EMOTIONAL EFFECTS OF COMPETENCY-BASED MEDICAL EDUCATION IN PSYCHIATRY

FEELING THE PULSE: AN EXPLORATION OF THE EMOTIONAL EFFECTS OF COMPETENCY-BASED MEDICAL EDUCATION IN PSYCHIATRY

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A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree Master of Science

MASTER OF SCIENCE (2024) (Health Science Education)	McMaster University Hamilton, Ontario, Canada
TITLE:	Feeling the Pulse: An Exploration of the Emotional Effects of Competency-Based Medical Education in Psychiatry
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NUMBER OF PAGES:	xi, 66

LAY ABSTRACT

Competency-based medical education (CBME) is a learner-centered outcomes-based approach. Competence by Design (CBD) is a hybrid time-based and outcomes-based CBME model that was adopted by all Royal College of Physicians and Surgeons of Canada-based residency training programs, with the primary objective of enhancing the quality of postgraduate medical education. However, preliminary findings suggest that residents experience higher levels of stress, anxiety, and exhaustion in a CBD model than with previous curricula. This thesis aims to understand the emotional effects of CBME on residents, faculty, and administrative staff in a postgraduate Psychiatry program. In this qualitative study, participants underwent semi-structured, one-on-one interviews where they were probed on their emotions and experiences with CBME. The findings suggest that CBD has a negative emotional impact on residents and faculty, specifically due to tension between CBD's theoretical benefits and its practical challenges, including increased emotional burden and structural challenges associated with the assessment methods.

ABSTRACT

Introduction: Competency-based medical education (CBME) is a learner-centered outcomes-based approach. Competence by Design (CBD) is a hybrid time-based and outcomes-based CBME model that was adopted by all Royal College of Physicians and Surgeons of Canada-based residency training programs, with the primary objective of enhancing postgraduate medical education quality. However, preliminary findings suggest that residents experience higher levels of stress, anxiety, and exhaustion in CBD than with previous curricula. This thesis aims to identify and understand the emotional effects of CBME on residents, faculty, and administrative staff.

Methods: This study used a qualitative approach, specifically hermeneutic phenomenology. Seven residents, six faculty members (several with education leadership roles), and one administrative staff member from a postgraduate Psychiatry program were recruited. Participants underwent semi-structured, one-on-one interviews where they were probed on their emotions with CBME. Interviews were transcribed and analyzed using a line-by-line approach that generated individual meaning units and, subsequently, themes.

Results: Five themes were identified: 1) Education is an emotional experience; 2) The emotional toll of CBD; 3) CBD is a failed educational promise—Expectations vs. realities; 4) Structural and administrative burdens of CBD; and 5) Survival of educational demands—The quest for coping. Participants initially struggled to articulate their emotions, but expressed surprise at realizing they did have strong, often negative, emotions related to CBD. There was also a dissonance identified between the anticipated benefits and the execution of CBD. Furthermore, participants highlighted administrative

and structural challenges of CBD, specifically regarding Entrustable Professional Activities, which were a burden and lacked much educational value. Participants discussed using various coping strategies to manage CBD's demands.

Conclusion: The findings of this work suggest that CBD has a negative emotional impact on residents and faculty, specifically due to tension between CBD's theoretical benefits and its practical challenges, including increased emotional burden and structural challenges.

ACKNOWLEDGEMENTS

I want to express my deepest appreciation to all those who helped make this thesis possible. First and foremost, I am incredibly grateful for my supervisor, Dr. Anita Acai, whose expertise, guidance, and support have been invaluable. I truly appreciate her willingness to introduce me to the world of qualitative research and show me that I can love qualitative research just as much quantitative. I also want to thank my committee members, Dr. Sheila Harms and Dr. Natasha Snelgrove, for their invaluable support and feedback during each stage of my research. Additionally, thank you to Alexandra Lopoukhova for her assistance in transcribing hours of interviews, and Dr. Acai's research group members for their willingness to learn, discuss, and provide feedback. I am also grateful to my peers in the Health Science Education Program—Kat, Michelle, Ally, Ali, Farah, Marina, and Spencer—for their friendship, support, and valuable exchanges. Additionally, I acknowledge the financial support of the Social Sciences and Humanities Research Council Canada Graduate Scholarships Program and the MSc of Health Science Education Graduate Program, whose generosity and support enabled me to pursue my master's degree and complete this research. Finally, I cannot express enough thanks to my parents, my partner, and the rest of my wonderful family and friends for their love, support, and encouragement throughout the duration of my studies.

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LIST OF ABBREVIATIONS AND SYMBOLS

CBD:	Competence by Design
CBME:	Competency-Based Medical Education
EPA:	Entrustable Professional Activity
FMRQ:	Fédération des Médecins Résidents du Québec
MedSIS:	Medical School Information System
RCPSC:	Royal College of Physicians and Surgeons of Canada

DECLARATION OF ACADEMIC ACHIEVMENT

The work described in this thesis was performed by Sakshi Sinha (hereafter referred to as "the primary researcher") and supervised by Dr. Anita Acai. The data were transcribed with the assistance of Alexandra Lopoukhova, an independent study student in Dr. Acai's research group at McMaster University. Participant recruitment was done with the permission and assistance of Dr. Natasha Snelgrove and Dr. Rachael Tweedle. Analysis and generation of codes were completed with the assistance of Dr. Anita Acai, Dr. Sheila Harms, and Dr. Natasha Snelgrove.

CHAPTER 1: INTRODUCTION

1.1 What is Competency-Based Medical Education?

For the past century, postgraduate medical education has largely employed a time-based approach where postgraduate learners (i.e., residents) progressed to the next stage of training after completing clinical rotations determined by each program. This educational model was predicated on the assumption that competence developed naturally over the course of residency training with experiential learning and exposure to a wide variety of clinical cases (Duffy, 2011; Frank et al., 2010).

However, there has been growing concern over the adequacy of this time-based model in ensuring that graduates learn at the same pace and are fully prepared to meet the complex demands of modern healthcare systems (Holmboe, 2021). Carraccio and colleagues (2016) discussed variability in the competencies of medical trainees, which were attributed to differences in training experiences, educational opportunities, and individual learning paces. This variability raised concerns about the reliability of time-based models in ensuring consistent outcomes in terms of graduates' readiness for independent practice (Carraccio et al., 2016). In fact, Bell and colleagues (2009) presented data from general surgery illustrating that residents did not receive adequate exposure to a large number of core procedures during their training, resulting in concerns about physician preparedness. Furthermore, another critique of the traditional medical training model is that it prioritized technical skills at the expense of non-technical skills (Prineas, 2021). However, competence in medicine encompasses more than just medical knowledge or procedural skills; it also includes skills such as communication and

collaboration (Frank et al., 2010). To attain this broader view of physician competence, a modified educational model was developed that explicitly targeted and assessed these diverse competencies (Frank et al., 2010).

Over the past few decades, the landscape of medical education has been undergoing major transformations to address these challenges described above, with a focus on preparing future physicians to meet the evolving needs of the populations they serve within complex healthcare system. Competency-based medical education (CBME) represented a paradigm shift in medical education that prioritized an outcomes-based learning approach focused on the development of skills, or competencies, rather than relying on time spent in training as a marker of success (Royal College of Physicians and Surgeons of Canada [RCPSC], 2022). This shift was driven by the global demand and perceived need by educational experts for medical practitioners who are not only knowledgeable but also skilled in applying their knowledge in clinical settings. CBME has been implemented in many countries across the world (e.g., United States, Australia, New Zealand, Netherlands, Canada, etc.), and is mandated across all Canadian residency training programs (Englander & Carraccio, 2014; Yan et al., 2023). Concurrently, there has been an increased emphasis on public accountability in healthcare, resulting in a need to monitor and more clearly document physician performance (Lanier et al., 2003). Moreover, the expanding knowledge requirements for physicians has challenged traditional ways of training, prompting a shift towards models that prioritize skill acquisition over training duration (Reznick et al., 2006).

CBME is touted as a learner-centered approach that aims to ensure that medical graduates are equipped with the necessary skills and knowledge to adequately meet the demands of modern healthcare systems (Frank et al., 2010; ten Cate, 2017). Based on a consensus definition, CBME curricula have five core components: 1) Outcome competencies; 2) Sequenced progression; 3) Tailored learning experiences; 4) Competency-focused instruction; and 5) Programmatic assessment (Van Melle et al., 2019). Outcome competencies and sequenced progression were described as central in guiding the development of learning, instruction, and assessment practices (Van Melle et al., 2019). Specifically, outcome competencies are specific and clearly articulated learning outcomes (Van Melle et al., 2019), whereas sequenced progression indicates that competencies must follow a sequential path for expertise development. Tailored learning experiences refer to real-life experiences that facilitate individualized and self-directed learning that is meaningful to the learner (Van Melle et al., 2019). Competency-focused instruction enables learners to gain knowledge and skills at their own pace, while programmatic assessment involves multiple ways of tracking competence that, together, support and document learner progress (Van Melle et al., 2019).

