to these types of conditions or social circles. How do they feed from this positivity? Notwithstanding those that break out of their circumstances.

...but we need to start asking the questions, is (are) these the types of relations or circumstances we need to establish or welcome into the workplace? (Astrid)

While participants widely acknowledged the causal power of shared social values owing to the social ills of society, the reality that many may not have access to these 'conditions or social circles' exists. The discourse shared by participants often suggested that in addition to those who break free from their social conditions, many within the South African prehospital milieu may be unable to latch on to the positivity or feed off the motivation derived from shared social values or interactions. One participant went as far as to recommend the implementation of infrastructure for strategies of informality to be accommodated within the industry to achieve certain conditions likely to influence

members of the profession positively. Implementing these types of social interconnectedness may be something the profession must cultivate to encourage further development, mainly because the prehospital milieu for ECPs brings forward the commonality.

In addition, it was found that to understand ECPs and their likely motivations, there is a need to understand the groups and communities with which they are associated. While ECPs are each autonomous individuals seeking their objectives, they are also members of a group or community, who ultimately sustain and guide themselves. The generative mechanisms and causal powers identified from the conditions experienced, particularly owing to the shared social values and the conditions (how and where) they are derived, motivated ECPs to pursue postgraduate education. Participants who alluded to the role of shared social values projected their respective realities and described these as encouraging them to pursue postgraduate education as a road map of what one needed or should resemble to fulfil the roles associated with postgraduate education within the profession. What does stand out, is the value that participants assigned to something born from the realm of informality, so much so that participants alluded to the role it could play if cultivated within the industry.

9.6 SOCIO-ECONOMIC CONDITIONS

Socio-economic conditions play a significant role in motivating postgraduate-seeking behaviours worldwide (Marginson, 2016; Boneva, Golin & Rauh, 2022). Empirically, this study found that the structural conditions experienced are different among ECPs. In Chapter Eight I discussed how these conditions motivated operational ECPs in South Africa to eschew postgraduate education. I discussed how the same conditions motivated ECPs to pursue postgraduate education in other roles or settings. The findings of this study suggested that financial incentives and support constitute the 'parts' that influence the internal conversations of 'people'.

In addition to the disproportionate nature of these structural conditions experienced abroad and in South Africa, it was found that those who work in the same province in

South Africa, less than 10 kilometres apart as an example, experience different structural conditions, owing to the roles they occupy (the academic sector versus operations). Archer (1995) argues that society has no pre-set form and is formed by the agents' interaction. I argue that these structural conditions can be considered part of a pre-dated system (parts) that ECPs entered rather than what is formed by their interaction. While structural conditions experienced owing to a socio-economic nature have been identified to motivate South African-based operational ECPs to eschew postgraduate education (Chapter Eight), this study found that the systems ECPs abroad or those in the academic world enter into, motivate them to pursue postgraduate education.

ECPs within academic roles are nearly six times more likely (OR: 5.59) to pursue postgraduate education than those in operational roles. A master's degree is a minimum requirement for a lecturer in most higher education institutions (DHET (SA), 2018), which may explain these findings. Of course, the question then becomes, why do they pursue a position within the academic world? This study did not aim to answer this question. However, this study found that financial incentives motivated ECPs to pursue postgraduate education, so much so that the implementation of financial remuneration structures was the second leading recommendation made by participants to improve postgraduate-seeking behaviours. Furthermore, unlike within the academic setting, participants reported that the financial remuneration structure within the prehospital milieu does not accommodate postgraduate holders, with 90.9% of the overall sample reporting the lack thereof to be a determinant of such pursuits within the prehospital milieu. In line with the international benchmark of 100 doctorates per million population (National Planning Commission, 2012; DHET (SA), 2020), the South African National Development Plan needs the number of PhDs to increase from 1420 annually (2010) to 5000 annually by 2030. It is evident that HEIs have rallied behind this initiative and implemented various strategies to meet this goal, including financial remuneration for postgraduate qualification holders. In South Africa, ECPs within the academic sector reported that their settings either remunerated according to postgraduate education or were in the process of doing so. Likewise, the qualitative findings suggested that ECPs abroad were exposed to academic and remuneration structures which acknowledged postgraduate education. The quantitative data echoed this as it projected that ECPs pursuing postgraduate

education were 22% less likely to work in South Africa than working abroad. Of the 20.4% of the sample who recommended the implementation of financial remuneration structures and predetermined career development (17.4%) for postgraduate qualification holders, nearly three-quarters (72.2%) applied their trade within South Africa.

The location (South Africa and abroad) and area of specialisation of ECPs' professional practice were found to have an impact ($p < 0.003$ and $p < 0.001$, respectively) on their decision to pursue postgraduate education. As discussed in the preceding chapters, economic conditions influence the motivations of ECPs in this regard. This study further found that against South African economic concerns, financial support in bursaries was predominantly available for those within the academic world. The quantitative data further suggested that the proportion of ECPs expecting to use self-funded models for postgraduate education was greater than those used during undergraduate periods. Lucrative salaries attained by ECPs abroad made self-funding models easier, while those in South Africa navigated a very different reality. These factors did not only result in a large number of operational ECPs eschewing postgraduate education, but were further noted in the six-fold increase in pursuits among academic ECPs. I found the conditions experienced relate to the first two stages of Archer's morphogenetic cycle (Archer, 2007; Lockett, 2012), thereby having structural and socio-cultural (morphogenesis) influences on the internal conversations of ECPs.

Similarly, I argue that ECPs form 'projects' to promote what they care about the most. While ECPs may well care about pursuing postgraduate education (as a project), this study found that the emergent properties of a socio-economic nature (financial remuneration and support) take priority over the emergent personal properties awarded to pursue postgraduate education. This means that ECPs within an academic setting and abroad who experience favourable conditions, pursue postgraduate education more frequently than those who do not (i.e. operational ECPs in South Africa). While this phenomenon may be empirically observed, its causal powers may not be exerted upon each ECP as not everyone who experiences these conditions may pursue postgraduate education, since other factors may influence their agency in this regard significantly.

9.7. EMS PROFESSION AND THE ACADEMIC WORLD

The findings of this study suggest that the structural conditions within the EMS profession and an academic setting that influenced the pursuit of postgraduate education among ECPs are similar and transferable. While there are inherent differences between these two settings, an analysis of how these conditions (parts) influence the internal conversations of ECPs suggests that at the level of real, the only discrepancy was where and how these conditions were experienced. These structural conditions are therefore discussed together.

ECPs associated the emergence of postgraduate education with various structural conditions that support such pursuits. Abroad, where operational ECPs felt supported by measures proposed by several authors (Fergie *et al.*, 2011; McLaughlin & Sillence, 2018), this study found that there were twice as many operational ECPs pursuing postgraduate education (68.8%) as opposed to those who eschewed it (31.2%). The quantitative findings suggested that ECPs within academic roles in South Africa predominantly pursued postgraduate education. While the proportions differed, in South Africa, ECPs within academic settings ($n = 52$) were similar to the accumulative number of those pursuing postgraduate education abroad ($n = 53$). The quantitative and qualitative findings suggest that these participants experienced similar conditions influencing their internal conversations.

ECPs abroad, where the largest proportion were in operational roles, felt they had the freedom (54.5%) and structural conditions (45.5%) to pursue postgraduate education. In contrast, South African ECPs within operational roles constituted the largest proportion of those who felt they did not have the same luxury of freedom (31.9%), structural conditions (44.1%), and cultural conditions (38.8%) within their settings to pursue postgraduate education. Despite the disproportionate nature of the structural conditions experienced (South Africa and abroad), participants within the South African academic settings pursued postgraduate education the most. Once again, the findings suggest that the motivating conditions experienced by ECPs may likely depend on the location and area of speciality within the prehospital milieu.

