

Multi-source Qualitative Analysis of Emergency Medicine Residency Programmes in Chile: A Case Study

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TITLE PAGE

Title: Multi-source qualitative analysis of Emergency Medicine Residency Programmes in Chile: A case study.

Short Title: Postgraduate Emergency Medicine in Chile.

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ABSTRACT

Background: Emergency Medicine (EM) is a developing specialty worldwide. In Chile, it has been developing for 25 years, however, there is a need for further progress.

Aim: We aimed to explore the current postgraduate curriculum in Chile and identify ways to standardise and improve it.

Methods: A qualitative case study approach was used to explore perspectives on EM curriculum development via interviewing residents, graduates and programme directors and documentary analysis of academic and governmental guidelines. Both data sets were evaluated through Thematic Analysis.

Results: Four documents were analysed, and eight interviews conducted. Three main themes emerged from both data sets: *curriculum structure*, *influence of context* and *expectations of an Emergency Physician*. Additionally, interviews offered a fourth theme: *perspectives of EM*. They convey how current programmes focus on workplace learning and protected time for learning strategies, however, they differ in clinical exposure and quality of training. As a priority, collaboration was identified, emphasising a need for programmes to work together towards ensuring quality

Conclusion

Overall, this study identifies similarities and differences among programmes, and common areas for improvement. There is agreement on the need for a standardized curriculum, considering local context and societal needs. This study assesses curriculum development, understanding cultural, social and educational influences.

Keywords: Curriculum, Emergency Medicine, Latin America, Qualitative, Postgraduate Medicine

TEXT - ARTICLE

Introduction

Emergency Medicine (EM) is a relatively new specialty worldwide whereby emergency departments began to appear in the United States (US) and United Kingdom (UK) (1). The Emergency Department (ED) is a challenging setting for teaching and learning, and while it provides a rich learning opportunity with a wide range of patients and clinical presentations, it is a busy environment amid continuous distractions (2,3). With a growing number of ED consults in the past decade, reaching 145.6 million visits to the ED in the US on 2016 (4), it has been recognised that a crucial step to solving this issue is to have well-trained EM specialists to attend the health demands of the population (5,6).

The first EM training programme in the US began in 1970, with many countries including Canada, Australia, Hong Kong, Singapore and the UK, following a similar path, obtaining recognition in the following decade (1,7). However, development of EM in Latin American countries began in the 1990's, with delayed recognition and slow academic progress. In Chile, 25 years after its initial steps, there is currently no core curriculum for the country, nor region. While international guidelines support its development, they do not meet local needs, and quality assurance processes have not been established (8).

Postgraduate education occurs mainly in the workplace, under supervised clinical practice. Increasing levels of responsibilities should be offered, allowing trainees to reach autonomy in their practice (9). The standards for postgraduate medical education (10) include the need for transversal competencies such as decision-making and communication skills to be taught. A competency-based curriculum, ensuring quality training while allowing flexibility, has a huge potential to positively impact healthcare provided in the ED, where many patients receive their first and sometimes only medical attention (11). Though frameworks exist worldwide for competency-based residency education (CanMEDS, AGCME), these have not yet been implemented in Chile for EM.

Curriculum reform has been described as a '*wicked problem*' given its complexity, being influenced by many cultural, political and social aspects (12, p. 337). Curriculum planners must, therefore, consider local practices when selecting the appropriate educational methods, including the healthcare system in which learners will practice in the future. To be meaningful, curriculum must be contextual and represent the organization of an educational programme, including intended learning outcomes (ILO), delivery and assessment strategies, as well as the local learning environment and experiences (13,14). ILO are the anchor that holds a curriculum together. Without this imperative component a clear understanding of the context in which the programme is embedded may prove challenging (15).

The importance of having a standardized curriculum, to meet public and governmental expectations improves communication among different stakeholder groups, especially when undergoing quality assurance processes (16). Social responsiveness in postgraduate medical education, as described by Philibert & Blouin (17), must be embedded in context and evaluated through proper accreditation processes, ensuring relevant competencies are

being taught and learned. While an imposed framework may not reflect their needs, it is important to adapt any standardized curriculum to respond to local requirements. Due to this strong influence of context, the first step towards curriculum planning is identifying and understanding it. This stage is known as a needs assessment, which gathers information to identify the gap between the current and desired state of the curriculum. This process will ideally shed light to improvement strategies (18,19).

Thus, the aim of this exploratory case study is to identify strengths and areas for improvement in the current state of EM curriculum in Chile. Understanding academic, cultural and social influences, by studying the perspectives of residents, recent graduates and programme directors, as well as analysing relevant documents.

Materials and Methods

Study Design

This case study is epistemologically grounded in constructivism, where meaning is co-constructed through social interaction and multiple interpretations and perspectives of reality (20,21). Its epistemology states that it is constructed through the relationship between researcher and participants (21). Hence, knowledge is influenced by social and political issues and the role of the researcher is key to understanding the interpretations of results (22). A diagram of the study's methods is shown in figure 1.