In Canada, the transition to CBME has been operationalized through the Competence by Design (CBD) model, which began its rollout in 2017 (RCPSC, 2017; RCPSC, 2022). CBD is a hybrid CBME model that combines a time-based and outcomes-based learning approach (RCPSC, 2022). The shift to CBD was introduced and implemented by the RCPSC in RCPSC-based residency programs across Canada for all specialties, including Psychiatry (RCPSC, 2022). This represents the first major curricular

shift in Canadian postgraduate medical education in more than 100 years (Duffy, 2011; RCPSC, 2022). CBD uses Entrustable Professional Activities (EPAs) and CanMEDS milestones to create a clear learning path for residents (RCPSC, 2024). EPAs are specific tasks of a discipline that are relevant to each stage of training within each specialty (RCPSC, 2024; Rich et al., 2019). They are observed and assessed by a supervisor and provide a comprehensive representation of a trainee's competence and performance over time (RCPSC, 2024). A resident's performance, including completion and success of EPAs, are assessed by competence committees, which comprise educators responsible for evaluating the advancement of residents during their training, assessing the attainment of EPAs, and offering recommendations regarding promotion and remediation (Acai et al., 2021; RCPSC, 2024; Rich et al., 2019; Van Melle et al., 2019). Academic advisors, also sometimes referred to as academic coaches, provide longitudinal mentorship and guidance to residents through their training, and are intended to act as intermediaries between residents and competence committees (Rich et al., 2019; Van Melle et al., 2019).

1.2 The Challenges of Competency-Based Medical Education

Despite the potential benefits of CBME, such as improving documentation of learner progression, promoting greater learner-centredness, and de-emphasizing time-based curricula (Frank et al., 2010; ten Cate, 2017), there have been numerous challenges associated with the implementation and execution of CBD, reflecting concerns from both residents and faculty (Ahn et al., 2023; Chen et al., 2022; Fédération des Médecins Résidents du Québec [FMRQ], 2020; Hall et al., 2020; Li et al., 2023; Miller et al., 2024;

Ott et al., 2023; Safavi et al., 2023; Szulewski et al., 2023; Tomiak et al., 2022; Wong et al., 2023). For example, residents have mixed perceptions about the transition to CBME, as well as its implementation and impact. A survey of residents by Chen and colleagues (2022) revealed a lack of full understanding of CBME's objectives and training content by a considerable portion of respondents. A study by Ahn and colleagues (2023) on the implementation of EPAs indicated that while EPAs aim to map out a competency roadmap for residents, there was a "striking polarization" in perceptions among residents regarding the value of EPA assessments (p. 678). Some residents viewed EPAs as valuable learning opportunities, while others saw them as burdensome tasks that detracted from their learning experience (Ahn et al., 2023). This polarization was informed by a complex interplay between program administration, faculty assessors, and learner behavior (Ahn et al., 2023). Additionally, other studies identified that although residents find CBME to be beneficial as a roadmap for residency, CBD has not fully delivered on its anticipated benefits, largely due to the considerable administrative burdens it imposes through assessment demands (Li et al., 2023; Miller et al., 2024).

Other studies have specifically highlighted the burden that EPAs put on residents due to the number, delayed completion, technology challenges, inconsistent quality of feedback, and significant psychological burden of EPAs (Li et al., 2023; Miller et al., 2024; Ott et al., 2023; Tomiak et al., 2022; Wong et al., 2023). Some preliminary findings that aimed to explore resident perceptions of CBD suggested that the assessment burden associated with CBD may have negative effects on the development of autonomy and learner-supervisor relationships, and that the achievement of competency may be

hindered (FMRQ, 2020; Ott et al., 2022). Additionally, some scholarly work has shown that CBD may not have improved the quality of feedback provided to residents through EPA assessments (Acai et al., 2019; FMRQ, 2020), which was a main promise of CBD. There have also been documented patterns of extremely high levels of stress, anxiety, and exhaustion amongst residents enrolled in the CBD curricula (FMRQ, 2020).

For faculty, challenges have revolved around an increased workload and the assessment process, specifically with EPAs (Li et al., 2023; Szulewski et al., 2023). Faculty members and supervisors play a crucial role in assessing residents' competencies, which is essential for progression within the CBME framework. However, this process is not without its difficulties, and many faculty members have been hesitant towards the implementation of CBD in residency training (Safavi et al., 2023). Once CBD is implemented, faculty members may face increased administrative burden due to paperwork for EPA completion and the lack of intuitive technology used to track EPAs (Li et al., 2023; Safavi et al., 2023). This increase in workload due to CBD and EPAs, in addition to their clinical demands, may be overwhelming to faculty members, leading to difficulties completing assessments in a timely fashion and/or poor-quality assessment data (Hall et al., 2020; Szulewski et al., 2023). These challenges of CBD and the concomitant increase in workload for both residents and faculty are concerning and can lead to resident and faculty burnout and deteriorating wellness (Szulewski et al., 2023).

1.3 Emotions in Education

Emotions play a prominent role in our daily lives; thus, educational experiences are also subject to emotions (Mortari, 2015). Emotional experiences of learners are a critical aspect of the education process because emotions can significantly influence learning, performance, and overall well-being (McConnell & Eva, 2012). Emotions, both positive and negative, play a crucial role in motivating learners, shaping their experiences, and influencing their engagement with the curriculum (Boekaerts, 2010; Tyng et al., 2017). Positive emotions, such as joy and interest, can enhance learning experiences, create more motivated students, and allow students to focus and learn better (Boekaerts, 2010). On the other hand, negative emotions, such as anxiety and frustration, can hinder learning because students are more likely to turn away from learning and have a harder time concentrating and engaging with the curriculum (Boekaerts, 2010). Furthermore, the exploration of emotions within health professions education has unveiled the important influence of emotions on learning processes, decision making, and professional identity formation (Artino et al., 2012; LeBlanc et al., 2015).

Medicine is a demanding profession, making the study of emotions within a medical education context particularly important. To date, emotion research in health professions education has often focused on the negative moods associated with physician burnout and poor quality of life (McConnell & Eva, 2012). Oftentimes, emotions in medicine and medical education are regarded as something to manage and titrate, thereby perpetuating the idea of an objective healthcare professional and a “good” doctor (Kerasidou & Horn, 2016; McNaughton, 2013). However, emotions and education are

intricately woven, and emotions are universal in both academic and clinical settings (Toufan et al., 2023). When emotion and reason are separated, experiences can become invisible and absent from discussion (McNaughton, 2013). Thus, integration of emotional intelligence training is important within the medical curriculum to improve patient care and physician well-being (Versel et al., 2023). Emotional intelligence, which involves the ability to recognise, understand, and manage one's own emotions as well as those of others, is increasingly seen as a vital component of effective healthcare delivery (Versel et al., 2023). Furthermore, some studies have highlighted the positive impact of emotional intelligence on physician burnout, which thereby improves clinical outcomes (Lisigurski et al., 2021; Vafaei et al., 2016).

Another key trait for physicians to avoid burnout is high emotional intelligence and resiliency. Medical trainees and physicians need to be emotionally resilient in order to enhance quality of patient care and sustain the healthcare workforce (Epstein & Krasner, 2013). Encouraging emotional intelligence in medical education prepares future physicians for the emotional complexities of patient care and promotes mental resiliency when facing the profession's inherent challenges (Epstein & Krasner, 2013; Versel et al., 2023). Thus, rather than removing from a physician's professional objectivity, the acknowledgement, understanding, and management of emotions can augment the quality of medical practice (Versel et al., 2023). The role of emotions in education and medicine are important to understand to create a positive learning environment for learners and educators, thereby improving the overall educational and medical practice landscape.

