Mental Health Experiences, Resources, and Challenges in Post-Graduate Medical Education
A Case Study of Resident Physicians in Ontario

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Thesis submitted to the University of Ottawa
in partial Fulfillment of the requirements for the
Master of Science in Health Systems

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Acknowledgements

I would like to first and foremost acknowledge and thank my thesis supervisor Dr. Ivy Lynn Bourgeault for her support, guidance, and encouragement over the past few years. She has been an excellent role model and set an exceptional example as a mentor. I would like to thank her for taking a chance on a passionate but naïve student with a background in Biopharmaceutical Science and Medicinal Chemistry and giving me the opportunities to learn about health care and move beyond my scope. She has moulded my professional identity into who I am today and I am honoured to have had her guidance as my mentor.

I would also like to thank my examiners, Dr. Leslie Flynn (Queen's University) and Dr. Laurent Lapierre (Telfer School of Management). I sincerely appreciate your time, comments, and recommendations for improving this research project.

I would also like to thank the administration and faculty of the MSc Health Systems program, in particular our program director Dr. Jonathan Patrick, as well as the Telfer School of Management for giving us the opportunities to learn and grow academically as well as professionally.

I would like to thank my dear parents for having faith in me and supporting me at every single step of the way in this journey. They are my foundation and give me reason to strive to be the best version of myself. Everything I accomplish is a testament to their dedication and belief in their children.

Most importantly I would like to thank my brother, for sharing his stories of residency and Fellowship and inspiring me to research in the area of resident physician mental health. This research is for you and all of the medical trainees you work with. You inspire me to excel in all that I do.

Last but definitely not the least, I would like to thank my husband for waiting patiently over our first year of marriage as I worked on this research. Your patience, support, and words of encouragement mean the world.

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The ethical components of this project received approval by the University of Ottawa Research Ethics Board. Certificates may be found in the Appendix.

This research was funded in part by a research grant from the Telfer School of Management Research Fund (SMRF) and through a trainee fellowship from the CIHR/SSHRC Partnership Development Grant, Healthy Professional Workers, PI: Ivy Bourgeault.

Abstract

Physician health is a growing issue, garnering recognition by virtue and for potential negative impact on patient care. The state of physician mental health is troubling with above average prevalence of burnout, depression, and suicidal ideation across career stages. Well-being in resident physicians requires special consideration, given their dual role as trainees and physicians.

The objectives of this study were to: (1) elucidate the mental health experiences of Ontario resident physicians, characterizing help-seeking behaviours in relation to awareness and utilization of available local and provincial services; and (2) generate knowledge that guides the development of resident-focused mental health services, informing wellness directives at the educational and organizational levels.

A provincially focused study included an environmental scan of physician health programs and services at six postgraduate faculties of medicine, as well as in-depth, experiential interviews with residents on key trends across different residency contexts, the specific circumstances facing Ontario residents, their help-seeking behaviours, and experiences with physician health services. A total of 40 interviews were conducted with resident physicians across the province of Ontario, from which a subset of 12 was selected for in-depth analysis.

This study found that resident physicians in Ontario were aware of resources for supporting their mental health but there were a number of challenges to seeking support. Barriers such as time, confidentiality, helpfulness, and impact on professional development and career trajectory were cited by participants. Factors that facilitated the use of resources included the accessibility and mode of delivery of services.

This research offers insight towards the development and dissemination of resident-specific services and wellness resources. Furthermore, the findings of this study inform strategies and interventions to improve physician well-being through medical education in the postgraduate setting in addition to health and wellness directives at the organizational level.

1 | Statement of the Problem/Introduction

Physician health is growing issue of salience that has garnered recognition in and of itself, as well as for its potential negative impact on patient care. The current state of physician mental health in particular is troubling with higher than average prevalence of psychological distress,[1-3] burnout,[4-6] depression,[3,7,8] and suicidal ideation[9,10] across all career stages.[11] Physician health and well-being is a systemic problem that is somewhat silently besieging the medical community. More recently, voices have been raising alarm bells on this issue. [12]

The international physician health literature has primarily focused on elucidating physical[13-15] and mental[3,16-22] health status in the physician population, examining experiences from a lens focused at the individual physician level. This outlook has expanded recently with a growing emphasis on adopting an organizational and system level focus. Indeed, the literature is increasingly indicating a need for cultural change in medicine[23] with emphasis on proactive, preventative,[24] and protective strategies - combining individual approaches (e.g., building resilience[25-28], mindfulness, wellness[14,29-36]) with organizational strategies[37-39] to better support physician well-being.[6,37,38,40]

While a relevant issue of growing concern in Canada, there are few studies informing the status of physician health.[19,41] This leaves Canadian health policies and directives to be informed by research from American and international sources, where health systems differ significantly. A recent national initiative has collected data on the combined health status of resident doctors and practicing physicians (Canadian Medical Association; National Physician Health Survey, 2017).[42] While notable efforts have been made to examine residents in this study[42] as well as in the past[19] – there remains a need for focused research on resident doctors.

Residency is a unique phase in the career path of a physician. Intense in duration, this period encapsulates the "development of a physician's professional identity as trainees transition from the role of learner to physician."[43] Fulfilling dual roles as trainees in postgraduate medical education as well as practicing physicians in academic settings can be overwhelming. There is a high prevalence of burnout in medical trainees (as compared to the general population) and this has professional and personal consequences.[44] Yet despite the indicators, trainees are hesitant to seek support when needed; this reluctance has been attributed to perceptions of stigma and fear of negative professional consequences.[23]

This research has undertaken a specifically target investigation of resident physician mental health experiences through a provincially focused case study in Ontario supported by a thematic review of the international literature. The goal was to provide an understanding of key

trends that exist across different residency program contexts and the specific circumstances facing Ontario-based resident physicians on their current health status, perceptions of help-seeking behaviours and experiences with physician health in medical education.

Understanding how resident physicians seek support offers insights informing the specific development of physician health and wellness resources targeting residents from different specialities and demographic backgrounds. It also informs strategies and interventions to improve physician well-being through practices in medical education in the postgraduate setting.

Research Questions

1 – What are the mental health experiences of resident doctors?

2 – What are the mental health service utilization patterns of resident doctors, their facilitators and barriers?

3 – What policies and programs could respond to the mental health service needs of resident doctors?

Research Objectives

The objectives of this research are *twofold*:

1 – To elucidate the mental health experiences and help-seeking behaviours of resident doctors in relation to awareness and utilization of these services

2 – To generate knowledge that will facilitate the development of mental health services for residents and inform health and wellness directives at the educational and organizational level more broadly

Background to the Project

Mental health is a topic of growing concern worldwide that encompasses a plethora of psychological conditions and diseases. The issue of mental health is also permeating the physician population, affecting physicians across all career stages. From medical students to resident trainees and practising physicians, there is an increasing concern with the prevalence of poor mental health in the medical community as evidenced by increasing signs of psychological distress,[1-3] burnout,[4-6,45] depression,[3,7,8] and suicidal ideation.[9,10,45] With the "growing recognition that physicians are exposed to workplace factors that increase the risk of work stress" and with the claim that "long-term exposure to high work stress can result in burnout" this is an issue that needs to be addressed. [46]

In response to emerging concerns regarding physician health, different initiatives have been undertaken by nations around the world – of note is the recent amendment to the Declaration of Geneva by the World Medical Association (WMA).[47] The Declaration is the modern adaptation of the Hippocratic Oath taken by physicians across the world. In collective international recognition of the impact of physician health, the latest amendment saw the addition of a new commitment to personal health added to the oath.[47]

> "I WILL ATTEND TO my own health, well-being, and abilities in order to provide care of the highest standard"
>
> *- 68th WMA General Assembly, Chicago, United States, October 2017* [47]

A medical workforce that is healthy, both physically and mentally, is better positioned to provide high quality of care to patients. Healthcare delivery is rarely a straightforward task; there are a multitude of obstacles that can challenge the daily practices of healthcare personnel. From a large volume of patients seeking care to limited resources, the reality of providing care can be rather complex.[45] For physicians who often enter the profession with altruistic intentions, these demands can be taxing physically, emotionally, and socially. Long shifts spent caring for ailing patients coupled with limited personal time can affect one's sense of well-being. Roman and Prevost note that physicians are "becoming increasingly dissatisfied" and "physicians are experiencing more and more work-related stress."[45] It is necessary to better understand and research the unique challenges faced by physicians in the workplace.

The physician workforce comprises the second largest profession in the health workforce in Canada. Given it is one of the key players in health care delivery, diminished personal well-being in the form of professional dissatisfaction and burnout can have an economic impact on health care organizations. Shanafelt et al. present the 'business case' to

address physician burnout – highlighting the impact of "costs associated with turnover, lost revenue associated with decreased productivity, as well as financial risk and threats to the organization's long-term viability due to the relationship between burnout and lower quality of care, decreased patient satisfaction, and problems with patient safety."[48] In the interest of maintaining a healthy physician workforce - finding equilibrium lies in both the individual health care workers and the organizations and health systems they work in.

As an emerging field in medicine and medical education, physician health is gaining prominence in the domains of research, health policy, and medical education. Canadian medical schools, medical associations, accreditation bodies and several organizations have taken initiative to support physicians' personal physical and mental health.[43,45,49,50]

Among the medical personnel that constitute the health workforce, trainees are particularly vulnerable to the challenges posed in health care delivery. Resident physicians are an interesting subset of the medical professional population. As newly licenced MD's, they have harnessed the core foundations of medical knowledge through their undergraduate medical education yet still have to learn the requisite skills and competencies to practice as independently licensed physicians. During this transitional period from learner to physician, residents fulfill dual roles as trainees and service providers.[43]

This dual transitional role of resident physicians presents a population that is receptive to learning as they build their identities as physicians. While the principal goal of medical education is to graduate well-rounded and competent physicians, the manner in which trainees engage towards attaining this objective may inadvertently hinder their personal well-being.[9,17] Residency is an intense and defining period of training in a physician's life that ultimately shapes their behaviours and practices (both professionally and personally). Providing support and educating physicians in health and wellness methods at this early point in their careers instills a sense of responsibility in caring for personal health that can support residents into their practicing years as independent physicians.

The overall goal of this research was to understand the mental health experiences of the resident doctor population as well as their current levels of awareness and utilization of programs and services across the province of Ontario. This study helps inform promising practices in resident physician health going forward through the conceptualization and design of physician health and wellness directives at the educational and organizational level.

2 | A Review of the Literature/ State of Knowledge

The Field of Physician Health

Physician health is an emerging field in medicine with research spanning only a few short decades, even though the concept has spanned centuries. As a profession, medicine necessitates a high level of commitment and compassion from physicians - hence since ancient times physicians have been cautioned against lapsing in caring for their personal health. As far back as 200 AD, Greek physician Galen noted "that physician will hardly be thought very careful of the health of his patients if he neglects his own."[51] The proverb "physician heal thyself"[51] as well as the notion of "wounded healers"[50,52] have circulated in the history of physician health. The modern beginnings in the field of physician health date to the mid-20th century.[53]

In the 1960's, researchers found that physician misuse of alcohol and drugs were "at a rate that suggested that these problems – and their attendant adverse effects on patient care – were more widespread than previously thought."[53] While an issue of concern, there was consensus at the time that physicians were not necessarily ill, but rather were impaired. In order to protect the societal investment in physicians, the first rehabilitation programs were founded in an effort to establish a regulatory structure for physicians.[53] Involvement in these physician health programs allowed physicians to seek help and have a chance to recover while preserving their licensure to practice.[53] Through the 1970's and 80's these physician health programs facilitated the recovery of physicians impaired by alcoholism and substance use disorders. With greater awareness, use of these programs grew in the US and there was a higher appreciation for the health and wellness problems affecting the physician population. In addition to the use of alcohol and prescription drugs, mental disorders such as depression and bipolar disorder, behavioural problems (such as disruptive behaviour, bullying and harassment) as well as physical impairment were treated through these physician health programs.[53]

The scope of physician health programs has broadened even further over the last decade in response to the growing "wellness movement" and services in self-care, prevention, and health promotion have been incorporated.[53] While physician health programs are an invaluable service and hold an important presence in the physician health arena, hesitance to seek and utilize these services remains key. In the past, these programs provided a means of support and rehabilitation for issues that visibly affected physicians. Mental well-being is characteristically an invisible condition and can remain hidden and untreated making it difficult to assess the exact status of mental health among the physician population. There is a growing collection of research studies over the last 15 years that examines the mental health and well-being of medical trainees and physicians in an effort to better understand the increasing rates

of job dissatisfaction[54-56] and mental health experiences of physicians. The following sections will cover an overview of the main themes in the physician mental health literature.

Physician Mental Health

Stress and Burnout

There is growing recognition that physicians are exposed to workplace factors (such as long work hours, work overload, sleep deprivation, work conflicts and disruptive behaviour) that increase their risk of negative stress and fatigue; research indicates that "long-term exposure to high work stress can result in burnout."[46] In a study by Murray et al. (2016) examining the health of physicians practicing in primary healthcare, preventative measures and interventions to protect physicians' mental health and well-being amongst workforce and workload issues is discussed.[57] The authors list increasing volume and complexity of clinical work and concomitant rising administrative and bureaucratic burden as factors that are causing rising levels of work-related stress and falling job satisfaction among physicians.[57] In a recent review of organizational interventions by Shanafelt & Noseworthy the authors highlight nine organizational strategies that can be used by executive leadership in reducing burnout and promoting engagement in physicians.[38] Furthermore, Ward and Outram (2016) emphasize the need for culture change in medicine, citing that "in some arenas, a subtle, hidden and until recently undiscussed toxic culture persists, which is clearly taking its toll on our vulnerable colleagues contributing to burnout and mental ill-health."[58] The culture of medicine is in part affected by the nature of the work and practice environments that are inherent to the profession (such as working in an emotionally charged environment and being responsible for the health of patients) but there are also more social and cultural stressors such as "bullying, harassment, sexism and racism" that persist within the practice environment.[58]

Another issue of significance indicative of the levels of psychological distress in the physician population is burnout. Burnout is defined as "a [occupational] syndrome consisting of three dimensions: emotional exhaustion, depersonalization and low personal accomplishment."[46,59] Preliminary estimates regarding the "cost of burnout on early retirement and reduction in clinical hours of practicing physicians" in Canada were "estimated to be $213.1 million ($185.2 million due to early retirement and $27.9 million due to reduced clinical hours)."[59] A further breakdown reveals "family physicians accounted for 58.8% of the burnout costs, followed by surgeons for 24.6% and other specialists for 16.6%."[59] With psychological and economic implications, research on burnout in physicians is an emerging topic in health human resources with potential for further development.

Many articles from the physician burnout literature communicate the significance of the problem on the well-being of the physicians, highlighting the prevalence of the condition in the health workforce.[7,9,60-64] In study by Boudreau et al. a survey measuring burnout in Canadian physicians was administered as a part of the Canadian Medical Association Physician Resource Questionnaire.[18] It was reported that "overall, 45.7% of Canadian physicians … were classified as being in the advanced phases of burnout."[18] This study concluded that "burnout is a fact of life for physicians and we need to take an active role in looking after our health providers." [18]

The issue of mental health is important to discuss and the prevalence of studies of psychological distress bring to light the severity of the issue in the physician population. Furthermore, the issue of mental health is of a sensitive nature and there is a high degree of stigma associated with mental illness.[65-67] Physicians are held to certain professional and societal expectations and taking into account personal characteristics and expectations of oneself, it can be challenging for physicians to acknowledge and disclose limitations and seek help for mental well-being.[68] This reluctance to seek help in combination with the intense lifestyle and demanding work environments allows mental health issues to propagate in the physician population. [65,66]

Substance Use

Continuing to work while psychologically distressed can be difficult. Historically some physicians have turned towards substance use to help cope.[53] Substance use remains prevalent in the physician population even today. A national study of substance use disorders in American physicians found that alcohol dependence was a significant problem with 12.9% male and 21.4% female physicians meeting diagnostic criteria.[69] Second, use of prescription drugs (such as opiates and benzodiazepines) have also been noted.[45] Conversely, it is interesting to note that physicians were found to "to be less inclined to consume illicit drugs such as cocaine, marijuana, hallucinogens or heroin."[45] Similar to other mental health issues, substance use is another largely invisible problem within the physician population. Physicians have been noted to make significant efforts to conceal their addiction.[45] Roman and Prevost note that "only rarely will they show typical signs of intoxication in the workplace, and even then will attribute them to stress or an excessive workload." [45]

Anxiety, Depression and Suicide

Physicians face issues of anxiety, depression, and suicide in complex ways. Although the rate of depression among physicians is reported to be about the same as the general

population[70] with 13% prevalence in male physicians and 20% in female physicians,[71] there are several other correlating factors that can be predictive of depression, such as "difficult relationships with senior doctors, staff and / or patients, lack of sleep, issues dealing with death, making mistakes, loneliness, 24-hour responsibility and self-criticism" present in the work and practice environment.[72] In their study of the impact of depression on the professional status and mental health care of physicians , Schwenk et al. (2008) found that 81% of physicians surveyed report that depression increased their professional stress level.[73]

Suicide is another serious issue within the physician population and can be difficult to predict and prevent. In a study by Center et al. examining the proportional mortality ratio of physicians and other professionals in the American context, suicide was a major cause of death in the physician population with a ratio nearly three times higher than the general population in both male and female physicians.[74] Conversely Wallace et al. (2009) note that suicide rates are estimated to be six times greater for physicians when compared to the general population (cardiovascular mortality is also higher than average).[35] Although the link between suicide and workplace pressures is unclear, each year in the United States approximately 300-400 physicians die by suicide and the rate is not decreasing. [75] American data indicates that suicide is the only cause of death where physicians have a higher rate than that of the general population.

Suicide has been linked to multiple risk factors converging into a final event with untreated or inadequately treated mental health conditions being identified as an important factor. [76] In a study by Schernhammer et al. "physicians who took their lives were less likely to be receiving mental health treatment compared with non-physicians who took their lives even though depression was found to be a significant risk factor at approximately the same rate in both groups."[76,77] There is also a gender dimension identified by Schernhammer et al. in the study participants as well, with "suicide rate among male physicians is 1.41 times higher than the general male population. And among female physicians, the relative risk is even more pronounced — 2.27 times greater than the general female population."[76,77]

There are very limited data available on physician suicides in Canada – data on suicidal ideation was only recently collected nationally by the Canadian Medical Association. The recent National Physician Health Survey (2017) reports that "suicidal ideation among physicians (including residents) has been recently reported at 19% (lifetime) and 9% (in the last year)."[42,78]

Resident Physician Mental Health

The literature on mental health experiences of resident physicians represents a much smaller subset of the physician health literature. Mental health issues such as burnout, stress, and depression have been studied and discussed in the resident population. Conversely there is little information regarding substance use and suicides within the resident physician population.

Stress, Burnout, and Depression

The effects of burnout can be observed in physicians even prior to the outset of their careers – physicians in residency training were the subject of interest in several different studies. [79-82] During residency, physicians in training are exposed to "stressors that range from long work hours to sleep deprivation," and it was identified that an environment that is stressful and conducive to burnout "can lead to an increased rate of serious medical errors and can influence all aspects of a resident's life."[83] In a study of resident physicians that examined the degree of burnout in different specialities in association with primary language and cultural background, it was found that the different dimensions of burnout were more prevalent in different specialities. [83] This study examined external social aspects that could affect resident burnout and they identified a "statistically significant relationship between burnout and residents' race/ethnicity, primary language, and cultural background."[83] Preliminary results from the 2017 National Physician Health Survey (CMA) report the prevalence of high burnout rates in 38% of residents compared to 29% in physicians.[42,78]

Common stressors perceived by resident physicians include: time pressures, intimidation, and harassment.[19] In their study of Canadian residents, Cohen et al. found more than half (52%) of residents experienced intimidation and harassment with 39% citing their training status as the perceived source while 18% felt gender was the cause for the intimidation or harassment. [19] Reporting of intimidation and harassment appears to be on the rise with results of a 2012 National Resident Survey indicating that "more than seven in ten (72.9%) residents reported behaviour from others that made them feel diminished during their residency."[84] Resident physicians face similar experiences as practicing physicians in their work and practice environment and also bear the burden of additional stress from the training environment.

Rates of depression are also higher in medical students and residents compared to the general population.[85-87] Cohen and Patten report that 17% of Canadian resident physicians rate

their mental health as fair or poor, which they note, is double the rate for the general population.[16] In their systematic review and meta-analysis of depression and depressive symptoms in resident physicians, Mata et al. report an overall pooled prevalence of depression or depressive symptoms to be 28.8%.[88] From the Canadian context, the results from the recent National Physician Health Survey (CMA, 2017) found that "49% of residents and 33% of physicians screened positive for depression."[42,78] Depression is not limited the personal well-being of resident physicians – depressed residents were observed to cause 6.2 times more patient safety incidents than did their non-depressed peers.[89]

Dyrbye et al. (2006) conducted a systematic review of depression, anxiety and other psychological distress indicators among American and Canadian medical students.[3] They found a high prevalence of depression and anxiety, which was consistently higher than rates for the general population (age matched). The rates were higher for female students than their male counterparts. Dyrbye and colleagues note that the nature and extent of 'distress' and mental health issues in medical school may be contributing to burnout for the students later in their careers as residents and physicians. It is not known, however, if pre-existing mental health issues are contributing factors to the high levels of distress noted in the research. Several studies note that student distress may influence professional development, negatively impact academic performance, lead to substance use, and lead to withdrawal from medical school. It may also negatively affect patient care. [87]

The data and statistics of resident mental health are distressing. With higher rates of burnout and depression than practicing physicians in addition to stressors in the training environment, resident physicians undoubtedly require support and programs.

Gender and Physician Health

Research on gender specific issues is an important aspect to consider in any profession and especially so with the changing ratio of female and male physicians in medicine (in light of the growing feminization of the profession). [§,90] In a study by Adams et al. it was reported that female physicians were significantly more likely to report suffering from depression, but when seeking help were more likely turn to family and friends or a counsellor for support rather than turn to colleagues.[91] Another study indicated similar findings with the analysis showing that the willingness to disclose mental health issues was positively associated with the female gender.[92] While the willingness to report and disclose mental health is present among female physicians

[1§] Female physicians comprised 39.9% of the licenced Canadian physician workforce, an increase of 23.7% over five years (from 2011) as compared to an increase of 7.3% in male physicians.

there is a disconnect with their actions with regards to help seeking behaviour – Gold et al. highlight these discrepancies in their study examining female physicians on their opinions and experiences on mental health diagnosis, treatment, and reporting." [67,91]

Physician Health Programs, Policies, and Services

Canadian Physician Health Programs (PHPs) are available for physicians, residents, medical students, and their families in each of the ten provinces. Each province varies in the magnitude and range of services provided and there is diversity in the structure and delivery of these programs. There are also programs and services for suicide prevention offered at the national level in Canada through the Canadian Association for Suicide Prevention which is similar to the USA with its American Foundation for Suicide Prevention. These programs are available for the general public and preliminary scans of the peer-reviewed and grey literature reveal little about resources and services specific to suicide prevention in the physician and resident populations.

