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Transition from College to Professional Workplace: Lived Experiences of Mid-level Emergency Care Graduates Working in a Provincial Department of Health in South Africa

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ABSTRACT

This study aimed to obtain empirical data on the lived experiences of emergency care technicians (ECT) during their transition into the emergency medical service (EMS) work environment. This qualitative (phenomenological) study used focus group discussions with 26 ECT graduates to obtain verbal statements describing their lived experiences when transiting from college to pre-hospital workplace environments. The three dominant emerging themes were workplace readiness and reception, professional confidence, and resistance in the workplace. The experiences reported regarding workplace readiness and reception were largely negative. The majority of the participants shared that the EMS station they were deployed to had not been ready to receive and optimally utilise their skills. In addition, participants stated that their integration into the workplace had been unpleasant, as they experienced a great deal of exclusion and resistance from colleagues. Furthermore, participants described how peer support, positive feedback from patients and co-workers, and the new skills and knowledge acquired during training enhanced their professional confidence. These findings suggest that more needs to be done by stakeholders in emergency care education and practice in South Africa to ensure that the transition of graduate paramedics to the workplace environment is a positive and less stressful experience. The recommendations made in this paper could be beneficial in achieving this.

Keywords: *Paramedics, workplace transition, emergency care technician graduates*

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INTRODUCTION

Students experience multiple transitional experiences as they move from school to university and then into the professional workforce, with Wood et al. (1) noting that the transition from student life to the world of professional work is often considered to be a substantial challenge for undergraduate students. Studies have enumerated the challenges faced by students in their transition as working professionals (2). Documented challenges include criticism, a lack of adequate experience and theoretical knowledge, time management, delayed gratification, communication of problems in the workplace, fear of being humiliated by senior staff or peers, work overload, and worries about career plans (3-5). Facing these challenges may precipitate feelings of stress and anxiety, as in the case of newly graduated paramedics (6), and may negatively impact work efficiency.

Prior to 1980, emergency care education and training in South Africa were fragmented, as training models and patterns varied across the provinces. However, over the past two decades, the profession has undergone continuous reviews and reforms. This started with the introduction of standardised non-credit-bearing short courses in 1985 and continued to the emergence of the recently approved three-tiered Emergency Care Qualification Framework (ECQF), which was adopted by the National Department of Health (NDOH) and is aligned with the South African National Qualifications Framework (NQF) (7-9). Important issues relating to the articulation between short courses and existing academic qualifications, compliance with the NQF Act, academic progression, career planning and placement, as well as professional development in the emergency medical care (EMC) profession were central to these reviews and educational reforms (9). Notable education reforms include the discontinuation of all non-credit-bearing short courses, and the introduction of two qualifications in 2006: a two-year 240-credit NQF 5 Emergency Care Technician (ECT) Diploma, and a four-year 480-credit NQF 8 Bachelor's degree in Emergency Medical Care (B EMC) (7).

The ECT qualification is considered to be a mid-level qualification (i.e. mid-level worker) for the emergency care profession, and graduates are eligible to register in the professional category of advanced life support (ALS) paramedics with the Health Professions Council of South Africa (HPCSA) (9). The ECT programme was designed using outcome-based education principles, and an important exit-level outcome of this programme is the ability to provide clinical emergency care independently within an EMS environment. Teaching, learning, and assessment practices involve face-to-face lecturing and instruction on theory, tutorial sessions, case study presentations, clinical portfolios, and classroom practical sessions. Additionally, laboratory simulations, assignments, and work-integrated learning occur in pre-hospital and clinical environments (9). The ECT qualification allows direct articulation into B EMC, while B EMC allows direct articulation into Masters and Doctoral programmes (9).

ECTs provide emergency care using approved practice guidelines and management protocols. The scope of the practice means ECT graduates may perform invasive, life-saving procedures, and they may administer scheduled medication (9). Between 2007 and 2018, seven colleges produced approximately 1,124 ECT graduates, who are currently practising as independent, mid-level, pre-hospital emergency care providers, alongside thousands of short-course graduates who constitute the majority (98%) of all EMC professionals registered with the HPCSA (7, 10).

Verbal reports by some of the ECT graduates to their district managers suggest that these graduates encountered numerous challenges while transitioning to the professional workplace. Challenges reported include issues related to workplace readiness, resistance, and negative attitudes experienced during the transition period. Some ALS paramedics who had trained and progressed through short courses expressed a lack of confidence in ECT graduates and their capabilities. However, no study has been conducted to validate or negate these attitudes or gain meaningful insights into the transition

experiences of new graduate paramedics, or the forms of support they require in South Africa. Hence, this study aims to obtain empirical data on the lived experiences of ECT graduates during their transition into the professional workplace environment. The findings may give an evidence-based insight into paramedics' experiences of transition from college to the professional work environment in South Africa. They may also identify the support required to facilitate the successful transition of new graduate paramedics entering the workplace. In addition, the recommendations can inform current plans related to education, training, and transition support for new graduate paramedics.

METHODS

Methodological Orientation and Theory

This research was designed as a qualitative (phenomenological) study that gathered data through focus group discussions (FGDs). The decision to use FGDs as a data collection tool in this study is justified by reports from authors Kitzinger (11), Dilshad and Latif (13), and Stalmeijer et al. (14), who found FGDs to be particularly appropriate when researchers wish to gather information on participants' understanding and experiences about an issue, and for research on poorly understood topics.