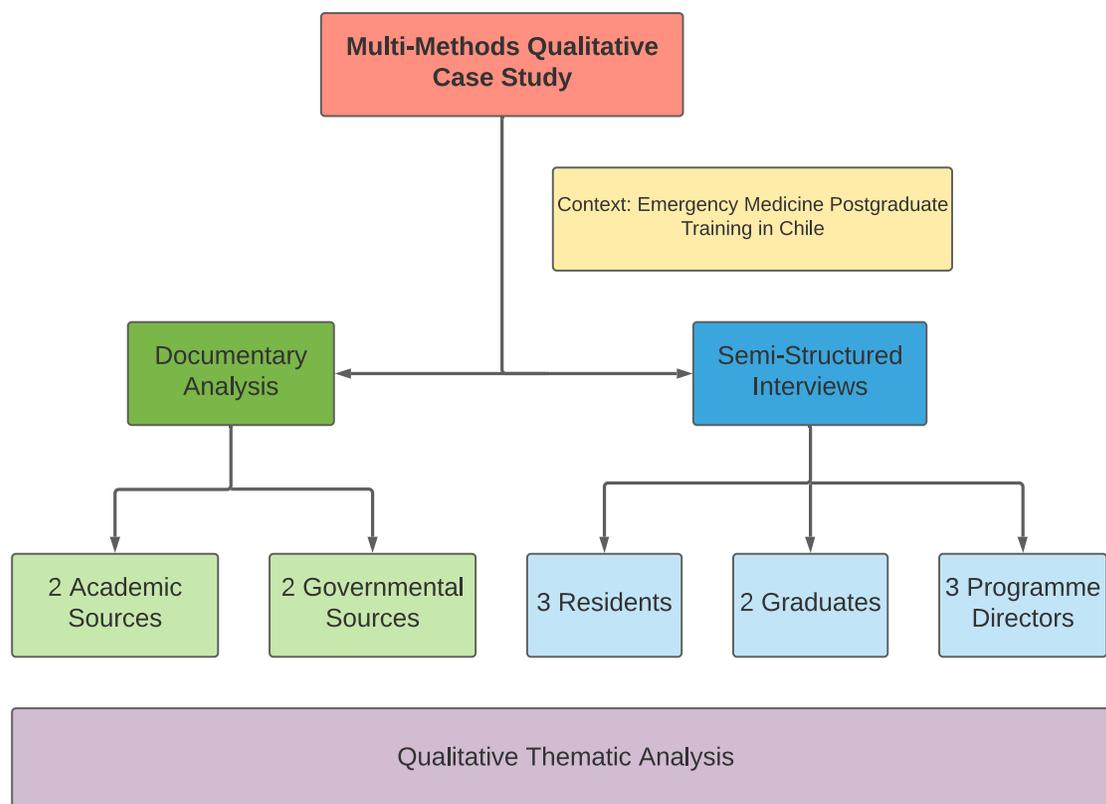


Figure 1 Research Methodology

Context

This study is set in Chile, a South American country, in which medical specialty training is well developed, having multiple institutions offer specialty, subspecialty and fellowship programmes in areas such as Internal Medicine, Paediatrics, Obstetrics and Surgery, among many others, for decades. The first EM training programme began in 1994, with a slow increase in residents being trained in the first decade, and a marked rise after the specialty was recognized in 2013 (23). There are now 11 postgraduate specialty programmes in three regions of the country, with approximately 160 residents in training. According to the national registry, there are 518 EM specialists, who have either trained in one of these programmes, or have gained certification through other institutions (24).

Participants and Sampling

This single case study set within the same academic EM community had three participant groups: 1) EM Residents, representing learners who are experiencing the current curricula 2) Recent EM graduates, who completed their training in the last year and 3) Programme directors (PD) who oversee planning and implementation of EM curricula. These were selected as they offered differing perspectives on curricular development of EM in Chile. All participants were contacted through email and provided with a participant information sheet including study information. Using information power to identify sample size (25), it was anticipated that 6 interviews would be needed. Allowing for two participants from each target group, providing diversity of perspectives from each EM programme. 109 participants were invited to participate and 21 volunteered to be interviewed. Purposive sampling was followed, selecting participants according to their relevance for the case study, following a maximum variation approach (26).

Data Collection

A qualitative case study design led to an in-depth exploration of postgraduate curriculum development of EM in Chile (27–29). Semi-structured interviews and documentary analysis were evaluated through Thematic Analysis (TA), as described by Braun & Clarke (30).

Interviews

Individual interviews gained multiple perspectives and interpretations from different stakeholder groups on the appraisal of their current curriculum; ways to improve the current curriculum and what characteristics are essential to becoming a competent Emergency Medicine Physician (EMP). Interviews were conducted online through video-conversation using Skype® and recorded with participant consent.

An interview guide was developed for each participant group using curriculum development literature (13,31–33) and the researcher's (SB) reflection of her own previous experience in working and training in EM. Key themes to be explored were definition of curriculum, its organization, content, educational strategies and assessment methods. All were opinion questions, enquiring about participants' experience on the topic, and their relation to values and intentions (34). All groups were asked about strengths and areas for improvement of their programme and characteristics they identify as key in a competent EMP. The aim was to identify the participant's perspectives on the current state of their curricula and the role of the EMP in the case study setting.

Documentary Analysis

This approach afforded an in-depth perspective of academic and governmental guidelines available for educators. Four documents were selected: two academic documents, one providing an international perspective (DocA), and the other representing a local view (DocB). Two further documents represented policy-makers' perspectives. DocC describes the technical content and minimal knowledge required of EMP in Chile, while DocD focuses on the processes and standards for the adequate operation of an emergency unit in the country. Table 1 provides a brief outline of what each document consists of; full documentation is available upon request.

Table 1: Documents Included for Analysis

Document	Type	Description
DocA [<i>International Federation for Emergency Medicine (IFEM) model curriculum for emergency medicine specialists</i>]	Academic	International model curriculum developed through consensus by IFEM, describing the minimum requirements for the development of graduate training for emergency physicians worldwide (46).
DocB [<i>Requisitos específicos para un programa de formación de especialistas en medicina de urgencia y anexos de contenidos de las rotaciones</i>]	Academic	Local model curriculum developed locally by an accreditation agency that is no longer in operation. It is the only available academic local guideline (71).
DocC [<i>Requisitos Específicos de Postulación: Descripción de Aspectos Técnicos y Conocimiento Mínimos para la Certificación de Especialidades Médicas y Odontológicas</i>]	Governmental	Created for quality assurance purposes by Chilean emergency physicians for a governmental entity. It describes the expected competencies for emergency physicians in Chile (72).
DocD [<i>Estándares y Recomendaciones al Proceso de Atención de Urgencia</i>]	Governmental	It provides the local governmental perspective of the emergency physicians' role in the workplace. It focuses on the processes and standards for the adequate operation of an emergency unit (73)

Data Analysis and Credibility

Thematic analysis (TA) was chosen for both data sets to compare and integrate both sources (35). Documentary analysis was performed inductively, identifying relevant extracts without a specific conceptual framework; and deductively, guided by the taxonomies for learning, teaching and assessing as a theoretical framework (30,36).