1.4 Gaps in the Literature

While existing research has investigated the overarching impacts of CBD on residents and faculty, with somewhat lesser focus on faculty (Acai et al., 2019; Ahn et al., 2023; Chen et al., 2022; FMRQ, 2020; Li et al., 2023; Miller et al., 2024; Ott et al., 2022; Ott et al., 2023; Safavi et al., 2023; Szulewski et al., 2023; Tomiak et al., 2022; Wong et al., 2023), the emotional impacts of CBD have received comparatively little attention. A recent national survey by Braund and colleagues (2024) has begun to shed light on this area, revealing that residents experience heightened negative emotions, including anxiety, frustration, and stress, as a result of CBME implementation. Yet, research primarily focusing on the emotional dimensions of CBME, especially among faculty and administrative staff, remains sparse.

The shift towards CBME in Canadian residency programs introduces complex emotional dynamics because both learners and educators must adjust to new standards for residency training that impose additional administrative demands with the potential to adversely affect their mental health and emotional well-being. Alternatively, if the model of CBD is as successful as it is purported to be, it is reasonable to assume that success and the development of skills to manage the clinical demands in a complex system may result in positive feelings towards self and the model of training. Despite an increasing acknowledgment of the significance of emotions in the realms of medical and health professions education, the incorporation of emotional considerations into the development and operationalization of CBME is still emerging. This represents a gap within the

literature. Moreover, CBME and CBD serve as valuable educational paradigms for exploring the broader implications of emotions within medical education.

1.5 Research Objectives

This thesis seeks to investigate the emotional effects of CBME on residents, faculty, and administrative staff by exploring the following research question: How does CBME impact the emotional well-being of postgraduate residents, faculty, and administrative staff?

1.6 Thesis Overview

Through this qualitative study, we aimed to investigate the emotional effects of CBME on residents, faculty, and administrative staff affiliated with the General Psychiatry Residency Training Program at McMaster University. Additionally, we aimed to understand the emotional dynamics inherent in medical education, which are necessary to improve CBME implementation. A qualitative approach, specifically hermeneutic phenomenology (semi-structured interviews), was selected to undertake this study. Chapter 2 describes the methodology, while Chapter 3 describes the findings of this study. Chapter 4 discusses the findings and their implications.

CHAPTER 2: METHODS

2.1 Study Design: Hermeneutic Phenomenology

In this study, we used a qualitative design, specifically hermeneutic (i.e., interpretive) phenomenology to delve into the emotional experiences of CBME for psychiatry residents, faculty, and administrative staff. Hermeneutic phenomenology is a qualitative methodology that aims to describe and understand a phenomenon's inherent meaning, both from the participant's perspective and the researcher's interpretive process, within the context of daily human life (Bynum & Varpio, 2018; Crist & Tanner, 2003). We used this methodology to gain a deeper understanding of human experiences as a whole (Bynum & Varpio, 2018; van Manen, 2016). Hermeneutic phenomenology is characterized by its dual focus on the context of its occurrence and the interpretive significance of a phenomenon. This methodology allowed us to access and articulate the layers of human experience that are often hidden beneath the surface. By delving into and giving voice to these underlying layers, we were able to foster a deeper understanding of participants' emotional experiences as they pertained to CBME.

We selected hermeneutic phenomenology for its unique ability to allow for an in-depth exploration of individual experiences in this study. Human emotions are both nuanced and individual, so this methodology allowed us to leverage emotional experience to uncover rich personal insights that individuals had towards CBME and its use in psychiatry postgraduate education (Ramsook, 2018). The hermeneutic circle was an essential concept in our work, signifying how the individual data points (the parts) contribute to the evolving understanding of the phenomenon (the whole), each enhancing

the understanding of the other in a continuous interaction (Heideggar, 2002; Laverty, 2003). The researcher is an integral instrument within the process, and this methodology acknowledges that the researcher's prior experiences and knowledge are not biases to be eliminated but essential to the interpretive act (Laverty, 2003).

2.2 Reflexivity

In accordance with the essence of hermeneutic phenomenology, which emphasizes the crucial role of the researcher in the research process, we continuously reflected on the experiences and perspectives that we brought into the study (Kaffle, 2011).

As the primary researcher, I (SS) hold a constructivist epistemological stance and believe that people create their own realities based on their previous unique experiences and knowledge (Ültanir, 2012). This view aligns with hermeneutic phenomenology, in which there is no one objective or singular truth, but multiple realities as constructed by people based on their unique experiences and interpretations (Heideggar, 2002). Additionally, as the primary interviewer, I was not directly affiliated with the Psychiatry Residency Training Program, nor was I a working professional in Psychiatry, both of which positioned me as an outsider in relation to the participants I interviewed. As an outsider, I was able to act more impartially as I did not have any of her own first-hand emotions, experiences, or thoughts regarding CBME (Kemmis & McTaggart, 2000; Padgett, 2016). This helped me maintain a neutral and professional approach, allowing me to listen actively without the risk of subconsciously allowing my own perspectives to overshadow those of participants, a risk of insider research. Additionally, being an

outsider is likely what allowed residents to be more candid in their discussions with me, comforted by the knowledge that I was not affiliated with their postgraduate program and had no influence over their residency training assessments or advancement.

I am a graduate student who completed my Bachelor of Science in Health Sciences and am now currently completing my Master of Science in Health Science Education. I have also previously conducted health professions education research at the undergraduate level. My roles as a health sciences student and researcher have given me a unique insight into health professions education. I entered this research with no prior personal experience with CBME but ensured I became as familiar with the topic as possible through a comprehensive literature search.

AA is an education scientist who brought her prior experience with CBME research to the study. While she is aware of a growing literature base that speaks to the challenges of CBME, she strives to be open to what the data in any given study are telling her. She therefore entered this research with some initial propositions about how participants may feel about CBME, but without any rigid preconceptions, allowing the data to guide the findings.

SH is an academic psychiatrist who has held a variety of education leadership roles within the academic department and university, and who brought her personal experiences with CBME to the study. SH participated in the development of CBD through the Royal College of Physicians and Surgeons of Ontario.

NS is a psychiatrist and postgraduate education program leader, who also brought her personal experiences with CBME to the study. NS co-authored the original Resident

Doctors of Canada position paper on CBME in 2014-15, which highlighted major risks and challenges of CBD implementation.

All four authors brought insights developed through prior research on health professions education. Although AA, SH, and NS had prior experiences with and knowledge surrounding CBME, all four researchers worked to ensure an authentic representation of the data through a variety of methods (e.g., rich discussion at each stage of the research process, triangulation of data across different researcher perspectives, bracketing their own thoughts and emotions about CBME if they had any, etc.). Additionally, all researchers ensured to keep an open mind regarding the varying interpretations of the findings.

2.3 Participant Recruitment

We recruited residents, faculty, and administrative staff affiliated with the General Psychiatry Residency Training Program at McMaster University. The Residency Training Program encompasses approximately 45 trainees across two campuses (i.e., the Hamilton Campus and the Waterloo Regional Campus). Eligibility criteria included psychiatry residents with direct experience learning in a CBME-based curriculum, as well as faculty members with direct experience teaching in a CBME-based curriculum. We also sought to recruit faculty with educational leadership roles, as well as administrative staff who helped to support the residency training program.

The study was advertised as an exploration of the emotional impacts of CBME implementation on residents, faculty, and administrative staff in Psychiatry. We recruited

participants through e-newsletter advertisements and emails sent directly to prospective participants. We used purposeful sampling to ensure we were able to recruit participants in the three subgroups (i.e., residents, faculty, and administrative staff; Burdine et al., 2021). We also used strategic sampling to focus on Psychiatry due to the nature of psychiatric practice, which focuses heavily on the mental, emotional, and behavioural aspects of health. The competencies in Psychiatry are centred around communication skills, psychological understanding, and medication management, as compared to surgical specialties, which may focus their competencies more on technical skills and procedural knowledge. Psychiatry educators train learners on emotions and mental health, presumably allowing participants to feel more comfortable identifying and discussing their emotions. Lastly, we also used convenience strategy sampling since the participants were easily accessible to us as researchers in the Department of Psychiatry and Behavioural Neurosciences (Palinkas et al., 2015). Interviews were concluded once researchers determined that data sufficiency was achieved using the information power concept (LaDonna et al., 2021; Malterud et al., 2016). This study used a narrow aim with an in-depth analysis of narratives from a targeted group of participants to allow for data sufficiency to be reached through a smaller sample size (Malterud et al., 2016).