The peer-reviewed literature on treatment and preventative approaches in physician health is largely focused on studies examining individual interventions (such as mindfulness, resiliency etc.) with programs and policies centered on helping physicians at a personal level. Individual interventions range from short programs to alleviate work pressure[93] to more intensive, full-time programs for addictions.[94] Interventions to prevent and reduce burnout and stress such as mindfulness, stress management, and small group discussions have been reported as "effective approaches to reduce burnout domain scores". [93]

West et al. report that structural interventions, such as duty hour limitations have also been effective. [93] Interventions for stress and burnout are offered through the organizations and institutions that physicians work at or through state-level or provincial programs. These state/provincial level programs also perform monitoring for physicians with substance use, and ensure that affected physicians "ensure compliance with treatment, ongoing remission of illness, and patient safety."[94]

While there has been research on interventions in physicians, there remains a great deal yet to be understood. West et al. note that the "effect of individual-focused and structural or organizational approaches in combination has not been studied, and which classes of interventions might be most effective for specific groups of physicians remains unknown". [93] Furthermore, "further research is needed to clarify optimal approaches to development of interventions." [93] Panagioti et al. found that "intervention programs for burnout in physicians

were associated with small benefits that may be boosted by adoption of organization-directed approaches."[6] Several avenues and opportunities of further research have been identified and there is a clear need for further research regarding policies, programs, and interventions regarding physician and resident health.

Resident Wellness Programs

Physician health services are often directed towards physicians at all career stages (medical students, resident physicians, and practicing physicians) – however, medical students and residents are further presented with unique opportunities for early career discussion on mental health and well-being though through their educational curriculum. Both undergraduate and postgraduate education in Canada involve some degree of lessons, seminars, and programs to initiate awareness of mental health.[43] The structure of these programs is diverse and little is known of trainees' awareness and utilization of these programs.

There are also initiatives at the national level for resident physicians through the Resident Doctors of Canada (RDoC) Resiliency Curriculum which was launched recently in 2016.[95] The curriculum involves peer-to-peer delivery of workshops and techniques for building resiliency during residency training.[95] In its initial stages, the utilization and impact of this initiative is undetermined but holds potential. Overall, the preliminary search of the peer reviewed literature reveals sparse information on resident mental health and well-being programs and there is further opportunity for research in this area.

Summary of State of Knowledge

In sum, the physician health literature currently captures the mental health experiences of individual physicians throughout different career stages. Different mental health issues and conditions and their attendant effects on patient safety, quality of care, and work productivity have been explored. The key knowledge gaps in examining physician mental health currently exist at the organizational and systems level with current research more theoretical and conceptual in nature with empirical studies still in the nascent stages. While programs and policies for mental health are present, they vary in their structure and delivery of services across different career stages. Studies in the Canadian context, particularly at the educational, organizational, and systems levels for those in post-graduate medical education are in the minority. As such, it is important to elucidate the current mental health experiences of resident physicians and reflect and research their experiences and utilization of mental health services and programs. It is these critical knowledge gaps that this study intends to address.

3 | Methodology

A two phase multi-method Ontario-focused case study approach was taken to address the key research questions, informed by the National Academy of Medicine Clinician Well-Being and Resilience Framework.[96]

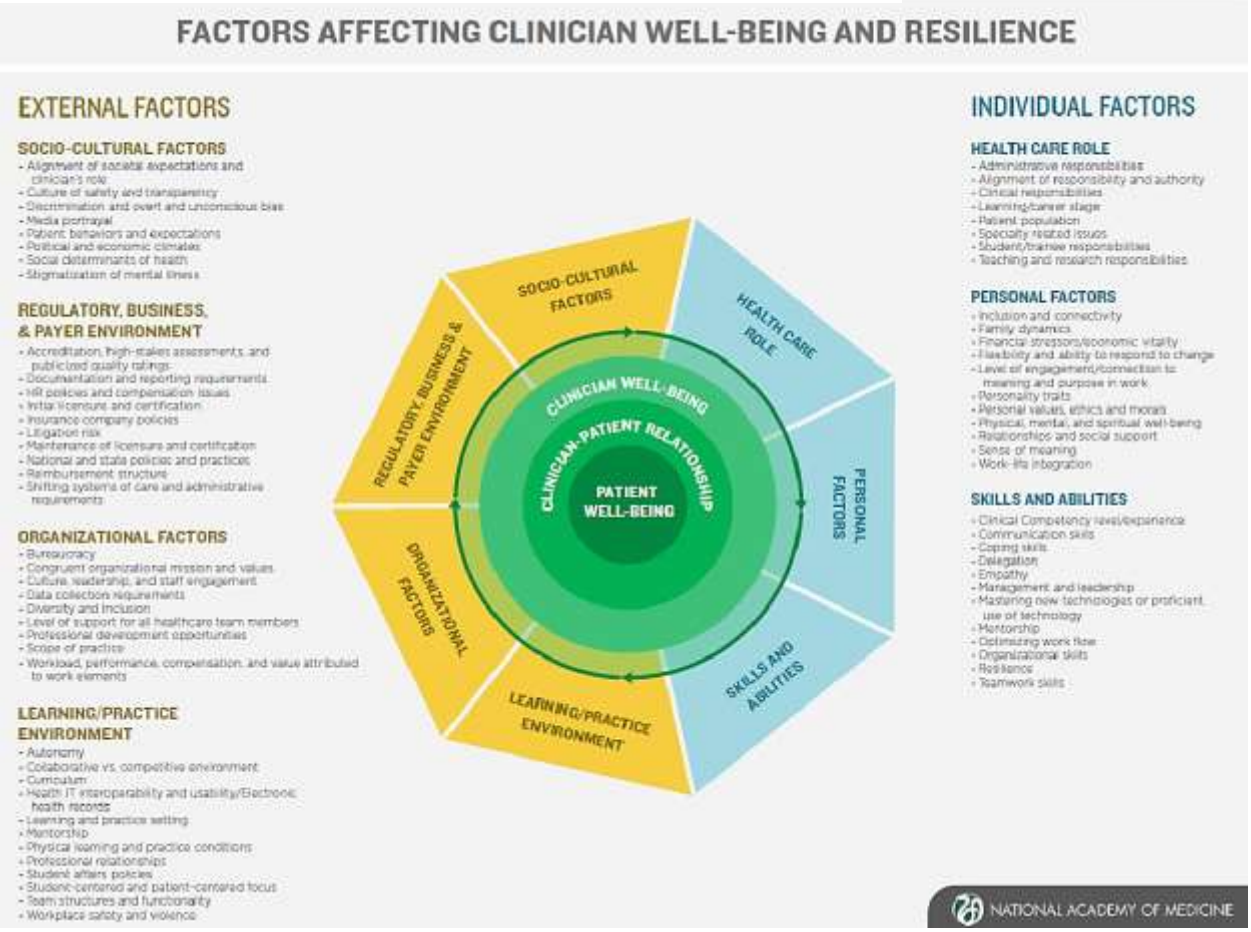
Conceptual Framework

I chose to frame this study with a combined micro-meso-macro systems lens - examining mental health experiences and availability of resources from an individual-organizational-health system viewpoint. This organizational schema would help to capture and explore the individual mental health experiences of resident physicians, the organizational challenges that affected them as well as the wellness resources available to them and systems level factors that had implications on their well-being.

Around the time this research project was proposed, the National Academy of Medicine (NAM) released a conceptual model of factors affecting clinician well-being and resilience [96] (Figure 1). The structure and approach of my research project fit very nicely with the NAM framework. The central image of the framework takes one of the objectives of the *triple aim*[97] of healthcare - patient well-being, and juxtaposes a fourth objective of clinician well-being (the quadruple aim).[97] The clinician-patient relationship links the core goal of patient well-being with the quadruple aim of clinical well-being. Surrounding the core model are seven factors that influence clinician well-being and resilience. There are four external factors and three individual factors - taking into consideration the individual-organizational-systems level factors that affect clinician well-being. [97]

This model was particularly suited as a conceptual framework for this study as it incorporates the learning/practice environment, organizational factors, health care role, and personal factors as elements that can affect clinical well-being.

Figure 1: National Academy of Medicine Conceptual Framework [96]



A Provincial Case Study

A case study research design outlined by Yin (2009) was used to guide the design of the case study for this research project.[98] The largely qualitative case study methodology has been described as "an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources."[99] To date, there are few studies that employ qualitative methodologies [100-102] to explore mental health experiences of resident physicians despite the nature of mental health experiences being highly personalized and unique to each individual and situation. The use of a qualitative approach can provide a deeper understanding of a phenomenon that may not necessarily be appropriately addressed through quantitative measurement.[103]

Case Selection

The province of Ontario was selected as the sample population for the case study as it is one of the more population dense provinces of Canada and provided a larger and more diverse sample population than any other province or territory.[104] Furthermore, given that resident

physicians are the interest of this study, 6 of the 17 faculties of medicine are located in Ontario (the highest number in any Canadian province) – with nearly 43% of the Canadian resident physician population training in Ontario alone (6,985 Ontario resident trainees of 16,334 Canadian resident trainees).[105]

By focusing on the province of Ontario, this case study presented the unique opportunity to examine physician health experiences of resident doctors from a large and diverse province and compare and contrast service utilization at the provincial level as well as among six faculties of post-graduate medical education. Each of the faculties of medicine served as smaller case studies embedded within a larger provincial case study. The different faculties of medicine are unique in their size, geographical location (large urban/small urban/rural), teaching philosophy, and language (English/French).

By examining the mental health experiences of residents within the current system, this study aimed to elucidate service utilization among resident doctors in Ontario and characterize the help-seeking behaviours of resident doctors in relation to awareness and utilization of these services. This can generate knowledge that will facilitate the development of mental health services for residents and inform health and wellness directives at the educational and organizational level more broadly.

Case Study Design

This study's stated objectives and description best matches the criteria for a collective case study design. Yin describes this design as having the overarching goal of studying one issue or concern but using multiple case studies to illustrate the issue such as selecting to "study several programs from several research sites."[98] By electing to study residents' training in the six faculties of medicine it was possible to examine the unique experiences of residents from the different post graduate training programs while focusing on identifying the common theme of mental health experiences and service utilization across the different programs.

In order to establish a holistic understanding of the mental health experiences of resident doctors in Canada, a multipronged approach was used in this case study. The research plan for the case study involved: (1) an environmental scan of the six faculties of medicine in Ontario (2) interviews with resident doctors in these programs. Although an additional third phase of interviews with key stakeholders in postgraduate medical education was proposed, it was not undertaken for reasons of recruitment difficulties.

Phase 1: Environmental Scan of Resident Physician Health Service Programs

Environmental scans are increasingly utilized "to provide evidence about the directions of an organization."[106] In order to support their trainees, the postgraduate medical programs at the six faculties of medicine in Ontario have programs and services available for their residents.

The environmental scan maps the current landscape of mental health and wellness programs offered for residents through a parallel, iterative process. The first step involved the use of search engines to explore the resources available to residents through a preliminary, basic internet search. Publically available information about physician health and well-being resources, programs and services available to residents at the provincial level, as well as at the individual faculty of medicine level were sought. The individual websites for the six different faculties of medicine as well as provincial resident organizations were thoroughly searched (through backward and forward reference searching).

A second step of the environmental scan involved contacting the post graduate medical education offices at the six faculties of medicine (University of Ottawa, McMaster University, University of Toronto, Western University, Queens University, and the Northern Ontario School of Medicine). I made initial contact through email to the postgraduate offices at each faculty of medicine with an inquiry about the services provided for mental health and well-being for residents. While I initially received responses, communication tapered off and I was not able to interact directly with personnel at the post-graduate faculty of medicine Wellness Offices in order to gain a better sense of program structure and delivery as well as services provided.

Furthermore, key informant interviews were requested from physician health program administrators/directors. Despite numerous efforts, recruitment was a challenge and I was able to complete only one interview with a program director at one of the PGME Wellness offices. This individual actively provided support to residents and was able to speak to the support provided to residents on a number of levels (academic difficulties, personal issues, etc.) through their program. The interview was informal (with a 2-3 guiding questions – see Appendix A) with the primary purpose focused on attaining more information of program structure and delivery. While it was recognized that there are stakeholders that may be affected by the issues permeating in this population and hold interest in examining mental health experiences and service utilization it was difficult to recruit them for interviews. For example, individuals involved in the delivery of mental health services to residents, physician health experts, physician educators and leaders could have offered insight from an outside perspective that is still associated within the sphere of residency training and resident experiences.

The key informant interview was recorded (with permission) and detailed notes were taken. As there was only one key informant interview, it was transcribed, but key information and themes extracted from the transcript or detailed notes taken during and after the interviews were not included in the results as there was not enough data to collate and organize by the different faculties of medicine.

In addition to examining services at the faculty of medicine level, data regarding the services provided to residents at the broader provincial level were also collected. Provincial organizations, such as the Ontario Medical Association Physician Health Program (OMA PHP) as well the Professional Association of Residents of Ontario (PARO) was included in the environmental scan with regards to their provision of physician health services for resident doctors.

The environmental scan contains a summary of physician health programs and services available to resident doctors training in Ontario. This section of the results consists of the findings from the internet search and information from the postgraduate medical office/physician health program and provincial health programs. The most apparent value of the environmental scan is for residents seeking help for mental health services. However, the results of the environmental scan are potentially of interest to faculties of medicine and policy makers as well. Different faculties of medicine could benefit from the additional knowledge of how physician health services are delivered at other post graduate programs. Policy makers may find of interest the discrepancy between information available publicly through internet searches versus the information from postgraduate faculties directly (which has more rich and robust information available internally) – this could facilitate an opening of the conversation regarding the awareness and subsequent utilization of physician health services by resident doctors in the province.

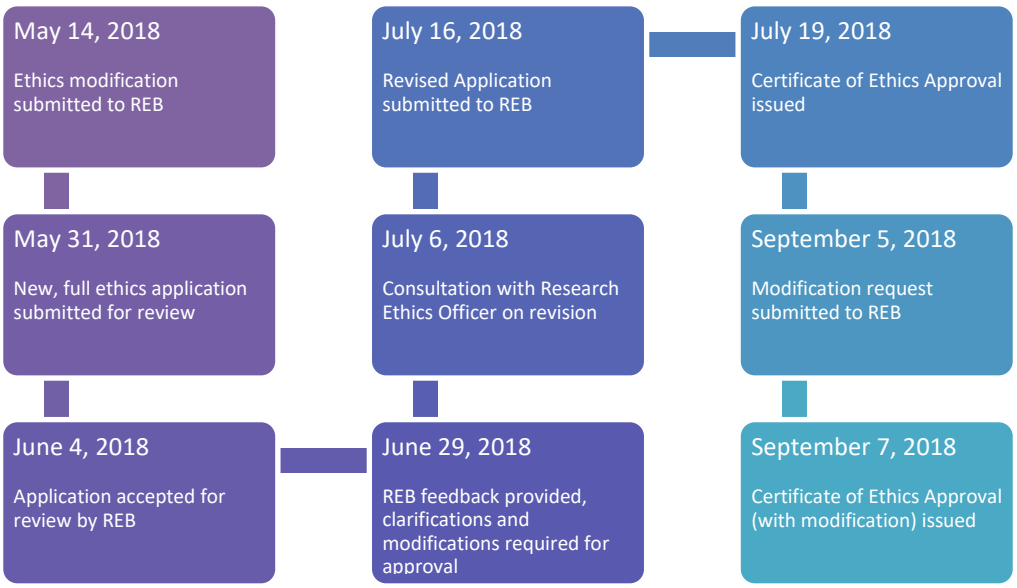
Phase 2: Resident Interviews

Ethics

The ethical components of this research project received approval from the University of Ottawa Research Ethics Board on July 19, 2018. (Appendix C)

There was difficulty initially in recruiting participants for interviews. I required an alternate recruitment strategy (see section on recruitment below) and subsequently sent a modification request to the Research Ethics Office on September 5, 2018. The request was accepted the same day and approval was granted on September 7, 2018 with a revised Ethics Approval Certificate (see Figure 2 below).

Figure 2: University of Ottawa Ethics Approval Timeline



Data collection and sampling

Purposeful Sampling Strategy

Purposeful sampling was used to recruit resident doctors training in six postgraduate medical programs in Ontario (our six case studies). The target for data sampling was to recruit a minimum of 12 resident doctors (two from each of the six faculties of medicine - with efforts to ensure gender balance).

Gaining access and building rapport

Access to the resident doctor population was sought through three primary avenues. First, access to the resident doctor population in Ontario was requested through the Professional Association of Residents of Ontario (PARO). This organization is the primary voice for residents in the province and was identified as an ideal source to connect with to request access to residents. Another avenue of access identified was through postgraduate faculties of medicine – each of the six faculties in Ontario were contacted and requested for access to residents through recruitment emails/posters. Finally, the use of social media such as Twitter was utilized to issue a call for Ontario residents to participants in this study – most postgraduate offices hold a social media presence that can be used to connect with residents though mainstream social media avenues.

Rapport was established with participants through a clear and detailed consent and disclosure process. Given that mental health is a highly stigmatized issue for those in the medical profession (especially trainees) it was important to specifically establish that confidentiality would be protected in this study. [23,107]

Collecting data

Following informed consent, participants were individually engaged in semi-structured interviews (telephone based or face-to-face meeting) with the primary researcher. For interviews conducted in person, efforts were made to ensure a private and quiet space for residents. All interviews were audio-recorded with an intended length of 30-60 minutes and followed a prepared interview guide (see Appendix B). The interview guide provided structure and direction providing the opportunity to explore and address the research questions in depth with semi-structured format also allowing for some flexibility in order to further explore and discuss relevant themes. Probes and follow up questions were used as per the researcher's discretion when needed to expand upon a participant's response and increase the richness of the data collected. [108]

Storing Data

Confidentiality of all collected data was ensured at all times. Recordings of interviews and transcripts were stored in a protected file on the primary researcher's computer with a secondary back-up on a protected folder in a flash drive. All electronic files of interviews and transcripts were labelled with pseudonyms with a paper-record of names and corresponding pseudonyms kept separate. The audio files were available only to the primary researcher and one other individual transcribing the interviews.

Recruitment & Reaching Saturation

In the thesis proposal, three recruitment strategies were outlined. The primary plan of action was to approach the Professional Association of Residents of Ontario (PARO) to request access to the resident doctor population in Ontario. This organization is the primary voice for residents in the province and was identified as an ideal source to connect with to request access to residents. I approached PARO in late July/early August 2018 with information about this thesis research project and a request to share messaging with resident physicians in Ontario. The following reply was provided with the recommendation to contact Post Graduate Medical Education (PGME) offices at the six medical schools in Ontario:

> *"PARO receives many requests to provide assistance and/or collaborate on research projects given that all of our members are required to do research projects. Since we cannot accommodate such a large number of requests, nor have the resources to assess*

them, we have a policy of declining all. Also, PARO's listserv policy is such that it can only be used for PARO activities."

Pursuant to this response from PARO, I created a communication plan to request PGME offices for their support in accessing resident physicians. Given that PGME offices are quite large, vary from medical school to medical school, and have various departments I needed to identify the correct individual to approach with our research project in order to gain access to the resident physician population at their respective schools. In reviewing the organizational structure of the PGME offices, I identified "Program Managers" to contact with regards to resident recruitment for our research purposes. Generally, the role of program manager oversees the operations of the PGME offices and assists/reports to the Postgraduate Dean of Medicine. These individuals are in an optimal position to answer research requests and have access to the necessary figures of authority to pass the thesis project information forward. I contacted program managers at six medical schools in Ontario (McMaster University, Northern Ontario School of Medicine, Queen's University, University of Ottawa, University of Toronto, University of Western Ontario). Figure 3 summarizes the responses from each program manager and the level of access granted to recruiting resident physicians.

Figure 3: Summary of Recruitment Permissions from Post-Graduate Medical Education Faculties

McMaster University

- Contact initiated on August 13, 2018.
- The thesis research project information/materials had to approved by a larger committee in order to recruit McMaster resident physicians. A package containing [(1) One page project summary, (2) uOttawa Research ethics certificate (3) Interviews: a) Letter of information, b) Invitation, c) Poster (4) Focus Groups: a) Letter of information, b) Invitation, c) Poster] was sent to the program manager
- The committee met Wednesday, September 11, 2018 and on September 14, 2018 I was informed that Postgraduate Medical Education Deans approved the circulation of the study.
- An initial invitation email was sent to McMaster Residents on Monday, September 17th with a reminder email on Monday, September 24th.

Northern Ontario School of Medicine

- Contact initiated on August 13, 2018. I received an initial reply from the PGME office on August 13 requesting further information. After providing information there was a lull in contact.
- Support was provided by thesis supervisor (Dr. Ivy Bourgeault) and a contact at NOSM on September 26, 2018. Subsequent to this exchange, information on this thesis research project was circulated in "The Script: NOSM's Postgraduate Education Bulletin" and sent directly by programs on September 27, 2018

Queen's University

- Contact initiated on August 13, 2018.
- The PGME office indicated that due to the large number of research requests, only Postgraduate Medical Education related communication could be sent to residents from their office

University of Ottawa

- I reached out to the PGME manager as well as the PGME communications coordinator. We were initially deferred to the uOttawa Wellness Office as well as the PARO site chair at uOttawa. After a formal request and given that we presented a uOttawa REB certificate, we were able to garner support. The uOttawa PGME shared messaging with the Program Administrators encouraging them to share the information with their residents.

University of Toronto

- Email communication initiated August 13, 2018. Due to the size of the U of T PGME office, it was difficult to identify a suitable individual to contact. We were eventually directed to email the PGME coordinator who then forwarded to the Physician Health Program director. Access to the resident physician population was deferred to the University of Toronto Ethics board which directed to the Office of the Provost and Vice- Provost. By this time, we had several University of Toronto volunteers that were willing to participate in the study

University of Western Ontario

- Email communication initiated August 13, 2018. We received a reply on August 15 requesting an ethics certificate.
- A small package was prepared for dissemination to residents at Western. This message was sent to approximately 780 residents on Thursday, August 30, 2018.

Resident Doctors of Canada

Through an existing partnership with the Resident Doctors of Canada (RDoC), the national voice of resident physicians in the country, on a related project I had fostered a connection with a program coordinator who worked directly with resident physicians. In lieu of support from PARO (the provincial housestaff organization of RDoC) I requested some support from RDoC. Once reviewing the project information and having a subsequent in-person meeting, RDoC decided to provide support for this research project by connecting me with individual resident physicians in Ontario. Recruitment materials (letter of information, recruitment poster) were shared with residents via an email message. I followed up with the residents contacted to schedule interviews and was successfully able to recruit three participants of the six residents contacted.

Twitter

The social media platform Twitter was also used as an avenue to connect with resident physicians. I posted an initial 'tweet' on August 1, 2018 with an attached picture of a recruitment poster using hashtags (i.e. #ResidentWellness) as well as tags to Twitter accounts of PGME's to promote the tweet. This first tweet was 'retweeted' 14 times and 'liked' 9 times with 7,331 'impressions' (as of March 26, 2019).

This initial tweet unfortunately did not elicit any volunteers. The recruitment poster was reformatted and a second tweet posted on August 20, 2018 (using hashtags and tags to PGME accounts). This tweet was 'retweeted 8 times' and 'liked' 9 times. This second tweet had 2527 'impressions' (as of March 26, 2019).

While Twitter was a unique platform to advertise this research study, I did not actively track whether volunteers approached me to participate in the study based on their exposure to a tweet or retweet or messaging from their PGME or though snowball sampling through information shared by a friend or colleague. The success rate of this recruitment is difficult to validate.