The findings on the motivations for pursuing postgraduate education were similar to those noted among allied healthcare sectors in South Africa (Havenga & Sengane, 2018; Kisansa & Lubinga, 2020; Hansraj & Rampersad, 2022; Crowley & Daniels, 2023). ECPs felt supported by critical structural conditions and provisions such as protected time, dedicated workspace, evident academic presence, and access to EMS-specific postgraduate programmes. Interestingly, a recent study by Craig *et al.* (2023) concluded that most of these structural conditions are among the concerns that require urgent attention to increase the number of South African emergency medicine doctoral graduates. The realities of ECPs within academic settings and those abroad were shaped by the fact that their organisations or settings projected postgraduate education-related activities as a measure to capacitate the profession actionably. These findings further suggest a disproportionate nature of support for postgraduate education within the profession. These findings are specific to the confounds of South Africa and abroad, which, based on the recommendations by Craig *et al.* (2023) may be discernible to more than just the prehospital milieu. Quantitatively, this was further noted as the disproportionate nature of the pursuit of postgraduate education among ECPs where 68.8% of the sample abroad as opposed to the 47.9% in South Africa, who were pursuing postgraduate education.

ECPs contrasted the disproportionate nature of structural conditions affiliated with the location (South Africa and abroad) and the roles occupied in the profession. This study found that not all ECPs are afforded the same support or are exposed to the degree of capacity for postgraduate education within their settings. Compared to operational and managerial roles, ECPs within academic positions constituted the highest proportion (25.5%) of those who felt that the structural conditions within their setting encouraged the pursuit thereof. Participants attributed this to the capacity of academic settings for ECPs who pursue or have completed their postgraduate qualifications. They further needed to capacitate the EMS academic space to professionalise the profession. For example, an ECP who entered a structure that could support a postgraduate candidate and graduate was awarded a greater emergent personal power to the project of pursuing postgraduate education, owing to the structural emergent properties they experienced. This means that

this study found the South African academic and abroad settings to encompass a pre-dated system that encourages the interaction of ECPs, rather than conditioning them.

Similar to the findings within the nursing fraternity (Havenga & Sengane, 2018; Mbombi & Mothiba, 2020), ECPs suggested that the nature of discourse and engagement present within EMS training institutions (the academic setting) capacitated ECPs to engage at a postgraduate level appropriately. The qualitative findings indicate that the EMS profession and the academic world engage interchangeably abroad, and this relationship cultivates a setting that enables ECPs and, subsequently, their pursuits in this regard. The largest proportion of ECPs who felt encouraged to pursue postgraduate education by the necessary structural conditions within their setting, were those working abroad (57.1%). They reported that the capacity within their EMS settings encouraged postgraduate-seeking behaviours among ECPs, supported them throughout their journey, and ensured some mechanism to plough back and add value to their respective milieus. In South Africa, ECPs within academic settings (30.3%) felt they had the freedom to pursue postgraduate education, as opposed to the 32% within operations who did not. Abroad, those within operations constituted the largest proportion of those who felt they had the freedom to pursue postgraduate education (54.5%), nearly quadruple that of those within academic roles (15.6%). The qualitative findings of this study alluded to the prehospital milieu abroad having the capacity for postgraduate qualification holders. Many factors may influence the various EMSs abroad to provide these structural conditions (socio-economic and human resources serve as examples). Empirically, this study suggests that when the same structural conditions experienced by those within the South African academic settings are applied to those within the profession, favourable pursuits of postgraduate education can be seen among ECPs. This is further echoed by 16.9% of the sample who recommended improved academic presence and support for ECPs within the EMS profession. Operational ECPs suggested that this would greatly aid them in overcoming the current structural conditions experienced.

Accumulatively, 85% of the study sample felt that the relevance of postgraduate education within their respective settings influenced their internal conversation. This study found that the majority (89%) of those who pursued postgraduate education were

motivated to stay relevant during the development of the EMS profession, as they deemed the undergraduate qualification insufficient. Similar to the findings by Amani *et al.* (2022), participants affiliated relevance with the capacity of their milieu to cater for career progression, improved financial remuneration and the likelihood of being fit for purpose. The emergent structural powers positively influenced their agency, owing to the relevance and capacity for post-graduate education and their emergent personal properties. The qualitative and quantitative findings suggested that the notion of relevance and subsequently being fit for purpose, was primarily affiliated with the roles within academic settings and the profession abroad.

Aligned with international trends, postgraduate education in South Africa has undergone significant reform over the last 20 years, which has seen an uptick in the pursuit thereof (Myburgh, 2020; Crowley & Daniels, 2023). In their attempt to remain relevant at a pace that parallels societal progress, allied healthcare fields such as nursing have been forced to incorporate postgraduate qualification holders into their structures due to the professionalisation of the discipline (Morphet, Kent, Plummer & Considine, 2015; Theobald *et al.*, 2021; Crowley & Daniels, 2023). Crowley and others (Havenga & Sengane, 2018; Crowley & Daniels, 2023) argue that understanding the challenges and motivations from within the field, may offer the profession valuable recommendations to ensure a sustainable specialist workforce in South Africa. In this regard, compared to that noted among ECPs within academic settings, the prehospital milieu lags.

9.7.1 SUPPORT FOR POSTGRADUATE EDUCATION

ECPs identified the support for postgraduate education as a structural condition influencing their internal conversations. The quantitative findings suggested that perceptions of support for postgraduate education are profoundly associated with agency. ECPs who felt free to pursue such activities owing to the support within their setting had a four-fold increase in the likelihood ($p = 0.001$) of pursuing postgraduate education. Furthermore, ECPs who felt their organisations or settings supported and encouraged the pursuit thereof, were three times more likely to pursue postgraduate education than those

who did not. The degree of support experienced influenced the emergent properties awarded to structure and agency in this regard.

Interestingly, where ECPs apply their profession and their respective specialities within the EMS profession, were both significantly ($p < 0.001$) associated with the decision to pursue postgraduate education. This study found that academic ECPs in South Africa were nearly six times more likely (OR 5.59) to pursue postgraduate education than those in operational roles, while operational ECPs abroad were again more likely to pursue postgraduate education. Similar trends are noted within allied healthcare sectors of South Africa (Kisansa & Lubinga, 2020; Hansraj & Rampersad, 2022). In South Africa, operational ECPs felt the pursuit of postgraduate education related activities were not supported, whereas abroad, those within operational roles felt that these pursuits were supported. Despite those within operational roles ($n = 153$, 57.74%) constituting the greater proportion of the sample, ECPs within academic settings reported the same degree of support, regardless of where they applied their trade. Operational ECPs abroad constituted the majority of those.

When stratified by area of work, those abroad were more likely to pursue postgraduate education across all areas of specialities than those within South Africa ($p < 0.01$). Among those within operational roles, 71.7% of those abroad pursued postgraduate education. Participants attributed these pursuits to conditions experienced owing to the presence of dedicated time, place, and work function, all conditions they deemed supportive and predominantly experienced by ECPs abroad and within academic settings. I agree with Craig *et al.* (2023) who state that while acknowledging the importance of protected time for postgraduate education-related activities, limiting the number of ECPs as a clinical resource by extracting them from operational duties, may not be a luxury that the South African under-resourced and overburdened EMS can afford. Abroad, high-income countries (e.g. UAE, Qatar and Saudi Arabia) may likely be able to focus on the long-term benefits, owing to their extensive resources, capacity, and adaptive systems. Those within academic settings often alluded to these conditions being provided. as it would ensure improved future capacity and productivity in the workplace, suggesting the institution was investing by providing these conditions.

9.8 CONCLUSION

The pursuit of postgraduate education was found to be fairly common among participants, with nearly half of them having completed a master's or doctoral programme. An overwhelming majority of participants who pursued postgraduate education reported that they were motivated by the need for personal development and growth. The power of postgraduate education as a tool to make meaningful changes to the EMS profession and become an agent of change in the prevailing social structures of South Africa, were further identified to be a strong motivator for the pursuit of postgraduate education. Interestingly, participants alluded to the cultural conditions born from the unique landscape of South Africa, the conditions that cultivated a desire that would not be a reality if ECPs hailed from different circumstances, to motivate them to pursue postgraduate education.