Interviews were transcribed, anonymized and analysed following an inductive approach. NVivo12® was used as a data management software. Familiarisation and data checking were achieved by listening to audio-recordings while reading transcripts. Thoughts and insights were recorded in a reflective log after each interview. Analysis progressed via regular team meetings, where ongoing coding and comparisons were explored. Comparisons were made between codes to explore differences and similarities in participants' perspectives/documents; discrepancies were discussed and then agreed upon. Analytical ideas and discussions were documented through memos and team correspondence to create audit trail.

Rigour was ensured whereby all interviews were undertaken by SB to ensure continuity (34). Peer debriefing ensured credibility of findings, whereby GS analysed two transcripts, comparing them to the researcher’s analysis, and data triangulation. Preliminary data analysis was shared and discussed with peers outside the research team (37). Transferability was ensured by providing a thick description of the study design and context, while dependability and confirmability were addressed by an audit trail. Reflexivity included a reflective journal and notes in the form of memos (38). The research team considered their positions and relationships with the data as a continuous and critical process in view of different disciplinary backgrounds (psychology, nursing and medicine), different levels of knowledge and expertise of delivering medical education, training and research perspectives (39,40).

Ethical Considerations

Ethical approval was obtained from the Scientific Ethics Committee at Pontificia Universidad Católica de Chile (CEC MEDUC), and University of Dundee.

Results

Eight interviews were conducted, including three PD, three residents and two graduates; each lasting between 30 and 60 minutes. This represented 7 of the 10 existing programmes at the time, three from larger, more experienced programmes and four from smaller, newer programmes. All programmes are set in urban academic centres. The last interviews provided few new perspectives, suggesting sufficient data had been collected (37).

Three main themes emerged from both data sets: *curriculum structure*, *influence of context* and *expectations of an EMP*. Additionally, interviews offered a fourth theme: *perspectives of EM*. The cluster of quality and an additional theme from documentary analysis, *training requirements*, are explored within curriculum structure in the following paragraphs. Thematic maps are provided in figures 2 and 3.