Snowball Recruitment

Initial recruitment of participants was fairly slow. This could be in part that there was a time lag in communications with PGME offices from initial point of contact to seeking approval and support. In order to mitigate this initial slack in recruitment I asked participants verbally at the end of the interview if they could help spread the message of this study with their friends and colleagues. If a verbal consent was given, I followed up after the interview with a thank you note, honorarium, and further recruitment materials.

Participants shared the news of this study through several avenues. Some forwarded the email to colleagues in their same program or verbally encouraged friends and acquaintances to participate. One participant posted information about the study on a personal Facebook group from medical school. Others tweeted on Twitter that they had participated in the study and encouraged those in their network to participate.

This snowball sampling method proved to be quite successful. A total of 81 resident physicians volunteered for the study and ultimately 40 resident physicians were interviewed from August 28th, 2018 to November 29th, 2018. Several participants identified that they learned of the study from a friend or colleague. This however also led to some disproportionately higher representation from the same school or specialty.

Data Analysis

A thematic coding approach was utilized for analysis of the interviews.[109] Following the completion of interviews, verbatim transcripts were prepared from the audio recordings. I initially prepared the transcripts, but given the large number of interviews completed, interviews were eventually sent for external transcription in the interest of timing.

The first phase of the thematic analysis involved the creation and conceptualization of an *a priori* code (informed by themes found from the literature review, National Academy of Medicine Conceptual Framework, environmental scan, and research questions). Each interview transcript underwent line-by-line coding (in the software NVivo 12) with each idea summarized and coded with the developed *a priori* code. The coding process endeavored to remain as close to the data as possible. Once the initial coding process was complete, the codes (following the *a priori* code list) were reviewed in detail, allowing the opportunity for a broader understanding of the data collected as well as leading to the elaboration of emerging issues as noted in the analytical memos. This information was used to form an emergent code list. The transcripts then underwent a secondary coding in which codes and themes from the emergent code were added.

When the *a priori* and the subsequent emergent coding processes were completed for the interview transcripts, a complete codebook was produced. This codebook included a list of *a priori codes* and emergent codes with descriptions of each code as well as illustrations (i.e. quotes) of the codes pulled from the data.

Using the codebook, a matrix was developed and codes were organized thematically. In-depth analysis of the content attributed to each code as well as a holistic analysis of possible relationships between codes was done. Themes such as residents' mental health experiences, service utilization patterns (and perceived facilitators, and barriers) underwent a constant comparative analysis (of similarities and differences), examining issues across gender as well as the six faculties of medicine.

4 | Results & Findings

Availability, Knowledge and Utilization of Services

The following section details the findings from the provincial case study. First, the findings from the environmental scan are summarized. This is followed by summary statistics of all of the resident interviews conducted as well as detailed statistics of the subset of interviews selected for in-depth analysis. Finally, the findings from the in-depth analysis of resident interviews are presented. These findings are reported by the main themes identified in the coding scheme.

Environmental Scan: Availability of Services

The findings from the environmental scan are presented below. A detailed internet search was conducted to identify the resources available to residents. Information about physician health and well-being resources, programs and services available to residents at the provincial level as well as individual faculty of medicine level is presented.

University of Ottawa

When searching online for "University of Ottawa Resident Wellness" there were several webpages that came up in the results. Resources varied from undergraduate medical education, post-graduate wellness education, and faculty wellness resources. I began by looking at the home page of the Faculty of Medicine at the University of Ottawa. On the welcoming page of the Faculty of Medicine, there is a separate widget with a link to Wellness Resources as well as a few other options. The Wellness Resources link leads to a four-page PDF file in which there is contact information (phone numbers and websites) for crisis support and counselling (outside of and specific to the Faculty of Medicine). The resources listed range from call helplines (national, local, university level) to Employment Assistant Programs (EAPs), counselling available at private practices in Ottawa (free and paid) as well as those specific to the Faculty of Medicine at the University of Ottawa. The resources cover those in undergraduate medicine, postgraduate medicine, and faculty.

When going back to the home page of the Faculty of Medicine at the University of Ottawa, under Tools and Resources, there is a dedicated page for a "Well-being Program for Physicians-in-training" where it is mentioned that this is a resource for resident physicians and Fellows. There is a note from the Vice-Dean of Postgraduate Medical Education at the University of Ottawa with a telephone contact number provided.

The objectives of the program indicate that it is there to support the physical, emotional, personal and academic/career needs of residents and Fellows. There is mention that this will be done at arm's length from the PGME Vice-Dean's office and there is a guarantee of confidentiality and discretion. There is mention of a Faculty Wellness Program Director with telephone number provided for contact information. There is some general information provided on physical, emotional, and academic/career well-being.

There were two services that were highlighted as specific to University of Ottawa residents (these services are provided for medical students in undergraduate medical education as well as faculty). The first is a Faculty Wellness Program, which initially began as a resource for medical faculty but was later broadened in 2002 to include resident physicians. This program offers departmental consultations on wellness, individual referrals to health care providers, financial advisors, counselors and therapists, educational interventions to suit the needs of a group, program, department, and information of conflict resolution. There is a link to 'Book an appointment' with contact information in the form of a phone number and email address provided. There are two additional resource pages that provide links to other relevant services and organizations that medical faculty or students may access.

The second service that is provided at the University of Ottawa is the Code 99 program. This program serves as a "matching" service that helps physicians find a family physician. The program also provides support for physicians that are treating other physicians. This program is limited to Ottawa area physicians and learners.

Overall, the University of Ottawa website serves as a source to connect residents with other services with several resources collated and linked. There is no specific program for resident physicians.

McMaster University

When searching online for "McMaster University Resident Wellness" the first few results were specific to physicians and learners.

There is a dedicated webpage for "McMaster University Physician Wellness" that is focused on undergraduate and postgraduate learners and faculty and administration. The home page introduces the World Health Organization definition of wellness and directs users to the collected resources and links on the webpage tabs. When browsing the tabs on the website there are four tabs for Physician Wellness Week, Hamilton, Niagara, and Waterloo Regional

Campus events. These webpages appear to be out of date with the last information posted in 2015 and 2016.

There is a separate 'Resources' heading in the webpage tabs with a variety of resources – of note are the Mindfulness and Physician Mental Health Resources. The Mindfulness Resources page provides helpful articles and links to local and online resources. The Physician Mental Health Resources page provides links resources relevant to resident physicians. There are links to a national resident distress helpline, the provincial association physician health program and several links to relevant online resources, information packages and guides on mental health, depression, stress and time management etc. An interesting resource of note is a social worker that is a part-time assistant professor in the Department of Family Medicine who provides confidential services to those in the "caring professions". Visits are covered by the Resident Benefit Plan (through an agreement with the provincial resident association). Furthermore the PGME office advertises that they will cover the expense of the initial visit in the spirit of promoting resident wellness.

When exploring further in the search results online, a second newer webpage was found. This webpage is on the Faculty of Health Sciences Post Graduate Medical Education website where there is a dedicated "Learner Wellness" page. This webpage mentions that there are a "multitude of individual program support structures to provide assistance" with further resources at the university level as well as supports provided through professional associations.

The first resident-focused resource is the Resident Affairs Office. There are resident affairs directors at the three regional campuses associated with McMaster (Hamilton, Waterloo and Niagara). With regards to mental health and wellness supports there is a Wellness counselor who is a registered psychotherapist that provides counselling free of charge for trainees. There is a psychologist at the Waterloo regional campus that provides counselling to trainees in that area. There is also a Professionalism Advisor from the Faculty of Health Sciences that provides confidential assistance for those experiencing challenges with professionalism, harassment, or intimidation. The second section of the webpage focuses on professional organization and institution supports and provided background and links to the Professional Association of Residents of Ontario (PARO), OMA Physician Health Program (OMA-PHP), Canadian Medical Protective Association (CMPA) and Resident Doctors of Canada (RDoC). The final section of the webpage indicates that there is an internal resource – MedPortal that accessible by those with sign in information that provides further wellness information.

When referring back to the original web search there was another McMaster student resource that was found. The Student and Resident Affairs at the Michael G. DeGroote School

of Medicine supports medical students and residents with personal, learning, or career issues. They advertise that they provide confidential support, information and referrals around personal and professional issues.

Overall, McMaster University offers several services for resident physicians – there are resources that are more personalized and offered directly for postgraduate medical education students as well as several useful articles and links to resources to professional associates and external resources.

University of Toronto

When searching online for "University of Toronto University Resident Wellness" there are several resident-focused results.

The first web result leads to the Post MD Education page for the University of Toronto. There is a page titled "Access Wellness Resources" with mention of the services provided by the Post Graduate Wellness Office. These resources are available to registered residents and Fellows.

There are several services offered: confidential counselling and wellness coaching, support during remediation and academic difficulty, career and training guidance, disability and accommodation support, educational programming and workshops related to wellness and performance, faculty development related to physician and resident well-being, and research pertaining to resident wellness.

The wellness resource page also serves as a hub for other sections – there are sections for "Get Support", "Urgent Advice", "PG Wellness Workshop Series", "Leading by Example Workshop Series", "Access more wellness resources", "Board of Medical Assessors", "Wellness Library" and more.

The "Get Support" section highlights resources that are available both at the University of Toronto as well as externally. There are counseling and psychotherapy as well as referral services provided to residents. These include working with individual residents as well as facilitating workshops and group training and opportunities related to wellness. There is information about a clinical psychologist (Ph.D., C.Psych) as well as a social worker (MSW, RSW) that work with students in the program and can be contacted through the Wellness Coordinator (program email and phone number provided). Both the Wellness Director and Associate Director offer appointments for residents for a number of issues including academic

difficulty, disability and accommodation guidance, leave of absence, return to work planning, intimidation, harassment or safety concerns amongst others. There is also information on Distress and Referral Services which provide background and links to the PARO Distress Helpline (24 hours) as well as the Ontario Medical Association Physician Health Program. Under 'Physician Health Education Websites' there is a link to the CMA Physician Health and Wellness Centre.

Navigating back to the Wellness Resource page, the section on "Urgent Advice for PGME trainees" was explored. This section is intended as a source of information and advice - providing links to resources when resident trainees are in urgent situations, however there is a disclaimer that the resources listed do not connect the reader to assistance. There is advice and links to services provided for a variety of scenarios such as: a resident experiencing distress, concern of safety at work, suffering of a workplace injury, experiencing intimidation or harassment in the workplace, taking a leave of absence, accommodation, or seeking a family physician. Each of these sections expands to provide further information and links to resources. Some of the resources under the "I am experiencing distress, where can I turn for help?" tab are repeated from the "Get Support" page while the other categories of question link to policies and guidelines from the University of Toronto PGME Office.

On the Postgraduate Wellness Workshop Series page, there is a list of workshops (eleven topics) that the Office of Resident Wellness organizes for academic purposes based on request from residency programs. The workshops are 1.5-2 hours long and cover non-technical skills that can support wellness and performance for residents. The Wellness Office also highlights a workshop series that is offered by the PGME office at the University of Toronto. There are eight workshops that present topics with relation to the LEADS in a Caring Environment Capabilities Framework. The workshops can be requested by residency programs as content for academic half-days or workshops.

There is another section that provides information on more wellness resources. There is information on professional organizations, fitness and nutrition, career resources, fatigue management, performance enhancement, mindfulness in medical training, and stress management. Each of the prior listed sections features drop downs with some brief information as well as links to other websites and resources.

While there were other sections on the University of Toronto Resident Wellness Office webpage, they were peripherally related to the program and services offered.

Overall, the University of Toronto, Resident Wellness Office is webpage is easy to search and well organized with the pertinent information easy to find. There are a lot of resources shared through link-outs to other pages for resident's to explore at their will.

University of Western Ontario

When searching online for "University of Western Ontario Resident Wellness" there are a number of resident-focused search results.

There are two main webpages for the Schulich School of Medicine & Dentistry - "Learner Equity & Wellness" page and the "Postgraduate Medical Education" page. Both contain relevant information for resident doctors seeking wellness resources. When conducting an online search specific subpages show up in the search. These subpages can also be found from the homepage of the "Learner Equity & Wellness" page and the "Postgraduate Medical Education" page however they require more navigation.

On the "Postgraduate Medical Education" page there is a subpage for Support and Counselling. There is a list of resources provided with the statement that "Help is only a phone call away" as well as assurance that the listed resources below are confidential. Interestingly at the top of the list is the PARO 24 hour helpline – a province wide helpline for resident doctors experiencing distress. Next, there is information in resources at the Schulich School of Medicine and Dentistry for learners seeking support. There is a link to the Learner Equity and Wellness Office, as well as a description that defines the mandates of the office (supporting the physical, psychological and professional safety of learners, as well providing support for academic wellness and providing career guidance). There is contact information listed for the London and Windsor campuses. There is an Associate Dean of Learner Equity and Wellness that can assist or discuss issues related to equity, intimidation, professionalism or gender. The name and email of the Associate Dean is provided. There are Assistant Deans for Undergraduate and Postgraduate wellness as well. The phone number is provided for the Assistant Dean of Learner Equity and Wellness, Postgraduate Wellness. In addition to contact information for the Learner Equity and Wellness Office, there is a phone number and email for the Postgraduate Medical Education Office. It appears that there is also an Employee Assistance Program (provided by Homewood Home Solutions) with a website and a toll-free number. There is also contact information (email and phone number) for The Western University Ombudsperson (although no clarification on how this resource can support learner wellness).

On the Learner Equity and Wellness webpage (the second webpage resource for students) there are a number of services offered. There is an extensive menu for a variety of resources learners may require, such as academic accommodation and personal counselling.

Academic accommodation is provided by the Learner Equity and Wellness office. This confidential service includes facilitating excused absences from mandatory small group sessions and classes, deferral of exams, and allowing for leaves of absence (parental leave, health problems or personal crises). This webpage specifically mentions that if learners have documented learning disabilities, mental health issues, or physical disabilities the Learner Equity and Wellness office will coordinate with the university service for students with disabilities as well as the learner's doctor. On this page, there is again mention and reference to the PARO 24 hour helpline, with detail about the service as well as contact information provided. Further to the information on the Support and Counselling webpage, there is more detail and clarification on the university Ombudsperson role. The ombudsperson is a resource that provides impartial services for all students (non-PGME specific) who require assistance with academic or non-academic issues.

Personal counselling is another service provided by the Learner Equity and Wellness Office. There are internal counselling staff and faculty at Western that residents may book confidential appointments with. The Learner Equity & Wellness Office also assists students with referrals for those that wish to see an external provider or would like after hours appointments.

Overall there are some valuable services available for resident physicians at Western University. There is a bit of navigation required on the website to explore all of the services offered but it is helpful that there is a separate webpage for the Learner Equity and Wellness Office.

Queen's University

When searching online for "Queen's University Resident Wellness" there were several results that came up regarding resident wellness resources. There is a dedicated "Resident Health and Wellness" page. On the main landing page, there is a note from the Associate Dean of Postgraduate Medical Education recognizing the various challenges (whether personal or professional) that residents may encounter. The note further highlights some sources that residents may seek when facing difficulty, such as their program director, faculty advisor or the Director of Resident Affairs. The importance of early intervention is highlighted, citing the resources available. There is also mention of facilitating interventions or program modification for residents that are affected by resident stress, burnout, or depression.

The “Resident Health and Wellness page is further divided into several tabs, with information on a Director of Resident Affairs, Counselling, Regional Learner Advocates, Resources, FAQs, and Who to Contact.

The PGME program has a dedicated Director of Resident Affairs whose role is to “establish and maintain support services for residents” through the provision of several services. These services include support during the transition from medical school to residency, counselling for residents facing challenges in their personal or academic lives and feedback loops with the Associate Dean of Postgraduate Medical Education. While resources are centered and offered in Kingston primarily, there are Regional Learner Advocates (RLAs) for residents practicing long term in communities outside of Kingston. There is also contact information for the Director of Resident Affairs (email and phone) for residents.

There is a dedicated page with information about counselling resources for resident doctors. There is confirmation that these services are anonymous and confidential “provided at arm’s length.” Counselling services are free and appointments can be made for same or next day sessions in person, virtually, or by phone. There is also a reference (with link) provided for a self-help workbook for residents who require assistance. There is phone and email information for the counselling services as well as physical office location information.

There is a useful page of collated “Resources for Resident Health and Wellness” with information (sometimes linked) as well as a descriptor of that the service provided entails. The resources are helpfully broken down into resources available at the school level (Queens and Kingston General Hospital (KGH) which includes a link to “Postgraduate Policies” for residents as well as information about KGH Employee and Family Assistance Program. The resources are further broken down into community, provincial and national resources.

There is a FAQ page with answers to common questions asked by residents. There is also a helpful “Who to Contact page” with pictures, titles and description of services/supports provided listed for each individual.

Overall, the Queens University website provides detailed, easy to find information.

Northern Ontario School of Medicine

When searching online for “NOSM Resident Wellness” there are several relevant search results. The first result links to the Resident Wellness webpage for the Postgraduate Wellness

Program at NOSM. At the beginning of the page is a message for resident physicians expressing that while residents will face high expectations in residency the Wellness Program is built to ensure that there is a high degree of support. The note further explains that the program's framework provides support for residents in several areas of their lives (occupational/academic, physical, emotional and social health). Of interest was that they mention that they will provide and coordinate support for residents with pre-existing health needs or those that arise during residency. This provides a sense of security for residents to know that they will be supported from the beginning of their residency and provided continuity of support if they were receiving care for health issues in medical school or previously. Residents are also informed that the Wellness Program will coordinate with residency programs to accommodate them in the learning and training environment if required. The note concludes by listing some interesting proactive initiatives such as a wellness curriculum, safe housing and transportation, protected duty hours and leaves and cultural supports.

The Postgraduate Wellness Program also boasts an interactive resident wellness app for resident doctors "NOSM Well" which provides accessible and secure up-to-date information on wellness. Exploring the features of the app there is a main dashboard with buttons that link to nine services. First there is emergency information that provides step by step instructions for emergencies ranging from workplace injury, contamination injuries, or not being able to reach a supervisor. The app also features a service to arrange a cab ride home – a feature that is very helpful for driving home post-call after overnight shifts or if leaving the hospital after dark. There is a link to wellness resources with contact information for the Wellness program team, an employee and family assistance program, and a summary of health benefits from the PARO collective agreement. There is a "Wellness Calendar" with up to date information about wellness events at NOSM. There is information about housing safety and options as well as travel safety that provides weather updates. There is a separate icon to explore the PARO Collective Agreement. Of note is a dedicated icon for "Intimidation and Harassment," linking to the NOSM PGE Discrimination and Harassment Policy. Finally, there is also a "Find a Family Doctor service" that lists family doctors in the area that are accepting resident physicians and their families as patients. The app is a very convenient tool for resident doctors at NOSM and a great source of up to date information.

Back on the NOSM Wellness webpage there is an "I Need Help: Crisis information" icon. When clicking for further information there is a support guide flowchart for residents that shows in sequential order recommended resources and support points they should seek in times of crisis.

On the main webpage, there is a list of further information with expanding menus. Under 'Primary Care', there is information about access to primary care, where there is mention of a list that is updated yearly of northern physicians that are accepting resident doctors as patients. There is a section on "Accommodations" that indicates residents with physical limitations, medical conditions, learning disorders or mental health disorders can seek support by contacting the Wellness Lead Clinician. There is mention of the NOSM Post-Graduate Accommodations Policy for resident physicians requiring assistance. The third tab features sources of direct support for residents. The first source highlighted is the Wellness Lead Clinician for coaching and advice on wellness challenges and locating and coordinating wellness resources. The next source is an Employee and Family Assistance Program (EFAP) that is paid for in advance by NOSM and offered free of charge to residents by Morneau Shepell. Professional counselling and therapy as well as numerous other EFAP benefits are offered for residents and their immediate family members. This service is touted to be completely confidential (within the limits of the law).

Another unique support that is listed is a Resident Support Network that consists of a group of residents, faculty and administrators that have been trained and have responsibility to assist residents. Their resident, faculty and staff members are listed and there appear to be residents from family medicine, emergency medicine, internal medicine, pediatrics, and psychiatry.

Under the Advocacy tab there is mention of the PARO-CAHO Collective agreement that commits to protection and freedom from intimidation and harassment and providing safe and healthy working environments and housing and transportation. There is a note that residents can reach out if they feel the conditions of the agreement are not being met.

There is also a separate tab for a Wellness Curriculum that is a part of the PGY 1 (postgraduate year 1) core curriculum. This offers first year residents, tips on mindfulness, resiliency, fatigue management and burnout. There is a link to the PGY 1 Core Curriculum that consists of 16.5 academic half days of which 3 mandatory sessions will focus on resident wellness

Under "Our Partners in Wellness" there are links and descriptions of the Ontario Medical Association Physician Health Program (PHP) and the Professional Association of Residents of Ontario (PARO) 24 hour helpline.

There is also a section on Transportation Safety – identifying that due to the geographical spread of postgraduate residency programs in NOSM and northern Ontario

weather, there are unique circumstances for residents. There is a Resident Safety Policy that protects residents from being penalized if there are unsafe driving conditions. Furthermore, the Wellness program has provided a reimbursement program for residents that need to take a taxi home following an extended shift. This service also covers the cost of transportation back to the hospital when residents come to retrieve their car.

There is a separate tab for confidentiality, indicating that all communication will be handled confidentially within the limits of the law. NOSM also has a Resident Wellness Confidentiality Policy document.

With regards to taking a leave, there is a Resident Leaves Checklist (a linked PDF document) that provides checklists for sick days (1-5 consecutive days), sick leave with salary continuance (up to 6 months) and long-term disability (greater than 6 months).

Overall the NOSM resident wellness webpage is a rich source of information. The tabs make navigation easy and there is succinct but detailed information as well as helpful links with further detail provided for those interested. It is the only school that has developed a resident wellness app.

PARO

When searching online for "PARO Resident Wellness" the first few results lead to the PARO website while other links lead to Ontario PGME wellness office pages. The first two search results lead to the "During Residency" and "Starting Residency" pages on the PARO website.

On the During Residency page, the webpage advises residents to seek help from the Resident Wellness Division in the university PGME office for resources. There are also tips for residents to manage their wellness through sleep, diet, and exercise with suggestions and examples. PARO has also negotiated a discounted membership for residents at Goodlife Fitness. PARO also negotiates on behalf of residents for benefits such as life insurance, extended health care (prescription coverage, psychologist, massage therapy etc.), vision care and dental care. These benefits are then administered by the Payroll and Benefits office at the individual universities.

The "Starting Residency" webpage shares some of the same tips on maintaining wellness though taking care of sleep, diet, and exercise and reiterates that residents can always reach out to their resident wellness offices.

On nearly every page of the PARO website on the left-hand menu there is a tab for "Helpline (1-866-HELP-DOC)". When further exploring this tab, there is information about the PARO 24 Hour Helpline - a service that is provided for resident physicians, their partners and family members and medical students. This helpline is a toll free number (1-866-HELP-DOC or 1-866-435-7362) that individuals can call anytime (24 hours a day, 7 days a week, 365 days a year). This service is offered through a partnership with PARO and the Distress Centres of Toronto and guarantees that all calls are strictly confidential and will not be traced. This webpage further describes this as a personalized service specific to resident physicians with helpline volunteers trained in acute crisis intervention, depression, anxiety etc. with further training specific to resident physicians (working environment and conditions, hours of work etc.). The helpline also provides guidance for other issues that are peripheral to emergency mental health care such as stress management, eating disorders, anger management, intimidation or harassment, substance use.