This study further found that, abroad, the prehospital milieu motivated 67.2% of its ECPs to pursue postgraduate education, whereas in South Africa, the preponderance (81.3%) of ECPs in the academic setting were encouraged to pursue postgraduate education. ECPs in these settings constituted the largest proportions among those who felt they had the freedom to pursue postgraduate education. The multiple logistics model registered a four-fold increase in ECPs who thought they had the privilege to pursue postgraduate education and a threefold increase among those with the necessary support from their settings. This resulted in ECPs being six times more likely to pursue postgraduate education in the academic setting. This study found that parental responsibilities influence the internal conversation of ECPs, as those who had dependents were 2.8 times more likely to pursue postgraduate education.

The cultural conditions, otherwise viewed as an internalised influence on the internal conversations of ECPs, predominantly motivated ECPs to pursue postgraduate education. The emergent properties of structural conditions experienced by ECPs abroad differ from those experienced by those within South Africa. Structural conditions owing to the socio-economic, industrial and academic nature present abroad were predominantly associated with a positive influence on the agency of ECPs, which motivated ECPs to pursue postgraduate education. Within South Africa, ECPs recommended the

implementation of financial remuneration structures, predetermined developmental pathways and improved academic presence and support within the profession to enhance postgraduate education-related behaviours. Interestingly, the cultural conditions, likely owing to their everlasting nature as a lived experience, remained the same regardless of where or how ECPs apply their trade, which was essentially found to motivate ECPs to pursue postgraduate education.

CHAPTER TEN: SUMMARY, RECOMMENDATIONS AND CONCLUSION

10.1 INTRODUCTION

This chapter provides a synthesis of the study findings presented in Chapters Five through to Nine in response to the research question posed in Chapter One: Why do ECPs pursue or eschew postgraduate education? I used the research sub-questions to frame the answer to this, and I then discuss the contribution to the existing body of knowledge. I conclude the chapter by presenting the recommendations that emerged from this study and the limitations of this study.

10.2 ANSWERING THE RESEARCH QUESTIONS

Social and critical realism informed this ontological and epistemological stance to identify and understand the influence of structural and cultural conditions on the professional agency of ECPs. The following main research question formed the basis of this study:

Why do ECPs pursue or eschew postgraduate education?

The research sub-questions were:

1. What structural, cultural and agential conditions within the prehospital emergency care field motivate ECPs to pursue or eschew postgraduate education?
2. How do the current postgraduate-seeking behaviours of ECPs emerge from the interplay between structure, culture and agential conditions within the prehospital milieu?

For this study, agency was defined as the ability or intentionality of ECPs to take action based on their vested interests and as a product of their internal conversations. Structural conditions represented the overall conditions, systems and tangible or material factors in the workplace (the EMS setting) that influence ECPs' daily lives. Cultural conditions represented the individually or collectively held ideals, values, and beliefs that influence the daily lives or decisions of ECPs. This study found these definitions to be appropriate

as the findings suggested that pursuing or eschewing postgraduate education emerged from the intentional agency on the part of ECPs.

10.2.1 SUB-QUESTION ONE

What structural, cultural and agential conditions within the prehospital emergency care field motivate ECPs to pursue or eschew postgraduate education?

Archer (1995, 2007) proposes that the emergent properties of structure and culture culminate to condition, but do not determine, the action of agents. This study, therefore, used a sequential, exploratory, mixed-methods research design to identify and understand these conditions. The first phase involved the use of qualitative measures, presented in Chapters Six and Seven, which sought to identify and understand the structural and cultural conditions. To answer this research question appropriately, elements of the second phase of this study were used to ensure that the data sets converse with each other. The analysis of the data identified the following themes (Figure 10.1) which were expounded upon in Chapters Five to Nine.

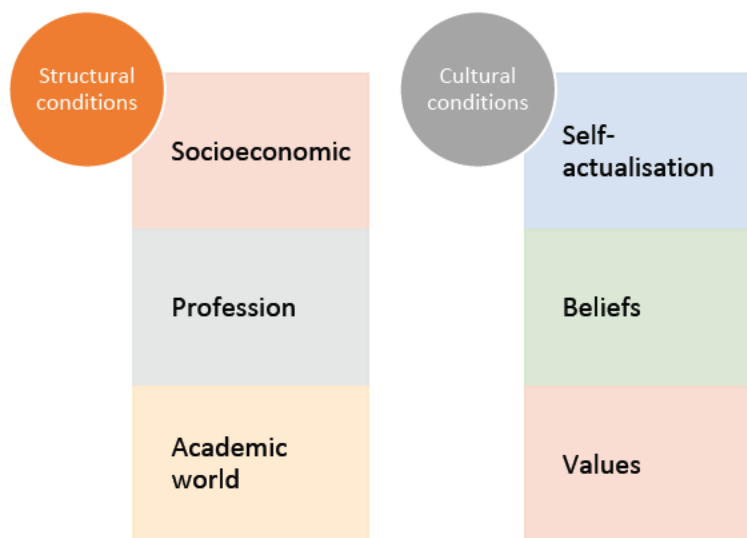


FIGURE 10.1: Structural and cultural conditions and the associate themes

Archer asserts that structure and culture are intertwined, particularly as social events emerge from society's properties as an open system. The process of analytical dualisms

enabled me to separate structural and cultural conditions for analytical purposes temporarily.

The generative mechanism of a social and economic nature was the most commonly occurring theme identified from the discourse shared among participants. The trans-empirical entities of socio-economic nature were found predominantly to motivate 64% of ECPs within South Africa to eschew postgraduate education, whereas those abroad who experienced them were motivated by them. Owing to the paucity of postgraduate-specific remuneration and support systems within the South African prehospital milieu, ECPs contended with the conflict of navigating the challenging economic landscape of South Africa and their ambitions for professional development. This study found this only valid for some ECPs working abroad.

This study found that the prevailing conditions within the South African prehospital milieu motivated ECPs to eschew postgraduate education. The largest proportion of ECPs within the operational roles, compared to those within academic roles in South Africa, needed more freedom and structural support to consider the pursuit of postgraduate education. Participants attributed this to the need for more support and capacity to accommodate postgraduate qualification holders within the prehospital milieu. ECPs further alluded to the omission of the prehospital milieu and the associated governing structures (HPCSA) to capacitate the EMS profession with the necessary registrations and roles to ensure these qualification holders are used effectively and are fit for purpose. The findings suggested that these structural conditions (systems) and socio-interactions abroad motivated ECPs to pursue postgraduate education.

The generative mechanisms and causal powers of self-actualisation predominantly motivated ECPs to pursue postgraduate education. The majority (94.0%) of the study participants identified their need for personal growth and empowerment to influence their motivations to pursue postgraduate education. This study found that the realities of ECPs are often socially constructed and that, in addition to what has already been reported in the literature, ECPs draw on several possible context-specific motivations. Becoming an agent of change within the prevailing social structures and fostering a sense of belief and

ownership of the field of emergency medical care were identified to be crucial parts of the cultural system found to influence the internal conversations of ECPs. Interestingly, while structural conditions experienced within the South African prehospital milieu may likely motivate ECPs to seek employment abroad, this study found that those conditions cultivated a desire that would not be a reality if ECPs hailed from different circumstances. Similarly, this study found that ECPs have a shared belief in the power of postgraduate education as a tool to remedy the issues of social equity and injustices prevalent within the unique landscape of South Africa.

10.2.2 SUB-QUESTION TWO

How does the current postgraduate-seeking behaviours of ECPs emerge from the interplay between structure, culture, and agential conditions within the prehospital milieu?

Research sub-question two focused on two critical components of this study: a) describing the emergence of the postgraduate-seeking behaviours of ECPs, and b) determining how this behaviour emerges owing to the interplay between these conditions. The data analysis of the qualitative and quantitative data conversed with each other to respond to this sub-question.