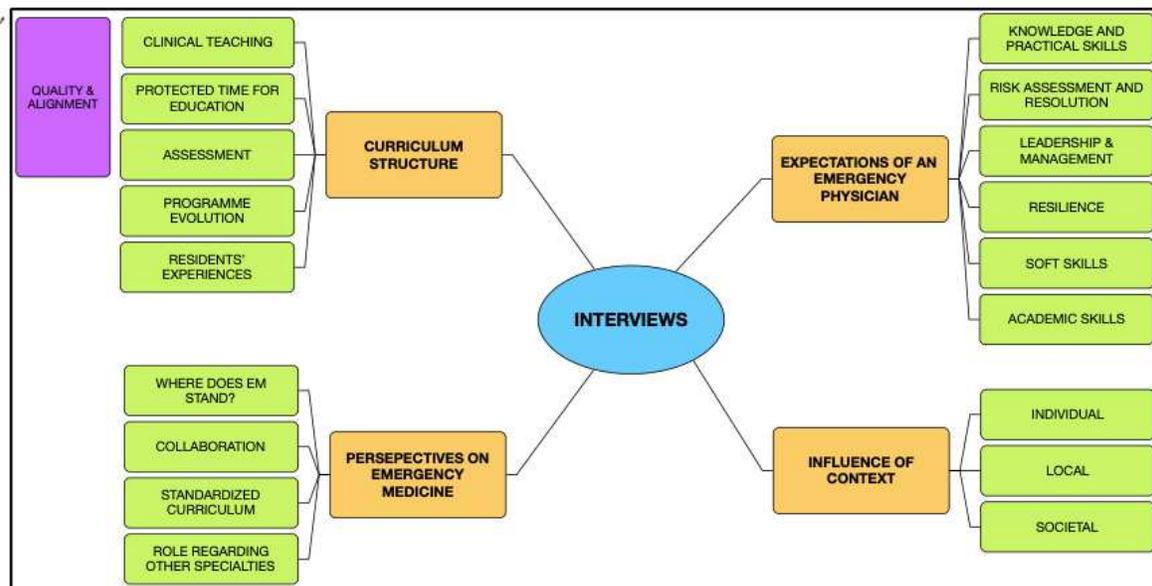


Figure 2 Thematic Map: Interviews

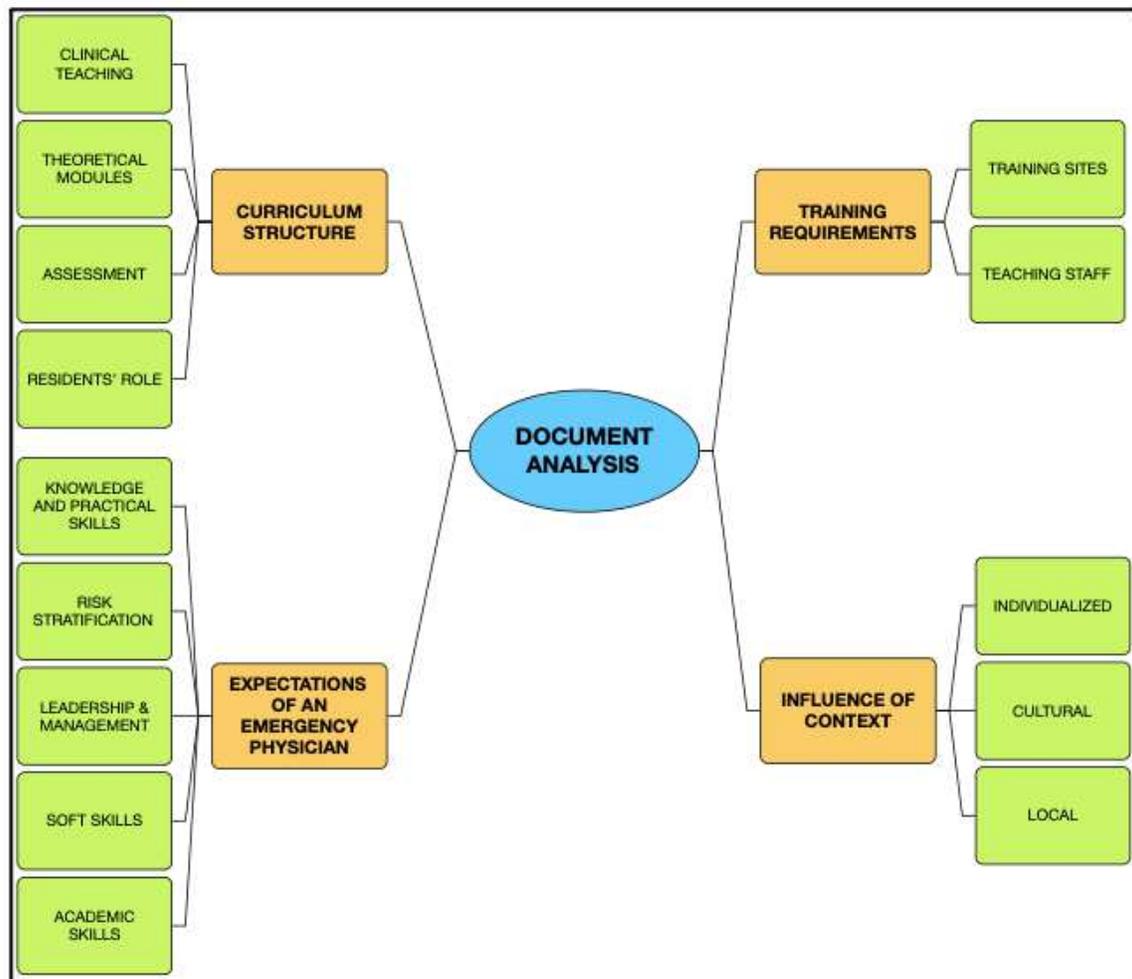


Figure 3 Thematic Map: Document Analysis

1. Curriculum structure

Clinical Teaching

Some programmes have more than one training site, including private and public healthcare, while others experience one sector only. Interviews evidence that main differences are the time spent within the ED and in critical care areas. Some participants mentioned the latter as a strength in their programme (Res2, Res3, PD1, PD2). Several interviewees emphasise the importance of having early exposure to ED patients:

“... for the first year, it is fundamental to have more time in the ED, to obtain a global perspective ...” (Res2).

While DocA mentions that teaching should “offer trainees optimal clinical exposure as well as adequate clinical experience—either real or simulated—so that they can be expected to perform similar or related tasks in an unsupervised manner in the future” (p.5), it does not specify time constraints. However, in a comparative table of member nations

curricula (attached as supplement), it is stated that the minimum time in the ED for formal EM training programmes is 18 months. Critical care exposure varies from 2-12 months and paediatrics from 1-6 months. DocB, on the other hand, specifies a minimum of 12 months to be spent in the ED, and at least 4 months in critical care units.

Protected educational time

All interviewees described having half- or whole-day weekly educational meetings. The format varies, with case discussions, journal clubs and topic presentations being mentioned. Most interviewees described having specific modules, such as trauma, airway and toxicology. Simulation was mentioned as a teaching method used occasionally, emphasising how it could be improved.

“...[simulation] really puts you in the situations and stresses you as in real life. With the difference that it is a safe environment. Even though we have simulation, I think we need more... specially during first year.” (Grad2)

Regarding teaching, DocA and DocB specify the need for having formal learning opportunities, attended by residents and staff. DocB describes specific modules as a requirement and provides a syllabus. However, it does not mention learning outcomes. DocA does not describe contents, however it suggests using syllabi developed by member nations. This document does, however, define intended learning outcomes following a competency-based model.

Assessment

Participants declared having assessments in some, but not all, rotations or modules; the critical care unit being most commonly assessed. Most participants described having annual summative exams, mostly in the form of oral case discussion. A few mentioned written exams, two mentioned formative feedback and none stated having practical examinations. Residents were critical, stating that, even though most assessments met their expectations, they would prefer multiple methods.

“...assessments are heterogenous... there are rotations with a final exam, and some were there is none... some rotations have a specialist in charge, who is very aware of your presence... while others do not seem to mind...” (Res1).

DocA and DocB emphasise the need to assess knowledge, skills and attitudes for every rotation or educational assignment. DocA describes most commonly used methods and suggests including formative and summative measures of progress throughout training, allowing progressive responsibilities to be assumed by residents.

Quality

Even though most residents and graduates declared having sufficient clinical exposure, regarding quantity and variety of patients, all of them stated that *quality* of clinical teaching is a priority.

“[clinical exposure] has to go hand in hand with a place where there are teachers who teach you how to do things... if you have a place full of critical patients, but

nobody teaches you anything, then you end up doing [the same tricks as before]... I think we are at the point of finding the balance between both things.” (Grad1)

The trainees highlighted that several rotations could be improved by having more dedicated supervisors, with a focus on learning and not on bearing the workload. Specially in the ED, they highlight the importance of being taught by trained EMP.

Training requirements are specified in DocA and DocB, declaring that ED supervision should be under qualified specialists or EM faculty. DocB, however, accepts non-specialist physicians with >10 years of experience or national recognition. Both documents specify the need for having academic physicians with dedicated time for education, for which DocB defines a minimum of 1 academic every 6 residents.