Overall the PARO website does not promote many services but the 24 hour helpline is a unique service that the Resident Wellness office at each of the universities promotes to their residents.

Ontario Medical Association Physician Health Program (OMA PHP)

When searching online for "OMA Physician Health Program PHP" the OMA PHP website was the first search result. This webpage is quite extensive as it serves medical professionals from medical students, residents, physicians, to late career retired physicians as well as veterinarians. For the purposes of this environmental scan I focused on the resident section of this program. On the resident page of the OMA PHP site, the section begins by acknowledging that residency is a "uniquely stressful" time and highlights the work environment and sources of stress that residents may face. The OMA PHP connects with PARO to stay up to date on challenges or issues residents might be facing and works together to support residents. This subsection also provides links to PARO and the six university PGME wellness offices.

The PHP provides confidential services to residents in Ontario with clinical team members ready to assist residents who would like to speak with these individuals during OMA business hours [toll free number (1-800-851-6606)]. The clinical team offers advice and support for residents, referral to clinical services to clinicians with experience in physician health, assessment services and monitoring and advocacy for mental health concerns. The PHP also offers education for physicians through delivering workshops and presentations on topics pertaining to wellness and mental health.

Summary

The environmental scan provides a breakdown of the services available for residents at the local academic/hospital level as well as province-wide. All six universities in Ontario had Wellness Offices within each PGME faculty. These services were similar across the six schools in that they were a point of contact for residents to reach out to when in need of resources to support their well-being. Core services such as counselling were common across all schools. Employee assistance programs (EAP) were often cited as resources residents could access. The PARO 24 hour helpline was also consistently recommended as a resource that residents could seek after hours.

Each Wellness Office website was unique to the school - with information about activities and resources offered at the school as well as contact information for Wellness Program Deans or Directors. Searching and collating the resources available to residents at each of the PGME's was helpful as it provided context when asking resident physicians about their knowledge and awareness of services. As I had an understanding of the services available through the environmental scan, I could corroborate the resources mentioned by residents with those I found in the environmental scan as opposed to those that were internally available or specific to a residency program. This furthered my research objectives by elucidating the help-seeking behaviours of resident physicians in relation to the awareness and utilization of existing services.

Resident Interviews

Overview

In reaching out to the resident population in the province I set a modest goal of 12 interviews – sampling 2 residents from each of the 6 schools in Ontario, one male and one female, with an attempt to balance broad disciplines and years of training. I fortunately surpassed our initial goals and completed 40 resident physician interviews - a unique situation described in the methods section above. I was able to get four of the six PGME's on board to help distribute the study and recruit participants as well as have interview participants spread the word with colleagues. I spoke with resident doctors across the six PGME's in both primary care (family medicine) and specialty education (including medical and surgical specialties in both adult and pediatric medicine).

The 40 interviews conducted with resident physicians across Ontario from August 28, 2018 – November 29, 2019 [Table 1]. Overall, there was a greater representation of female

participants as compared to male participants (29 females to 11 males; 73% - 27%) [Figure 4]. Residents from all 6 PGME's participated in the study, however there was variable representation from the schools with the greatest representation from McMaster University, University of Ottawa, and the University of Western Ontario [Figure 5]. Residents were from a variety of specialties - in total 15 disciplines were represented with residents from Pediatrics, Family Medicine, Internal Medicine, and Psychiatry being the most prevalent [Figure 6]. There was fairly even distribution among year of study (Post-Grad Year or PGY) with lower participation rates from resident physicians in PGY-4 and PGY-5 [Figure 7].

Table 1: Demographics and Interview Information, Whole Group

Identification	Sex	PGME	PGY	Specialty	Interview Length (minutes)
Participant 1	M	uOttawa	1	Psychiatry	70
Participant 2	F	uOttawa	2	Pediatrics	45
Participant 3	F	uOttawa	3	Pediatrics	51
Participant 4	F	McMaster	4	Psychiatry	31
Participant 5	M	Western	3	Internal Medicine	24
Participant 6	F	Western	3	Internal Medicine	21
Participant 7	F	Western	2	Internal Medicine	48
Participant 8	F	Queens	4	Public Health	46
Participant 9	M	Western	3	Family+Emergency Medicine	17
Participant 10	F	McMaster	4	Pediatrics	30
Participant 11	M	uOttawa	1	Pediatrics	29
Participant 12	F	Western	2	Family Medicine	16
Participant 13	F	Western	2	Obstetrics and gynecology	32
Participant 14	M	Western	1	Family Medicine	61
Participant 15	F	Toronto	3	Internal Medicine	60
Participant 16	M	uOttawa	2	Pediatrics	61
Participant 17	F	uOttawa	1	Psychiatry	33
Participant 18	F	McMaster	4	Pediatrics	46
Participant 19	F	McMaster	3	Neurology	34
Participant 20	F	uOttawa	2	Family Medicine	36
Participant 21	M	Western	1	Internal Medicine	25
Participant 22	F	McMaster	3	Pediatrics	49
Participant 23	M	McMaster	3	Emergency Medicine	40
Participant 24	F	uOttawa	2	Radiology	36
Participant 25	F	McMaster	4	Medical Oncology	51
Participant 26	M	McMaster	4	Orthopedic Surgery	40
Participant 27	F	NOSM	1	Internal Medicine	45
Participant 28	M	Toronto	1	Plastic Surgery	35
Participant 29	M	Toronto	2	Family Medicine	38
Participant 30	F	McMaster	1	Family Medicine	47
Participant 31	F	Toronto	1	Family Medicine	22
Participant 32	F	McMaster	5	Psychiatry	35
Participant 33	F	McMaster	1	Psychiatry	42
Participant 34	F	McMaster	3	Pediatrics	46
Participant 35	F	Toronto	2	Anesthesia	59
Participant 36	F	Queens	1	Internal Medicine	40
Participant 37	F	NOSM	1	Family Medicine	41
Participant 38	F	McMaster	1	Emergency Medicine	57
Participant 39	F	uOttawa	4	Emergency Medicine	103
Participant 40	F	uOttawa	3	General Surgery	36

Figure 4: Completed Interviews by Gender, Whole Group

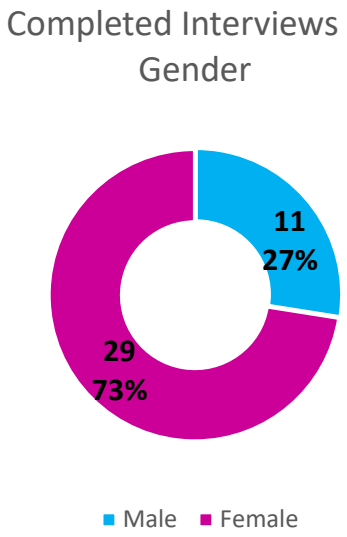


Figure 5: Completed Interviews by University and Gender, Whole Group

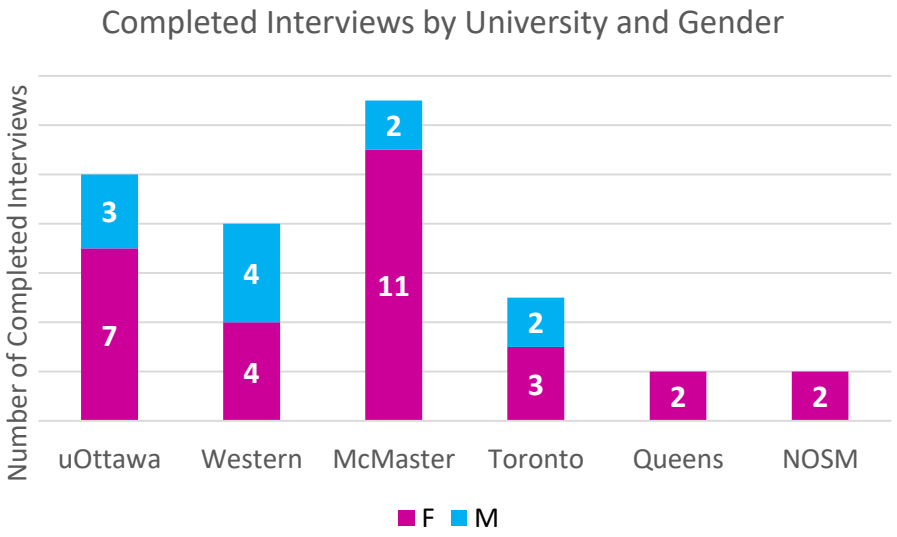


Figure 6: Completed Interviews by Specialty and Gender, Whole Group

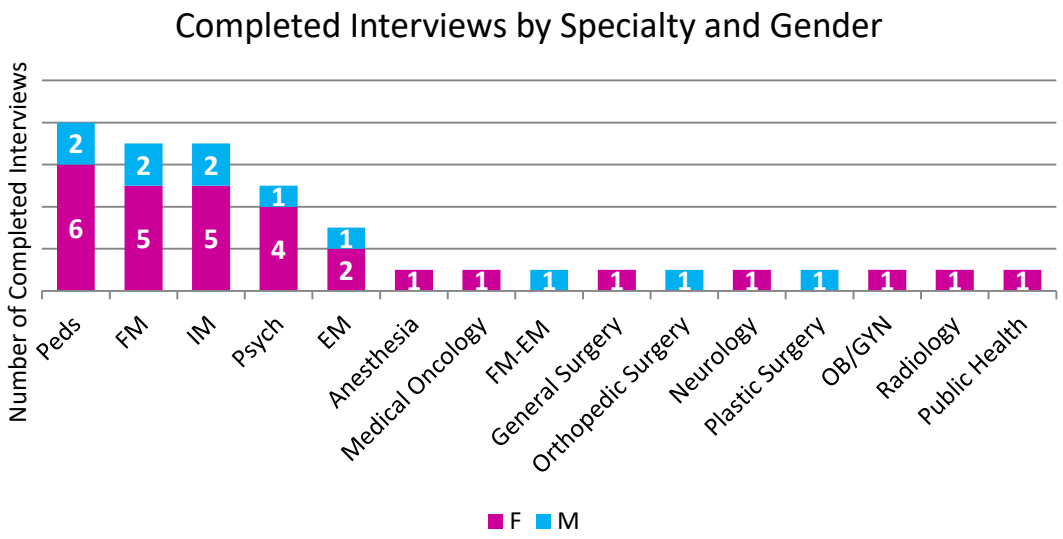
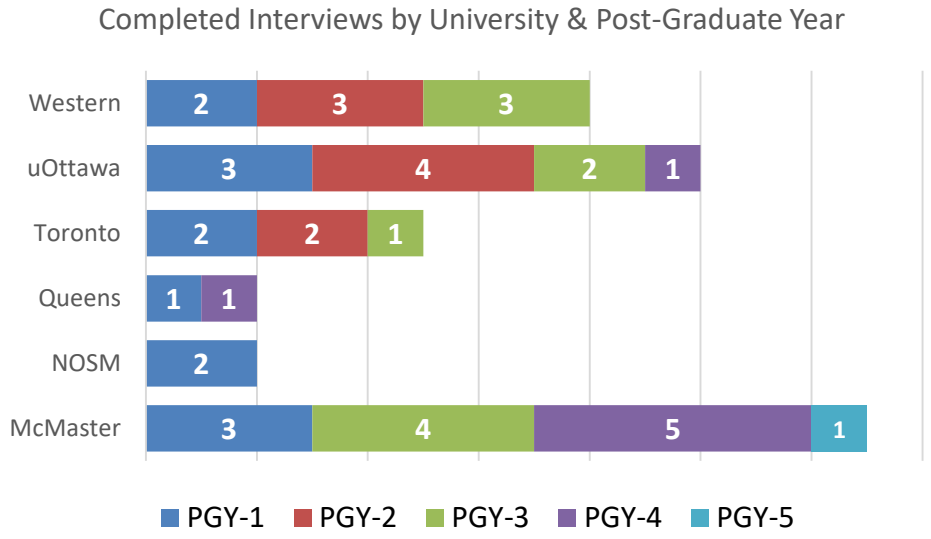


Figure 7: Completed Interviews by University & Post-Graduate Year, Whole Group



Selection of Interviews for In-Depth Analysis

I had set an initial goal of 12 interviews, with the primary intention to collect PGME specific data from residents across the six schools in Ontario. As a secondary goal, I endeavored to speak to both male and female residents to be inclusive of the gendered experiences of mental health in residency. As a tertiary goal, I attempted to recruit and interview resident physicians from different specialties across a variety of post-grad years of training (PGY).

With the initial difficulty in recruiting resident physicians, I started accepting participants as resident physicians began to volunteer. With scheduling of interviews as per the resident physician's schedule, I conducted interviews as resident physicians were available. I continued interviewing until I had reached the initial goal of 2 interviews per school and was able to interview at least one male and one female resident. If I was able to recruit residents from different specialties or different years of post-graduate experience, while waiting to fulfill my initial goal of 2 interviews per school with gender representation, I completed the interviews. If interviews had been scheduled with a resident physician, I honoured my commitment to complete the interview even if the requirement for variety across schools and gender had been met.

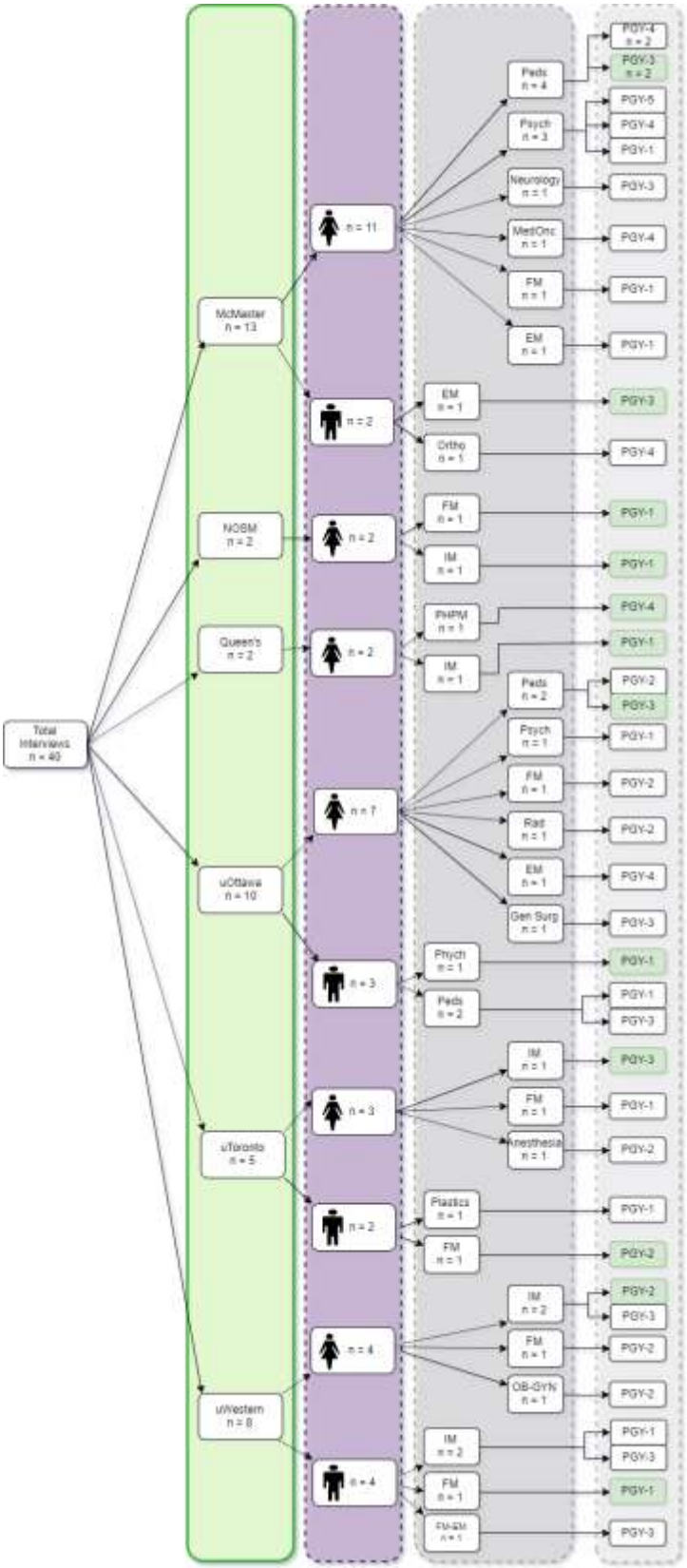
The unique challenges of my purposive sampling strategy led to the collection of more interviews than anticipated. While saturation in the main themes (mental health experiences, awareness and utilization of services, facilitators and barriers to access) were achieved in the first 12-15 interviews, the goal of this study was to capture these experiences from the perspectives of resident's across the six PGME's in Ontario and I continued data collection until this goal had been met.

So as to have more equal representation of experiences across PGME programs, I selected a subset of 12 interviews that met the primary and secondary criteria (variability in school and gender) with efforts to have variability across specialty and post-graduate experience. All interview transcripts were reviewed and interviews that did not have sufficient discussion or material to analyse were rated lower in the selection process than those that had a more fulsome discussion with participants. After a rigorous process of reviewing transcripts, high level analysis of content, and ensuring sampling variability across school and gender, 12 interviews were selected for in-depth analysis (Table 2). This selection process utilizing maximum variability within the purposive sampling process is illustrated in Figure 8.

There were only two resident doctors that participated in the study at both Queen's University and NOSM (four female residents total), and thus interview selection was limited in that regard for those two faculties (Figure 10).

There were eight female resident and four male resident interviews selected for full thematic analysis (Figure 9). Four participants were from Internal Medicine, three from the Family Medicine, two from Pediatrics, one each from Psychiatry, Emergency Medicine and Public Health & Preventive Medicine (Figure 11). With regards to year of training (Post-Graduate Year or PGY), there were five PGY-1's, two PGY-2's, three PGY3's, and one PGY-4 (Figure 12).

Figure 8: Interview Selection Process for In-Depth Analysis



Selection of Interviews by Specialty and Post-Graduate Year

The selection of the interviews for in depth analysis was primarily focused on having representation from each of the six PGME's as well as having a gender balance. I tried to balance the inclusion of a variety of specialities as well. During the selection process I evaluated all of the transcripts and provided an initial rating to help me better decide which interviews to include for in-depth analysis.

Recruitment of resident physicians in surgical specialties was challenging. While I ultimately secured four interviews from residents in surgical fields (10% of the sample pool) three interviews did not have enough substrate for thematic analysis. One resident physician interview could have been selected for in depth analysis however given the multiple variables in the selection process it was inadvertently excluded.

With regards to selecting participants from a wide range of post-graduate years, I was limited in part as I only had selection from four of the six schools as NOSM and Queen's only had two participants from each school and three of the four were PGY-1's.

In the total pool of 40 interviews there were twenty-two PGY-1 and 2's *(just over half - with thirteen PGY-1 and nine PGY-2*) and eighteen PGY 3 to 5's *(ten PGY-3, seven PGY-4 and one PGY-5)*.

The selected pool of 12 interviews was representative of the overall ratio of interview participants with just over half – or seven PGY-1 and 2's *(comprising of five PGY-1 and two PGY-2)* and five PGY-3's and 4's *(four PGY-3 and one PGY-4)*.

I endeavoured to be as inclusive as possible in selection if interviews for in-depth analysis given the interview pool I had and the participants that volunteered.

Table 2: Demographics and Interview Information, Selected Participants

Identification	Sex	PGME	PGY	Specialty	Interview Length (minutes)
Resident Physician 1	M	uOttawa	1	Psychiatry	70
Resident Physician 2	F	uOttawa	3	Pediatrics	51
Resident Physician 3	F	Western	2	Internal Medicine	48
Resident Physician 4	F	Queens	4	Public Health & Preventive Medicine	46
Resident Physician 5	M	Western	1	Family Medicine	61
Resident Physician 6	F	Toronto	3	Internal Medicine	60
Resident Physician 7	M	McMaster	3	Emergency Medicine	40
Resident Physician 8	F	NOSM	1	Internal Medicine	45
Resident Physician 9	M	Toronto	2	Family Medicine	38
Resident Physician 10	F	McMaster	3	Pediatrics	46
Resident Physician 11	F	Queens	1	Internal Medicine	40
Resident Physician 12	F	NOSM	1	Family Medicine	41

Figure 9: Completed Interviews by Gender, Selected Participants

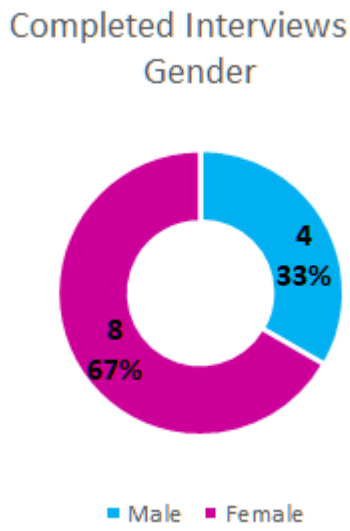


Figure 10: Completed Interviews by University and Gender, Selected Participants

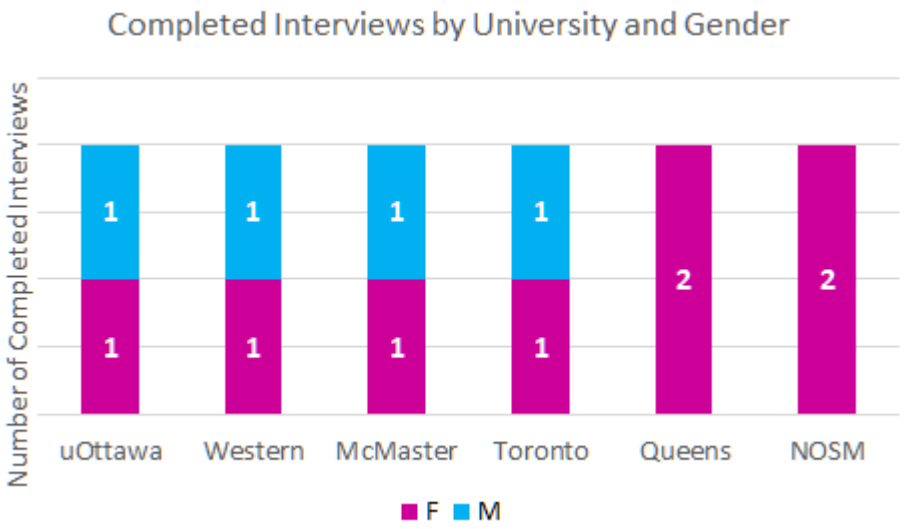


Figure 11: Completed Interviews by Specialty and Gender, Selected Participants

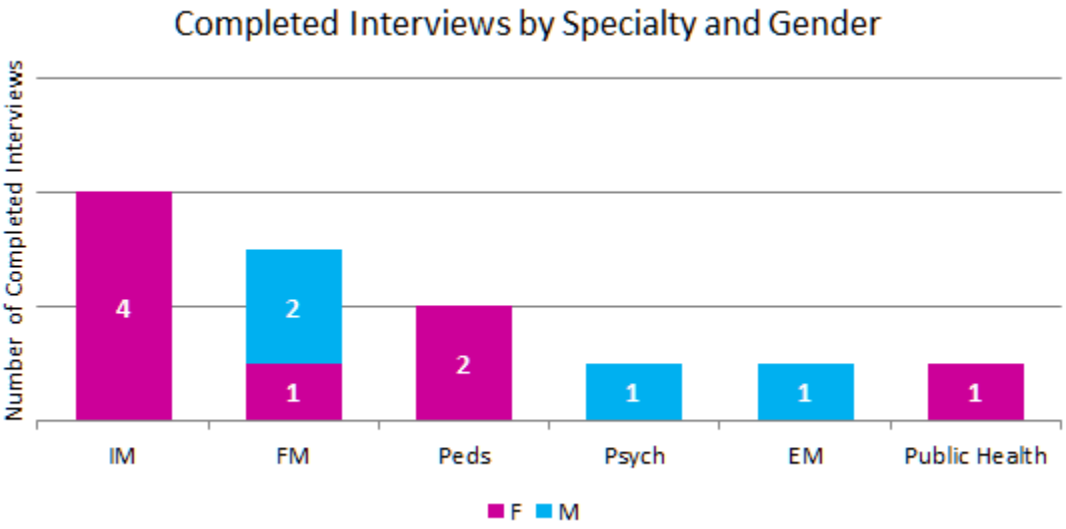


Figure 12: Completed Interviews by University and Post-Graduate Year, Selected Participants