Sampling

A purposive non-probability sampling technique was used to select participants (i.e., deliberately choosing a certain group of people as participants due to the qualities they possess) (15). The target population comprised ECTs who had graduated between 2009 and 2016 and were working as mid-level paramedics for the Northwest Department of Health (NWDoH) at the time of the study (N = 211). ECT graduates employed by the NWDoH are stationed in all four districts of the province: the Bojanala, Dr Kenneth Kaunda, Ngaka Modiri Molema, and Dr Ruth Segomotsi Mompati districts.

Method of Approach

A letter detailing the aim of the study and participant requirements was sent to ECT graduates in all four districts via email through their district managers to request participation in the study. Interested participants were required to complete a participant sign-up form and return it to one of the researchers. The information supplied on the form was assessed against the eligibility requirements. All 32 ECT graduates who completed the participant sign-up form were then contacted by email and telephone to schedule the focus groups. They were also required to complete and sign an informed consent form.

Sample Size

The survey population consisted of 26 participants who voluntarily agreed to participate in the study after reading and signing the informed consent form. Follow-up telephone calls were made to remind these participants to participate in the FGDs. Six participants from the initial 32 ECT graduates who consented refused to participate in the FGDs. These participants did not give a reason for non-participation.

Setting of Data Collection

All FGDs were conducted in a conference room at the NWDoH office building in each district.

Data Collection

For this study, four separate FGDs were conducted. An interview guide containing one open-ended question was used to initiate discussion on the research topic. Arrangements relating to the date, time, and venue of the FGDs were communicated to the participants via e-mail and mobile phone messages. The four FGDs were conducted in May 2021. FGDs 1 and 2 comprised five participants each and lasted for 38 minutes and 51 minutes, respectively. FGD 3 comprised seven participants and lasted for 68 minutes, while FGD 4 comprised nine participants and lasted for 66 minutes. One of the researchers (AM), who is a paramedic, fulfilled the role of facilitator and took field notes. At the beginning of each FGD, participants received a short introduction on the purpose of the study and were assured that there is no right or wrong answer and that all contributions would be valued and would remain confidential. All activities during the FGDs were audio recorded after obtaining participants' prior consent. Data saturation was considered to have been reached at the end of the fourth FGD when no new information was discovered during data analysis. The audio recordings were downloaded on a computer, which was password-protected for the safekeeping of the data. Transcripts of the FGDs were sent to all the participants for comment, correction, or confirmation prior to data analysis.

The Focus Group Discussion Guide

An FGD guide developed for this study comprised one open-ended question:

Exploratory Interview

An exploratory interview was conducted with three participants prior to the official start of data collection to establish the feasibility of the chosen data collection method and to estimate the duration of the FGDs. No adjustments were made to the interview guide, as the participants of the exploratory interview did not recommend any changes. The data generated in the exploratory interview were not included in the final data of the study. Participants in the exploratory interview were not included in the main study.

Data Analysis

An independent transcriber transcribed the FGD recordings. All transcribed data were organised into audiotaped documents; the complete transcript was then read and re-read by the researchers to familiarise themselves with the content. One of the researchers (AM) coded the data with the assistance of a co-coder with an extensive background in qualitative data analysis. An iterative inductive coding technique was used to identify emerging patterns and themes (i.e., themes were identified from the data). Units of meaning (codes) were generated from the transcribed data; the generated units of codes were then grouped into categories and major categories were grouped to form themes (16, 17). Qualitative analysis was conducted using Atlas.ti 8.3 software (Scientific Software Development, Germany). The views of the participants of each focus group were considered separately and then compared to those of the other groups to identify similar themes and to ensure that all codes were accounted for. The investigators confirmed the identified themes and codes.

Trustworthiness

The concept of trustworthiness is discussed under credibility, transferability, dependability, and confirmability.

Credibility: Credibility addresses the issues of internal validity and ensures that the study measures what it is intended to measure. To ensure credibility, the researchers followed the approach suggested by Guba and Lincoln (18 and 19). The researchers utilised an appropriate research design and a well-recognised research method, employed purposive non-probability sampling of participants to eliminate researcher bias, and ensured triangulation of data by including participants working in all four districts of the Northwest province. This ensured that the researcher obtained different perspectives that represented a broad view of the reality in question, thereby ensuring the credibility of the study. In addition, all transcripts of the focus group discussions were sent to the participants for feedback.

Transferability: In the context of this study, transferability defines the degree to which the research findings can be generalised or transferred to other contexts or settings (20). The transferability of the findings of this study is limited, as the study was done in a particular context (i.e., ECT paramedics working in the Northwest province of South Africa).

Dependability: To ensure dependability, the research methodology, its implementation in the study, and the data gathering process are distinctly detailed. Furthermore, the planned research process, data collection, and data analysis were subjected to review and approval by a departmental evaluation committee that consisted of academics with expertise in qualitative research methodology.

Confirmability: The researchers ensured confirmability by providing a detailed audit trail of the process of data collection, data analysis, and interpretation of the data (21).