2.4 Data Collection

We collected data through a single 25- to 45-minute-long semi-structured virtual Zoom interview with each participant (Zoom Video Communications Inc., 2016). We strategically opted for fewer interview questions to accommodate the busy schedules of

the physician participants; however, the broad and open-ended nature of the questions still allowed participants to share as many details as they were comfortable with and had time for, ultimately resulting in a rich data set that went far beyond only a surface-level account of the phenomenon being studied. We chose interview questions based on their ability to allow participant-led conversation. During the interview, where it was deemed helpful and relevant, we used probes to help elicit further details from participants. The semi-structured interview guide (Appendix A) was a collaborative effort between members of our research team, which included me, a health science education graduate student researcher (SS); my primary supervisor, a PhD-trained education scientist with experience in qualitative research methodologies (AA); and committee members, two psychiatrists and researchers (SH and NS), both experienced qualitative researchers with advanced research degrees (PhD and MSc, respectively). We also pilot tested the interview guide with a pediatrics resident completing Masters-level research on a related topic to collect feedback on any areas for improvement; however, no changes were identified or made at this point.

At the start of the interviews, we collected participant characteristics, including self-identified gender, position, and year of study (for residents only). During the interviews, we first asked participants to describe their experiences and associated emotions with CBME more generally. Next, we asked participants to explain these emotional experiences in detail, with follow-up questions being asked to probe deeper into certain emotions. We also asked participants some program evaluation questions near the end of the interview to gather any additional information that may have been missed

in the emotion-driven portion of the interview. Lastly, after the interview, we debriefed participants about the aims of the study and provided them with resources for emotional support if needed given the topics addressed during the interview.

2.5 Data Analysis

Interviews were recorded, transcribed verbatim using Zoom and manual transcription, de-identified, and uploaded into NVivo 14 software (Lumivero, 2023; Zoom Video Communications Inc., 2016) to assist with data management and analysis. I (SS) analysed the data using a line-by-line approach to generate individual meaning units (i.e., codes). My primary supervisor (AA) and two committee members (SH and NS) analysed three different transcripts each, helping to scrutinize and refine my interpretations of the data. Using these codes, I then developed themes in collaboration with all research team members. These themes were refined after another round of coding to ensure that all relevant data were captured and interpreted authentically.

Memoing and reflexivity were also used throughout the data collection and analysis process to enhance the qualitative approach and promote rigour (Birks et al., 2008; Krefting, 1991). Memoing was used during the data collection and analysis phases to help bring intention to my personal assumptions and subjective perspectives, incorporate my experiences, and build transparency in the research process (Birks et al., 2008; Groenewald, 2004; Olmos-Vega et al., 2022). Memos were created immediately after each interview and after final transcription of the recording, as well as during the analysis process. These memos were then used when developing themes. Furthermore, to

reinforce the trustworthiness of the research findings, we adhered to Lincoln and Guba's framework (1985), which involves demonstrating credibility, transferability, dependability, and confirmability (Jack et al., 2015; Krefting et al., 1991). We ensured credibility by testing the interview guide using a pilot interview with a pediatrics resident. We also ensured transferability using purposeful sampling techniques to specifically recruit participants in Psychiatry. Additionally, we ensured dependability through debriefing sessions between all researchers and had AA, SH, and NS re-code randomly selected transcripts that were initially coded by me. Lastly, we ensured confirmability via memos and reflexivity throughout the data collection and analysis process.

CHAPTER 3: RESULTS

Fourteen participants completed an interview, including seven residents, six faculty (several of whom held postgraduate education program leadership positions at the time of the study or had in the recent past), and one administrative staff member involved in supporting postgraduate education. Participant characteristics, including self-identified gender, position, and year of study (for residents only), are summarized in Table 1.

Our analysis yielded five themes: 1) Education is an emotional experience, 2) The emotional toll of CBD, 3) CBD is a failed educational promise—Expectations vs. realities, 4) Structural and administrative burdens of CBD, and 5) Survival of educational demands—The quest for coping.

3.1 Education is an Emotional Experience

Most participants were initially hesitant when asked about their emotions regarding CBME, and some reported not being able to identify any emotions at all. However, as the interviews progressed, participants gradually expressed surprise at realizing they did have strong, often negative emotions related to CBD.

> *"It's hard for me to come up with an emotion … Yes. I feel angry. Anger, there's a word, there's an emotion. I actually do feel angry at the Royal College. I feel angry at them. Ah, here we go!"* (Participant 008, Faculty)

> *"I know I said not rage, but now that I'm talking … I'm like, yeah, like, you know, if you get me going like it is pretty like infuriating."* (Participant 001, Resident)

> *"To be honest, I feel like unpacking them here, like I just realized like, oh, I didn't realize how cynical I actually was."* (Participant 002, Resident)

There was also a sense of catharsis for some participants when they shared their experiences and criticisms of CBD. Negative expressions towards CBD appeared to serve as therapeutic releases throughout the interviews.

> *"I'm so sorry, I feel like I just like … unloaded on you today, but I hope some of it was useful. … We just don't think about it because we just don't have that much time, you know?"* (Participant 002, Resident)

> *"I know this is probably like, you're probably just, you know, listening to us venting so like you should be a therapist."* (Participant 001, Resident)

Additionally, outside of the interviews, informal discussions among peers about their educational experiences also helped offer a sense of communal understanding and relief.

> *"With residents, I think the discussions are a little bit more predictable, and … it ends up being either a venting session or a 'This is how [CBD] can be better session,' which sometimes actually is nice to feel like we're commiserating, I suppose."* (Participant 010, Faculty)

> *"So, I think that yeah, behind the scenes, complaining and just being genuine with the residences to how we're struggling with this as well is a lot of how we've handled it."* (Participant 007, Faculty)

As the interviewer, I (SS) had my own emotional responses to having participants share their emotions with me, which I documented in some of my memos.

> *"That felt like a therapy session, which is also something that [Participant 001] mentioned in their interview … Overall, I can definitely feel [Participant 001's] frustrations … There were … a lot of negative emotions."*

> *"I feel very frustrated and anxious and overwhelmed … The way Participant 006 was describing their emotions that they are experiencing, I feel like it's a lot being in [Participant 006's] position … And so [from the participant's perspective there is] definitely a lot of anxiety and stress about the big picture and little details … it's scary, anxiety-inducing, stressful, frustrating, tiring [for them]. I feel exhausted, and I just talked to this individual for 36 minutes."*

3.2 The Emotional Toll of CBD

Throughout the interviews, participants shared a diverse range of emotions, with the majority of these being negative. Participants' emotions are summarized in the word cloud in Figure 1.

The emotional toll of CBD on individuals was palpable, with many participants expressing stress, frustration, and even defiance in the face of CBD requirements, particularly around EPAs. The psychological impact of these educational demands revealed a complex emotional landscape marked by resistance, guilt, and protective instincts.

Participants identified the daily emotional management that is required when dealing with CBD, illustrating a constant struggle between emotional reaction and professional obligation.

> *"You can't be enraged throughout your whole day. So, we kinda like … you just sort of put that aside and move on, cause if you're enraged, this is a*

> *daily thing. We can't just become enraged every day. So instead, we get annoyed and frustrated."* (Participant 001, Resident)

The participants in this study were high-achieving professionals who recognized the responsibility that came with their roles. Some participants encountered an emotional conflict between the desire to resist a perceived overburdening educational system and the ingrained professional commitment to fulfill educational obligations.

> *"I actually am debating, I have one [EPA] left, if I'm just gonna not do it in like a revolt. I might end up doing it in the end, because … I'm not the kind of person who doesn't do stuff, but like a huge part of my brain wants to not do it just to … be defiant because I just feel so irritated."* (Participant 013, Resident)

Faculty also highlighted EPAs as being one of the most emotionally burdensome elements of CBD, specifically the stress and guilt associated with residents having to manage and potentially not complete these activities.

> *"I certainly sort of started to appreciate how much like additional work this was in terms of completing EPAs and things like that, and the emotional sort of burden of having them sitting there and getting reminders, and then they expire. And you feel you feel terrible because you've not completed an expired EPA, and so forth."* (Participant 006, Faculty)

This sense of frustration and concern extended to and was shared by other faculty as well, with one expressing a protective, almost parental instinct towards residents against a system that seemed to exacerbate rather than alleviate educational pressures.

> *"I can see them being frustrated, overwhelmed, and worried about [CBD] and that's where I sort of get … protective, kind of like, mama bear, you know. Why are we doing this to them? I can see them, you know, getting overwhelmed, and then I get frustrated and feel like I'm banging my head on the wall."* (Participant 007, Faculty)

Residents and faculty were both weary of EPAs, which was reported to take an emotional toll on residents due to potentially damaged learner-supervisor relationships. More specifically, there seemed to be a perceived imbalance between the effort residents put into their roles and the support they received in return.