A) The emergence of postgraduate-seeking behaviours among ECPs

The second phase of this study consisted of quantitative research, which sought to describe the influence of structural, cultural, and agential conditions on their postgraduate-seeking behaviours. The data were collected using an electronic survey.

A total of 265 ECPs responded to the survey. Overall, 153 participants identified their area of speciality to be operational (57.7%), followed by academics (29.1%) and managerial (13.2%), respectively. The median number of years as an ECP was 6 (3.00–8.00), with the largest proportion of the sample (25.28%) having between 8 to 11 years of service within EMS. ECPs applying their trade within South Africa constituted the majority of the study sample (70.9%), as opposed to the 29.1% applying their trade aboard.

The preponderance of the sample (54%) had pursued postgraduate education. Among the study population, 46% eschewed postgraduate education, of whom 80.3% applied their trade within South Africa. Accumulatively, ECPs within operational (72.1%) and managerial (15.6%) roles constituted the largest proportion of those who eschewed postgraduate education. In South Africa, ECPs within operational roles accounted for 70.5% of those who eschewed postgraduate education. The findings suggested that ECPs pursuing postgraduate education were 22% less likely to work in South Africa than ECPs working abroad.

The study findings suggest that the structural and cultural conditions experienced by ECPs may likely depend on the location and area of speciality within the prehospital milieu. ECPs in South Africa, of whom the largest proportion (51.0%) were in operational roles, felt they did not have the freedom, structural conditions, and cultural conditions within their setting to pursue postgraduate education. Interestingly, operational ECPs working abroad accounted for the largest proportion of those who felt they did have the freedom to pursue postgraduate education. The multiple logistic models registered a four-fold ($p < 0.001$) increase in the odds of pursuing postgraduate education for those who felt they had the freedom to do so. At the same time, those who experienced the necessary structural conditions were 3.03 times more likely to pursue postgraduate education.

The majority of the study participants (90.9%) suggested that the absence of financial incentives (90.9%) and career progression pathways (92.0%) for postgraduate qualification holders motivated ECPs to eschew postgraduate education. More than half (57.0%) of participants suggested that ECPs within operational roles needed better access to financial support for postgraduate education. Furthermore, 45.7% of ECPs within the South African prehospital milieu reported that the perceived relevance of postgraduate education not being fit for purpose motivated them to eschew postgraduate education. There was a threefold increase in South African ECPs compared to those abroad, who identified the absence of structural conditions that would support further study within their respective EMS settings.

Most (94.0%) study participants identified their need for personal growth and empowerment to influence their internal conversations. An overwhelming majority (81.0%) of the study sample suggested that their need for empowerment and to become an agent of change within the prevailing social structures of South Africa influenced their internal conversations regarding the pursuit of postgraduate education. This study found that ECPs who are the first in their families to attain a university degree are almost 1.5 times (OR 1.436) more likely to pursue postgraduate education. The qualitative findings suggest that postgraduate education provides ECPs with an opportunity to rewrite their narratives for themselves and those with whom they interact, the reality of being the first person in their families to graduate from university with a postgraduate qualification influenced their agency. Similarly, the quantitative findings suggested that ECPs who had dependents were 2.8 times more likely to pursue postgraduate education ($p < 0.001$). When considering the views expressed in the qualitative findings and confronted with the opportunity to improve their standing through postgraduate education, the ECPs likely draw on their parental responsibilities as motivation.

B) The interplay between structural and cultural conditions

The prehospital milieu and higher education institutions have traditions, values, beliefs and ideas that shape their identity, and these take on the form of structural and cultural conditions. In this study, I demonstrated that ECPs (agents) interact with these structural and cultural conditions (parts) in a process that Archer (1995) refers to as socio-cultural and structural interactions. I share Archer's (1995) views that structure, culture and agency are entities with causal powers. This study found structural and cultural conditions interrelated because neither could preclude a particular action or motivation by ECPs. While the findings presented throughout this study are primarily suggestive, the interplay between these conditions is seen as ECPs pursuing postgraduate education in more significant numbers than I expected.

This study found that structural conditions within the South African prehospital milieu contradict the situational logic reported among those within the academic setting. I observed that the absence of such conditions eliminates motivations for pursuing

postgraduate education, almost side-lining or undermining this activity among operational ECPs within South Africa. Furthermore, I noted a positive correlation between supportive or reinforced conditions and postgraduate-seeking behaviours, to the degree that ECPs recommended various EMS-specific structural requirements (financial remuneration, career progression pathways and specialised roles) that they not only felt were omitted, but deemed necessary to ensure the growth and development of the EMS profession. While dominant references were made to the omitted structural conditions, I found that in isolation, the behaviour of ECPs was not conditioned by this component alone.

Archer (1995, 1999, 2003) argues that contrary to what has been, we now find ourselves in a context where structural and cultural conditions have come into synergy to influence agency, described as the far-reaching morphogenetic consequences. This is to say that these have opposing properties which culminate and subsequently condition the agency of ECPs. This researcher argues that the unique landscape of South Africa has conditioned certain cultural conditions that emergency care providers might not experience in other parts of the world. While many ECPs are working abroad, the characteristics of cultural conditions argued by Archer (1995, 2003) have ensured that these are embedded within them. The interconnectedness of values, practices and behaviours of ECPs noted in this study further alludes to the dynamic nature of culture and structural conditions.

Archer (1995) asserts that social activities hardly exist in isolation and that their intersection affects each other. Given that social practices are constituted by pre-existing structural and cultural properties at the level of real, gaining insight and understanding the relationship between these two entities provided me with insight into the situational logic of complementarity or contradiction at play in the given context, particularly how such logics condition the actions of agents. Interestingly, in this study, I noted that cultural conditions might profoundly influence the agency of ECPs in pursuing postgraduate education. Despite the scarcity of structural conditions within the prehospital milieu, the emergent properties and the influence of cultural conditions have resulted in a favourable number of ECPs pursuing postgraduate education. In most cases, this was tied to the self-derived social responsibility of ECPs, which emerged as a situational logic of both

constraining and complementing. This means that while ECPs deemed the action of pursuit necessary to eliminate a particular injustice, it would thus build capacity opportunistically. In certain instances, I observed the contention between structural and cultural conditions that must be resolved primarily by postgraduate education as an instrument for change within South Africa. The power of education and the role it plays in overcoming social and societal injustices may be provided as a prime example. This study further echoes the resilience noted by other authors in overcoming the resource limitations within the prehospital milieu (Luckett, 2008; Muthama, 2018). This is not to say that, as it stands, the cultural conditions are sufficient to ensure the development of the profession, as resource limitations, structural omissions, and the brain drain phenomenon still plague the South African EMS. Instead, it suggests that while society has no pre-set form or preferred state, the emergent properties of the cultural conditions have considerable influence over agency in this regard.

To synthesise the key findings about agency, operational ECPs in South Africa are the primary agents with little power to change the pre-dated structural conditions. While their position as primary agents within the prehospital milieu is particularly significant to be able to challenge or change the status quo, without buy-in from operational structures and statutory bodies that provide them with a specific purpose, the pursuit of postgraduate education may likely not improve. This is not to say that these conditions enslave operational ECPs, as the same structures may be taken up in different ways as many break free owing to their autonomy within the EMS profession. ECPs within academic settings appear to have significant power in changing these structural conditions, as their positions and their pursuits of postgraduate education appropriately position them to drive the necessary change within the prehospital milieu by improving the interface between the profession and the academic world.

Lastly, this study demonstrated that the structural and cultural conditions depend on agents acting or reinforcing them. The concern for how structural and cultural conditions combine to motivate ECPs to pursue or eschew postgraduate education is an insufficient deliberation if the role of agency is not considered. In the case of this study, this was seen as the resilience of ECPs to overcome the structural conditions owing to the unique

landscape of South Africa and the internalised desire for meaningful growth and development within the EMS profession.