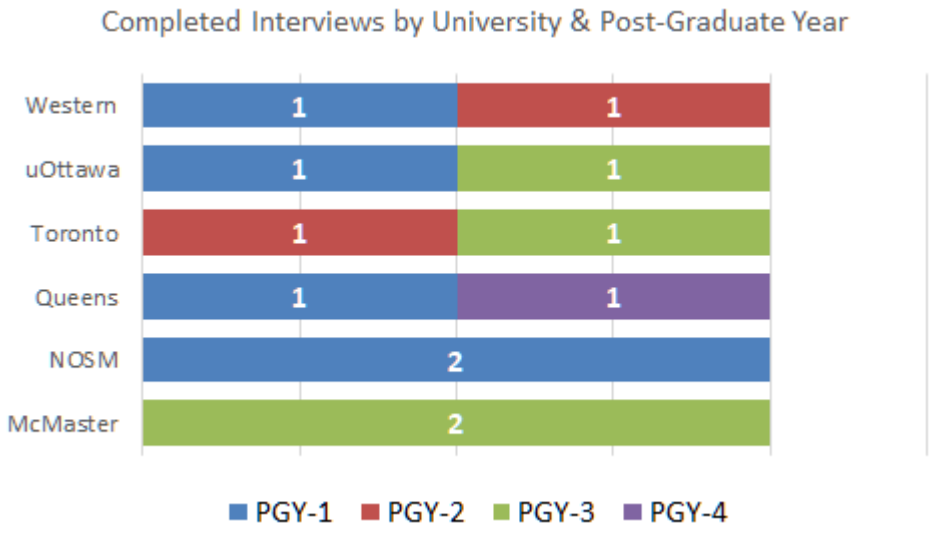
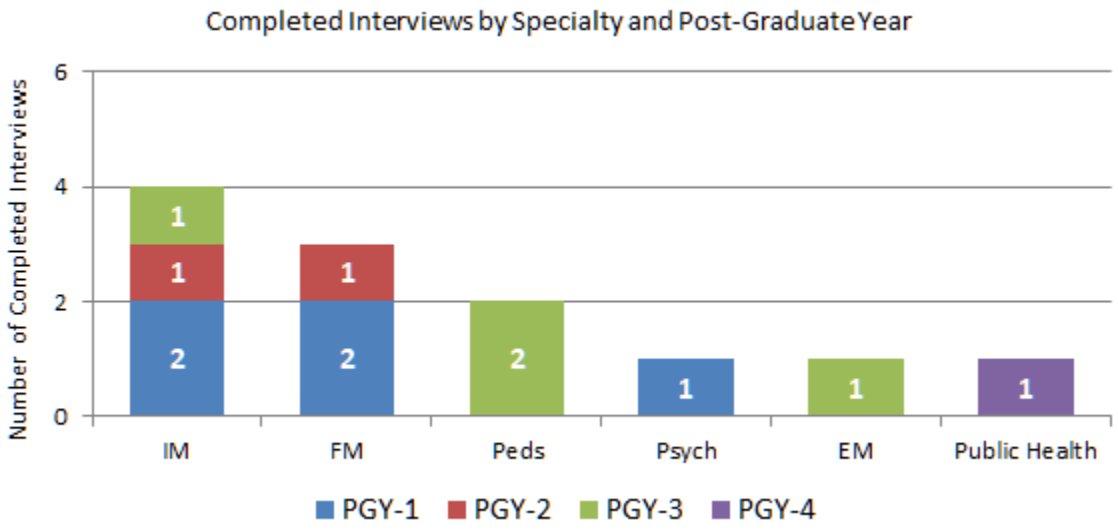


Figure 13: Completed Interviews by Specialty and Post-Graduate Year, Selected Participants

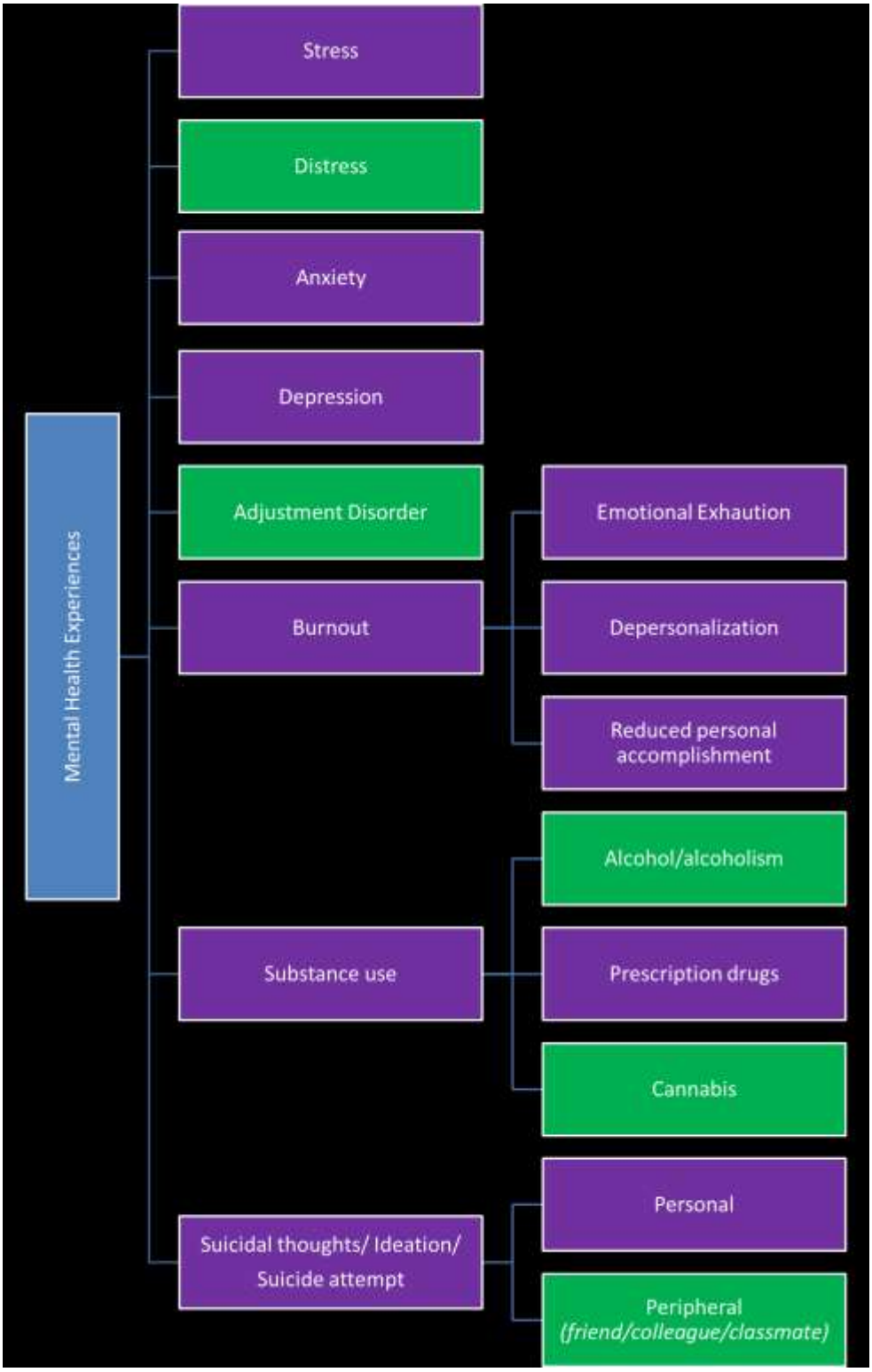


Each interview focused on three key themes. First, I asked participants about what mental health challenges they faced in residency and explored sources of stress in their unique environments (personal, academic and clinical settings). I then asked about their awareness of resources – at their school, hospital, or broadly. Given awareness of programs, residents were asked about their utilization of the services available to them – and facilitators and barriers to seeking support. Lastly, I sought to examine the role of gender in residency (given the changing demographic with an increase of female physicians entering the profession), examining relevant issues such as harassment, intimidation, and bullying.

The following sections summarize the key themes that emerged through coding of the selected interviews according to the mental health experiences, sources of stress, resources (informal, formal, individualized), and barriers and facilitators. Codes identified by purple boxes were incorporated into the coding scheme as *a priori* codes that were developed when conducting a review of the literature. Codes identified in green are emergent codes that were added through an iterative process while coding the resident physician interviews.

Mental Health Experiences

Figure 14: Coding Scheme for Mental Health Experiences of Resident Physicians



Discussion around mental health was the cornerstone of every interview conducted. Following an introductory question and comments about the study, each participant was asked the following question:

"What are the main mental health issues that you/or your colleagues in your program experience in general?"

Most interview participants identified depression, burnout, anxiety, and stress as major mental health issues that they or colleagues in their residency program were struggling with or had struggled with during their residency at one point.

Participants also highlighted aspects of residency that were not necessarily mental health issues but affected mental health – such as adjustment disorder, overworking, heavy workloads and sleep deprivation.

> *"I would say the first challenge I think is just general mental fatigue. It's hard to be yourself after being awake for so many hours. And you're kind of always running at a sleep deficit. So I think that it pushes right on your emotions in the way that you may not have reacted if you were fully like well rested." ~Resident Physician 11, PGY-1, Internal Medicine*

Anxiety

Anxiety was an issue that many participants identified when asked about mental health challenges. The participants' conversation around anxiety identified it as a concern that held both positive and negative connotations. One participant identified that a healthy level of anxiety was good and felt that it helped her to be a better resident doctor but when in excess, anxiety could also hinder her ability to make decisions.

> *"It's kind of true because like being worried about things and like paying attention makes me focus and detail-oriented and not miss things. But it also like creates quite a bit of burden to carry along with you…I feel like I'm very aware of that risks that come with the job that I do if I don't do a good job. And so that's something that makes me pay like close attention but also like agonize and worry about things that I've done or haven't done or things that I've missed or things that I've misinterpreted." ~Resident Physician 2, PGY-3, Pediatrics*

There was an interesting relation between feeling anxious and participants' identification with their status as resident doctors (as learners and trainees in the system). The expectations of

depth and breadth of medical knowledge that accompanies residency training was felt to be overwhelming at times, especially in a context of the different tasks that resident doctors are already committed to.

> *"But just like what you need to know to do anything is a lot. And I think that's a big source of anxiety – just the amount of knowledge in caring for a patient. And then another source of anxiety could be the stakes often. So often it's really acute care and, you know, someone could die if you don't ask the right question or do the right thing or provide the right intervention. So that's a big source of anxiety there." ~Resident Physician 1, PGY-1, Psychiatry*

Another participant related that while anxiety was very real for them they actively had to work to keep their anxiety under control using techniques such as cognitive behavioural therapy (CBT) and following a balanced routine.

> *"And I know for me, I struggled on and off with my anxiety levels throughout residency. I don't think it's ever gotten to the point where it's really super pathological. But I have to be on top of it because as soon as I kind of don't actively try to stay well by exercising, getting enough sleep, using kind of CBT methods on myself, then I can turn into just like a really big mess in terms of my anxiety where I'm not sleeping well and stuff like that." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

Further to this, one participant mentioned that this breadth of knowledge could be daunting in that as they learned more material, there was a developing sense that there was even more material to learn and incorporate into their knowledge-base.

> *"…each step that you take where you start to learn things, your mind becomes open to more possibilities and knowledge you could have. And so even though you're learning more, you're also seeing what more there is to learn." ~Resident Physician 2, PGY-3, Pediatrics*

This feeling also translates into a sense of imposter syndrome where residents are treating patients with their existing knowledge while they are still learning – yet their medical opinion contributes to the course of treatment for a patient.

One participant identified that taking medication for anxiety was common among residents in their program. The participant shared their residency program was largely female

and tight knit and close where fellow resident doctors felt comfortable in sharing their struggles with anxiety and use of anti-anxiety medication.

Residents reported that there was also anxiety and distress with regards to career trajectory and progression. This was often centered on key milestones in residency such as a subspecialty residency match or the expectations of research projects. This also extended into their personal sphere and became an individual stress residents can feel as though career development is not an aspect that is emphasized during residency.

> *"I think probably the biggest thing that I see is kind of stress and anxiety seems to be the biggest issue among people. And from my perspective, a lot of it stems from kind of a culture where failure is not expected, anticipated or well tolerated. And, yeah, just kind of a little bit of a perfectionistic culture where if everything doesn't go exactly as planned, people get quite worked up, upset about it and kind of ruminate on it. And then can be stressing out and becoming anxious that they're going to kind of spiral out of control. I guess it's like a lot of attempts to control things and then when that doesn't work out, it results in anxiety and a lot of mental health issues from what I've seen. I mean especially with… I mean people… A lot of mental health issues and suicide I think related to that stress and that anxiety." ~Resident Physician 5, PGY-1, Family Medicine*

Type A Personality/Coping

Another important factor that many participants identified with regards to anxiety was the personality type of individuals that typically enter medicine as a profession. Participants identified that medical students tend to be "Type A" personality individuals that are used to perfection and success and when placed in an environment where there are more variables than can be controlled they could turn to coping with the situation.

The nature of medicine and the work and sacrifices it takes to gain entry into the profession was highlighted. Participants noted that "Type A" personality individuals that are often high achievers are those that pursue medicine and get into medical school. But often the strengths that allowed them to get admission into medical school work against them in residency as they do not necessarily accept their difficulty – rather continue to cope or work harder.

> *"I think honestly a lot of it is a function of the selection process for medical school...the people who get in are very used to kind of like being at the top of*

their class, getting A+ on every single assignment, succeeding in everything they do, and then following a very rigid kind of system.... academically, personally, professionally, most people who get into medical school are quite successful and haven't really experienced failure to this point in their life, from what I've seen...And then you put a whole bunch of people who are used to being at the top of their class or, you know, near the top of their class in a class, and just by virtue of statistics, half of the people are going to be at the bottom of the class. And they're not used to that…And then on top of that, you put them into a field like medicine where there's a lot of ambiguity, there's a lot of breadth of things to know, and a lot of depth to know. " ~Resident Physician 5, PGY-1, Family Medicine

This type A behaviour can also contribute to anxiety:

"…medicine probably attracts the type of person, and I think also like medical training sort of emphasizes a lot of detail orientation, and you, you know, being…trying to sort of excel as much as you can, and being a perfectionist. So I think that all that is emphasized by residency and being evaluated and compared to our peers all the time. So I think that definitely would also probably contribute." ~Resident Physician 10, PGY-3, Pediatrics

One participant highlighted being perfect was unrealistic but it was a feeling that they identified with.

"It's like sometimes mistakes happen, and they're going to happen. And it's unrealistic to expect myself to be perfect. But I still expect myself to be perfect. And so then when I make a mistake, that's the thing that I'll dwell on. If I do 100 things in the course of a shift, and 99 of them are right, and 1 of them is wrong, it's the one that's wrong that I take home with me. And that's what I agonize over like in my post-call day. I'll sleep and I'll wake up and that's the first thing I think of, is like that one mistake that I made. And sometimes it's not even my fault. Sometimes it's a mistake that somebody else made. And I still feel responsible for it because I'm also responsible for that patient." ~Resident Physician 2, PGY-3, Pediatrics

Among the 12 selected participant interviews, it was more so the female resident doctors that identified anxiety as an issue they experienced or had seen among fellow resident doctors – male participants tended to identify with other mental health challenges (such as burnout).

Depression

When participants spoke about depression, they referred to the DSM diagnosis of clinical depression seen in their patients and identified that they themselves were not necessarily depressed in the clinical sense but experienced periods where feelings of depression tended to surface. Two participants identified depression/depressive feelings with adjustment disorder, where stressors in their environment led to feelings of depression for a time.

> *"Yeah, I think most people in med school and in residency experience some form of depression at some time. Whether it be a depression or like an adjustment disorder just secondary to like the really heavy workload and the life stresses kind of thing. I think that would be the main one." ~Resident Physician 1, PGY-1, Psychiatry*

and

> *"Oh, yeah. So when you think about DSM diagnoses of psychiatric conditions, an adjustment disorder is often a response to a situational stressor. So if somebody is sick with something, and then their mood gets low, well, it's not really a true depression because it's caused because they broke their leg or something. They're kind of adjusting to their situation. So you can kind of have an adjustment disorder that's depressive or anxious. And it's more kind of a response to the situation." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

One participant spoke about depression with regards to the culture of medicine and the stigma around mental health challenges as a weakness, where resident doctors are reluctant to acknowledge, much less disclose, and seek access to help for mental health challenges such as depression.

> *"There's a lot of…I think still a culture of feeling that, you know, mental health issues are a personal weakness or should be swept under the rug due to stigma or whatever. That experiencing a bout of depression would be, you know, looked upon as, you know, a weakness. Which it obviously is not. But I think that people aren't vocal about accessing it." ~Resident Physician 6, PGY-3, Internal Medicine*

Another participant identified depression as episodic and situationally dependent at times depending on their current environment and situation (professionally and personally).

> *"I think some of us, myself included, like experience some episodes of depression probably related to, you know, just anxiety and also maybe depending on I guess what our self-care looks like at any given time. I think that can sort of predispose us. And certainly I myself like have experienced both of those things and know… Like I'm on sort of medication now and have like pretty I guess like…like I would say I'm in remission now." ~Resident Physician 10, PGY-3, Pediatrics*

Among the selected participants, both male and female residents identified depression as a challenge they had seen among resident physicians.

Burnout

One of the major struggles that was identified for resident physicians was burnout. There are a multitude of factors that were identified that contributed to resident burnout such as long hours, overnight call, loss of sleep, and fatigue while also balancing busy schedules.

> *"I think the other thing that like I know for myself or even like my colleagues that we struggle with, like I want to say like an element of burnout. Like the hours are long. You do a lot of call. And so you don't sleep well. And you're busy. And so to kind of add that onto the other pressures and things too. And depending on like what time of year it is or depending on how things are going, like some years are better than others." ~Resident Physician 2, PGY-3, Pediatrics*

One resident spoke how burnout made them lose motivation across the different spheres of their life (personal, academic and clinical).

> *"Like even towards the end of med school and during residency, like I guess it's periods where it's like, you know, you start recognizing things in yourself where you're like, okay, maybe like my mood is not where it's supposed to be, and it's not just my work. Like you're sleeping a lot, you're not as interested in stuff. Like for me personally, like I have to like exercise regularly to try to keep my mood up. And I'm like I'm not motivated to that. I'm not motivated to do anything. So you like recognize that and work really hard to like get a routine going. At least I get a routine going because that's how I come out of it." ~Resident Physician 3, PGY-2, Internal Medicine*

In this vein, another resident spoke about how empathy could wane as a consequence of burnout as residents went through their residency program.

> *"I think that probably the most commonly talked about mental health problem is a sense of burnout. I think oftentimes especially in the field of emergency medicine, there's a sense that we get jaded very quickly or we perceive the same type of patients that maybe we would have had a lot more empathy for and a lot more sympathy for when we started medicine, and we kind of lose that empathy as we kind of go through medicine." ~Resident Physician 7, PGY-3, Emergency Medicine*

Another resident spoke how burnout could manifest in several different ways in residents and sometimes they could exhibit reclusive behavior that actually prevented them from seeking help.

> *"...there's a point when you reach where you're like I cannot put any more effort. ...this can be manifested like in different ways. So for example, I remember there was like one talk we were having on burnout, and there was a resident who was saying that, you know, they were feeling that they were not caring anymore about the patients… Where even though you're caring for the patient, but you're so tired to a point where you don't think you can invest anything more towards the patient. ...Other than that, I would say like other forms of burnout that I've seen is like probably like shutting yourself, like not wanting to like keep in touch with your peers or with your family or friends. Just being like so overworked and tired in general that you feel that, you know what, no one understands me, no one understands my workload, and then I'm just going to be like reclusive and just kind of figure out my own issues. Which is actually contraindicated to what should be done. Like we don't talk about our problems. " ~Resident Physician 8, PGY-1, Internal Medicine*

One issue of interest that a participant brought up was the burden of paperwork and how it contributed to the long hours of work;

> *"Unless you have notes to do. And then it's until whenever your notes are done. So like you're here until the work is finished." ~Resident Physician 2, PGY-3, Pediatrics*

Vicarious Experience of Suicide

One resident shared how the suicide of a colleague from medical school just before the beginning of residency deeply affected her, surrounding colleagues, as well as the Undergraduate Medical Office - this led to increased support for residents as well as focus on building a better wellness program for medical students and residents.

> *"Like I mean they've created this system I think in part because there's been events like my colleague committing suicide that have really brought it to their attention that they need to have help available...And I think…at least I know from talking to people at UGME, they were really, really shocked when it happened. And I think they felt really awful about it. So they felt like they failed. I think… I mean a lot of us did. Like what did we miss? You know, all those kind of questions that people kind of have. I think with all that stuff, they took it pretty seriously and put in a lot of effort to trying to support people. I don't know how effective it is but they're trying." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

Substance Use

Substance use was not discussed extensively by residents but one participant in particular highlighted the introduction and prevalence of alcohol early in medical school which appeared to continue through to residency.

> *"...there's quite a strong culture of alcohol and partying ...Like the whole social thing, like putting on a good face, like going on fancy trips, drinking, having fun, like just telling everyone that everything is great... And I think a lot of that is kind of used to mask what people are just generally dissatisfied or disenchanted with their life. And the alcohol not only masks that but it acts as a depressant. So it probably worsens the situation. There's a lot of like, I guess, subclinical alcoholism that starts very early in medical school." ~Resident Physician 5, PGY-1, Family Medicine*

Another resident spoke about how substance use was not often spoken about when discussing mental health issues in resident physicians.

> *"Other things that I've noticed that I think get a lot less air play than they should is resident experience with substance abuse... there really isn't a lot of air play*

about substance use disorders in residents. And I feel like it's kind of almost a dirty secret that's swept under the rug in some ways. I think everybody's aware that it's something that happens but people are much less vocal about it than they are about other I would say less stigmatized issues." ~Resident Physician 6, PGY-3, Internal Medicine

The stigma associated with substance use was considered more so than for other mental health challenges due to the liability of addiction.