> *"I'm doing like all this work for [the supervisor], and like honestly like making [the supervisor] more money at the end of the day, and like I'm asking for like one thing that I don't, I don't wanna do. I know [the supervisor doesn't] wanna do [it], but I need to have done. And like it just feels like it's too much of an ask, you know, like it's too much of a burden."* (Participant 001, Resident)

> *"I think that another component of it is also … it's difficult to like ask your attendings to fill out these [EPA] evals for you, because everyone is busy, and so you almost feel like you're kind of a burden to your staff."* (Participant 011, Resident)

Lastly, residents also reported having to worry about balancing learner-supervisor dynamics to determine when the correct time was to ask their supervisor for an EPA assessment, which was described as an emotionally draining experience.

> *"It takes emotional energy out of you, too, to get into that state where you're like ready to ask and to time it right? Because, you know, like, just in any human interaction, when you ask for something, you have to ask in the right timing, like in the at the right time and place, so cognitively thinking about that."* (Participant 001, Resident)

3.3 CBD is a Failed Educational Promise—Expectations vs. Realities

Participants highlighted a disconnect between the theoretical benefits of CBD and its practical implementation. Participants expressed concerns regarding the rationale behind the national overhaul of medical education, questioning the universal applicability and effectiveness of CBME. Specifically, participants noted that there seemed to be a critical lack of clarity about the underlying issues CBD aimed to address, suggesting a misalignment between the perceived problems and the proposed solutions. One faculty member voiced fundamental questions about the justification for what was described as a "national overhaul" of residency education:

> *"What did people understand the problem to be in medical education? What was the problem that was so significant that it required a national overhaul? How did they know that it was a problem? And how did they know that it was a problem that was the same for every discipline?"* (Participant 009, Faculty)

Other participants pointed to a lack of planning in a top-down approach, where the complexities and unique challenges of different programs were not adequately considered by policymakers, leading to widespread frustration among educators.

> *"It's been frustrating in that I feel that the Royal College did not put enough foresight into their plan. They came up with an idea and handed it down without, in my opinion, giving thought to the intricacies of what they were requesting of programs and that has been frustrating."* (Participant 008, Faculty)

Furthermore, participants questioned the effectiveness of CBD in enhancing the learning experience, and that perhaps the emphasis on documentation of EPAs detracts from the intrinsic learning process.

> *"I think [CBD] doesn't help achieve learning goals any different than non-CBD modality. And, to a certain degree, it frustrates the ability to actually achieve my learning goals because it slows down the actual learning process, because we now … have to pull out the paper and document it for someone else rather than taking that on as my own lesson."* (Participant 004, Resident)

When asked if CBD has met the original objectives it set out to obtain, participants stated its failure, specifically related to one of the proposed advantages of reducing training timelines.

> *"It hasn't met those objectives whatsoever, so it's very disappointing and kind of frustrating in that regard. One specific example is like, oh, we can shorten training timelines, but that hasn't been born out whatsoever."* (Participant 004, Resident)

CBD's applicability and effectiveness in Psychiatry were frequently questioned by participants due to the unique, subjective nature of psychiatric practice; however, CBD was perceived to potentially offer greater benefits in procedural disciplines.

> *"I think [CBD] has been helpful for different disciplines where … interventional techniques like surgery are required. I think that has been quite helpful to say, 'How many times have you closed an abdomen? How many times have you resected a tumour? How many times have you removed an appendix?' I'm not sure that it's all that relevant to Psychiatry, because*

> *there is so much intersubjectivity that makes it difficult to really understand what's happening in any psychiatric exchange."* (Participant 009, Faculty)

3.4 Structural and Administrative Burdens of CBD

Participants highlighted multiple systemic challenges that affected their educational experience and professional development. These insights underscored the complexities and inefficiencies present in the CBD framework, which were described to have major implications for both learners and educators.

One of the criticisms of CBD revolved around the perceived imbalance between the effort invested and the educational value received by learners. Participants expressed concerns that the time dedicated to CBD-related activities could be more beneficially spent on direct learning opportunities.

> *"If I use that time to read on my own instead, I think I will get more educational value because the effort to education ratio with this system just isn't there for me."* (Participant 001, Resident)

The process of managing and tracking EPAs presented considerable administrative challenges for residents, contributing to a sense of disorganization and inefficiency within CBD.

> *"Sometimes it gets forgotten … you send stuff, and then it never gets filled out, and you don't get notified … it just fades, and then you never do it. And you think you're doing better you than you are."* (Participant 002, Resident)

EPA assessments were noted to have a potential for negative repercussions and systemic pressures associated with supervisors providing honest and critical feedback. The fear of constructive or negative responses and the energy required to navigate any disagreements were seen to complicate the evaluation process, leading to inauthentic feedback.

> *"I think there are system issues that make evaluating residents challenging. There are potential repercussions to resident feedback being negative or punitive in response. There is a lot of time and energy that would go into any disagreement with your evaluation to defend your evaluation. And I've even heard informally people say, I'm not going to do that, it's too much of a headache."* (Participant 012, Faculty)

The implementation of CBD was also reported to have led to a large increase in the amount of data and information that both residents and faculty were required to manage. This surge appeared to be contributing to participants' feelings of being overwhelmed.

> *"It's just because … there's this mountain of data and this mountain of stuff to keep track of in terms of amounts of data and changing requirements as we roll all of this out and I think the residents are overwhelmed with keeping track of their own purpose, and all those details, and we are overwhelmed with managing it, and certainly we hear that from our administrative support professionals like every day, how overwhelmed they are with the amount of work that this is created."* (Participant 007, Faculty)

Lastly, participants identified a gap between the resources provided and the actual needs of learners, faculty, and programs. This disparity highlighted a fundamental

misalignment within CBD, where the theoretical benefits failed in the day-to-day experiences of those involved.

> *"[The Royal College] clearly missed the mark in terms of what resources are needed, what and how it affects, not just the learner, but also faculty and programs."* (Participant 004, Resident)

3.5 Survival of Educational Demands—The Quest for Coping

During the interviews, participants shared a variety of coping mechanisms to navigate the systemic pressures and demands of CBD. These narratives highlighted the resilience of people within the educational system and illuminated the diversity of strategies used to manage the emotional and logistical challenges associated with CBD.

One participant expressed the overwhelming nature of tracking EPA progress and chose to opt for a more laissez-faire approach, thereby prioritizing personal well-being over meticulous tracking.

> *"I do not track them myself. I just kind of wing it most of the time, but because it's a lot of work like I just don't want to come home after a long day and sit there and enter into a spreadsheet."* (Participant 002, Resident)

Other residents described a resigned and pragmatic acceptance of EPAs as a necessary but frustrating part of their postgraduate training. This reluctant compliance emphasizes a coping mechanism of action over complaint.

> *"I just trigger the EPAs … I don't really complain about it anymore … We don't really talk about it as much as this is something we have to do. So, I just do it, and you know yeah, it's annoying. And yeah, it's frustrating. But*

> *like, since I can't change it, I'm not gonna dwell on it. I'm just gonna do it."* (Participant 001, Resident)

Some participants also identified how residents strategically triggered EPAs when they felt confident in their performance. This allowed them to navigate the system effectively while ensuring their success.

> *"I think the residents tend to ask us to do more … EPAs when they are doing well than when they did the terrible job."* (Participant 005, Faculty)

> *"I'm not doing the extra work of triggering evaluations, which I know are going to turn back negative, because if I did that my supervisor would probably even just look at me and be like what's the point like, I just … told you what you need to work on like why would you ask for an evaluation that you know, is gonna be negative? Just wait till you do it like correct."* (Participant 001, Resident)

Another coping mechanism seen throughout the interviews was using humor to diminish or deal with negative emotions.

> *"Like if I'm being like comedic about it, I could say like [CBD is] disgusting to me. Like that's … more just me, like you know, kind of coping with humor. Like I don't know if it's actually disgusting. [Laughs]."* (Participant 001, Resident)

Lastly, some participants stated that they would share their emotions in private settings or internalize their frustrations, which are coping strategies that involve suppressing negative emotions to maintain a professional facade.

> *"I've probably internalized most of it. Because within my position, like, you know, in certain, in the company of certain people behind closed doors, you can express what your thoughts are. But I would never do it in front of, or I didn't do it in front of residents or faculty that I was trying to train … So, I would say for the most part I internalized it, and just let it sit inside me."*
> (Participant 008, Faculty)

CHAPTER 4: DISCUSSION

4.1 Emotional Effects of CBME

This qualitative, hermeneutic phenomenological study explored the emotional effects of CBME on psychiatry residents, faculty, and administrative staff. Through the analysis of semi-structured interviews with 14 participants, we developed five themes: 1) Education is an emotional experience, 2) The emotional toll of CBD, 3) CBD is a failed educational promise—Expectations vs. realities, 4) Structural and administrative burdens of CBD, and 5) Survival of educational demands—The quest for coping.