10.3 CONTRIBUTION TO THE BODY OF KNOWLEDGE

This is the first study to describe the postgraduate-seeking behaviours of ECPs. Against the paucity of prehospital-related research in LMICs, this provides the EMS profession and its academic affiliates with a baseline measurement of postgraduate access, where potential graduates end up and how likely they are to return and contribute to the South African EMS profession.

This study provided the opportunity to be the first to use Archer's social realism to investigate this phenomenon, particularly within the field of emergency medical care. Furthermore, it enabled the identification of structural and cultural conditions experienced within the prehospital milieu. This contributed to the body of knowledge by taking the epistemology and ontology of ECPs into account, thus recognising the agency of ECPs. Using Archer's social realism to explore ECPs' agency to pursue postgraduate education was therefore unique.

Secondly, this study provides and compares detailed descriptions of the structural and cultural conditions experienced by ECPs within various locations and specialities. This provides the EMS professional with the necessary insights into understanding the variations and the likely impact that each has on agency. Finally, this study allowed ECPs to challenge pre-dated structural conditions and put forth recommendations that would enable the EMS profession to evolve at a rate parallel to that of society and similar to professions such as nursing.

10.4 RECOMMENDATIONS

Based on the findings of this investigation, the following recommendations may help motivate ECPs to pursue postgraduate education and in so doing, capacitate the EMS profession with practitioners that actively contribute to the knowledge economy.

ECPs almost unanimously recommended the implementation of specialised roles and career progression pathways within the prehospital milieu to improve the postgraduate-

seeking behaviours among ECPs. This is likely owing to the paucity of structural conditions experienced and the associated feeling of not being fit for purpose, which is not to say that this would be the most effective medium to introduce, but rather this is what ECPs deemed necessary. This study therefore calls upon EMC-specific universities to engage with the HPCSA and the PBECP to develop and provide the EMS profession with postgraduates who are acknowledged and registered as specialists in an EMC clinical, management, research and/or education stream.

The articulated discourse underscores the prevailing consensus among participants that the accessibility of postgraduate education in South Africa is characterised by discernible disparities. Social constructs and socio-economic circumstances emerge as generative mechanisms that operate at every level, delineating the patterns of access and support for ECPs in South Africa. Most participants called for improved access to financial support structures, particularly in the form of bursaries. Participants contended that such support is disproportionately available to individuals situated within academic settings.

Most of the participants further called for the implementation of appropriate financial remuneration structures for postgraduate qualification holders within the prehospital milieu. Based on the findings of this study, and the large proportion of ECPs within the prehospital milieu and in operational roles, this study calls on the OSD structure to include and recognise postgraduate qualification holders within the prehospital milieu.

Participants emphatically called for the establishment of an academic presence within industry, envisioning a paradigm that would expose those within the EMS profession to the prospect of advancing their educational stature and competencies within the prehospital milieu. The identified dearth of academic support and engagement within the prehospital milieu emerged as a generative mechanism significantly influencing the agency of ECPs. In response to these findings, this study advocates for the recognition of EMC-specific postgraduate programmes, proposing an adaptation of the Helix model. This adaptation would entail active engagement with the prehospital workforce through initiatives strategically embedded within the EMS profession. Such initiatives would aim to promote postgraduate related activities that directly and indirectly address the workforce and their challenges within industry. Notwithstanding the existence of current

measures, such as external advisory committees, this study discerned their apparent ineffectiveness in influencing the structural and cultural conditions experienced by ECPs within South Africa. Consequently, a transformative approach is urged, wherein academic endeavours are seamlessly integrated into the EMS industry, fostering an environment conducive to the holistic development and educational advancement of ECPs.

This study further recommends that cultural conditions, which have already proven to motivate the current postgraduate education-seeking behaviours, be cultivated within the prehospital milieu. ECPs who acknowledged the value of these conditions and the emergent properties, called for the artificial or purposeful implementation of such practices by those within strategic positions within the milieu.

While structural and cultural conditions significantly influence the agency of ECPs, this study demonstrated that involving this cohort of practitioners in future interventions is of the utmost importance. After all, the agency is a personalised characteristic derived from ECPs' internal conversations. The motivations for pursuing or eschewing postgraduate education identified among ECPs have provided insight into what has been, what is and what needs to be to ensure that the development of the profession parallels societal progress within the knowledge economy era. This study therefore recommends that ECPs, as the likely knowledgeable workers around which the profession will be developed, be consulted by the strategic planners and key role players within the profession to ensure that there is an appropriate understanding of what is currently at play and what needs to be done to improve the status quo.

10.5 POSSIBILITIES FOR FUTURE RESEARCH

This study found several gaps in EMS-specific literature that relate to the investigation or aspects of this social phenomenon.

The structural and cultural conditions experienced by prehospital care providers within sub-Saharan Africa have not yet been described in the literature. The influence that these conditions have on the rendition of emergency medical care, the livelihood of these practitioners and their overall contributions to the profession also demands attention and further study.

The value and contributions of postgraduate qualification holders in the South African EMS profession or education and training sector requires formal assessment to determine the value of postgraduate education to the profession and society as a whole.

While this study found that the power ECPs awarded to the pursuit of postgraduate education in overcoming the social ills and redressing unique social issues within the South African society, the impact that attaining such qualifications has on these conditions have not yet been described.

Although this study found that a large proportion of ECPs within the academic setting pursue postgraduate education for various reasons, the impact and relevance to undergraduate training and the development of the EMS profession has not been described in the literature.

The study further found that research needs to be conducted into how the postgraduate qualification holders can be used better in the EMS profession. Does the EMS profession see them as the renders of emergency medical care in the capacity of an ECP, or as that and as active contributors to the development of the profession? This notion requires further investigation, but more importantly, it remains a question that the profession needs to answer urgently.

10.6. LIMITATIONS

Limitations are restrictions in a study that may result from factors such as research design problems or weaknesses in data collection and results (Ross and Bibler Zaidi, 2019). ECPs are not an easy cohort to research and accessing them was challenging as they are situated worldwide. This research was conducted using data from ECPs who were recruited through various informal media platforms. While an appropriate power number from the total ECP population was attained, given the unique nature of ECPs within the prehospital milieu, generalisability to the entire ECP population may not be appropriate. Furthermore, this study employed purposive and snowball sampling, which are ultimately weaker forms of recruitment and also do not favour generalisability. Random sampling would have been a stronger method of recruitment. However, given the wide-spread

geographic locations of ECPs and the paucity of unified mediums to engage with the entire ECP cohort, such a sampling strategy was not possible.

This study alludes to the unique nature of ECPs within the prehospital milieu, thus challenging the transferability of these findings to other prehospital care providers. Furthermore, the descriptions and discussions presented in this study provided sufficient insight to enable a certain degree of comparison, particularly in light of the paucity of prehospital emergency care research in LMICs. However, this study may not be appropriately powered to make transferability inferences.

This study yielded numerous quantitative results that, were not statistically significant. As sculpted by the theoretical underpinning of this study, what is known or in the case of certain quantitative results - observable, often require further investigation to understand what exists at the level of real. This study therefore drew upon the strengths of mixed methods research, where quantitative and qualitative methods are combined, not disregarding results due to p-values, but further exploring these to determine relevance during the follow up phases of the study. These instances are presented as such in relevant discussion sections, again alluding to the fact that certain results may not be generalisable to the entire ECP population.

Lastly, this study attempted to operationalise two intricate theories in the pursuit of understanding the emergence of the phenomena of interest. As a novice researcher, having these two theories amalgamate to inform my ontological and epistemological stance may have resulted in a nuanced balance, possibly resulting in the underplaying of certain aspects inherent to each theory. Certain aspects of each may not have been fully exploited to enable the emergence of what was found to be more prevalent. While the metaphysical nature of the study and its associated theories often necessitate complex debates, I have attempted to keep the discussion simple by providing examples that are easy to follow. This is to say that the operationalisation of complex theories involves inherent challenges, and the findings and discussion that follow, should be interpreted with a degree of cognisance regarding the potential nuances and implications introduced throughout this study.