Ethical Considerations

Approval for the study was obtained from the Ethics Committee of the Faculty of Health Sciences at the University of the Free State (No. UFS-HSD2019/1552/2611). Approval was also sought from the NWDoh research committee. Number coding was used, and no names or personal identifiers of participants appear on the data sheet that was sent for transcribing or used for analysis.

RESULTS

Participants' Characteristics

Of the participants, men constituted 65% (n = 17) and women 35% (n = 9). Participants had worked as emergency care technicians (mid-level paramedics) for an average of 9.4 years (\pm SD = 2.0).

Experiences of ECT Graduates during their Transition into the Professional Workplace Environment

Analysis of the participant's responses yielded three main themes: workplace readiness and reception, professional confidence, and resistance in the workplace.

Workplace Readiness and Reception

Participants reported that their employers had not prepared the workplace for ECT graduates when they reported for duty. The participants indicated that their stations were not ready, to the extent that they still, at the time of the FGD, lacked access to the resources they needed to execute their duties. Participants described their transition as not being smooth and the welcome they received as being unpleasant. This was evident from the first group of graduates, as one participant explained: #1 “There was a lot of resistance and especially for us, it was for us as the first group of ECT, people did not know what the meaning of ECT was” (FGD1, PP1).

Many of the participants described how they found the EMS stations to be unprepared to receive and use their skills optimally. In addition, the graduates said that they had to consult with the college management to intervene and advise their managers on the type of equipment and tools they required to execute their duties effectively:

#2 There was a negative reception, especially when coming to workplace readiness; it was not there. Just as participant 1 was highlighting her points, the station I was working at was also not ready. They were not ready when we requested some of the stuff; there was some tension or resistance from the manager saying we are asking a lot and questioned why the college did not notify them first on the stuff that they were supposed to buy. So, things were not procured in time, and we were struggling a lot. So, workplace readiness was not conducive by then (FGD1, PP4).

Participants attributed poor workplace readiness to the fact that their qualifications had only recently been instituted, as exemplified by Quote #3.

#3 As a new qualification I think that is what is happening in most cases where you come in and they do not understand why you need this and why you want things – they think that you are being impossible – You are just trying to show off (FGD1, PP1).

In contrast, some participants indicated that they found their workplace ready, as their managers and predecessors had tried to prepare their station by procuring the required equipment:

#4 I will say my station was ready for an ALS, as an ECT, because we did not struggle to have medication, dry dispensary, equipment, and all that. At our station, there was nothing that we lacked...The station was well prepared for me to do my skills and to perform all the duties well. It was not a challenge as such. It was good from the management side. Everything was fine (FGD1, PP2)

#5 I had already people that were in the first group and the second group of the ECTs that qualified as emergency care technicians. And those people had already prepared a lot of things, you know, like the medications which are at the level of the qualification, the equipment (FGD2, PP5).

Participants reported that most EMS stations in the province did not have vacant positions into which ECT graduates could be appointed, which also illustrated poor workplace readiness. This situation resulted in salary disparities, as some ECT graduates were employed in lower-level positions compared to their counterparts, who were employed at the correct salary levels. In addition, some participants reported that, due to salary notches, some stations placed ECTs at a level equivalent to ambulance emergency assistants (AEAs; intermediate life support paramedics), instead of ALS paramedics, despite the ECTs possessing higher-level clinical skills and capabilities for patient management. Participants reported that this made them feel discouraged, and it negatively impacted their transition to the workplace:

#6 ECT and ILS – there is no difference. It is the same thing. There is no difference; we do not feel like anything above them. Remuneration-wise levels, recognition at HR [Human Resources], even they don't even understand why you would want to be a bit different or better than ILS (FGD2, PP2).

#7 People ended up not going for training for ECT – we tend to be discouraged, we're going to go there for two years, we come back. The person that I was with on the salary scale is going to be getting more than me when I come back. So, it's no use for us to go there (FGD2, PP2).

ECT graduates observed that workplace unpreparedness indicated a lack of clinical governance. While the scope of practice and functioning of ECT graduates allowed them to practice independently, clinical governance is provided by medical doctors. Some of the participants reported that their station did not have medical personnel to provide clinical supervision. This posed a challenge for ECTs since some of the skills and medication required consultation before they could be administered:

#8 I think the system did not create an environment that is easy for us in a way, because even if I attend a case where I administer morphine, I don't have anybody in mind who I can call in the whole district or the sub-district where I'm working (FGD3, PP2).

Regarding their reception at the new workplace, the majority of the participants stated that their transitional experience was not as smooth as they had expected it to be (6): #9 “The welcoming at the workplace, it was not as smooth as we expected. There was a lot of resistance” (FGD1, PP1); #10 “In essence, true that there was a negative reception” (FGD1, PP4); #11 “So I would say the transition was not that smooth. But it was something that I was willing to accept” (FGD2, PP3); #12 “It was not a nice welcome” (FGD2, PP2).

Professional Confidence

A key exit-level outcome of the ECT programme is that graduates should be able to provide clinical emergency care independently within an EMS environment by following approved practice guidelines and patient management protocols (9). This suggests that, if they are to be deemed workplace-ready, ECTs must possess some level of professional confidence when transitioning to the new workplace. Participants reported that moving to the workplace environment with a new and/or advanced set of skills and knowledge enhanced their professional confidence and made them feel adequately prepared for clinical practice:

#13 After college, confidence was there, and it is still here, it lives here. And we are usually not even afraid to take resuscitation from the doctors and send them away. The confidence comes from the fact that I know where I am coming from; I know what I must do. If you know what you are doing, you gain confidence (FGD4, PP8).