2. Influence of context

The influence of context emerged repeatedly, reflecting that residents come from different backgrounds and learn differently. Several participants recognized societal and local healthcare needs,

“...it is necessary [a standardized curriculum]... but it has to be a minimum, because different realities must be considered... there has to be flexibility to adapt to local needs (PD2)

DocA suggests individualizing training to the resident’s needs, as well as considering cultural and educational influences (e.g. resources and local healthcare needs). Even though this is not explicitly addressed in DocB, it does consider it when stating requirements such as the teaching staff.

3. Expectations of Emergency Physicians

When asked what makes a competent EMP, most participants identified achieving sound knowledge and practical skills to manage emergent conditions. Four participants stated the ability to adequately risk-stratify patients, while all PD mentioned being resolute as a main characteristic.

“We [EMPs] are capable of saving lives, identifying patients who are going to progress badly and those who are going to be alright... that risk stratification is something very unique about our specialty” (Grad2)

All groups emphasised the need to tolerate frustration and work under pressure, considering the burden associated to working in a busy ED. Leadership and management were used interchangeably; the ability to lead the ED team, as well as managing the ED unit. This was deemed fundamental by all graduates and PD interviewed, emphasising how current training must improve in order to achieve this outcome.

“The team puts their trust in you. They seem calm when you are there, like they are afraid of what happens when there is no leading EMP...” (Grad2)

When asked about the EMP's role in paediatrics, gynaecology and orthopaedics, all participants agreed that EM should be involved in treating these patients. However, for paediatrics and gynaecology, they agree that the EMP should focus only on the most critical and emergent conditions, since current training is insufficient for a complete management of these areas. They emphasise that Chilean society is not prepared for such a system and achieving this would require longer training and a major cultural change.

"I think that unfortunately we are fighting against society, again, because it will be very difficult, if not impossible, for a patient to come with his 5-year-old and not be seen by a paediatrician." (Grad1)

Regarding orthopaedics, most participants agree that EMPs should be able to manage orthopaedic-related conditions, except for those requiring surgery. However, they disagreed about current training for this area, including one programme not considering it in their curriculum.

"...to be able to define the skills of the EMP... to define it as such for curricular purposes, it is not only our vision, but also the users', other specialists', the people with whom we relate..." (PD1)

Regarding patient population, DocA suggests the EMP should see patients of all ages, while DocB agrees, but only focusing on emergent conditions and initial stabilization. DocC does not address this, while DocD categorizes it according to acuity, where high complexity patients must be seen by a specialist, while others by general physicians.

4. Perspectives on Emergency Medicine

Most participants mentioned how EM is different from other specialties, contrasting with the traditional view that the ED can be staffed by non-trained practitioners. They mention EM being increasingly recognized; however, this is still an ongoing process.

"... we have a strong impact, but we still need to be further valued... programmes should work together towards this" (Res3)

Participants emphasised the importance of collaboration among programmes. EM is a developing specialty therefore, programmes should work together towards ensuring quality. All PD agree that EM should be represented by one society to lead the specialty academically and administratively.

"... if we worked together, we could pressure the government and demand quality" (PD3)

All PD support having a national core curriculum, expressing concern about programmes offering deficient training, highlighting the absence of up-to-date guidelines and regulatory bodies. Some participants, however, were apprehensive about a standardized curriculum, underlining flexibility and adapting it to context as a requirement.

Discussion

To the best of our knowledge, this is the first evidence-based study exploring the academic development of postgraduate EM training in Chile and its region. Three main themes can be found in both data sets, while an additional theme emerged from interviews. While some perspectives reflect on curriculum literature and meet international recommendations, other findings relate to local reality for this case study and must be interpreted within its context. This section unifies key concepts arising from both data sets.

Curriculum Structure: Quantity and Quality

Findings show that, even though current EM programmes in Chile tend to follow a similar general structure, they differ in key aspects of training. Most put supervised clinical practice and protected educational time for teaching and learning activities as a central component, in line with findings indicating experiential learning as the main strategy for postgraduate education (9). However, time spent in the ED and critical care settings differs greatly, from 11 to 18 months. This barely meets DocB's minimum requirement (12 months) while all exemplified curricula in DocA aim at least 18 months. This suggests that some training programmes may offer insufficient exposure to ED patients, which must be addressed by either increasing these rotations or supplemented through other teaching methods such as simulation. This has been studied in other settings (41-43), identifying a wide variation among clinical exposure even within a programme, observing an increase in exposure according to the level of training. Further research should focus on determining the real exposure residents have to different ED consults, ensuring enough experience - either real or simulated - to achieve the expected level of competence.

Regarding quality, our findings indicated that current curricula does not meet teaching staff requirements, with some programmes being taught by non-specialist EM doctors. As the speciality grows it is critical that training is delivered by EMP. Though this is part of developing any new specialty, it must be addressed early and supported through faculty development and mentorship programmes (16).

Collaboration: Key for Success

EM has progressed significantly in Chile, due to the specialty's recognition in 2013, and the rapid expansion of training programmes and number of trainees thereafter. There has been a transformation, with other specialists moving away from the ED. Yet, this is still an ongoing process and our findings emphasised the need for collaboration among programmes in order to reach maturity as a well-established specialty. Mallon et al. (44) recommends unification of competing societies, coordinating common academic meetings, development of a single certification exam and working towards strengthening current training programmes.

Standardized Curricula: An Emergent Need

There is a need for a national core curriculum. This is described as a fundamental part of academic progress by literature on international development of EM (16,45,46). Even though collaboration seems key to achieving this, the findings of this study highlighted tensions among leaders in the specialty. Collaboration will require overcoming these

barriers, reaching consensus on conflicting aspects, such as the role of the EMP regarding other specialties or adequate exposure to ED patients. Such a curriculum must allow adaptability to different settings, reinforcing the impact of context in curriculum development.