10.7 CONCLUSION

In conclusion, the study established and presented, from the ECPs' point of view, the cultural and structural conditions that influence their agency: motivations to pursue or eschew postgraduate education. The findings highlighted the dynamic and interchangeable nature of structure and culture and the overlap of the values, practices and behaviours of the prehospital milieu. It notably identified the interconnections as all the practices and behaviours underpinned by the motivations emerging from the prehospital milieu. The study further demonstrated that a comprehensive and deeper understanding of how individuals interpret their structural and cultural conditions is essential. The objective goal of developing the profession is interlinked with establishing institutional and cultural norms that capacitate and support those within the profession.

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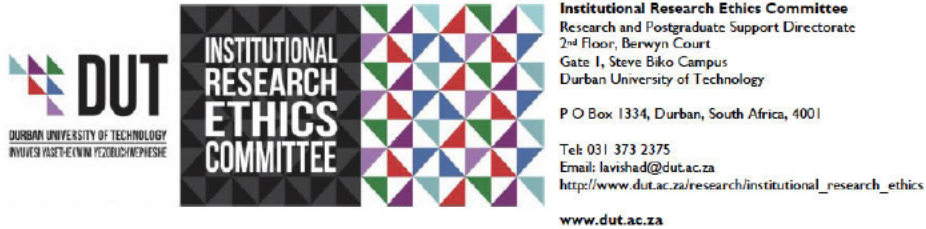
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APPENDIX A: ETHICS CLEARANCE



4 June 2021

Mr M N Abdullah
19 Dandelion Way
Grassy Park
Cape Town
7941

Dear Mr Abdullah

Postgraduate education in South African Emergency Care Practitioners: A social realist study.

Ethics Clearance number IREC 089/21

The Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Yours Sincerely,

Prof J K Adam
Chairperson: IREC

APPENDIX B: FOCUS GROUP INTERVIEW GUIDE



FOCUS GROUP INTERVIEW GUIDE AND QUESTIONS TO DETERMINE THE STRUCTURAL AND CULTURAL CONDITIONS INFLUENCING ECPS AGENCY

Welcome

- ☐ Introduce myself and the purpose of the focus group interview.
- ☐ Facilitate a brief introduction of participants in the group.

Our topic for this session: Within the context of the South African EMS, what structural and cultural conditions motivate ECPs to pursue or eschew postgraduate education

- ☐ The results will be used to identify the material/tangible factors (structure) and ideas/beliefs (culture) within the South African EMS that influence ECPs postgraduate seeking behaviour. This will further be used to make practical recommendations of what needs to be done to increase postgraduate activity among ECPs.
- ☐ You were selected because of your knowledge, the scarcity of your expertise and the invaluable insight you may offer due to your context within the realm of EMS development.

Focus Group Discussion Interview Guidelines (this will be adapted for One-on-one interviews)

- ☐ There are no right or wrong answers, only different points of view.
- ☐ These sessions are usually filled with a wealth of valuable information, and I doubt I will be able to notate them all. May I therefore have your permission to audio-record this session? as I do not want to miss any of your valuable comments. I will be the only person to listen to the recording so what is said in the group will remain confidential.
- ☐ To further ensure confidentiality, I humbly request all participants to refrain from disclosing what was said during this session with others outside/afterwards.
- ☐ All participants and organisations mentioned will remain anonymous, in addition to this, your participation is completely voluntary, and you are under no obligation to participate. You may withdraw from the study at any time and there are no consequences for refusing to take part or withdrawing from this study.
- ☐ I ask that you turn off your cell-phones. If you are unable to do so and if you must respond to a call, please do so as quietly as possible and re-join us as quickly as you can.
- ☐ My role here will be to merely guide the discussion.
- ☐

Grand tour question

Can you describe to me what material/tangible factors (structure) and ideas/beliefs (culture) within the prehospita! milieu motivate ECPs(you) to either pursue or eschew postgraduate education?

- For the purpose of this question, the following definitions will be operationalised
 - Structural conditions: represents the tangible/material structures that influence (possess causal powers) our daily lives
 - Cultural conditions: represents the ideas and beliefs that influence our daily lives and decisions taken.

Further exploration and prompts will arise from participant's responses to the grand tour question. The following are questions I will use to facilitate the discussion.

- ☐ What do you think the role of postgraduate education is within the South African EMS?
- ☐ Can you describe the degree of agency among ECPs (yourself included) with regards to pursuing postgraduate education?
- ☐ What structural/cultural support systems do you feel works particularly well for motivating ECPs within your EMS or organisation to pursue postgraduate education?
- ☐ Which do you think plays a bigger role in motivating ECPs within your EMS or organisation to pursue or eschew postgraduate education, structural or cultural conditions?
- ☐ Do you feel there are any discrepancies between ECPs postgraduate seeking behaviour within different EMS/organisations? If yes, describe these in relation to the difference in structural and cultural conditions.
- ☐ Can you describe how you overcame structural and cultural conditions within your EMS or organisation to pursue postgraduate education?
- ☐ Suppose you were tasked with improving the structural and cultural aspects of the South African EMS, what one change would you make to ensure an increase in postgraduate activity among ECPs.

Thank you all for the immense value you have contributed to this research project

APPENDIX C: RESEARCH ADVERTISEMENT



Research Advertisement

Study Title: Postgraduate education in South African Emergency Care Practitioners: A Social Realist Study

Principal Investigator: Mohammed Naseef Abdullah (MPhil: EM)

Introduction: While the rest of the world builds an appetite for the highly skilled South African prehospital practitioners, the emergency care field in South Africa is in dire need of practitioners who can engage with research and advance the profession through evidence-based practice. Achieving this requires Emergency Care Practitioners to embark on postgraduate education programmes to learn research skills. Given the shortage of Emergency Care Practitioners in South Africa, the lack of prehospital specific research and the large number of paramedics that pursue employment and education abroad, understanding the factors that influence Emergency Care Practitioners agency in pursuing or eschewing postgraduate education is extremely important as this impacts the paramedic workforce and the development of the field in South Africa.

Who is conducting the study? Mohammed Naseef Abdullah

Research Question this study aims to answer: Why do ECPs pursue or eschew postgraduate education?

Participation: Your participation in this study is voluntary. Furthermore, you can withdraw from the study at any time, should you wish.

Who can participate?

- ☐ All Emergency Care Practitioners (ECPs) registered with the HPCSA
- ☐ Undergraduate and postgraduate course conveners /facilitators
- ☐ Operational Managers, Directors and EMS policy developers

What does this study involve?

The study involves two data collection phases in which you are invited to participate .

- ☐ Phase one entails a series of in-depth focus group discussions and one-on-one interviews where appropriate, which will take approximately one hour of your time and will be conducted between 01 June - 30 August 2021. These sessions will be conducted via an online medium and will be audio recorded.
- ☐ Phase two of this study will consist of a short online survey that will be distributed to ECPs via email. This phase will be conducted between 01 September – 30 October 2021

Benefits of the study:

- ☐ This study will, for the first time in South Africa, attempt to understand the motivation behind postgraduate seeking behaviour of South African ECPs.
- ☐ We also aim to contribute to the EMS doctrine and the development thereof in South Africa.
- ☐ It will contribute to the development of future postgraduate training pathways within the EMS of South Africa.

Participation: Kindy follow this link <https://forms.gle/yUTubs4NXaCTXMfh9> should you wish to participate in either phase of the study and receive a copy of the information letter and sign up forms.

Who do I contact if I have questions about participating in this study? Mohammed Naseef Abdullah at +971 54 4426 911 or alternatively abdullah.naseef911@gmail.com

APPENDIX D: FOCUS GROUP/INTERVIEW LETTER OF INFORMATION



LETTER OF INFORMATION

Dear Participant

My fellow Emergency Care Practitioners, please find below a letter of information for an opportunity to contribute to the body of knowledge and be part of the change within the prehospital milieu.