#14 The college grew our confidence, a sense of responsibility to the patient. Remember, I've mentioned that our responsibilities tend to increase – tend to be more than before. So, I will say, the confidence as well, it was a matter of self-esteem, it has just grown to get a sense of believing in ourselves (FGD4, PP7).

Furthermore, the participants reported that the positive feedback they received from their patients and colleagues (doctors and nurses) after applying their newly acquired skills and knowledge enhanced their professional confidence further (22):

#15 I was really overconfident. I did attend to a certain patient, i.e./she was a diabetic. I went there and the patient had collapsed. So, when I went and checked the Hemo Glucose test (HGT)...the reading was 1.0 mmol/L. What was this... the indication was 50% dextrose. All of a sudden, the patient was awake and laughing. So, all of the people who were there were very impressed. It boosted my confidence (FGD3, PP2).

#16 The thing that most boosted my confidence, more often, is that when I arrive with a patient at the hospital, they would tell me no, I am referring this patient and you are the one who will escort the patient. So, that boosted my confidence. The appreciation from the doctors as well (FGD3, PP2).

#17 When it pertains to the new-borns, most of the nurses have a problem putting in a line for the new-born babies, but they will say the doctor request me to put in a line – and I did not mind...they say it because all the people from the college, all of them, can put in a line. For me, it gave our college a name, to be honest. When I got there, they would have already written my name on the book and said, “we know you would be able to do it” (FGD3, PP3).

Participants said that building good work relationships with colleagues at their workplace also boosted their confidence levels (22). They mostly achieved this through debriefing interesting and challenging cases they had encountered with their former classmates or more experienced ECTs:

#18 We had this thing of when I come back from a call, we would discuss the call. I will tell him what I did wrong or what I did, and he would tell me “No, you could have done this or that” – that is how we groomed each other and bring back self-confidence (FGD1, PP2).

In contrast, some participants indicated that the disconnect between simulated training and real-life practice had a negative impact on their professional confidence and that they sometimes felt unprepared for real-life practice:

#19 So what I knew was what we did, in the worst case, in the simulations, apart from when we had to do our practicals at the college, so now reality hit. I can say I was lied to... Coming to the actual work, like I said, we couldn't take from dummies to real patients; it was more of a shock (FGD2, PP3).

Some participants suggested that creating a formal mentorship or internship programme for newly qualified ECTs would enhance their professional confidence, and speed up and improve their preparation for the EMS workplace (23):

#20 I think a structured, mentorship for newly qualified, especially for new qualifications like we had, it was for us, it will assist a lot in bringing a lot of support to newly qualified people and confidence will build up quicker and benefit the patient (FGD1, PP1).

#21 Just like what they do with doctors...not just ECTs. To have interns, to have supervisors overseeing what you are doing with patients, so that you develop more confidence having a backup, knowing that someone is behind you (FGD4, PP2).

Resistance in the Workplace

Resistance was the third-most-dominant theme that emerged from the participants' responses. Almost all of the participants in this study used the word resistance to describe their experiences in relation to their reception at the new workplace. In the researchers' view, most of the resistance that participants described originated from EMS managers and shift supervisors, who felt threatened by the ECT graduates. According to the participants, a common misconception that they observed was that some managers and shift supervisors thought ECTs were going to take over their work and replace them in management positions: #22 "There was this thing of resistance from management, for the mere reason that most if not all management were ILS" (FGD3, PP7); #23 "Some in management level thought that we were going to take over their work and there was also resistance on that level" (FGD1, PP1). This can also be seen in Quote #24:

#24 It was not a good reaction from the colleagues that were not trained. They were scared of us that we're going to take everything in front of them, the opportunities that are coming. And if maybe there's a post for a manager, they were not thinking that they will be able to participate in the interview to get the manager's post, just because there's an ECT (FGD2, PP2).

In addition, participants reported that the reason behind the resistance that they experienced from their colleagues at the operational level was that some colleagues with AEA certification believed that ECT graduates were receiving preferential treatment from management, that is, that management tended to listen more to the ECTs:

#25 Most of the workforce was intermediate life support practitioners [AEAs], so there was a lot of resistance because they felt like management listened to me more often because I was regarded as an advanced life support practitioner (FGD1, PP5).

Participants also referred to the effects of age and generational gaps in the workplace and how they impacted the transition experience (24). In terms of best practices and evidence-based patient management, participants reported that the older generation of AEAs did not appreciate it when ECTs corrected some of their obsolete practices. Participants also reported that older AEAs found it difficult to take instruction from new graduates who had no prior experience in EMS but who were entering service as senior medically qualified officers:

#26 Most resistance was on operational level – people, they would feel like you want to change them from what they used to do in a day, and they were not really accommodative...but it was a challenge for them to adapt to us in that we ALS that are from nowhere without having any prior operational background (FGD1, PP1).