Through our interviews, we were able to gain insights into participants' strong emotions regarding CBD, affirming the idea that emotions are inherent to medical education and cannot be separated from education or medicine (Kerasidou & Horn, 2016; Mortari, 2015). This is consistent with previous findings, such as those of Ofri (2013) who discussed how the emotional landscape of healthcare professionals considerably influences decision making, physician-patient relationships, and the overall quality of care. Emotions, often viewed as an undercurrent to the scientific and technical proficiency required in medicine, are a crucial element that shapes the humanistic side of healthcare (Ofri, 2013). Similarly, Smith III and Kleinman (1989) delved into the emotional socialization of medical students and showed that their experiences with patients foster a professional identity that closely intertwines with emotional management. Emotional management was defined as the process of managing one's emotions in response to specific situations to maintain professionalism in clinical settings (Smith & Kleinman, 1989). This underscored the reality that emotional management and empathy are integral

in medicine, which challenged the notion of emotional detachment in clinical settings (Smith & Kleinman, 1989). In our study, some participants were initially hesitant or unable to identify their emotions related to CBME, which suggests that a discourse about emotions in relationship to CBME was initially strange. This is in line with previous literature that suggests that there is a perceived notion that "good" and professional physicians must minimize or titrate their emotions from objective reason (Kerasidou & Horn, 2016; McNaughton, 2013). The resident and faculty participants in our study were in Psychiatry, a specialty focused on emotions and mental health. Interestingly, participants, who would have had extensive experience in managing patients' emotions, encountered difficulties in initially identifying their own emotions. This further highlights the culture in medicine that emphasizes professionalism without showing vulnerability.

As the interviews progressed, participants gradually expressed surprise at realizing they did have strong, often negative, emotions related to CBD. These emotions oftentimes became more pronounced once participants were able to identify them, and this identification and pronouncement had both cathartic and therapeutic dimensions. The acknowledgement and integration of emotions in education are vital. Our study, which explored emotions in postgraduate medical education, can be used as a case study to understand the dynamic and attend to it in the planning and delivery of educational programs. Additionally, these findings underscore the need for a more holistic approach to healthcare and medical education—one that equally embraces the emotional, scientific, and technical aspects of medical practice and does not unduly suppress the important role that emotions play.

In our study, the residents and faculty highlighted the emotional toll of CBD requirements. Our findings align with the existing literature showing that the implementation of CBME, especially the use and tracking of EPAs, has imposed a high emotional toll on Psychiatry residents and faculty (Cohen & Kassam, 2016; O'Sullivan et al., 2012; Ott et al., 2022). Additionally, our study revealed that residents faced a dilemma between resisting an overburdening educational model and adhering to their professional duty to comply with educational obligations. This conflict appeared to lead to moral distress, which is a cognitive-emotional dissonance (Berger, 2014), stemming from a struggle between a resident's need to protect their emotional well-being through setting boundaries and their desire to excel as trainees by fulfilling all educational requirements. This battle between conflicting responses to CBD was articulately described as creating further emotional turmoil.

Research has shown that heightened negative emotions can lead to job dissatisfaction and burnout, which is associated with poor function and sustainability of healthcare organizations and reduced quality of patient care (Hodkinson et al., 2022). Similarly to our findings, Ott and colleagues (2022) identified EPAs as sources of stress that added additional workload for learners with little return in terms of educational value, while leading to consequences for learner well-being and intrinsic motivation (Ott et al., 2022). Lastly, EPAs have added another layer of complexity to the already complex learner-supervisor dynamic, serving as a notable source of stress. This challenge introduced a hidden curriculum—a set of unwritten and informal values—that residents needed to manage to navigate these relationships (Cohen & Kassam, 2016; O'Sullivan et

al., 2012). For example, in our study, residents identified having to balance when to ask their supervisor for evaluations (depending on their supervisors' busy schedules and moods) with their need to successfully and timely complete EPAs. This management of EPAs, learner-supervisor relationships, and the hidden curriculum of CBD all place further emotional burden on residents and faculty members.

Our data revealed a dissonance between the expectations set by CBD and the realities of its implementation. Participants questioned the rationale behind CBD, suggesting a misalignment between identified problems in medical education and the proposed solutions. Participants also questioned whether CBD improves feedback quality and the learning experience for residents. The critical perspective on CBD's effectiveness and relevance, particularly in Psychiatry, raises concerns about the appropriateness of a one-size-fits-all model approach to medical education developments. This concern was highlighted by Menezes and colleagues (2018) who delved into the nuanced challenges that CBME presents within Psychiatry. The authors highlighted that the rigid structure and standardized assessment metrics inherent in CBME might not align well with the complex, variable, and highly individualized nature of psychiatric practice (Menezes et al., 2018). In contrast with surgical specialties, which have more tangible outcome measures, Psychiatry values certain attributes that inform the therapeutic alignment which is used as a clinical tool (i.e., compassion, humanism, altruism, professionalism, and skilled communication), which are often difficult to quantify (Menezes et al., 2018). Rather than removing CBME from Psychiatry, which could ostracize the specialty, Menezes and colleagues (2018) suggested adapting CBME to reflect Psychiatry's unique

learning and assessment requirements. Potential adaptations may involve a heightened focus on reflection within Psychiatry education, coupled with prioritizing the development of physicians' identities alongside competence. Additionally, Menezes and colleagues (2018) underscored the importance of evaluating curricular modifications to ensure their effectiveness.

Structural and administrative challenges, such as the tracking of EPAs and the considerable administrative changes required for program administrators to implement and support CBD (e.g., implementation of technologies for EPA completion and tracking), were identified as having profound emotional impacts on the faculty, residents, and administrative staff in our study. These findings are supported by previous literature that showed increased administrative burden, such as that seen due to EPA assessments, led to frustration and anxiety that overshadowed learning, thereby decreasing residents' ability to view the assessments as learning opportunities (Day et al., 2023). Additionally, our findings suggested that the time and effort that residents invest into CBD-related activities may not correspond to the educational value received, and that the system may lead to inauthentic feedback and assessments by supervisors due to the fear of systemic pushback. Day and colleagues (2020, 2023) also found that feedback quality on competency-based assessments was variable and oftentimes did not meet expectations, with residents feeling as if supervisors were more focused on completing EPAs than on providing specific feedback and areas for improvement. Additionally, time is a limiting factor in that residents and faculty may feel overburdened if they are expected to do more (i.e., complete EPA assessments) with the limited time that they have (Szulewski et al.,

2023). This increased workload can cause cognitive overload for faculty who are expected to juggle CBD demands with their clinical and educational duties, which can result in poor quality feedback for residents and burnout for faculty (Szulewski et al., 2023). Our findings reaffirmed the concerns about the effectiveness of CBD in promoting resident learning.

Participants described using diverse coping mechanisms, such as humour, emotional support, or resignation to manage the systemic pressures of CBD, which reflected their resilience. These strategies revealed how residents, faculty, and administrative staff navigate the logistical and emotional challenges presented by CBD while still maintaining the professionalism required of them as part of their roles. Coping strategies are necessary to manage the emotional demands of education (Salimzadeh et al., 2021). In our study, some participants used humour to downplay their emotions. The use of humour as a coping mechanism has been shown to be significantly and negatively associated with burnout, as humour is associated with more optimistic outlooks in difficult situations (Martin, 2001; Ramsey et al., 2011; Salimzadeh et al., 2021; Tümkaya, 2007). Additionally, within the context of CBME, Day and colleagues (2023) described how residents "gamed" the system by seeking out competency assessment opportunities in which they were confident they would do well or finding lenient supervisors to assess them. Similarly, in our study, both residents and faculty identified how residents "gamed" the system by triggering EPAs when they knew they were already competent and would therefore excel at a particular task. This "gaming" can be seen as a coping mechanism whereby residents do not engage authentically with CBD by subtly circumventing

bureaucratic red tape because they do not see the value to their training. Lastly, the use of emotional support (e.g., external or internal reassurance, acceptance, and encouragement) and emotional resignation have been shown to be used as emotional coping strategies (McKinley et al., 2020; Salimzadeh et al., 2021). Adoption of these coping mechanisms is indicative of the underlying need for system-level changes to alleviate the pressures faced by learners and educators.