My name is Mohammed Naseef Abdullah, a paramedic from Cape Town, South Africa, and I am currently conducting a research project in fulfilment of the Doctor of Philosophy in Emergency Medical Care Degree (PhD EMC) at the Durban University of Technology. I would like to invite you to participate in my research study. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. However, before you decide whether you would like to participate, it is important that you understand what your participation will involve and why this research is being done. Please take the time to read the following information letter carefully and feel free to reach out and ask me if there is anything that is not clear or if you would like more information.

You are receiving this letter because of your knowledge, the scarcity of your expertise as an ECP and the invaluable insight you may offer due to your context within the realm of EMS development.

Title of the Research Study: Postgraduate education in South African Emergency Care Practitioners:
A Social Realist Study

Principal Investigator/researchers: Mr Mohammed Naseef Abdullah (MPhil EM)

Supervisor: Associate Prof Patricia Mc Inerney.

Co- Supervisor: Dr Simpiwe Sobuwa (Doctor of Philosophy in Emergency Medicine)

Brief introduction and Purpose of this study:

While the rest of the world builds an appetite for the highly skilled South African prehospital practitioners, the emergency care field in South Africa is in dire need of practitioners who can engage with research and advance the profession through evidence-based practice. Achieving this requires Emergency Care Practitioners to embark on postgraduate education programmes to learn research skills. Given the shortage of Emergency Care Practitioners in South Africa, the paucity of prehospital specific research and the large number of paramedics that pursue employment and education abroad, understanding the factors that influence Emergency Care Practitioners agency in pursuing or eschewing postgraduate education is extremely important as this impacts the paramedic workforce and the development of the field in South Africa.

This study aims to provide insight as to how the material/tangible factors and the ideas/beliefs within the South Africa prehospital milieu influence ECPs postgraduate seeking behaviour.

Outline of the Procedures:

All Emergency Care Practitioners (ECPs) registered with the HPCSA are welcome to participate in this study. This study will involve two data collection phases.

1. Phase one entails an in-depth focus group discussion and one-on-one interviews where appropriate, which will take approximately one hour of your time and will be conducted between 01 June - 30 August 2021. These sessions will be conducted via the Zoom video conferencing online medium and will be audio recorded. During this discussion, you will be asked questions in relation to the structural and cultural conditions within the South African EMS and how these have either motivated you to pursue or eschew postgraduate education.

2. Phase two of this study will consist of a short online survey that will be distributed to ECPs via email. these questions will be aimed at identifying the interplay between the specific ideas/beliefs and material/tangible factors identified during phase one. This phase will be conducted between 01 September – 30 October 2021.

Inclusion criteria:

We are aiming to purposefully recruit participants from the prehospital milieu who share similar characteristics, are knowledgeable and able to provide deep insights into the emergence of the phenomena being studied.

Phase one : We aim to recruit participants from **ONLY** five categories within the prehospital milieu, these are:

1. Operational ECPs
2. Academic ECPs
3. Managerial ECPs
4. Stakeholders in Industry (Organization Directors, policy developers, strategic planners, non-ECP managers)
5. Undergraduate and Postgraduate course conveners and facilitators (those outside the EMC field from allied departments)

Phase two: We aim to only recruit **ONLY** ECP participants from the following categories:

1. Operational ECPs
2. Academic ECPs
3. Managerial ECPs
4. Non-postgraduate and postgraduate ECPs
5. South African based and Non-South African based ECPs

Confidentiality:

If you agree to participate in this study, you will be asked to complete a consent form for each of the respective phases. Upon doing so, you will be assigned a number (1 – 851) and you will remain anonymous for the remainder of the study. While some demographic and epidemiological data will be required for the analysis component in the study, no personal information that could associate this information with you, will be required. Every effort will be made to ensure confidentiality throughout this study. All data related to this study will be stored on a password protected device and only the principal investigator and supervisors will have access to the data.

Risks or Discomforts to the Participants:

There are no risks to you. The only possible discomfort envisioned, is that which may be experienced by you when disclosing experiences, thoughts or feelings related to the phenomena being studied.

Benefits:

The proposed study will likely yield novel data regarding the causal factors and generative mechanisms that influence ECP's postgraduate seeking behaviour. By exploring and creating a deeper understanding of this behaviour, I aim to identify key concepts aligned to attaining professional agency through the development of postgraduate programmes that are tailor made to region specific emergency medical care needs of South Africa.

Furthermore, by exploring the causal factors and generative mechanisms that either contribute to ECP's pursuing or eschewing post graduate education; possible areas can be identified that might work best for motivating postgraduate education and improve developmental pathways within the emergency medical care field of South Africa.

Withdrawing from the study:

Your participation is completely voluntary and there is no obligation to participate. If you decide to participate in this study, you may withdraw at any stage without giving a reason. There are no consequences for refusing to take part or withdrawing from this study.

Remuneration: None

Cost of the study: All costs associated with this study will be covered by the researcher.

Research-related injury: No research related injury is expected during this study.

Persons to Contact in the Event of Problem of Queries:

Please feel free to contact the researcher, Mohammed Naseef Abdullah (Contact no: +971 5444 26911) , my supervisor: Assoc Prof Patricia Mc Inerney (Contact no: +271 11 4314471), my Co-supervisor: Dr Simpiwe Sobuwa (Contact no: +271 31 3735203) or the Institutional Research Ethics administrator on +271 31 3732375. Complaints can be reported to the Director: Research and Postgraduate Support Dr L Langaniso on +271 31 3732577 or researchdirector@dut.ac.z

APPENDIX E: PARTICIPANT SIGN UP FORM

Participant No: _____



Dear Participant

You were selected because of your knowledge, the scarcity of your expertise as an ECP and the invaluable insight you may offer due to your context within the realm of EMS development.

Please complete the sign up form below. The information shared will be used to place you in the appropriate focus group, it will also be treated as confidential as I will be the only person to see it.

Please indicate if you are currently registered as an ECP with the HPCSA			
Yes		No	
Gender			
Age			
Years of service within EMS (estimation)			
Current Area of speciality			
Operational	Academic	Managerial	Other
If other, please specify			
Please indicate which university you completed your degree at?			
CPUT	DUT	UJ	NMMU
Are you applying your profession in South Africa or Abroad			
South Africa		Abroad	
If in South Africa, which province?			
Have you pursued postgraduate education since completing your degree			
Yes		No	
If yes, have you completed the postgraduate programme?			
Yes		No	
If no: please specify why			
Please indicate which of the following you would be interested in attending			
Mixed focus group discussion		One-on-one interview	

Thank you for your time and interest. All information indicated in this form will only be used for this study. The form will be kept confidential. You are very important.

APPENDIX F: CONSENT FORM



CONSENT

Dear Participant: Thank you for agreeing to participate in this study

Full Title of the Study: Postgraduate education in South African Emergency Care Practitioners: A social realist study

Statement of Agreement to Participate in the Research Study:

- ☐ I hereby confirm that I have been informed by the researcher, Mr Mohammed Naseef Abdullah, about the nature, conduct, benefits and risks of this study – Research Ethics Clearance Number:
- ☐ I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- ☐ I am aware that the results of the study, including personal details regarding my sex, age, date of birth, geographical location and academic history will be anonymously processed into a study report.
- ☐ In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.