#27 I am also an ECT school leaver. One of the challenges as a school leaver, it was that it was a lot of intimidation in the beginning. People were thinking we are still young, and it was challenging, as young as you are, and then you come work with an older person, and you are there for the benefit of the patient, but the person will say that you are young and that they will not take instructions from you. That was one of the challenging things (FGD1, PP3).

According to the participants, some EMS staff did not understand the concept of professionalizing the EMS profession (10) and questioned why a four-month course, which could produce new AEAs every four months, needed to be phased out and replaced by a two-year programme: #28 "I do not understand why you will discontinue a four-month course that would produce so much with this course that is going to bring less" (FGD1, PP1). Some EMS staff in the workplace questioned the professional status of ECTs and asked whether they even belonged to the category of ALS. According

to the participants, these attitudes contributed to their experience of resistance while they transitioned to the workplace. Some participants were of the view that the perceived resistance may also have been caused by a lack of clarity on the roles and responsibilities of ECTs. Many participants reported that junior colleagues would not call them for backup to assist with patients who had critical conditions that required ALS intervention. Participants also reported that the perception of special treatment of ECTs, when they were issued with certain medical equipment and tools, was also due to this lack of clarity about their capabilities and, for the same reason, management did not always utilise the ECTs correctly: #29 “Nobody will call ECT for a backup, even if they see a need that this patient needs somebody of higher qualification” (FGD3, PP4); #30 “They judge us: you have a drug bag, but I don’t have a drug bag” (FGD3, PP3); #31 “I think there was not enough information relayed to the stations about this ECT, where you need them to be used...The utilization of the ECT was not correct at some stages” (FGD4, PP2).

DISCUSSION

According to Hout (6), graduate paramedics should be adequately supported while they transition from college to the professional workplace, so that they can function effectively. Hout argues that a detailed study on the transition experiences of these graduates should be conducted to identify the support that might be required.

While previous studies have discussed aspects related to ensuring that graduates, including graduate paramedics, are workplace ready (25-28), the literature is largely silent about the readiness of the organizations or workplaces that are employing the graduates. This study found that workplace readiness and reception were the dominant themes that emerged from participants’ responses. The theme of workplace readiness identified in this research highlights the role of employers in preparing the workplace for ECT graduates. Although there were some positive comments (Quotes #4 and #5), the experiences and perceptions that were reported regarding workplace readiness and reception were largely negative. Poor workplace readiness was discussed under the following terms: unavailability of the requisite tools for work, absence of appointable posts for ECT graduates, salary disparities, and poor clinical governance.

A key aspect of preparing the workplace for employees is providing the appropriate tools for them to do their work effectively at the workplace (29). Equipment requirements of paramedics often depend on their certification or licensure levels, local medical direction and jurisdiction, population densities, and the geographic and economic conditions of the region (30). Participants of this study reported that the EMS stations where they worked did not provide the requisite equipment for their level of practice, which meant they could not do their work effectively (Quotes #1 – #3). This shortcoming can be attributed to a lack of clarity about the role of ECT graduates, and the relative novelty of the qualification. Delivering successful and good quality pre-hospital emergency care requires having the right tools, in the right place, at the right time (30). Therefore, it is plausible that the lack of readiness of these EMS stations, as exemplified by the lack of equipment to work effectively, can negatively affect the quality of the pre-hospital emergency services rendered by these graduates.

Gunawan and Amalia (31) report that education, job placement, and work environment are some of the important factors that can influence an employee’s performance (as measured by the quantity of work, quality of work, and timeliness). This implies that shortcomings in job placement, salary disparities, and negative attitudes experienced by these graduates during the transition period may negatively affect their performance leading to poor pre-hospital care. Organizational readiness has been reported to significantly correlate with outcomes such as success in the implementation of health

service programmes (32), the implementation of quality improvements (33), and the adoption of evidence-based treatment practices (34). Furthermore, organizational or workplace readiness has been suggested as a key concept in the dissemination and implementation of frameworks (35). Hence, the stakeholders in pre-hospital emergency care education in South Africa must address the issues of workplace preparedness when implementing the newly adopted three-tiered EQF. Doing so will ensure that emergency medical service (EMS) meets the emergency care service needs in South Africa.

Professional confidence refers to confidence in a professional setting relating to the roles and demands of occupation (36). In the clinical setting, professional confidence can affect all aspects of a healthcare provider's clinical performance and can influence the quality of patient care (37). Hence, it is essential for new medical graduates to develop professional confidence, so that they can provide quality patient care (38). The following factors enhance the professional confidence of healthcare professionals: obtaining formal clinical training, receiving positive feedback from preceptors, colleagues and/or patients, and establishing a peer learning and support system with colleagues at the workplace (22, 36, 39-41). These studies corroborate our findings, specifically those of participants reporting that gaining new knowledge and skills after formal training, receiving positive feedback from colleagues and/or patients, and establishing a peer learning and support system with colleagues at the workplace enhanced their professional confidence. Further, attaining professional confidence underpins clinical competency (39, 42). It is probable that enhanced professional confidence, as reported by this study's participants, contributes to the early attainment of clinical competency during the transition period. Ortiz (22) and Makarem et al. (41) report that achieving and improving professional confidence in medical graduates is an ongoing process, from the studentship period to independent professional working life after graduation. Dyess and Parker (43) report that implementing a collaborative programme that offers transition support for nursing graduates enhanced their professional confidence. In addition, Mason-Whitehead et al. (44) argue that professional confidence should be developed by the curriculum and after graduation through clinical monitoring, peer education, and support. Similarly, participants of this study suggested that creating a formal mentorship or internship programme for newly qualified paramedics would aid in the early attainment of professional confidence (Quotes #20 and #21). Therefore, we advocate that stakeholders (HPCSA, NDoH, and EMC curriculum planners and educators) in pre-hospital emergency care education and practice in South Africa design and implement programmes that will offer transitional support for graduate paramedics to improve their professional confidence and clinical competence to practice.