"There's liability and the risk associated with hiring someone with a substance use disorder given the nature for relapse. And I think that that's part of the reason or a huge reason that people aren't more vocal about it." ~Resident Physician 6, PGY-3, Internal Medicine

This resident brought up how there were issues with alcohol and marijuana:

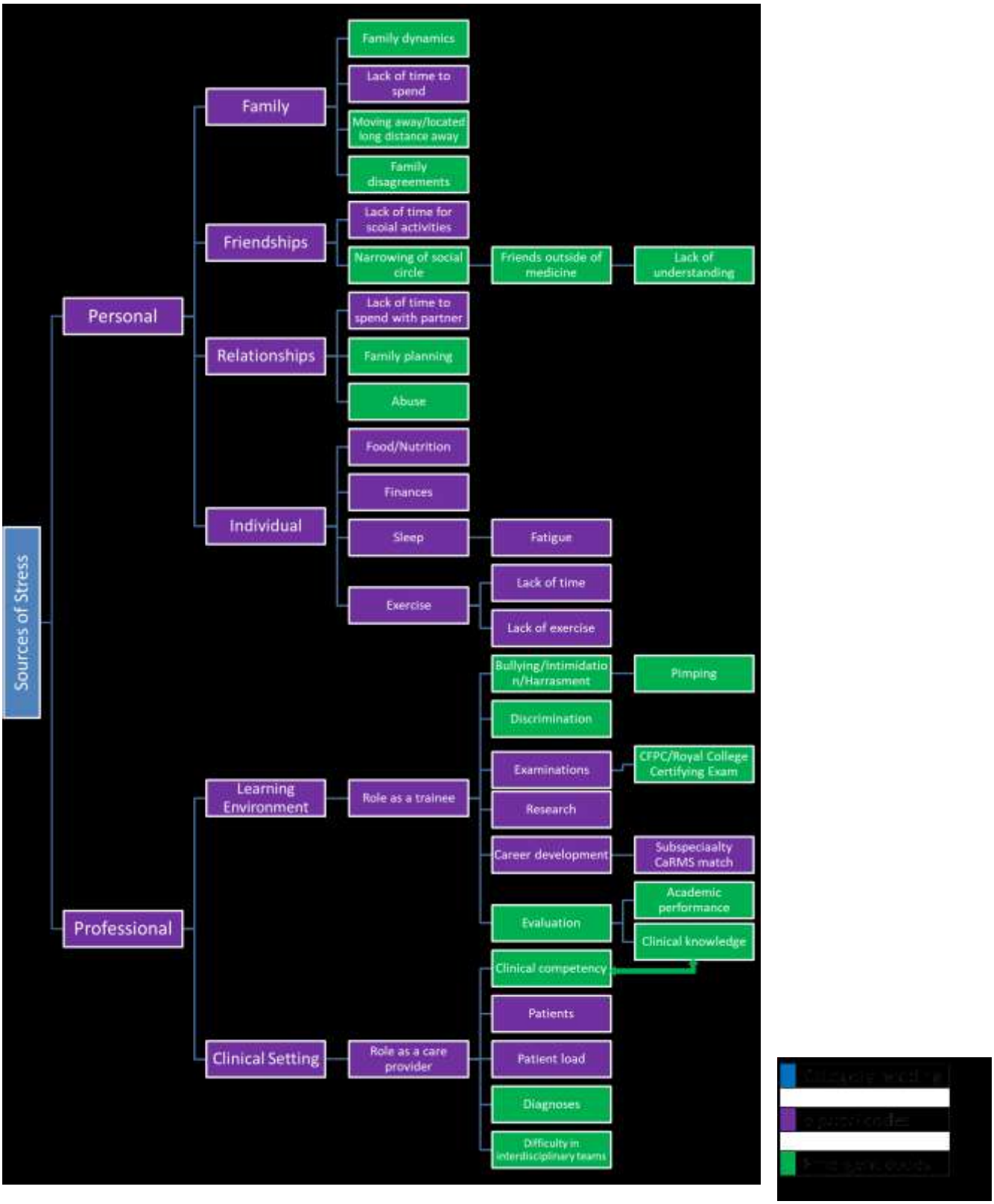
"...within my resident cohort and my friend group, I would say there's a rampant issue with alcohol and marijuana abuse. I think that it's very prevalent but under-acknowledged, for sure." ~Resident Physician 6, PGY-3, Internal Medicine

When probed further to understand how this substance use came to be, it was described to be a coping mechanism or as a means of escape from the stress and demands that they experienced as residents. This resident spoke further how this substance use was an accepted and normalized behaviour - residents were not letting it affect their patient care but they were developing unhealthy habits and perhaps not making the best of their time as learners.

In sum, these findings echo the literature and indicate that residents are facing a myriad of mental health challenges – the single most prevalent issue identified was burnout with nearly every single participant referring to it as one of the more prevalent challenges in residency. This was followed by anxiety and depression, then stress and fatigue. Some residents identified isolation as a challenge during residency while a few mentioned seeing or hearing of substance use among colleagues, starting as early as medical school. Suicidal ideation or the aftermath of a completed or attempted suicide attempt was seen as rare but was mentioned by residents as well. Other issues mentioned included sleep deprivation, adjustment disorder, and bipolar disorder.

Sources of Stress (Personal-Academic-Clinical)

Figure 15: Coding Scheme for Sources of Stress in Residency



Personal

In their personal environment, residents indicated a poor work-life balance with long work hours that leave little time for personal lives (time to eat, sleep, workout, pursue hobbies). Tending to basic needs was also cited as a challenge. Eating well and fueling themselves with good food was difficult.

> *"when you're working long hours, ... you don't always have time to make food at home...So then the next day you're at work and you're trying to scavenge for some sort of lunch. And so you end up eating fries. And it's depressing. Yeah, like* ***it's actually really hard to eat well often at the hospital****. Which is, you know, backwards. We should have healthy food available at the hospital. But it's also really expensive to eat at the hospital. So there are many times when especially when I was an early resident ..., I would, you know, eat a donut for dinner because it was cheap." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

Making time to exercise or go to the gym was also another struggle. One resident spoke about finances and how managing finances with a debt load from medical school was stressful in residency - especially when it seems as if more money is being spent than saved.

> *"Money is a huge stressor...Having to spend money on things. Like this is I guess more residency-related. But I had to spend $5,500 on licencing exams in my second year. Like that's a huge portion of my paycheque, right. Like that's over a month's worth of income...And then also you have to go to a lot of conferences and stuff. And the cost of that add up a lot too. You know, there's just you have to spend money. And you see how much debt you're in, and you're like oh my God, I can't. And yet you're still stuck spending more money. " ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

Another participant focused on how the lifestyle in medicine could lead to a resident's personal identify become enmeshed with their profession as a physician.

> *"Another factor is I mean given the hours and the time that you work… I mean a lot of people work long hours, don't get me wrong. Lawyers, businessmen. But a lot of medicine is kind of evenings, weekends. So it kind of makes it a little bit harder to have a regular schedule for people outside of the medical field. And again, it kind of narrows your circle to people in the medical field. And building on*

that, then you kind of get this self-perpetuating culture of medicine engulfing the rest of your life. And it becomes the focal point because you spend a lot of time working. And then outside of work, you tend to become friends with people you work with. So your whole life starts to revolve around medicine. And then I guess this is a key point, is what really ends up happening is you get your identity entangled within medicine.... So ***if anything goes wrong then it's not just their job that's being injured or being threatened, it's their whole personality and their whole identity that's wrapped up in that****." ~Resident Physician 5, PGY-1, Family Medicine*

When recounting how the match from medical school did not go as per her expectations, one resident shared her struggles with coming to accept the decision.

"I would say like that was probably the worst sort of like mental health episode I've had, was during that time. I think a lot of it for me was that I had matched… I kind of saw it as like a failure that I hadn't matched to like my number one choice...just like the idea of having to be in a program and doing residency in something I didn't want to be in was extremely, extremely daunting. Like it just felt like all of this had been for nothing,..." ~Resident Physician 10, PGY-3, Pediatrics

Residents also identified moving to a new city as another challenge – as the move coincides with the already busy transition to residency.

"…yeah, so not being able to see my family and not really being able to plan around it. Or like it being tough to plan around. Because like I guess we work weekends as well. So it's not like you have set times that you can go and see them" ~Resident Physician 3, PGY-2, Internal Medicine

Some residents highlighted that the way the residency match works, residents may or may not be in their location of choice and have to leave family and friends behind to move to a completely new city. The match was also stressful with respect to choice of discipline – where residents may not match to their speciality of choice and are compelled to complete training in a discipline they may not identify with.

"No, it was just the second iteration. I didn't apply to (a speciality) because I was told that I would match in (a speciality of choice) absolutely by everyone I talked to, including the program directors. And I got like interviews with 9 out of 11

programs across the country. So it was kind of a shock basically to myself and to everyone else." ~Resident Physician 5, PGY-1, Family Medicine

An unexpected mental health challenge that one resident brought up was isolation. Feelings of isolation in residency were reported as challenging.

*"…I think **isolation is a really big issue, especially in residency**. Because we're all like going on different schedules and they're all very busy schedules. And so not only do you not really have a lot of free time, **when you have free time**, you're kind of tired and **it doesn't coincide with anyone else's free time**. So like I think isolation is huge." ~Resident Physician 3, PGY-2, Internal Medicine*

Another participant brought up how isolation made them feel anxious. This particular resident was from a school in rural Ontario and spoke how being on rural placements made her feel away from her supports and this isolation made her more anxious.

"I know I've definitely felt this throughout my training, is like isolation and kind of what's associated with that. So you are often on these placements alone, and you jump into unique communities so you don't often like have people. And so I've struggled a lot with the isolation and then kind of what comes with that...So I find that when I don't have my supports or things like that then I end up having like a lot more anxiety. So I find anxiety on rural rotations is especially common. And I think a lot of my colleagues and classmates would agree with that. Because I think the biggest thing for mental health is support. And when you kind of take that away when you're not in your home base with your friends and family, and kind of the things you're used to doing. And so I think for me, the biggest thing is anxiety from isolation." ~Resident Physician 12, PGY-1, Family Medicine

Personal factors that were stressful and impacted residents also include relationship challenges - finding time to have a relationship, making time for themselves and their partner.

"we are at that age…like a stage in life when you're making the big decisions, right. For example, we are at that age range, like 24 to 30, where you're deciding, you know, should I…like stuff like marriage, engagement, children. So it's a given that many of us have additional stresses from a personal point of view. Like whether I should settle down in a city. And whether your partner who's going to be…who is not a doctor or in the field of medicine, is that person actually understanding of the challenges that you're going through?...For

example, like what can I foresee my career further on based on is my partner supportive or not, right? ...those are decisions and those are things that can take up space in like your personal thoughts and stuff." ~Resident Physician 8, PGY-1, Internal Medicine

Another stressor that one resident reported was family issues ranging from a family member being sick to family members not understanding the challenges of being a medical resident and working in healthcare. One resident gave the example of her family wanting to spend time with her by asking that she come to visit them when she found it difficult to make the time to drive the distance to another city to spend time.

"And they kind of have demands. Like they want me to come visit all the time. But obviously commuting...it's not crazy... but like it's not…you know, it's not nothing. It definitely impacts my schedule. And they kind of have expectations of my ability to be present more than I'm able to give, right. They think that my job is, you know, "Well, why can't you just come this weekend," kind of thing. But it's not always that simple. And no one in my family has a job in healthcare. So they don't… I don't think they really get what it's like. " ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine

Another resident shared how the schedule of residency didn't allow her to spend time on family matters which would remain unresolved.

"I feel as though sometimes if there's any conflict or difficulty in like my family, not like my relationships but more so my family, I just feel as though I don't have like the time or energy to invest into that. And so it remains kind of unresolved and then it's in the back of your mind sometimes throughout the day. But yeah, I guess I feel like I don't have the time to deal with my own conflict or issues." ~Resident Physician 11, PGY-1, Internal Medicine

Professional

Academic Environment

In their academic environment, stressors included a constantly changing schedule as they moved from rotation to rotation, working with any given number of new staff and preceptors in each rotation. Given their schedules, residents identified that they felt isolated at times – with only 1-2 residents working a service at times or when working on-call shifts left

them with a reversed schedules. With regards to scheduling, residents mentioned that the lack of control over their schedules was challenging, especially for planning personal time for themselves (i.e. vacations).

> *"one big source of stress for me is, you know, not having a lot of control over my schedule. I feel like I'm kind of a victim of the call schedule. I feel like I don't have very much, if any, autonomy in scheduling my vacation...And it's very stressful because a lot of my coping with the stresses of residency is having, you know, things to look forward to. And when the things that I'm trying to look forward to, where there are barriers to getting there, that's a big source of stress for me." ~Resident Physician 6, PGY-3, Internal Medicine*

One resident pointed out that completing mandatory rotations that are part of their residency program but not their area of practice could be tedious (i.e. a family medicine resident doing a surgical rotation).

> *" I mean for me the biggest source of stress is just like being on a rotation and doing something that I have absolutely no interest in doing after having spent 4 years thinking I was going to get to where I wanted to go, and I still have now punch through these other blocks. And just like waking up at the beginning of the day not wanting to go to work in the first place, and then working long hours just kind of causes the day to drag on. So that's a big source of stress." ~Resident Physician 5, PGY-1, Family Medicine*

Academic half-day/teaching day was reported to be a good break from the regular shift but it was also stressful in that it was half a day of dedicated teaching/lecture time which is built around the resident's clinical duties. One participant mentioned not being able to make it to half days due to clinical or patient duties while another referred to difficulty going to half day when on a post-call day.

A participant from NOSM shared that their residency program had a different approach to academic teaching which was really helpful for residents. Rather than having a half day teaching session every week they spent 2½ days of protected time at the end of the month to cover academic materials.

> *"at NOSM we do it a bit differently. I know other schools do half days a week. So we actually have it all at the end of the month. So we do 2 ½ days of academics and have lectures, simulations, lots of different stuff. And I find them to be super*

helpful and kind of a nice break from clinical stuff at the end of the month when you're a bit burnt out. And it's also been really good to have that time with your fellow residents to debrief... So I've actually found that to be a source of like calmness at the end of the month going back for academic sessions." ~Resident Physician 12, PGY-1, Family Medicine

The breadth and depth of knowledge to learn was also identified as stressful, with residents oftentimes feeling like they should always be studying even when not at work. One resident spoke of how the learning style shifted quite a bit from medical school to residency - in that there was less structured time for studying.

"So I think just the lack of time to do formal studying, as we're used to. So I think the stress stems from kind of that transition and the way that you're expected to learn. You're not expected to be sitting down and studying with textbooks really at any point in your first couple of years. But you're expected to be learning throughout the day and retaining and reading around things as you go. And so just that switch in how you should learn is quite stressful. " ~Resident Physician 11, PGY-1, Internal Medicine

As learners, residents also often have a research component that is required during their residency program. Other stressors include studying for licencing exams (for example one entire year for Royal College exams) or preparing for subspecialty matches for further training.

"there's the big Royal College exam which is like a qualifying exam that people spend like up to a year studying for in groups while they're working. So that's in your final year. As is your electives and your second match." ~Resident Physician 3, PGY-2, Internal Medicine

The subspecialty match occurs in select specialties such as Internal Medicine and Pediatrics and occasionally surgery where residents complete core training in 3 years (for Internal Medicine and Pediatrics at least) and then apply for fellowships to subspecialize further. One participant spoke about colleagues undergoing the second match that faced an additional level of stress in core training as they had to plan their electives in their speciality training to undergo successful match for their subspecialty/fellowship training.

The "match is definitely this like sort of black cloud that looms over everyone. Because like I guess another thing with at least the medicine residency ...you need to like go through the match for another 2 years of fellowship...You don't

know where you're going to be in 3 years...And you have a bit of a honeymoon period when you match to your residency. But then like that's kind of short lived because there's also the stress of like trying to figure out what you want early so that you can sort of gear your resume towards it." ~Resident Physician 3, PGY-2, Internal Medicine

There was also the added stress of feeling as if they were being constantly evaluated.

"then just the general stress of kind of being evaluated. And often you're told.. You know, you're being told you didn't do a good job on something or you're being told that you didn't live up to the expectations" ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine

In this vein, one resident identified that one cause of stress for them was a perceived notion of expectations from preceptors. They already had high expectations for themselves and were often stressing if they met the requirements in the eyes of their preceptors. This tied into feelings imposter syndrome, which added a level of complexity to their self-perception and made residents questions themselves and their academic abilities.

These feelings of imposter syndrome were sometimes validated through interactions of preceptors with residents in the hospital - one resident related that sometimes shame-based learning was utilized by staff which was stressful and made residents question their competency.

"I haven't seen much of like a shame- based learning thing. So when I came to medicine, it was like a brand new thing, right. Like we use this term amongst colleagues and things... Like you're put on the spot and you're asked questions where if you don't know, it's like you feel really bad..." ~Resident Physician 8, PGY-1, Internal Medicine

One resident brought up that the breadth and depth of the knowledge can be so overwhelming at times and given the culture in medicine residents might not seek help, or fall behind further and further - compounding their stress over time.

"For other people I guess another source of stress is that they can feel… they can feel intimidated because you're going to be pushed, you're going to be challenged, and you're going to be asked to do things that you're not entirely comfortable with, and you're going to be asked to give answers that you're not

entirely sure of, and you will be wrong a whole bunch of times. So other people may be stressed about feeling wrong and not knowing what they're talking about, and feeling like they can't admit that they're wrong... Because then you start bluffing, and then you get further into your lies. And your over-confidence and your false projector of confidence, and then eventually gets caught and it just gets worse. So I think part of it is the culture that lot of people have of feeling like I can't say I don't know or I'm not sure." ~Resident Physician 5, PGY-1, Family Medicine

With regards to academic development, conducting research was a stressor one resident identified. This was partially due to the fact there was little time given for research however it is an expectation of most programs. On average residents are given short research block (up to 2 months in a residency) however, in the preceding months they are expected to begin the research process and move things forward.

"You're expected to spend like hundreds of hours essentially gathering data and processing data, and writing manuscripts and publishing. And there's really like no extrinsic reward. But you are kind of punished if you don't do it. So that's one thing that I think is stressful." ~Resident Physician 6, PGY-3, Internal Medicine

Some residents found that administrative tasks such as recordkeeping, charting, dictations often kept them from learning opportunities in medicine which was a source of stress.

"Like there's a bit of administrative burden in terms of getting evaluations completed by our evaluators, and sort of tracking sort of the work that we're doing in terms of attendance at lectures, and responding to emails from our supervisors, and those types of things. Those are more academic things in the sense that they're sort of check boxes that we have to tick off... And I feel like those kind of school-related administrative tasks do take up a lot of time. And those are often the things that we get kind of slapped on the wrist about if we haven't completed. When I feel like my time is often pretty scarce, and like I should be using it to like learn or, you know, take care of patients rather than do some of these tasks." ~Resident Physician 10, PGY-3, Pediatrics

One particular resident summarized the conflict of balancing academic and clinical responsibilities really well - touching on many of the key points that residents face in residency,

"as we're progressing through our residency, there's still a ton of expectation that we continuously have to study and gain knowledge. And that can be sometimes very difficult to do when we have such long work hours. I think that

provides a lot of stress. And like I said again, it's the additional responsibilities as well. So like research projects and stuff like that. It almost feels like in some extent nowadays ***we aren't just expected to be good clinicians but we are expected to be like good researchers as well, be good educators, be good advocates.*** *And while those are all I think very important roles of physicians, they all take time." ~Resident Physician 7, PGY-3, Emergency Medicine*

Clinical Environment

Patient volume and the type of service a resident is on impacts their daily stress levels as well. When on a clinic block, patients are scheduled and the day is relatively structured. Conversely, while on a ward service, the number of patients is constantly in flux - there are rounds on current patients, admitting of new patients, transfer of patients to other services, and discharging of patients.

"So yeah, definitely the volume plays a huge role. And the inconsistency. Like I mean it's one thing if you could…if you knew you were going to have like let's say 10 patients in a day between the hours of X and Y, and you can plan accordingly. But again, like you have no idea. And sometimes you can kind of get… Like I've had people that have admitted… Or I know of people that have admitted like close to an entire team of 30 people in one day" ~Resident Physician 3, PGY-2, Internal Medicine

Being on-call was another stressor for residents. There are two calls that a resident may encounter: the first is hospital call in which a resident completes a regular workday and then remains in the hospital in the evening and overnight (from 5:00 pm - 8:00 am) spending an additional 2 hours in the morning to perform 'handover' with the incoming medical team. The second type of call is home call, in which a resident completes a regular day and returns home but is 'on-call' and required to return to the hospital as needed between the hours of 5:00 pm and 8:00 am. Following an on-call day, residents have a post-call day to recuperate.

"But I guess it was just the tension, that was like the muscle tension that was making me so tired. And then like for a few days before call, like you'd start thinking about the call. So like I felt like the anxiety of it, like I wouldn't sleep well the night before I had call. And like knowing you're not going to sleep for home call" ~Resident Physician 3, PGY-2, Internal Medicine

A few residents highlighted that in some specialties such as surgery, the culture of residents and staff is such that residents will often remain in the hospital post-call to observe the next day's cases. Relating the case of a colleague one resident highlighted that this is an unspoken expectation.

> *"So he stays the whole day and does the cases even though he's supposed to go home post-call. The PARO guidelines are generally like often not followed. And he's expected to stick around. You know, you can argue that it's your contract but when you know that the people that you're operating with are the ones who are going to hire you at the end of the day, and jobs are hard to come by, you're not going to go home, right. So work hours alone are a huge amount of stress. And it's hard to live your day-to-day life when you're spending, you know, 100 hours in the hospital in a week." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

In terms of other stressors related to the clinical environment, residents shared that difficult patients or families could be challenging to deal with over things that are out of a resident's control such as (waiting room times or time for diagnostic tests) or disagreeing with a course of treatment – with differences between patient's and family's wishes.

> *"It's more like I can't change like what kind of room you're in, or like you've been waiting in the emerg for 10 hours, or that I can't get you an MRI today. And it's sort of like that kind of thing where I don't have the power to sort of like help with it. But I'm still being asked to like fix it, is obviously challenging. And I think… You know, like I don't think that's unique to residents. But I do think that because we're the ones who are often interacting with the patients, we do get a lot of that." ~Resident Physician 10, PGY-3, Pediatrics*

Two participants spoke about managing the expectations of difficult patients and the toll it took on their mental well-being.

> *"But like it's a tough place to feel when you're…kind of like you're resenting your patients because like you have to at the end of the day provide good care for them, and you do want to provide good care for them, but they're just sort of…they're not doing anything to help themselves. But in fact, they're just like further adding to your workload and sort of the burden on like the system." ~Resident Physician 3, PGY-2, Internal Medicine*

and

> *"it generally feels worse like at the end of the day when people have like yelled at you or screamed at you and told you you were incompetent and that they're going to sue you, and stuff. That feels bad. When you give someone a bad diagnosis, it feels bad in like your heart. But if you do it in the right way, you can at least get some solace from that. It's hard to get solace out of being yelled at." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

A first year resident spoke about how patients came in with expectations and opinions for their treatment and it could be difficult to show authority as a resident. This resident shared that dealing with patients who wanted opioids could be challenging as younger residents could be easily manipulated.