Finally, it is important to acknowledge that experiences related to CBD implementation may vary based on program culture and size. For example, a recent study found that both residents and faculty members in a smaller Geriatric Psychiatry subspecialty program had markedly more positive perceptions about CBME (Simon et al., in press). Being a smaller program allowed for closer working relationships between faculty and residents that facilitated a culture of feedback even before CBME had formally been implemented (Simon et al., in press). Moreover, with fewer EPAs than General Psychiatry, Geriatric Psychiatry faculty and especially residents appeared to find CBME relatively manageable in terms of assessment processes related to EPAs (Simon et al., in press). In our study, we focused on residents, faculty, and administrative staff in General Psychiatry, which is a larger program than Geriatric Psychiatry. Thus, it is possible that CBD is better received in smaller programs where residents benefit more from the promises of the model, such as valuable feedback from supervisors, and have fewer EPAs, which decreases workload on both residents and faculty.

4.2 Implications

Our study has important implications for residents, faculty, and administrative staff who train and work within a CBME or CBD model. First, the emotional burden highlighted by participants in our study suggests that medical education frameworks need to acknowledge and integrate emotions as a core component of curriculum design. Tyng and colleagues (2017) discussed how intense emotional experiences among students influence learning outcomes and highlighted the importance of managing emotional challenges to enhance learning effectiveness. It is important to first increase the awareness of recognizing emotions experienced by learners, which can then be used to help optimize learning to reduce extraneous cognitive load and enhance learning (Tyng et al., 2017). Sharma and Gokani (2017) highlighted the increasing recognition of integrating emotions in medical education, focusing on the emotional burden of participants. They suggested developing emotional support strategies in medical education, such as daily mindfulness meditation, which can help recognize and alter emotional states (Sharma & Gokani, 2017). While these individual emotional support strategies may provide some value, educational programs must go beyond only individual strategies if they truly want to improve resident and faculty well-being (Lee et al., 2017; Serrano et al., 2023). Furthermore, the coping strategies used by participants in our study highlight the necessity of providing broader support systems within medical training programs, such as open forums for discussion about the challenges and emotional experiences of CBME and CBD. These support systems have been highlighted in the literature as essential for the emotional well-being of healthcare providers (Nyquist, 2014;

Ofri, 2013). They also align with the growing recognition of the importance of emotional intelligence in medical education and calls for educational approaches that foster emotional resilience (Epstein & Krasner, 2013; Versel et al., 2023).

Moreover, the disconnect between the theoretical expectations of CBD and the lived experiences of participants implies a need for a more nuanced and discipline-specific approach to CBD. This could involve tailoring CBD to better suit the unique demands of Psychiatry training, where the subjective skills valued are more difficult to quantify than in surgical specialties (Menezes et al., 2018). This tailored approach would echo the opinions of educators like Carraccio and colleagues (2002), who advocated for flexible and adaptable competency frameworks in medical education. Recently, the RCPSC released a statement with key action items (e.g., programs can decide the evidence for stage-promotion based on individualized resident learning plans, EPA entrustment data should not be the only performance indicator for residents, etc.) to enhance flexibility for CBD program implementation (RCPSC, 2023). These changes are a promising first step to help minimize the burden put on residents, faculty, and administrative staff by allowing for a less rigid training model that can be molded to fit individual specialty and resident needs. However, further flexibility at the systemic level may be needed to allow for variability in EPA completion and assessment. EPA development and implementation in any specialty should be an iterative process in which residents can provide feedback to their Residency Program Committees, which can also serve as a mechanism for quality improvement. A research based iterative process for quality improvement would allow for programs to adjust how CBD is implemented to

better suit its learners and educators needs, which would help further minimize the burden put on residents, faculty, and administrative staff.

Furthermore, the structural and administrative issues that participants identified indicate a need for a review of CBD assessment procedures. Physicians frequently report burnout due to being overworked, and excessive administrative tasks divert time from clinically important activities such as providing quality patient care (Duong & Vogel, 2023; Erickson et al., 2017). Optimized technology has been identified as a means to support healthcare workers, reduce workload and minimize physician burnout (Craig et al., 2021; Mohammadnejad et al., 2023). The excessive administrative workload associated with CBD could be mitigated through the improvement and implication of current technology systems used, such as the Medical School Information System (MedSIS) for EPA completion and tracking, which would help reduce the clerical burden on residents and faculty. Traditionally, faculty supervisors completed assessments using computer forms (Marty et al., 2023); however, this becomes less feasible and more cumbersome with the growing number of assessments required by CBD. The implementation of mobile technologies can be used to support assessing EPA achievement (Duggan et al., 2021). Pilot studies of mobile assessment applications have demonstrated ease of use and feasibility with certain applications that can be used to provide learners with higher quality formative feedback in EPAs (Ott et al., 2023). Additionally, to overcome the structural and administrative issues, programs can blueprint their assessments, which can serve as another method of quality improvement (Boland et

al., 2014), to understand areas where efficiencies may be possible. Then, CBD can be modified, if necessary, to better suit the needs of its learners and educators.

It is possible that adopting more humanistic curricula into medical education would help ensure that the education residents receive is more sensitive to their emotional needs. A humanistic curriculum is centered upon human values and emphasizes empathy, communication skills, and personal growth (Goodland, 1967; Harms & Acai, 2020). It aims to educate the whole person, fostering not only cognitive skills but also emotional and social abilities to help learners realize their full potential and contribute meaningfully to society (Goodland, 1967; Harms & Acai, 2020). CBME was implemented with the aim of creating a more learner-centered and outcomes-based learning approach to residency training (Frank et al., 2010; ten Cate, 2017). However, it is important to acknowledge that the focus on completing EPAs and achieving competencies might inadvertently cause learners and educators to overlook the emotional and humanistic side of medical education. We saw this in our study when which participants had trouble initially identifying and discussing their emotions. By integrating humanistic curricula, the competency and emotional aspects of postgraduate residency training can be combined and balanced (Harms & Acai, 2020). This may decrease the emotional burden experienced by residents, faculty, and administrative staff while fostering a more compassionate and supportive educational environment. A humanistic model of residency education could enhance the emotional resilience and well-being of residents, enabling them to provide better patient care.

Lastly, our findings may raise ethical and practical concerns, such as whether it is justifiable to impose additional burdens on physician learners and educators, particularly when the educational benefits appear limited. It is important to assess the cost-benefit ratio of nationally implemented educational reforms. Our findings suggest that the perceived benefits of CBD do not outweigh the associated increased burden and workload, challenging the ethicality of its continued implementation without evidence of effectiveness. Evaluating the effectiveness of CBD is inherently challenging due to the lack of baseline data prior to its introduction and implementation. This gap makes it difficult to determine whether CBD is meeting its goals in relation to the problems it was intended to address. Additionally, the considerable time and resources already invested into the CBD curriculum may contribute to a "sunk-cost fallacy" in which decision makers continue to support the curriculum despite limited evidence of its success, simply because of the substantial initial investment. Perhaps greater flexibility in the implementation of CBD could help mitigate some of its current adverse effects. It is important to recognize that CBD comprises more than just EPAs; however, the administrative burden EPAs impose appears to have overshadowed other aspects of the curriculum. Modifying or eliminating components that provide little benefit, such as the excessive number of EPAs, while retaining effective components, such as academic coaches and competence committees, may help strike a better balance for learners and educators. Existing evidence showing that CBD places a substantial burden on both residents and faculty needs to be considered to increase flexibility and decrease burden.

4.3 Limitations

Selection bias is a potential limitation of this study. It is possible that those who chose to participate in this study had stronger emotions that they wanted to express in a private and safe environment. The reverse is also possible where some participants may not have felt comfortable enough to share their emotions with the researcher, and thus may have held some emotions or feelings back. Furthermore, we were only able to recruit one administrative staff member due to the small pool of administrative staff in Psychiatry, as well as the turnover in some of these roles. Administrative staff members are integral to the CBME process, and their insights play a crucial role in understanding the full impact of the model; however, with only one administrative staff participant, our study may not have fully captured the range of emotions and perspectives within this group. Lastly, our study focused on a single medical discipline, Psychiatry, which likely had unique emotional demands as compared to other specialties or institutions. Psychiatry, as a specialty, delves deep into mental health issues, necessitating a high degree of emotional engagement, empathy, and resilience from its providers. These unique demands stem from the complexity of the disorders and the intensive therapeutic relationships formed with patients. Further studies across other medical fields, such as surgical specialties, which might place a higher emphasis on technical precision, are necessary to understand the full impact of CBME on the emotional experiences of residents, faculty, and administrative staff.