A disconnect between the clinical knowledge acquired during training and the way it needs to be applied in professional practice could undermine professional confidence (43). This suggests that the ability of a graduate paramedic to effectively bridge the gap between knowledge and practical application is vital for attaining competency and that it is likely to contribute to a successful transition from student to novice professional (45, 46). Training colleges use clinical placement to foster "on the job" skills acquisition (46). However, systemic constraints, such as limited funding for training, staff shortages, patient unavailability, competition for placements between healthcare disciplines, and an increasing number of students, have led to a shortage of clinical placements or "on-the-road" experience during undergraduate training (46, 47). Using simulation and simulators could bridge this gap and prepare paramedics for the pre-hospital environment (48). A major disadvantage of medical simulation is its incomplete mimicking of human systems, real-life situations, and the complexity involved in both (49). Some participants of this study highlighted this, stating that simulation-based education created a "theory-real-life-practice" gap, which had a negative effect on their professional confidence and clinical competence when they transitioned to the EMS workplace (Quote #19). Therefore, we recommend that stakeholders in pre-hospital emergency care education and practice in South Africa ensure that all training programmes provide early and sufficient exposure to real-life emergencies, rather than relying solely on simulation-based education when implementing the newly adopted three-tiered ECQF.

Filstad and McManus (50) report that colleagues must accept newly qualified paramedics, so that novice paramedics can gain experience during the crucial transition period. Doing so will, in turn, reduce stress and affirm the paramedics' confidence in their clinical practice (51). In this study, graduate paramedics reported that they experienced a great deal of resistance and negative and hostile behaviours from some colleagues and managers with lower qualifications at their workplace. Experiencing hostile behaviours, such as being ignored or made to feel unwelcome in the workplace, has been reported to negatively affect new graduate paramedics during the transition period, thus making transition difficult and stressful (51). The concept of the "other"—those who are perceived as different or marginal—has been identified as a cause of resistance in organizations (52, 53). Othering, in the context of this study, is attributed to the fact that some colleagues and managers, who obtained their qualifications by completing short vocational courses, considered ECT graduate paramedics to be different from them. Canales (54) suggests that exclusionary othering employs power in relationships to dominate and oppress. Therefore, it is plausible that some ECT graduates were dominated and oppressed by some managers during their transition period. The inability of an organization or its members to facilitate social integration may negatively impact new paramedics and their sense of belonging (55, 56). Kelly and McAllister (57) argue that the ability to engage and integrate is an essential component of a healthy positive workplace and that a lack of such support may precipitate the erosion of trust, productivity, and the health of members of the organization. This suggests that the resistance, lack of integration, and negative hostile behaviours experienced by these graduates may affect their productivity during the transition period. Therefore, it is imperative that management at EMS stations treat issues of acceptance and integration with the attention they deserve and that they make a conscious effort to facilitate the acceptance and integration of newly qualified paramedics to make their transition to the professional workplace less stressful and enhance their productivity.

LIMITATIONS OF THE STUDY

The main limitation of this study is that it was conducted on only ECT graduates employed by NWDoH, thus limiting the generalizability of the findings of the study. Investigating the lived experiences of mid-level paramedics working in other provinces should be the focus of future studies. A second limitation is that the ECT programme was phased out during the course of this study (last offering 2019). At present, the Diploma in Emergency Medical Care has replaced the mid-level qualification, as per the three-tiered ECQF that has been newly adopted by the national Department of Health, which is aligned to the South African National Qualifications Sub-Framework (7, 8). However, the findings and recommendations of this study may serve as a valuable guide for stakeholders in emergency care education and practice during the implementation of the newly adopted three-tiered ECQF promulgated by the National Emergency Care Education and Training (NECET) Policy.

CONCLUSION

By investigating the lived experiences of ECT graduates during their workplace transition, this study highlights some of the challenges faced by mid-level graduate paramedics when they transition into the EMS workplace environment in South Africa. Workplace unpreparedness, resistance and hostility in the workplace, and a disconnect between simulation-based education and real-life situations are some of the factors that may contribute to high levels of stress and anxiety in new graduate paramedics when they transition from student to practitioner. Taken together, these findings suggest that more needs to be done by stakeholders in emergency care education and practice to ensure that the transition of graduate paramedics to the workplace environment is a positive experience.

RECOMMENDATIONS

Based on the findings of the study, we propose the following recommendations to the HPCSA, NDoH, EMC curriculum planners, and EMC educators to provide the support required by new graduate paramedics integrating into their new roles:

Building a healthy and productive peer and collegial relationship should be encouraged, as it is an important component of a successful transition.