- ☐ I may, at any stage, without discrimination, withdraw my consent and participation in this study.
- ☐ I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in this study.
- ☐ I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant	Date	Time	Signature/Right Thumb print

I, Mohammed Naseef Abdullah herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature

Full Name of Witness (if applicable)	Date	Signature

APPENDIX G: CONSENT TO VOICE RECORD



CONSENT TO VOICE RECORDING

I _____, hereby consent to my voice being audio recorded with the use of an audio device recorder during the focus group interview/discussion. I also agree that all information contained on the audio recordings may be used in any way for the Research Study titled: "Postgraduate education in South African Emergency Care Practitioners: A Social Realist Study"

_____	_____	_____	_____
Full Name of Participant	Date	Time	Signature/Right Thumb print

I, Mohammed Naseef Abdullah herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	Date	Signature

_____	_____	_____
Full Name of Witness (if applicable)	Date	Signature

APPENDIX H: ONLINE QUESTIONNAIRE



ONLINE QUESTIONNAIRE

Demographic information

1.	Please indicate if you are currently registered as an ECP with the HPCSA	
	Yes	
	No	

2.	Please indicate whether you are:	
	Male	
	Female	
	Other	

3.	Please select your age category	
	18 - 24	
	25 - 34	
	35 - 44	
	45 - 54	
	55 - 64	
	Above 65	

4.	What is your current area of speciality	
	Operational	
	Academia	
	Managerial	
	Other	
	If other, please specify	

5.	Where are you applying your profession?	
	South Africa	
	Abroad	
	If South Africa, please specify which province	

6.	Please specify your area of work (location of EMS)	
	Urban area	
	Rural area	
	Semi – rural area	

7.	Please select the nature of your EMS/Organisation	
	Public sector (Government service)	
	Private sector	

8.	Years of service within EMS	
	0 – 3 years	
	4 – 7 years	
	8 – 11 years	
	12 – 15 years	
	>16 years	

9.	Please select the institution at which you completed your EMC degree	
	Cape Peninsula University of Technology	
	Durban University of Technology	
	University of Johannesburg	
	Nelson Mandela Metropolitan University	

10.	What is your attitude towards your chosen profession	
	I am passionate about serving the community and rendering EMC to those in need.	
	I am happy with my role in the profession and cannot picture myself doing anything else	
	I am comfortable with my role in the profession but will rather be doing something else	
	At first I was interested in this field, but now I regret choosing it	
	Not interested in this field, merely here to use my undergraduate education to secure an income.	
	If other, please elaborate further	

11.	Have you pursued any postgraduate education since completing your degree ?	
	Yes	
	No	

12.	If answered yes to question 11, please indicate why you pursued postgraduate education?	
	To find a better job	
	To fulfilling parents expectations	
	For Self-improvement	
	It was part of my personal career planning and development	
	Postgraduate education would provide me with an opportunity to make meaningful change within the field of emergency medical care	
	It was a means to escaping employment pressure	
	Undergraduate qualification may not be sufficient for future development: I needed to stay relevant to industry	
	If other, please elaborate further	

13.	If answered yes to question 11, have you completed the programme?	
	Yes	
	No	

14.	If answered no to question 11, please indicate why	
	No financial benefit for pursuing postgraduate education	
	I lacked perseverance or interest	
	I feel ill prepared to participate in postgraduate education	
	It will be a waste of time and money	
	Postgraduate education will not enhance my ability in the workplace	
	There is no clear progression pathway within EMS for those who pursue postgraduate education	
	I am tired of studying and do not want to continue being a student	
	If other, please elaborate further	

15.	If answered yes to question 11, has it been postgraduate education that was/is specific to EMS ?	
	Yes	
	No	
	If no, please name programme	

16.	If answered yes to question 15, please indicate which University you enrolled at?	

17.	If answered yes to question 15, please indicate which postgraduate education speciality/area of focus did you choose to follow and why	

Sociocultural history (prior to completing degree)

18.	What type of school did you attend	
	Private school	
	Public (Former Model C)	
	Public (Township)	
	Public (Rural)	
	If other, please specify	

19.	When you enrolled for the emergency care degree, had you worked within the prehospital field or did you come directly from school ?	
	Came directly from school	
	Worked first	

20.	Are you the first member of your family to complete a degree at a University?	
	Yes	
	No	

21.	If no, has any member of your immediate family successfully pursued postgraduate education?	
	Yes	
	No	

22.	Did you have a previous tertiary qualification prior to completing your emergency care degree?	
	Yes	
	No	
	If yes, please specify	

23.	Do you feel that your emergency care degree adequately prepared you for postgraduate education programmes?	
	Yes	
	No	

24.	If you have pursued postgraduate education, how was it funded?	
	Parents or family member paid	
	Bursary	
	Self-funded	
	Other	
	If other, please specify	

Socio-cultural interaction (present)

25.	Do you feel that you have the freedom to pursue postgraduate education in your current capacity?	
	Yes	
	No	
	If no, please specify	

26.	Do you feel that your current EMS or organisation encourages you to pursue postgraduate education?	
	Yes	
	No	

27.	If you answered yes to question 26, please indicate which of the following are relevant	
	Variables to be determined during phase one	
	If other, please specify	

28.	If you answered no to question 26, please indicate which of the following are relevant	
	Variables to be determined during phase one	
	If other, please specify	

29.	Do you feel that there is a need for ECPs in your EMS or organisation to pursue postgraduate education programmes?	
	Yes	
	No	
	Please explain why	

Structural conditions: represents the tangible/material structures that influence our daily lives.

(institutional/organisations rules, policies and procedures, the higher education architecture and the demanding nature of being a HCP within the South African EMS are but a few examples of this)

30.	Are there any material/tangible structures within your EMS/organisation that may influence your wish to pursue postgraduate education?	
	Yes	
	No	
	If yes, please specify	

Cultural conditions: represents the ideas and beliefs that influence our daily lives and decisions taken. (social norms, expectations and practises are but a few examples of this)

31.	Are there any beliefs/ideas (culture) within your EMS/organisation that may influence your wish to pursue postgraduate education?	
	Yes	
	No	
	If yes, please specify	

Structural and Cultural elaboration (> 2021)

32.	What one change would you make to ensure an increase in postgraduate activity among ECPs.	
	Variables to be determined during phase one	
	If other, please specify	

33.	Please rate the below structural conditions that might motivate ECPs to eschew postgraduate education within your context	1 - 5
	Variables to be determined during phase one	

34.	Please rate the below cultural conditions that might motivate ECPs to pursue postgraduate education within your context	1 - 5
	Variables to be determined during phase one	

35.	Which of the below mentioned areas need to be prioritized over the next 5 years to increase postgraduate seeking behaviour among ECPs.	
	The material/ tangible factors (structure) within my EMS/organisation	
	The ideas and belief system (culture) within my EMS/organisation	
	Please explain your choice	

THE END

Thank you all for the immense value you have contributed to this research project

APPENDIX J: PILOT STUDY EVALUATION FORM



FOCUS GROUP INTERVIEW FEEDBACK

ONLINE QUESTIONNAIRE FEEDBACK

1.	What is your opinion of the subject matter raised in this questionnaire?	
	Very interesting information and questions	
	Interesting	
	Average Interest	
	Lacks interest	
	No interest at all	

2.	In your opinion, do you think the topic raise in this questionnaire was adequately covered?	
	Yes	
	No	

3.	What is your opinion about the Research Advert?	
	Very Clear	
	Clear	
	Adequate	
	Ambiguous	
	Completely unclear	

4.	Did you understand all the instructions and definitions before each question?	
	Instructions and definitions were very clearly stated	
	Instructions and definitions were sufficiently clear	
	Adequate instructions and definitions	
	Confusing instructions and definitions	
	Instructions and definitions were of no aid	

5.	Do you think the questionnaire is to long ?	
	Yes	
	No	

6.	In your opinion, how did you perceive the wording of the questions?	
	All questions were clearly stated	
	Most of the questions were clearly stated	
	Structure and culture were often confusing	
	Questionnaire will not be understood by the intended audience	
	Revise questionnaire as its completely confusing	

7.	If you had any trouble answering or any problems with a question/s, please indicate the question and how it can be revised?	

Thank you for your time in assisting me with my research project.

Your input is greatly appreciated. Please be reminded that all information regarding the topic discussed is confidential.