CHAPTER 5: CONCLUSION

In Canada, CBD has been implemented nationwide in all specialties; however, much remains unknown about its emotional effects. In this thesis, we aimed to explore the emotional effects of CBME on residents, faculty, and administrative staff within a residency training program in Psychiatry. We used hermeneutic phenomenology to explore the complex dynamic between emotions and medical education. Our findings revealed that individuals felt an emotional toll and a pronounced dissonance between the expected advantages of CBD and the realities of its implementation.

CBD was implemented with the aim of enhancing postgraduate medical education quality, however, in our study, participants reported high levels of negative emotions (e.g., feeling frustrated, overwhelmed, angry, anxious, etc.) with many questioning the benefits of CBME. These negative emotions were predominantly tied to the completion and tracking of EPAs, which were seen as being burdensome and detracting from the educational value that they were supposed to add. Additionally, the structural and administrative challenges highlighted by participants indicated a critical misalignment between CBD's theoretical frameworks and its practical execution. This misalignment suggests that CBD, in its current form, might be failing to meet its primary objectives, and instead may be contributing to an overextended educational system that impedes rather than facilitates professional development. Moreover, coping strategies identified by the participants, such as seeking peer support and focusing on personal well-being, not only underscore their resilience but also signal a need for systemic change. Individual

coping strategies, while somewhat helpful, are not sustainable solutions to the systemic challenges imposed by CBD.

In conclusion, while CBD was implemented with the intention of enhancing the quality of medical education by providing more learner-centered and outcomes-based approaches to learning, our findings suggest substantial drawbacks, such as increased emotional burden and structural and administrative challenges. There needs to be ongoing evaluation and adaptation of CBD to better serve the needs of everyone involved.

TABLES AND FIGURES

Table 1: Participant characteristics.

Characteristic		***n* = 14**
Gender	Man	3
	Woman	11
Position	Residents	7*
	Faculty	6**
	Staff	1

*2 PGY1; 3 PGY2; 1 PGY3; and 1 PGY4
**Several faculty members also held postgraduate education program leadership positions; the specific educational roles are not included to prevent the identification of participants.

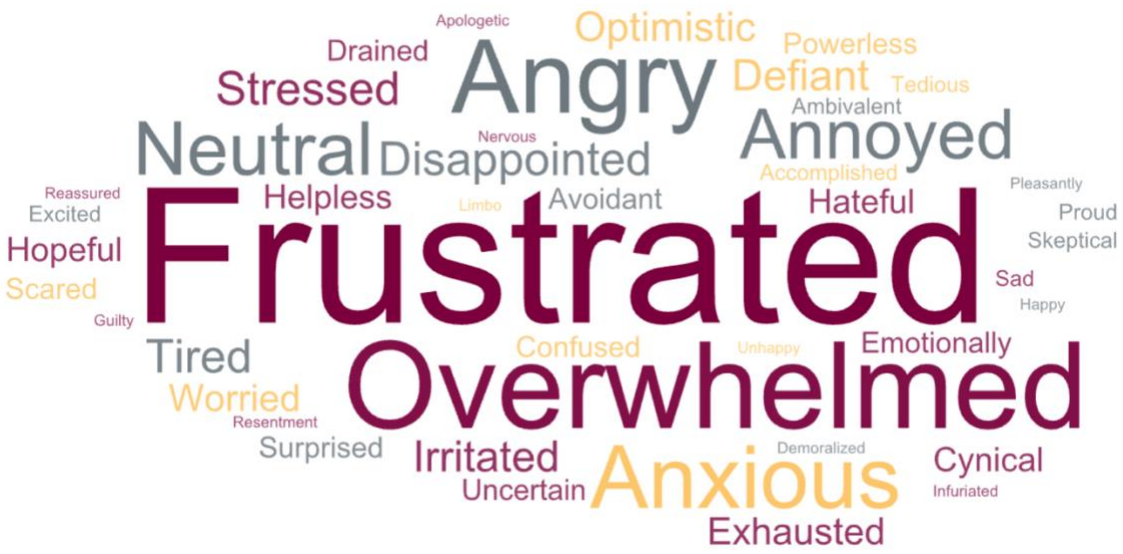

Figure 1: Word cloud consisting of the emotion words used by participants. Word size indicates frequency with which word was used. The colours were randomly generated and are not intended to convey any additional meaning.

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APPENDIX 1: INTERVIEW GUIDE

CBME Implementation: Understanding the Emotional Impacts on Postgraduate Learners, Faculty, and Administrators

Participant ID_____ Date_____
Location_____ Researcher_____
Start time_____ End time_____
Date of informed consent _____

Verbal Consent:

1. *Did you receive and review the Letter of Information?* **Y / N**
2. *Do you have any questions from the information letter that was sent earlier?* **Y / N**
3. *In this study, I will be asking you some questions about your personal experience with competency-based medical education (CBME). Please answer as honestly as you can. We will remove any identifying information from the transcripts and will use your interview responses for research purposes only, so there will be no repercussions of what you answer. You can skip any question(s) you do not wish to answer or stop the interview at any time. Also, please feel free to ask me if you have questions or want clarifications at any time. Do you understand what the study entails?* **Y / N**
4. *Do you consent to participate in the study?* **Y / N**
5. *Do you consent to being audio recorded?* **Y / N**
6. *Do you consent to being video recorded (if on Zoom)?* **Y / N**
7. *Do you consent to being directly quoted (no personal identifiers will be used)?* **Y / N**

Do you have any questions before we start?

Semi-structured interview questions:

General

1. What is your gender?
2. What is your position (resident, faculty, administrator)?
   a. For how many years have you been in your current role?
3. What kind of words come to mind when you think about your experience with CBME?
   a. What comes to mind for you when you think about these words?
   b. Why did you choose these words?
4. What situations come to mind where CBME evoked strong emotion(s) for you?
   a. Please describe this situation in as much detail as you feel comfortable sharing.
5. Are there any other emotions that come to mind when you think of CBME?
   a. Tell me about that experience.
   b. When you tell me about these emotions, would you describe them as primarily positive, primarily negative, primarily neutral, or a mix?
6. How have you responded to the emotions you have experienced as a result of CBME?
   a. Did your emotions surprise you? Why or why not? What was it about them?

7. Have you ever been in a situation where you have had to respond to other people's emotions as a result of CBME?
   a. What happened?
   b. What was this experience like for you?
   c. If not, what, if anything, would have helped you more effectively manage others' emotions?
8. When we think about strong emotions (e.g., hate, love, disgust, desire, etc.), do any of these resonate for you in your experience with CBME?

Thank you for taking the time to participate in this study on the emotional impacts of CBME. Would you be okay with answering some additional program evaluation questions related to the implementation of CBME from your perspective as a resident / faculty member / administrator?

Residents

9. What was your overall experience with CBME implementation as a resident (e.g., orientation guides, checklists for EPAs, EPA lanyard cards)?
   a. What have been the most difficult experiences in CBME implementation?
10. How has your experience been with academic coaches?
   a. Why? What makes you say that?
11. Do you think CBME is helping you achieve your learning goals?
12. Are you receiving adequate support from faculty and administrators regarding CBME?
   a. Are you receiving useful feedback on the EPA assessments?
13. Have you been able to keep up with all CBME requirements?
14. What are your thoughts about the competence committees?

Faculty

15. Do you think CBME strategies were effectively implemented? For example, orientation guides, faculty resource repository, faculty development sessions, EPA lanyard cards?
   a. Should any changes be made?
16. Do you think CBME is helping you effectively prepare resident physicians?
17. How has the transition to CBME affected your day-to-day job?
   a. Any benefits/challenges?
18. Have you been able to keep up with all CBME requirements?
   a. How are your EPA completion rates?

Administration

19. Do you think CBME strategies were effectively implemented? For example, orientation guides, faculty resource repository?
   a. Should any changes be made?
20. How has the transition to CBME affected your day-to-day job?
   a. Any benefits/challenges?

Thank you for your responses. I have a few more general questions for you before the end of the interview.

General

21. Do you have any additional thoughts or comments that we haven't yet discussed? Anything else that came to mind during the interview?

Who else would be good to speak with to get a clear understanding of the emotional impact of CBME on residents, faculty, or administrators? Is there anyone you know who may have different lived experiences regarding CBME than yourself? Can you provide contact information for this/these individual(s)?
Is it okay if we refer to you by name when we contact these individuals? **Y / N**

Would you agree to review, and confirm, our findings from your interview? **Y / N**

Thank you for your time.