EMS managers should ensure that the requisite equipment is available for all levels of emergency care providers to ensure the delivery of successful and high-quality pre-hospital emergency care. A standardised list of equipment for all levels of emergency care providers should be formulated. Proper job placement should also be ensured.

Undergraduate EMC curriculum planners should devise strategies to enhance clinical experience that promote learning that is more realistic. For example, clinical placement (“on-the-road” experience) can be used to enhance the skills and knowledge gained during simulation-based education. Allocating more time for work-integrated learning will be a good step forward in this regard.

The HPCSA should implement frameworks for clinical governance procedures and activities in accordance with different registration categories and scopes of practice.

The HPCSA and NDoH should engage EMS operations teams and managers in developing and sustaining a healthy and supportive working environment for new graduate paramedics. Programmes that ensure early and smooth integration of newly qualified paramedics into the workplace should be initiated.

The HPCSA, NDoH, and EMS operations should develop and implement a formal mentorship programme by partnering new graduates with supportive, experienced paramedics for a clearly defined period of time (e.g., 12 months) to smooth the continuum from student to practitioner and provide the ideal support that is needed to facilitate a successful transition for new graduate paramedics (6).

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REFERENCES

1. Wood LN, Psaros J, French E, Lai JW. Learning experiences for the transition to professional work. *Cogent Business & Management*. 2015; 2(1):1042099.
2. Wendler C, Bridgeman B, Markle R, Cline F, Bell N, McAllister P, et al. Pathways through graduate school and into careers. Education Resource Information Center. 2012.
3. Gericke S. Now what? Problems graduates encounter in the workplace [Internet]. 2017 [cited 1 Dec 2021]. Available from: https://www.up.ac.za/news/post_2558580-now-what-problems-graduates-encounter-in-the-workplace.
4. Luthy C, Perrier A, Perrin E, Cedraschi C, Allaz A-F. Exploring the major difficulties perceived by residents in training: a pilot study. *Swiss Med Wkly*. 2004; 134(41-42):612-7.
5. Pitkala KH, Mantyranta T. Professional socialization revised: medical students' own conceptions related to adoption of the future physician's role--a qualitative study. *Med Teach*. 2003; 25(2):155-60.
6. Huot K. Transition Support For New Graduate Paramedics. Victoria, Canada: Royal Roads University; 2013.
7. National Department of Health: Republic of South Africa. National Emergency Care Education and Training Policy. Pretoria; 2017.
8. Vincent-Lambert C. International perspectives: South African ambulance services in 2020. *Ambulance Services: Springer*. 2015; p. 175-83.
9. Vincent-Lambert C. A Framework for articulation between the emergency care technician certificate and the emergency medical care professional degree. Bloemfontein: University of the Free State; 2011.
10. Sobuwa S, Christopher LD. Emergency care education in South Africa: past, present and future. *Australas J Paramedicine*. 2019; 16.
11. Dilshad RM, Latif MI. Focus group interview as a tool for qualitative research: An analysis. *PJSS*. 2013; 33(1).
12. Khan M, Manderson L. Focus groups in tropical diseases research. *Health policy and planning*. 1992; 7(1):56-66.
13. Stalmeijer RE, McNaughton N, Van Mook WN. Using focus groups in medical education research: AMEE Guide No. 91. *Med Teach*. 2014; 36(11):923-39.
14. Kitzinger J. Qualitative research: introducing focus groups. *Bmj*. 1995; 311(7000):299-302.
15. Etikan I, Musa SA, Alkassim RS. Comparison of convenience sampling and purposive sampling. *AJTAS*. 2016; 5(1):1-4.

16. Kekeya J. Analysing qualitative data using an iterative process. *Contemp PNG stud.* 2016; 24:86-94.
17. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval.* 2006; 27(2):237-46.
18. Guba EG, Lincoln YS. *Effective evaluation.* San Francisco, California: Jossey-Bass Publishers; 1981.
19. Guba EG, Lincoln YS, Lincoln YS, SAGE. *Fourth generation evaluation.* SAGE Publications; 1989.
20. Polit DF, Beck CT. *Essentials of nursing research: appraising evidence for nursing practice.* Wolters Kluwer; 2018.
21. Korstjens I, Moser A. Series: practical guidance to qualitative research. Part 4: trustworthiness and publishing. *Eur J Gen Pract.* 2018; 24(1):120-4.
22. Ortiz J. New graduate nurses' experiences about lack of professional confidence. *Nurse Educ Pract.* 2016; 19:19-24.
23. Hecimovich M, Volet S. Development of professional confidence in health education: research evidence of the impact of guided practice into the profession. *Health Educ.* 2011; 111(3).
24. Grubb VM. *Clash of the generations: managing the new workplace reality.* New Jersey: Wiley; 2016.
25. Taylor S, Govender C. Education and training for the workplace: workplace-readiness skills. *The African Journal for Work-Based Learning.* 2013; 1(1) 14-22 p.
26. Palesy D. Brief classroom training sessions for workplace readiness: are they effective? *International Journal of training research.* 2017; 15(2):119-35.
27. Peltola A. Lead Time: An Examination of workplace readiness in public relations education. *International Journal of Work-Integrated Learning.* 2018; 19(1):37-50.
28. Edwards D. Paramedic preceptor: work readiness in graduate paramedics. *Clinical Teach.* 2011; 8(2):79-82.
29. Strong K. The Importance of providing the up-to-date tools for employees [Internet]. 2019 [cited 3 December 2021]. Available from: <https://www.myasbn.com/small-business/management/the-importance-of-providing-the-up-to-date-tools-for-employees/>.
30. American Academy of Pediatrics, American College of Emergency Physicians, American College of Surgeons Committee on Trauma, Emergency Medical Services for Children, Emergency Nurses Association, National Association of EMS Physicians, et al. Equipment for ground ambulances. *Prehosp Emerg Care.* 2014; 18(1):92-7.
31. Gunawan H, Amalia R. Wages and employees performance:the quality of work life as moderator. *Int J Econ Financial Issues.* 2015; 5(1S):349-53.