When attempting to design a renewed standardized curriculum, medical education trends, such as competency-based education and individualizing training should be considered. Concordantly, this is already a requirement in the IFEM curriculum and postgraduate frameworks, presented as milestones. An innovative concept for implementing these into practice are Entrustable Professional Activities (EPA). These are defined as “a unit of professional practice that can be fully entrusted to a trainee, as soon as he or she has demonstrated the necessary competence to execute this activity unsupervised” (47, p.983). These have been recently defined for EM (48) and, even though it is an emerging trend, requiring further research confirming its validity and utility (49), it is worth considering it as a way to move forward.

Programme directors emphasised a need for clear objectives to be determined. International and local academic documents, as well as postgraduate education literature, support establishing outcomes within higher levels of cognition (3,9). Even though clinical practice aligns with these, classroom activities do so only partially. Case discussions and journal clubs explore the application level, but only abstractly. This corresponds to the need identified by participants of embedding more simulation in the curriculum. This strategy has been increasingly adopted in healthcare, providing an opportunity to practice complex scenarios in a safe manner (50). It has been successfully used in EM, even in-situ in the ED or guiding remediation (51,52).

While academic documents state the importance of assessing knowledge, skills and attitudes, there was a disconnect to what was happening in practice, with assessment occurring mostly through written and oral exams. In order to assess skills and attitudes, residents should be assessed in the *show* and *shows how* levels (53), requiring more complex tools.. Residents are adult learners, thus teachers must act as facilitators supporting residents in their own learning towards developing autonomy (54). Learner-centred approaches would encourage residents to identify their goals and direct their own learning (55,56). The challenge remains in assessing residents adequately to identify their level of achievement. A systematic and rigorous assessment programme, aligned with clear intended outcomes framed as competencies aids in this endeavour (57–59). Simulation has also been used in EM for this purpose (60,61) and workplace assessment plays a key role, allowing provision of constructive, focused feedback to improve performance (62–64).

Context Influences Curriculum and Clinical Practice

The role of the EMP corresponds closely to the expectations described by international and national documents, suggesting that participants have a good idea of what a competent EMP should be like. However, controversy appears regarding patient population as literature indicates a clear association between context and curriculum development (13,32,65). EM development worldwide has been significantly influenced by context, with developing countries modifying international curricula according to their cultural, educational and political context. Regarding educational and cultural needs, the findings of

this study indicated local policies and healthcare systems influence curricular decisions. Thus, moving forward, social accountability must be considered when evaluating programmes, focusing on priorities for embedding social responsiveness into the curriculum (17).

A recurrent perspective among participants is societal influence on the role of the EMP, particularly for paediatrics and gynaecology. They state that Chilean society is not ready for a system in which EMP see all consults within the ED, expecting to be seen by other specialists such as paediatricians and obstetricians. While this has been addressed in other countries by either increasing length of training, or offering subspecialty training in this areas, it still seems to be an issue in several contexts (66,67). DocB agrees, stating that EMP should only treat emergent conditions of this population while the international curriculum (DocA) supports seeing patients of all ages. The subject of how much training should be provided for these areas must be addressed through further research, which is anticipated to impact educational and administrative policies in the future.

Implications & Limitations

As an initial approach towards understanding the academic context of EM in Chile, this study provides unique perspectives from both local and international stakeholders. Its findings may be valuable for those intending to develop policies or academic documents addressing postgraduate training in EM and, though the study was set in Chile, interpretations may be applicable to other comparable contexts.

Since documents are *non-reactive* and, thus, remain unchanged after their use, they were available for further review after the interview process (26,68). Since documents were not originally written for the purpose of this study, some contained incomplete information and were less relevant than data from interviews (35,69,70).

A challenge for maintaining quality and rigour was having to translate interviews. Since interviews were conducted in Spanish, transcriptions were translated for peer debriefing, as well as provided quotes.

The wider literature suggests the messages from this study are transferable/credible in other healthcare regions. Though views expressed may not be representative of all EM residents or PD, a diverse sample representative of those working across Chile in an EM role was included.

Conclusion

This study offers more insight into the importance of gaining multiple perspectives when developing effective training programmes. From a policy perspective, this study has highlighted the importance of the practising physicians' voice in the development of healthcare documents that will impact the specialty in which they work. Applying evidence to practice begins with understanding the context and the needs for local reality. By addressing this, findings from this case study may contribute to further academic development, recognizing the important impact that EM has in the community.

Moreover, there may be implications for the academic EM community in Latin America and the wider communities that grapple with ensuring that appropriate clinical exposure and quality training is afforded to resident doctors. Thus, treating a wide range of patients and cases within the ED and for the Chilean healthcare system to deliver competently practising physicians at the end of formal training.

This study identifies similarities and differences among programmes. Collaboration among programmes appears to be the way forward towards ensuring quality and solidifying progress as a specialty group. Once this is achieved, a standardized curriculum, guided by current medical education trends, and certification exam will define the role of the EM in Chile. Further research should focus on developing contextualized learning objectives, allowing for effective teaching and learning strategies and systematic assessment planning that will ensure quality training, meeting local needs. While local development is required, collaboration with other countries within the region is fundamental when considering a global medical education perspective.

ABBREVIATIONS

ED – Emergency Department

EM – Emergency Medicine

EMP – Emergency Medicine Physician

ILO – Intended Learning Outcomes

PD – Programme Director

TA – Thematic Analysis

UK – United Kingdom

US – United States

DECLARATIONS

Ethical approval and consent to participate

Ethical approval was obtained from the Scientific Ethics Committee at Pontificia Universidad Católica de Chile (CEC MEDUC), and University of Dundee (UoD).

Informed consent was obtained from all subjects as required and all methods were performed in accordance with the relevant guidelines and regulations.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

Funding

No funding was required for this research.