> *"Difficult patient encounters. Like managing the opioid kind of patients has been tough as a resident because they're a little bit manipulative. And it's a bit stressful. I find myself to be a little bit more manipulated, easily manipulated at this point in my training. And maybe that will get better as I go on." ~Resident Physician 12, PGY-1, Family Medicine*

One resident spoke about how sometimes residents felt compassion fatigue dealing with patients that were quite ill and in need.

> *"I think that just compassion fatigue is a huge thing. Not that people get tired of being compassionate but you just have so many patients who are sick who need your attention. And a lot of them you can care for for a long time, and you grow to know and to care for them. And when they pass away that's very difficult. It's a hard spot to be in because you're not… You know,* ***you're not their family and you don't grieve the patients in the same way that family members would. But I think that we do get attached to our patients. And when we lose them, it's hard. And there's no like good way to deal with it.*** *You can debrief but you still might be left with a lot of questions around their care. You might feel guilty about something. You might just be sad that their life is over. And I think that is a huge source of stress. And I don't know that people as they get older, they just become more numb to it or if it's something that you actually get better at coping with. Which is I hope that you get better at coping with it and you're not just becoming more numb." ~Resident Physician 11, PGY-1, Internal Medicine*

Residents also spoke about how changing blocks during their residency and working with different specialities could be challenging as they are often working in different specialties with a different team and different staff which may have unique expectations of the as a resident.

> *"I think sometimes a source of stress…or most of the time when I do experience sources of stress at work, it's mainly when I'm on another service where I may or may not be as familiar with the team, may or may not be as familiar with the particular type of medicine that I'm practicing. And it makes it more difficult when the people that I'm working with can have challenging personalities or have different expectations than I can provide." ~Resident Physician 7, PGY-3, Emergency Medicine*

Aside from difficult patient experiences, interactions with the interdisciplinary team could also be a source of stress - one resident shared how her difficult relationship with a nurse manager affected her mental well-being.

> *"One of them would be difficulty with the inter-professional team. This is something that thankfully I haven't experienced a lot of. That I have on one occasion experienced a very negative interaction with a very high kind of level nurse manager who was I think picking on me and bullying me to a certain extent. And so that was extremely stressful and played a part in me being not well from a mental perspective that block because I was really dreading kind of having to go in and interact with this person. I was feeling very personally kind of like, you know, targeted and attacked." ~Resident Physician 6, PGY-3, Internal Medicine*

Another resident also brought up the nuances with working in an interdisciplinary team - specifically the physician-nurse relationship. From a patient care perspective, a resident physician is the decision maker in overnight call (when staff are away for the night), however the team often has experienced nurses that have been in practice for many years. This participant noted that some residents may have confrontations with the nursing staff over opinions and decisions in patient care.

> *"...there's, in an academic centre especially, an awkward relationship with nurses where as a resident, I mean nurses answer to you. You're the most responsible physician overnight or in the emergency department. But they oftentimes have a lot more experience. And again related to that some people are not comfortable saying they don't know, they then get into confrontations with nurses where*

often the nurse has more experience, is more comfortable, and knows what's going on. But the resident will then kind of dig in their heels and say, well, I'm supposed to be the resident, I'm supposed to be in charge, I can't take advice or I can't like show weakness in front of them. And instead of being more collaborative and saying, oh, well, what do you think? ... And kind of talking to them on a more peer-to-peer level. There's sometimes the idea that you have to not talk down to but show…like assert your dominance or assert your hierarchy. And I think that's a very unhealthy work environment. And then it can lead to resentment and awkward relationships with nurses..." ~Resident Physician 5, PGY-1, Family Medicine

Making the correct diagnosis was another source of stress that contributed to anxiety as oftentimes, despite being learners, a patient's life in their hand. In this vein, making clinical mistakes contributed to one participant's anxiety as well. The fear of making the mistake is also compounded by the fact that the resident has to disclose the error to the patient or their parents/family members as well as fill an online background form for the hospital (detailing the mistake and the factors that led to it).

One resident shared that the dual roles of a resident (as learners and practicing clinicians) might affect their building trust with patients due to the fact that the resident doctor treating them might need to refer to a staff physician to confirm their diagnostic plan. This made them worried that this undermined their relationship with a patient.

" I guess the other thing is trying to build trust with patients but also needing to still kind of review with staff. So you often… Like we have to leave the room and say, you know, I have to review this with my staff because we're still learning. And sometimes that might, I don't know, maybe scare patients a bit because they don't know if they can trust your management plan." ~Resident Physician 12, PGY-1, Family Medicine

Another resident brought up that it could be stressful as a resident if they did not agree with the clinical plan of action of the staff they were working with. As a learner, it can be difficult to speak up and voice their clinical opinions.

"And there's also a bit of stress in terms of like not being the one making the decision sometimes. So there's, you know, occasions where I think something is, you know, best for the care of a patient, and my staff will disagree with me. And I kind of have to just do what they tell me to do just even if sometimes I don't

agree with it. And so that disconnect is sometimes challenging as well." ~Resident Physician 10, PGY-3, Pediatrics

The following participant aptly captured the struggle to balance academic and clinical roles while balancing a personal life.

"...you're easily working 80, 100 hour weeks...It's like you're doing 2 fulltime jobs. And they're expecting you to do like research on top of that. And you… Like research on top of that, study extra on top of that, and then just sort of like find time for like life stuff as well. And ***it's just there aren't enough hours in the day to do all that****." ~Resident Physician 3, PGY-2, Internal Medicine*

Clinical Environment - Specialty Specific

Residents in specialties such as pediatrics, reported that in addition to dealing with young patients they also have to consider parents in the equation when providing care.

"Pediatrics is a very…like I find like a very positive and meant to be like a very warm and welcoming and happy environment. And sometimes dealing with those things kind of takes the wind out of your sails a bit. Like you're trying to make the best experience for these kids who are in hospital. But you're also like dealing with the stress of having to sit down and have a 45 minute conversation with the family who doesn't want to hear anything that you have to say or thinks something if your fault when it's not, or doesn't want to do what their child needs." ~Resident Physician 2, PGY-3, Pediatrics

As learners in the clinical environment, one participant described that those in pediatrics were consistently positive and it was a very warm and supportive environment - however people drawn to the speciality were very detail oriented and focused on the minutiae and staff could be perceived as micromanaging or monitoring. This hands-on approach to teaching was attributed to the fact that the pediatric patient population is very vulnerable and small mistakes might be more detrimental. This monitoring by staff was reported to be "different areas to varying degrees, and at different times of the day." *~Resident Physician 2, PGY-3, Pediatrics*

Another resident, in an internal medicine residency, described that the nature of their work could be taxing and the patients they treated in hospital had multi-morbidities and could be challenging to treat to full health.

> *"think that just the nature of our work is that, you know, in internal medicine residency, you're not dealing with for the most part healthy young patients who are coming in with, you know, normal physiology...You're dealing with patients who have a very, very complicated medical history, who are often elderly, who have low quality of life, low functional baseline. And as a part of dealing with this type of patient population, many of them are going to die while they're in the hospital. Many of them will leave the hospital with a lower quality of life than they came in with. And that's just part of the job that I think that it can be taxing on residents. Because it's like you're not really getting that good outcome necessarily that is usually a more gratifying part of medicine. You're not kind of patching people up and sending them home better off than they came in. It's usually they're going home worse off, if they go home at all." ~Resident Physician 6, PGY-3, Internal Medicine*

Another internal medicine resident echoed these sentiments as well:

> *"especially in internal medicine, you have the sickest of the sick patients. And often it's stressful being around people who…like taking care of a patient who you know is sick and who's probably not going to make it out of the hospital at this visit. So it's just like losing your own… Coming to terms with it yourself too before going and interacting with the patient." ~Resident Physician 8, PGY-1, Internal Medicine*

A resident in Emergency Medicine spoke about how sometimes a patient's lack of understanding and expectations of the Canadian healthcare system caused the Emergency Department at the hospital more busy causing unnecessary strain on the system and the physicians and healthcare team. This resident specifically spoke about how the ER was often a patient's source of primary healthcare rather than the emergency care that the team is trained and prepared to deliver.

> *"So I think especially in the emergency department and with the way that the Canadian health system is set up, the emergency department can oftentimes be the primary healthcare provider for some patients. So whether it's because there is not enough access to any family practitioners, or it's that the patient chooses*

to use the emergency as their primary healthcare system, or it's just that they're not educated enough to kind of recognize what is useful use of the emergency department. Those can always seem a little bit frustrating, especially when the emergency department gets filled up with patients who may not have required your services and could have been dealt with in like a non- acute setting when there are so many patients that do require the intensive care that we can provide." ~Resident Physician 7, PGY-3, Emergency Medicine

A resident in Family Medicine shared that the clinical experience was unique in that they were given a roster of patients beginning from the first day of their residency. They spoke about how it was different from medical school or other residencies when a senior resident or staff would ultimately review their work.

"we have our own patients. So day one, you show up, you have a roster of patients, people come see you. It's just you in the room. If you want to talk to the staff, of course they'll come in if there's an issue. But really it's just you doing everything. So it's a huge transition from you went in, spoke to the staff, go back in with the staff, in med school. I mean you would do the plan together. To suddenly you are basically their primary provider. And so this is in the family clinic itself. So I think the major stress is assuming that role as the primary care provider when you're still learning, you're still trying to sort out the system. How do I make the prescription? What dosage? Am I giving the right diagnostic test? So there's… And so number one is assuming that role." ~Resident Physician 9, PGY-2, Family Medicine

Furthermore, this family medicine resident also spoke how another stressor was patient flow and practical management. They were responsible for treating a certain number of patients in half a day and found that it could be challenging to be focused and make efficient use of their time as well as the patient's time when they were also dealing with the responsibility and implications of handling a patient independently without review.

Another family medicine resident spoke about how the short duration of the family medicine program could bet stressful and make them experience a sense of burnout earlier in residency.

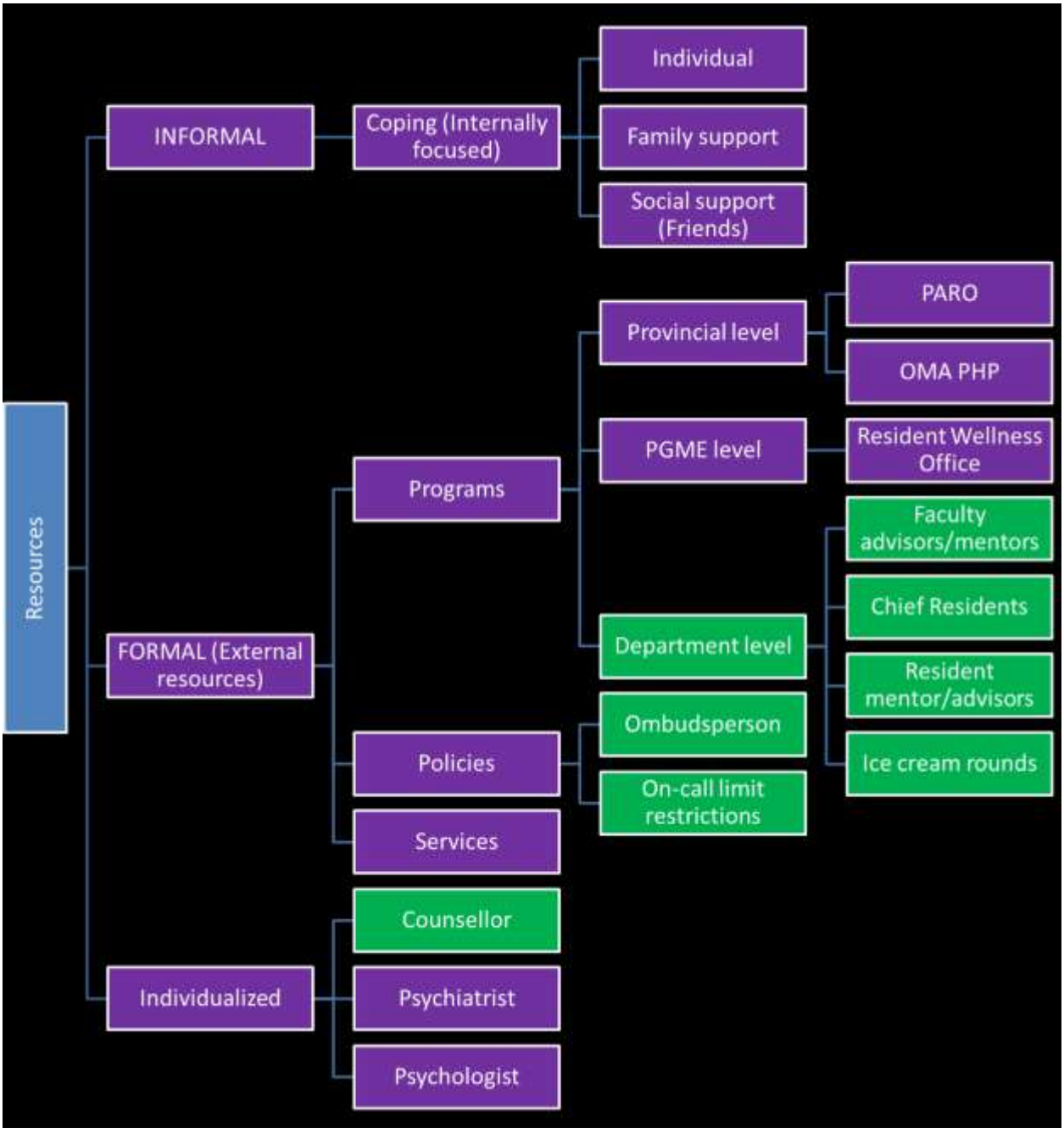
"Because yeah, getting burnt out is real because you have a lot of pressure just to jump right in and kind of know everything, and see your own patients, and manage your own things. And family is such a short residency. So it's all kind of

packed into 2 years. So yeah, I've been feeling a bit burnt out." ~Resident Physician 12, PGY-1, Family Medicine

Each of these unique environments (personal, academic, and clinical) overlap and while each may have distinct sources of stress, they can accumulate to exacerbate the overall stress a resident physician experiences over the course of their residency. These have important consequences for their personal mental well-being as well as in their academic and professional spheres.

Programs, Policies & Services

Figure 16: Coding Scheme to Identify Resources for Mental Health for Resident Physicians



When asked if they knew of programs, policies or services where they could seek support residents could usually name two to four different resources with varying degrees of knowledge of their services. Their source of information often stemmed from information received during orientation sessions or emails shared by their faculty. Resources identified included PGME wellness offices, a resident physician association 24 hour help-line (PARO), EAP (Employment Assistance Plans), and access to free sessions with counsellors or psychiatrists. Residents also indicated the possibility of speaking with program administrators as well as program directors – although this was dependent on a participant's program and speciality, and compatibility with their program director or administrator.

Knowledge and Utilization of Services

University of Ottawa

Participants found that often they were introduced to the wellness office during their orientation in first year but the timing of their services coincided with the presentation of other orientation materials pertaining to residency. Additionally, the uOttawa Wellness Office website was reported to be difficult to use with difficulty finding what resources were available and where they were located.

> *"I mean I guess they mentioned it in the orientation – Come to the Wellness Office. And it seemed like a decent thing. But I kind of doubt that it's something that's accessed until there's a problem. And rightfully so. Because their services are psychology and psychiatry. And* ***you don't really go see a psychologist for anticipating future problems****." ~Resident Physician 1, PGY-1, Psychiatry*

Another participant identified that they had communicated with the resident wellness team at the PGME by email in the first couple years of their residency. This particular participant identified that they were told there was availability but the times coincided with their work schedule and they were uncertain if they should ask their program for time off for an appointment. This participant ultimately did not visit the Wellness Center as they did not want to ask their residency program for time off. They rather found a private counsellor that was completely separate from the University and Faculty of Medicine. This resident found that making a point to meet the private counselor fairly regularly was helpful for them however these visits were scheduled for post-call days or off days in rotations. This particular private counsellor offered services by Skype which proved to be helpful.

*"And **being in** like I think like **a mentally healthier spot now is** like **helpful in terms of breaking the stigma for myself and recognizing that this is very normal, a very reasonable thing to go through**. And it doesn't mean that I'm a bad doctor, and it doesn't mean that I'm a bad person, and it doesn't mean that I'm somehow not strong enough or not capable enough to do a good job. Just recognizing that we deal with a lot of stuff, and it's important to reach out. So I think like where I had to reach out to the wellness office again, I would be more inclined to go to the program now and say like I need time to take to do this." ~Resident Physician 2, PGY-3, Pediatrics*

McMaster University

When asked about services at McMaster, one resident spoke about various levels of services. At the program level there was a resident wellness committee that recently launched a wellness curriculum and hosted events such as ice cream rounds (a small group session for residents to speak amongst themselves in the presence or absence of staff). The program also hosted and facilitated sessions with guest speakers for their residents to gain insight on how to stay well in residency.

At the school level and PGME level, there was mention of services for mental health issues as well as support however the resident was not aware specifically of what services were provided as they had not sought the services before.

This resident also mentioned broader city level initiative such as a suicide help line in Hamilton.

At the provincial level, there was mention of PARO, the resident voice for students in the province that provided access to a 24 hour helpline for residents - this information was often shared with residents by emails sent throughout the year - the helpline was mentioned at least every year in an email.

Another resident spoke about an Employee Assistance Program (EAP) that was available for resident physicians through McMaster University which included services such as counselling. This resident also mentioned that residents were also given extended health benefits through PARO that provided a sum every year for counselling (not confirmed but the resident had heard of this).

There was also mention of an ombudsperson that residents could meet with regards to issues in their residency - although the resident did not know the exact capacity in which the ombudsperson worked. This resident also mentioned that they were peripherally aware of a Wellness Office but were not sure of the services offered. The residents also had access to a social worker that could provide them counselling.

University of Toronto

When asked about wellness services at the University of Toronto, one resident shared that they had engaged with the services offered at the Office of Resident Wellness. They mentioned two counsellors as well as two physicians that were trained in remediation and leave policies. Appointment booking was described as a straightforward process where residents could call or email to set up an appointment. An important distinction of note was that the Wellness Office did not offer crisis services, but did facilitate appointments fairly quickly (often within a week). The Wellness Office also offered one-on-one counselling as well as workshops and presentations in academic half-day. This resident felt well supported by the Wellness Office and found it to be such a good resource that they encouraged fellow residents to visit as well. The Wellness Office consulted with and helped residents in a variety of situations - from those that had a negative workplace experience, difficult patient deaths, struggles with burnout, or relationship issues.

One very pertinent factor that this resident brought up was that the Wellness Office was a neutral ground to seek support - this was important for residents when seeking help as they are required to disclose if they have been treated for mental health when applying for a license to practice or insurance.

> *"And I think one of the best parts about it is that seeing someone from the Office of Resident Wellness, I don't feel like that's something that you need to disclose as having received treatment for a mental health disorder. Which I think is a barrier to some people seeking formal help. For example,* ***if you are renewing your CPSO application, there's a little box that you have to tick to say that you received treatment for a mental health condition or for substance use disorder****. And similarly, on insurance forms, like for disability and life insurance, there's another similar thing. I consider the Office of Resident Wellness kind of a neutral, low stakes place where you don't have to disclose that. It's not documented, it's not part of your medical record." ~Resident Physician 6, PGY-3, Internal Medicine*

This resident also highlighted that there were several online resources with a dedicated website for wellness resources including a section on financial wellness. External resources were also mentioned with reference to a psychiatrist health program, a telephone hotline from PARO (the provincial resident association group).

Sharing their experiences with harassment in residency, one participant brought up a harassment policy at the University of Toronto.

> *"There's a harassment policy. It's pretty clear-cut about how you're supposed to report these things, who you're supposed to escalate it to. There's chief residents at every site. There's a site director that you meet with a couple of times per year. And like there's ample opportunity to discuss these things and to report them. And I think that they're taken very, very seriously by the program. " ~Resident Physician 6, PGY-3, Internal Medicine*

There was one resident that later switched to a residency program at another school but when at the University of Toronto sought help from the PGME Wellness Office. This resident had a good experience there - they met with a physician who worked at the Resident Wellness Office in a confidential role. The resident was referred to a psychiatrist that specialized in working with medical professionals. Working with this psychiatrist over the course of a few months helped this resident through a rough time during their first year of residency.

Another resident spoke about how awareness about resources was not always very prevalent as the PGME programs in Toronto were spread across several sites and hospitals across the city. They also spoke about how different residency programs and departments offered different programs and services for those in their specialty. For this resident specifically, there was a social worker in their clinic they could speak with as well as a link to resources on their department webpage. With regards to supports from the PGME office, the resident was not aware of PGME services offered as they were at a separate site in Toronto and had not looked into seeking support but they instinctively felt that the PGME would offer support or counselling for residents. They also referred to the PARO webpage as a source of information about resident wellness initiatives.

University of Western Ontario

When asked if they were aware of programs where residents could seek support when experiencing mental health challenges one resident related that they often received emails

about wellness activities (dog therapy, colouring sessions) as well information about places residents could speak with someone if they are experiencing challenges or file a complaint. This resident noticed that these resources were more prominent and residents were contacted more frequently when a serious event such as the suicide of a student occurs. In this regard they felt it was meant to be helpful but was also a bit bureaucratic and perceived as a protective measure for the school rather than an effort to be proactive and help students in need.

One of the resident participants mentioned knowing that there was a faculty member that would be able to provide support but did not know any specific details. They did bring up that similar to any medical appointment it would be difficult to take time from their already busy day to schedule a meeting.

> *"I intuitively know there are resources. I don't know of any. But I think the bigger barrier would actually just be like* ***when am I going to do this****?...I think it's definitely a nice experience to like just talk to someone and like vent out your feelings to someone who doesn't know you and doesn't like…isn't invested in your story, like so to speak, outside of the clinic time." ~Resident Physician 3, PGY-2, Internal Medicine*

Conversely, another resident felt that they were always receiving communication about wellness initiatives.

> *"They specifically have like a wellness office here. They have the department that reaches out. Like yeah, I mean it comes from the top down and it just filters through every channel that they can try to reach us through." ~Resident Physician 5, PGY-1, Family Medicine*

The first participant had sought resources in medical school but in residency felt there were more hurdles to seeking support. In addition to finding the time to make an appointment, there was a questioning of the value of seeking services when they felt they knew the recommendations but were not able to implement them in residency.

> *"But like now it's a little bit like what's the point, from my perspective? Because there is… Like again, all the effort that goes into it. And then part of it is I mean like the things that you are going to tell me to do are things that I already like know that I need to do and have just like fallen out of habit. Trying to maintain a routine, trying to sleep more, trying to find time for your friends and like social*

activities, trying to find some hobbies outside of medicine, trying to make sure you're taking care of yourself physically. ... And I guess like one of the other things is like I guess I don't feel that special. Like my issues are the same issues that like everyone else deals with. So like why do I need to go like see someone for it?" ~Resident Physician 3, PGY-2, Internal Medicine

Queen's University

Both of the residents interviewed were aware of a Learner Wellness Office at Queen's and the fact that there was a psychiatrist that ran the program which also offered counselling services. This information was introduced to residents in their first year of residency through a mandatory event known as "QCARE" (Queen's Conference on Academic Residency Education) in which several issues in academic residency education were introduced and discussed. This event is in May of the residents' first year (towards the end of the academic year) and was noted to be a good touchpoint for residents after their initial orientation.