32. Gustafson DH, Sainfort F, Eichler M, Adams L, Bisognano M, Steudel H. Developing and testing a model to predict outcomes of organizational change. *Health services research*. 2003; 38(2):751-76.
33. Molfenter T, Gustafson D, Kilo C, Bhattacharya A, Olsson J. Prospective evaluation of a Bayesian model to predict organizational change. *Health Care Manage Rev*. 2005; 30(3):270-9.
34. Fuller BE, Rieckmann T, Nunes EV, Miller M, Arfken C, Edmundson E, et al. Organizational readiness for change and opinions toward treatment innovations. *J Subst Abuse Treat*. 2007; 33(2):183-92.
35. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation science*. 2009; 4(1):1-15.
36. Holland K, Middleton L, Uys L. Professional confidence: a concept analysis. *Scand J Occup Ther*. 2012; 19(2):214-24.
37. Iacobucci TA, Daly BJ, Lindell D, Griffin MQ. Professional values, self-esteem, and ethical confidence of baccalaureate nursing students. *Nurs Ethics*. 2013; 20(4):479-90.
38. Clark CM, Springer PJ. Nurse residents' first-hand accounts on transition to practice. *Nurs Outlook*. 2012; 60(4):e2-e8.
39. Crooks D, Carpio B, Brown B, Black M, O'Mara L, Noesgaard C. Development of professional confidence by post diploma baccalaureate nursing students. *Nurse Educat Pract*. 2005; 5(6):360-7.
40. Holland K, Middleton L, Uys L. The sources of professional confidence in occupational therapy students. *South African Journal of Occupational Therapy*. 2012; 42(3):19-25.
41. Makarem A, Heshmati-Nabavi F, Afshar L, Yazdani S, Pouresmail Z, Hoseinpour Z. The comparison of professional confidence in nursing students and clinical nurses: a cross-sectional study. *Iran J Nurs Midwifery Res*. 2019; 24(4):261.
42. Porter J, Morphet J, Missen K, Raymond A. Preparation for high-acuity clinical placement: confidence levels of final-year nursing students. *Adv Med Educ Pract*. 2013; 4:83.
43. Dyess S, Parker CG. Transition support for the newly licensed nurse: a programme that made a difference. *J Nurs Manag*. 2012; 20(5):615-23.
44. Mason-Whitehead E, McIntosh-Scott A, Bryan A, Mason T. *Key Concepts in Nursing*: SAGE Publications; 2008.
45. Clements R, Mackenzie R. Competence in prehospital care: evolving concepts. *Emerg Med*. 2005; 22(7):516-9.
46. Michau R, Roberts S, Williams B, Boyle M. An investigation of theory-practice gap in undergraduate paramedic education. *BMC Med Educ*. 2009; 9(1):1-7.

47. Boyle M, Williams B, Burgess S. Contemporary simulation education for undergraduate paramedic students. *Emerg Med.* 2007; 24(12):854-7.
48. Rice A. The use of simulation mannequins in education. *Journal of Paramedic Practice.* 2013; 5(10):550-1.
49. Krishnan DG, Keloth AV, Ubedulla S. Pros and cons of simulation in medical education: a review. *International Journal of Medical and Health Research.* 2017; 3(6):84-7.
50. Filstad C, McManus J. Transforming knowledge to knowing at work: the experiences of newcomers. *International Journal of Lifelong Education.* 2011; 30(6):763-80.
51. Phillips C, Esterman A, Smith C, Kenny A. Predictors of successful transition to registered nurse. *J Adv Nurs.* 2013; 69(6):1314-22.
52. Czarniawska B, Hopfl H. *Casting the other: the production and maintenance of inequalities in work organizations.* Abingdon, Oxfordshire: Routledge; 2005.
53. Bach BW. The organizational tension of othering. *J Appl Commun Res.* 2005; 33(3):258-68.
54. Canales MK. Othering: toward an understanding of difference. *Adv Nurs Sci.* 2000; 22(4):16-31.
55. Wray N, McCall L. 'They don't know much about us': educational reform impacts on students' learning in the clinical environment. *Advances in health sciences education.* 2009; 14(5):665-76.
56. Watt E, Goh K. From 'dependent on' to 'depended on': the experience of transition from student to registered nurse in a private hospital graduate program. *Australian Journal of Advanced Nursing.* 2003; 21(1):14-20.
57. Kelly J, McAllister M. Lessons students and new graduates could teach: a phenomenological study that reveals insights on the essence of building a supportive learning culture through preceptorship. *Contemp Nurse.* 2013; 44(2):170-7