Authors' contributions

This research was conducted as a dissertation for a Medical Education Master's programme. SB is the main researcher, designing and implementing the study, and is a major contributor in writing the manuscript. GS, as dissertation co-supervisor, contributed on the design and analysis process, as well as writing. FM, as dissertation co-supervisor contributed on the analysis and discussion, as well as writing of the manuscript.

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Figures

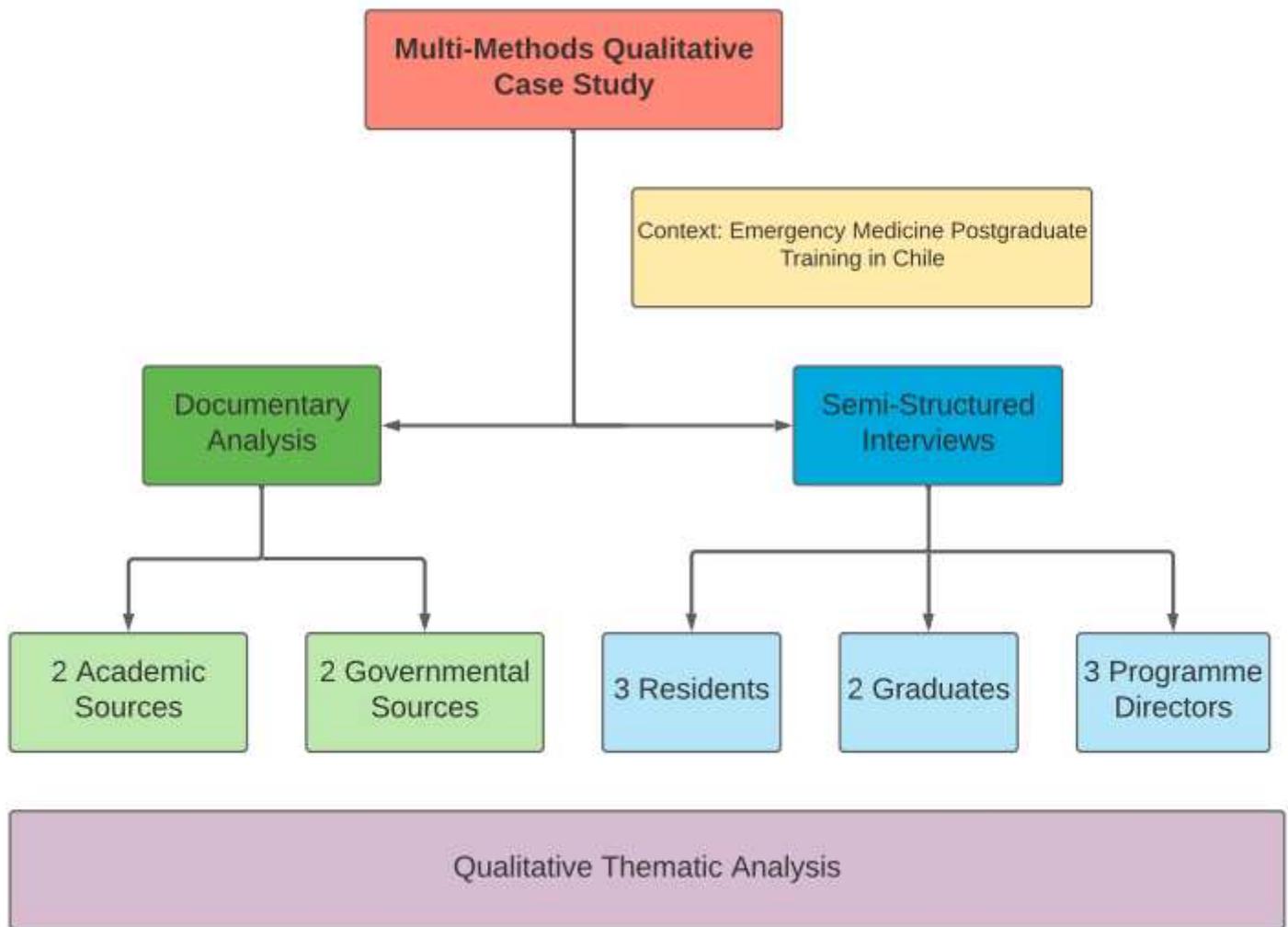


Figure 1

Research Methodology

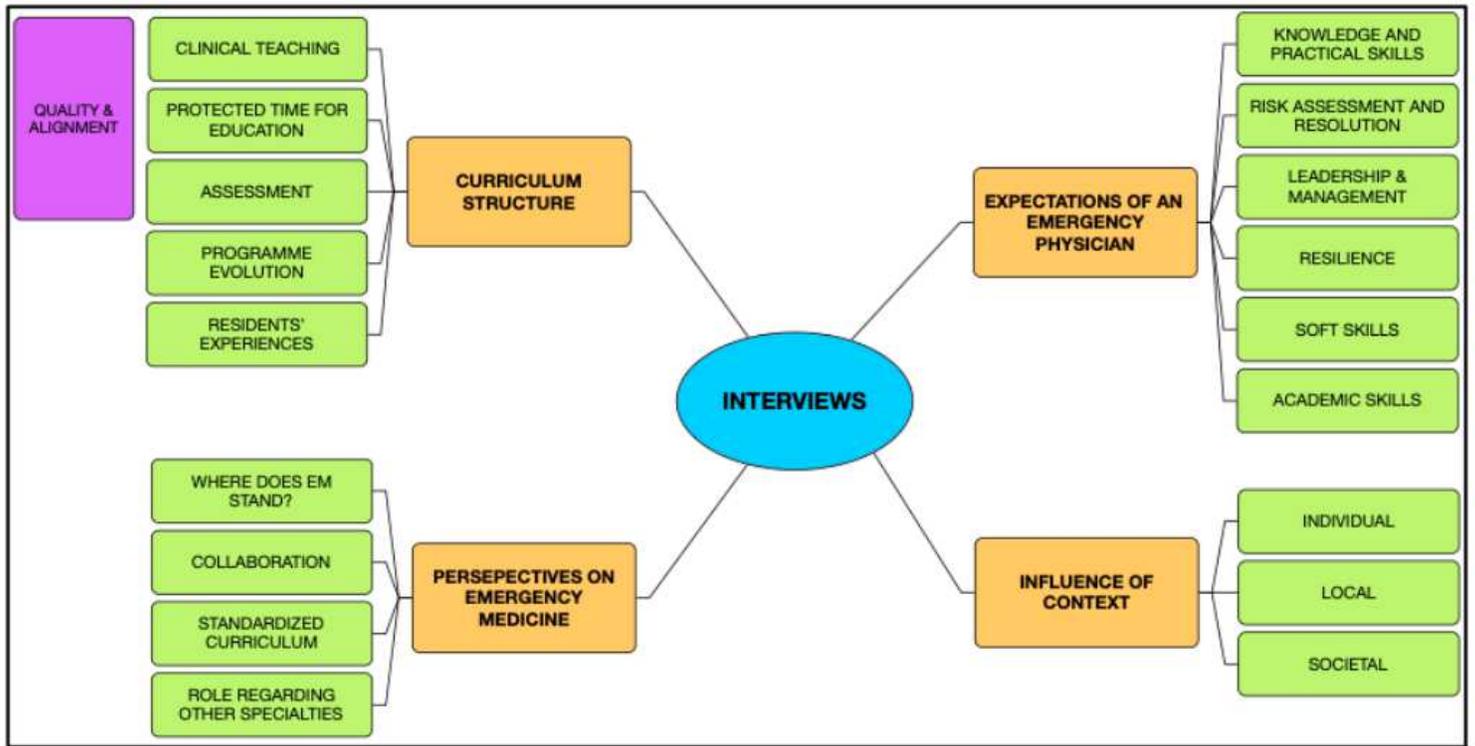


Figure 2

Thematic Map: Interviews

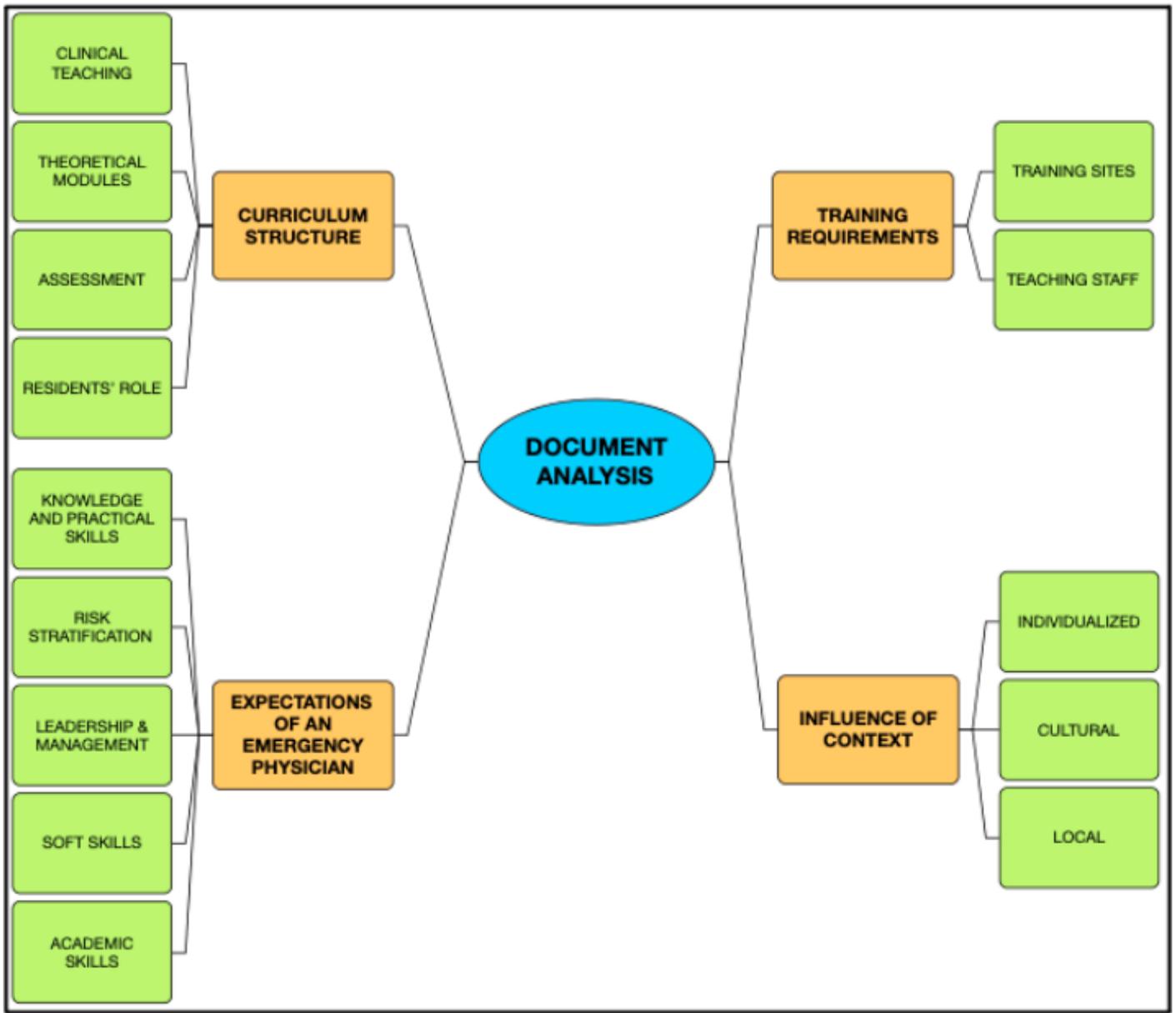


Figure 3

Thematic Map: Document Analysis