One of the residents also brought up that there were counselling services available through a counsellor that worked primarily with medical students and residents.

There was mention of Student Health that helped with accessing a family doctor. This resident also knew from colleagues that the PGME would be willing to accommodate residents and allow them to take time off for mental health reasons but she acknowledged that there is a stigma around accessing support and resources for mental health. In this particular case, the program director was also considered a source of support as there was an existing relationship of trust between the residents in the program with their director. It was brought to attention that program directors different amongst the specialties and all cases might not be the same.

The internal medicine program also set up their residents with a staff mentor who was a sounding board for all matters (related to residency or non-academic challenges). The resident that spoke of this mentioned that this could be helpful depending on how comfortable they felt with their mentor.

There was also mention of the resident help-line offered through PARO.

Northern Ontario School of Medicine

When asked about programs, policies and services at NOSM, both residents interviewed identified that the school was quite good in supporting their residents. One resident highlighted that the program was still new but that there was an established program with a Wellness Clinical Lead and a division of people. They mentioned that every webpage had an "Are you in a crisis" button that linked residents to resources.

Both residents mentioned that wellness was introduced right at the beginning of residency in orientation. One resident spoke how the Wellness Lead was at their orientation on the first day and spoke with residents, sharing his personal contact information and making residents comfortable with reaching out. Another resident spoke about a session where a guest speaker (staff) was invited to their orientation to share their experiences in residency and how they faced challenges.

One of the interviewed residents spoke about a new initiative at NOSM - a Resident Support Network - which trained selected resident physicians to provide support to fellow residents. This peer-to-peer model was introduced as residents can be tightly knit and will often share and speak amongst themselves. The training that was offered to those in the resident support network gave them the tools to help a fellow resident in need:

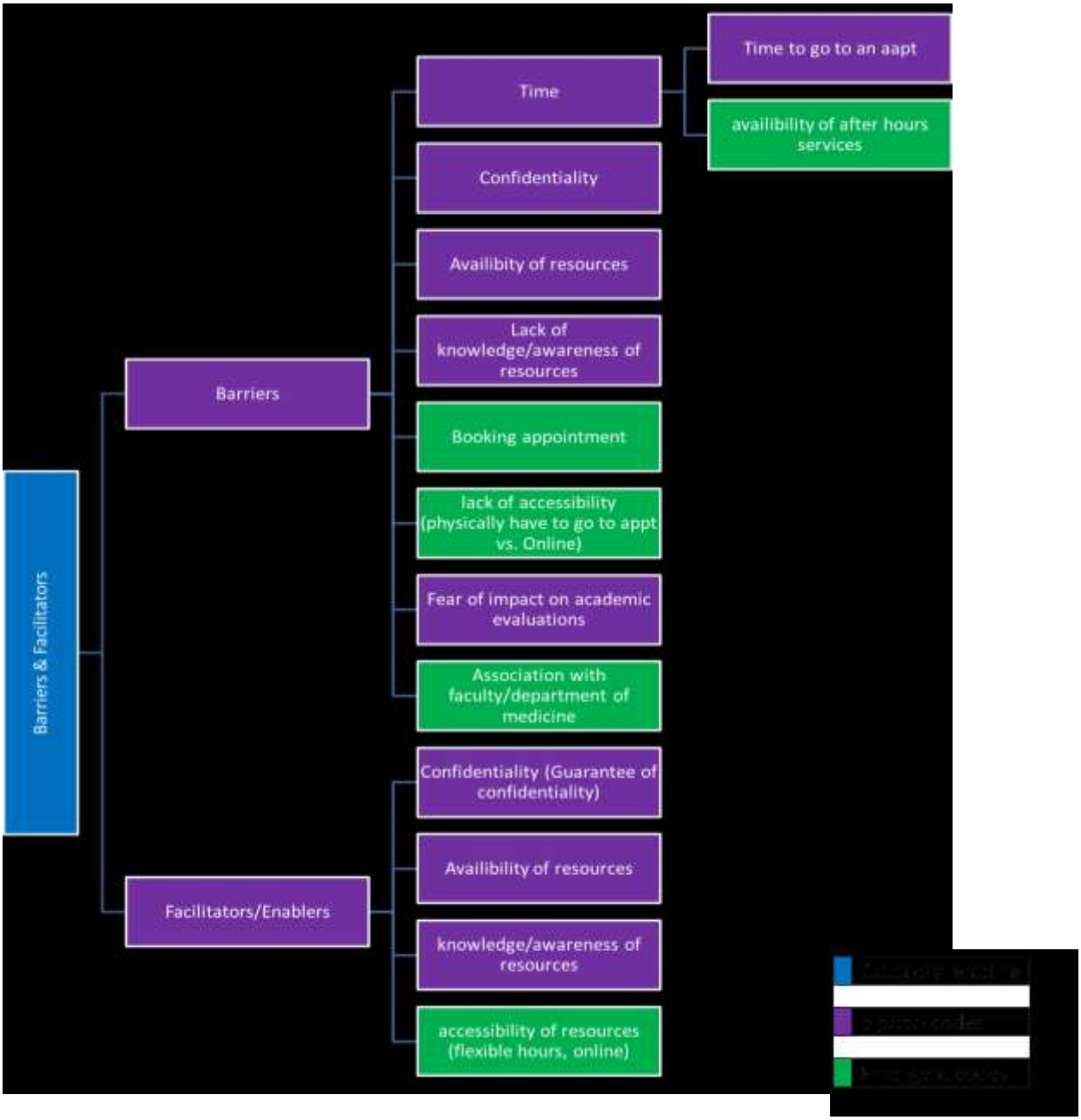
> *"So we are kind of trained on what to…how to respond to that resident, how to be supportive, how to provide resources." ~Resident Physician 8, PGY-1, Internal Medicine*

Furthermore, a different resident spoke about the availability of a psychologist on the wellness team that could be available for same-day appointments. The Wellness Program was quite enmeshed with the residency programs - in particular it was interesting to note that the psychologist was introduced to residents in their academic retreat.

As I had an understanding of the services available through the environmental scan, I could corroborate the resources mentioned by residents with those I found in the environmental scan. Through examining the knowledge and awareness of program, policies and services available to residents, I was able to gain a better understanding of their utilization of these services – in particular the barriers and facilitators to seeking help. This furthered my research objectives by elucidating the help-seeking behaviours of resident physicians in relation to the awareness and utilization of these services.

Barriers & Facilitators to accessing Services

Figure 17: Coding Scheme to Identify Barriers and Facilitators to Accessing Services for Mental Health



Barriers to Accessing Services

In terms of barriers, time was the single most mentioned barrier to seeking support, followed by worries about confidentiality and anonymity and impact on professional development and career trajectory.

Time was mentioned as "the number one barrier" to accessing resources. One participant highlighted the challenge of taking time while embracing the role of a resident physician.

> *"… people don't feel like they have the time or the rights kind of to access those resources without impacting themselves academically." ~Resident Physician 1, PGY-1, Psychiatry*

This participant highlighted the fear of negative appraisal or being given negative evaluations as a barrier to taking time to seek resources for wellness. The dual roles of a resident physician are entwined in such a way that their academic performance is linked to their progress in clinical education. The fear that taking time to focus on well-being will affect performance was another barrier to seeking support.

In this vein, confidentiality was important for residents - letting other people know about their challenges with mental health and opening up and sharing was cited as an initial barrier to seeking support.

> *"So I guess on the flip side, I think what is going to happen if other people know that I am feeling like this? Like if I'm a depressed doctor requiring medication, like should I…am I even in the right headspace for this?" ~Resident Physician 3, PGY-2, Internal Medicine*

Furthermore, confidentiality from other residents was also mentioned as important to residents. It was important to them to be comfortable coming to appointments without the fear of meeting someone familiar.

> *"If they don't want other people to know that they're accessing these services, there's always the risk of when you go to one of these appointments, who's going to be walking out the door before you, who's going to be sitting in the chair after you? You know, like I think that people feel a bit of anxiety about like having*

people find out that they're accessing these services." ~Resident Physician 6, PGY-3, Internal Medicine

Along with the desire for confidentiality, there is inherent stigma around seeking help for mental health challenges - one resident spoke about how medical culture was evolving with more education about wellness and resiliency but at its core still did not fully embrace and promote wellness.

"I think sometimes there's a culture that still exists that doesn't necessarily promote wellness. " ~Resident Physician 7, PGY-3, Emergency Medicine

One resident spoke about how this stigma kept her from sharing her struggles with mental health with colleagues and staff.

"And this sounds horrible but I think the stigma associated with mental health in medicine particularly is definitely still very present. Like I don't share like my mental health history with, you know, obviously all my colleagues... But you know, like I would be really reluctant to tell one of my supervisors about it. And that I think, you know, does cause some barriers in terms of accessing services because you do kind of have to explain like why you have to leave or whatever, right." ~Resident Physician 10, PGY-3, Pediatrics

Another resident mentioned that taking time off for being physically unwell was perceived as a legitimate reason for taking a sick day but conversely if one was feeling mentally unwell it would be more challenging to justify taking a day off from work,

"If you have a day of diarrhea or a day of a headache or a day of whatever it is, and you call in sick, like that's understandable. But if you have a day where you're extremely stressed and anxious, that would be frowned upon if you called in sick. I still think so. I think that's barrier #1." ~Resident Physician 9, PGY-2, Family Medicine

Fear about disrupting the timeline of residency was another barrier that one resident spoke about.

"Royal College exams only run once a year. So even if you're like 3 months or 4 months off then you may have to actually extend residency by an entire year. And so even if we do get some medical compensation for mental health concerns, it

will extend your residency by one entire year." ~Resident Physician 7, PGY-3, Emergency Medicine

One resident made the point that seeking emergency care for mental health challenges can be difficult when working in healthcare. While there is confidentiality, there is also a high chance of encountering colleagues when seeking help and those you work with learning about your challenges,

"But in general like the fact that to access emergency care would mean seeing your colleagues. It's like a huge negative. I've had this chat with a few friends, and they kind of all agree that they would drive a couple of hours to get outside of the city just to go to a different hospital if they had something embarrassing going on. And mental health, you could definitely feel embarrassed even if they shouldn't be. So I think not being able to access kind of care that way is hard." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine

Another resident brought up the culture of medicine and the reluctance to seek help:

"There's this whole like kind of stoicism that accompanies, I think, the culture within medicine to not reach out." ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine

One resident related that there could be a feeling of failure when reaching out for help:

"And then I think… I don't personally feel this but, you know, feeling like you failed like if you need to reach out for more support. Because you're trying to, you know, do everything. You're a medical student. And then you're like, okay, I'm going to be a resident. I should be able to handle all of this. And I wonder if everyone else is handling it." ~Resident Physician 12, PGY-1, Family Medicine

In this vein, along with reluctance to seek help, there was some hesitation to seek formal psychiatric assistance as they would be required to disclose when applying for their licence or insurance forms.

"one of the barriers that I think prevents people from seeking out formal psychiatric help or formal help for substance abuse issues is the fact that you have to disclose this on your CPSO application, and it has implications to your disability and life insurance." ~Resident Physician 6, PGY-3, Internal Medicine

The concern about finding a safe, neutral space to share challenges and seek help was noted to be difficult for residents - especially depending on their issues. In the case of a physician struggling with substance use, one resident pointed out that if they sought help with the Ontario Physician Health Program there was a risk that they would be required to enter a monitoring program that in turn could affect their livelihood.

Burden on colleagues was another concern that residents brought up with regards to taking leave for mental health. The onus of the workload is spread among other residents in the program that are already often stretched thin.

> *"And so if you leave the service that you're on, it makes other people have to work harder. So like this is not… This comment is not intended to be insensitive towards my friends and colleagues who have had to take time off for their own mental health. It's like but the number of spots in the call schedule are the same regardless of how many people are there. So if you lose 2 people to mental health coverage, it means you're doing more call shifts. Which means that you're also having more sleepless nights and fewer days off and evenings off." ~Resident Physician 2, PGY-3, Pediatrics*

Participants mentioned making pertinent information about wellness programs/mental health supports easily available online such as email information in addition to phone information. Contacting phone numbers were listed as difficult as residents were wary of making a sensitive call during business hours (which are often resident work hours as well). One participant identified that it would be helpful if the Wellness Office shared online what services they provided in detail. Another resident spoke about a wellness app that was being developed at their school and shared that it could be helpful to have all of the resources in one spot with phone numbers and information.

The cost of mental health services was another issue brought up by a resident - resident benefits cover the cost of a limited number of sessions and if an individual requires a lot of support the cost associated with seeking the services of a psychologist could impede them from getting help.

> *"essentially like it's for short term counselling. So that's I guess a barrier. But like for I think 4 to 5 sessions, they're like covered and free." ~Resident Physician 10, PGY-3, Pediatrics*

Service by appointment was highlighted as another issue for access to the Wellness Office. A participant mentioned that a walk-in office where one could go when in need of help would be useful. Furthermore, the appointments that were made available to residents could be during business hours for the Wellness Office which often corresponded to work hours for residents.

> *"Having hours outside of business hours. So not having to go in the middle of clinic or something. Because as much as like a lot of programs will give you time during the day to go, a lot of programs would really frown upon that. And so especially if you didn't want to involve your program and you wanted to access Learner Wellness outside of your program" ~Resident Physician 4, PGY-4, Public Health & Preventive Medicine*

Another barrier that one of the residents highlighted was the lack of resources when on elective out of the city. Being away from their academic centre and often away from home makes it difficult to utilize resources. One participant mentioned that having virtual meeting opportunities with counselors would be helpful for those that cannot be present in person for appointments.

> *"Yeah, so not a lot of resources either. If you do need… Like we have really good programs through NOSM. But if you kind of need something in the community, it's a bit tough to find at times." ~Resident Physician 12, PGY-1, Family Medicine*

One participant identified that low self-awareness could be a barrier to seeking care. This resident identified that sometimes residents are not aware that they are struggling while fellow residents might see these signs more clearly. He shared that being aware of having a problem and accepting it could be a barrier to seeking care. This participant also brought to light the fear of professional consequences - knowing that a mental health diagnosis could affect their livelihood. Another resident echoed these sentiments:

> *"So I think maybe just raising awareness of the available resources and kind of the signs and symptoms to look out for may be kind of the important thing to drive the usage of the support system." ~Resident Physician 7, PGY-3, Emergency Medicine*

One barrier that a couple of residents (at different schools) brought up was that there was a gap in access to services between medical school and residency. They shared that the transition to residency was difficult and when they tried to be proactive and seek support, the supports

available to residents were not available to them nor were the supports they had used in medical school as they had graduated.

> *"One thing that I would say is a gap that should be addressed is for people like me who, you know, were a little bit up in the air between the end of medical school and the beginning of residency. It was a pretty difficult time. ...Like I had engaged with a counsellor at my medical school. And then all of a sudden on graduation day it was like I no longer had access to those resources...But you know, all of a sudden it's like you're no longer in the domain of the medical school, and you're not yet a resident...And I had reached out to the Office of Resident Wellness because I was like I'm still kind of like having some personal issues, I'd like to see a counsellor there, I'd like to transition this. And I was told that I wouldn't be able to do it until when residency started. So there was like a 4 month period where, you know, there wasn't that counselling resource available. And there wasn't like a formal transition protocol. There was no kind of like handover...But I think it would be easy for students to fall through the cracks at that transition, especially during that kind of critical summer between medical school and the beginning of residency." ~Resident Physician 6, PGY-3, Internal Medicine*

Facilitators for Accessing Services

Some facilitators that residents identified as making support services more accessible were after hours services, phone services (vs. in person), and online appointment booking. One participant (who elected to use a support service outside of the University) found that having the option of meeting virtually (i.e. via Skype) was convenient and helpful.

> *"being restricted to only access those services during kind of like banking hours, I think it adds to the challenge. So if there were counsellors available on evenings and weekends, I think that would be helpful." ~Resident Physician 6, PGY-3, Internal Medicine*

One resident brought up an interesting point - in situations when after-hours appointments were not possible, they shared that the culture should be more open and staff should be more supportive to allowing residents taking time during the day to for an appointment with the Wellness Office.

"one thing that could be done is having, you know, a culture of if you're saying I need to leave for an appointment from a clinical service, having the staff kind of step in and provide patient care while you're gone, and like being kind of excused from clinical duties to attend an important appointment, I think would be very helpful... I can't just disappear for like an hour during midday to go see a counsellor without things falling apart, you know. So if there was kind of more of an acknowledgement from staff as, you know, if you've got an appointment, go ahead." ~Resident Physician 6, PGY-3, Internal Medicine

A key facilitator that was identified was confidentiality for those seeking support from a wellness service. All six of the Post-Graduate Medical Education Wellness Programs clearly let users of their service know this and it facilitated visits to the Wellness Office.

Having an open environment for residents to discuss challenges with mental health was something that actually facilitated some residents seeking out help. One participant recalled that her openness about struggles with mental health helped her fellow residents relate and band together. By sharing and talking about their struggles and challenges it reduced some feelings of isolation and lessened the burden. Being open about using services outside the school's resident wellness office actually encouraged the friend of one resident to seek counselling services and address the anxiety they had been feeling in residency.

An important facilitator that one resident brought up was that administrative staff and staff doctors or preceptors should also be made aware of the programs and the services available so they may be able to help residents and direct them to the proper channels of help when they are asked for assistance by a resident physician.

One resident spoke of how it was helpful to have support services offered by someone familiar with the healthcare and medical system.

"I think the other thing is just like being to talk to someone would kind of gets it. I mean like doctors generally have some experience of this because they sort of trained this way probably too. But I think it's helpful to have someone who kind of knows the system and... is able to sort of counsel that way. Like when I saw that psychiatrist who was only seeing medical residents, it was like extremely helpful for him to say like you know, "Like we see a lot of people like this." ... So I think having someone specific to medical professionals is super helpful." ~Resident Physician 10, PGY-3, Pediatrics

One facilitator that a participant mentioned was the presence of a physical space for a Wellness Office – somewhere that could easily visit.

An interesting facilitator that one resident brought up was the notion of a triage system for appointments at the Wellness Office - they noted that sometimes with residents that were in a significant crisis would not get an appointment for an extended period of time (2 weeks) where they could likely use the help more immediately.

> *"…being told that the first available appointment is two weeks from now is kind of not ideal. Because it's like this person's in a very difficult time right now. And two weeks from now is not good enough, you know. Like it needs to be something that is dealt with this week or right now. This person is in crisis. It might not be crisis enough to necessitate the mental health emergency department but a great personal crisis." ~Resident Physician 6, PGY-3, Internal Medicine*

Gender

With regards to gender – female respondents were more vocal than their male counterparts with regards to sharing their challenges in terms of gender. Issues for female residents included being mistaken for allied health by patients, often being asked to see the doctor after consulting with a patient. It was interesting to note that junior male residents or medical students were identified as doctors more readily than a female resident.

One female resident shared her perspective on being mistaken as a nurse:

> *"I haven't had it too often but sometimes it's a challenge because they just do not assume that you are a physician even despite introducing myself. I guess more so over my male colleagues, I introduce myself by my last name, by Dr. last name, just because I feel as though you need to actually outline that role more clearly for patients. And I've definitely had a patient…multiple patients where I'll go into the room and I'll say, "Hi, I'm Dr. [name]. Like I'm a member of this team." And then they'll be on the phone or like someone will call them and they'll answer the phone, and they'll be like, "Oh, sorry, the nurse is here. Got to go." And you're like, okay, like just because I'm a female doesn't mean that I'm the nurse. And it's just like* ***I don't think people often understand your role very easily as a female in medicine****." ~Resident Physician 11, PGY-1, Internal Medicine*

A male resident physician shared his perception of how his female colleagues were identified:

> *"there's a lot of mistreatment. Like a common thing for females in med school is to be called nurses and aren't you a nurse or whatever. And it's not about thinking that they're better than nurses but just it's just hard for them to be recognized as physicians. Because a lot of people, particularly older patients that refuse to be treated by females sometimes." ~Resident Physician 1, PGY-1, Psychiatry*

Another challenge female residents reported, were tense and at times hostile treatment by allied health as compared to their male counterparts and indicated having to exercise an additional level of caution when interacting with allied health. These observations were not limited to the female participants interviewed - one of the male participants also identified that female physicians had more difficult interactions with female nurses and were often not recognized as physicians by patients who would defer to the male in the room as senior.

> *"And I'm the type of person that I'm able to stand up for myself very effectively. But I've seen other residents… And unfortunately it's typically young women getting I think treated unfairly or being picked on. And unfortunately, even more unfortunately, it's often by other women. And the way that I've seen it happen most frequently is more senior members of allied health teams that are picking on young women residents or young women medical students." ~Resident Physician 6, PGY-3, Internal Medicine*

Another participant shared his perspective as a male resident on how he observed his female colleagues being identified:

> *"... there's been numerous times where as a medical student, I would walk into the room with a female doctor or a female resident, and the patient would automatically assume like I was the doctor, I was in charge. So there's still like a lot of that in the general public. So I think from that perspective, like in some ways it makes it difficult to be a female doctor because patients sometimes just assume that you're a nurse. " ~Resident Physician 5, PGY-1, Family Medicine*

Regarding tense relationships with nurses a male participant identified that there was a tense relationship with nurses and his female physician colleagues:

"And the second thing that I've also heard is that with the majority of nurses being females, I have heard that some females find it more difficult…female physicians find it more difficult to form good relations or earn the respect of the female nurses." ~Resident Physician 7, PGY-3, Emergency Medicine

Female residents indicated that they were more open about their mental health experiences, willing to discuss with other female colleagues.

I also asked participants if their gender played a role in their access or utilization of services and found that few residents had taken into consideration the association of gender and mental health and it is an area that merits further exploration. One participant highlighted that there were not many males working at her school's PGME Wellness office - if there were male residents that wanted to speak with someone of the same gender it would be difficult.

When asking male participants of how they though gender affected residents, one participant succinctly stated

"…I think that they have a number of very unique, very difficult barriers that they have to overcome" ~Resident Physician 1, PGY-1, Psychiatry

One male resident also acknowledged that it was harder for female resident doctors to be recognized as physicians when they were more often recognized or referred to as "nurse" by patients. Another problem that a male resident doctor pointed out was the notion that female residents work less due to fulfilling more traditional responsibilities like having children. In a time where both male and female residents are striving for work-life balance females are more 'seen' due to their taking time away from work for maternity leave of child care and might face additional barriers to seeking help.

Conversely, when speaking with a female resident, they noted that their male counterparts traditionally were less likely to reach out for help.

"... it's interesting because I find that the women that I've spoken to, both my personal friends and in my program, have a very I would say low threshold for accessing these services. Whereas the men that I've ended up kind of, you know, talking to and ultimately helping facilitate connections with the Office of Resident Wellness, like they wait until they're completely dysfunctional, they're in a total moment of crisis before they even entertain the possibility of going to see a counsellor." ~Resident Physician 6, PGY-3, Internal Medicine

One female resident shared that she felt female residents and physicians received uncalled for attention and commentary from patients or occasionally senior staff which her male counterparts did not often face.

> *"Sometimes I ran into preceptors who, you know, are still misogynistic or still, you know, not… Like especially older males. And then just trying to, you know, deal with that but still having to be professional... And then just like the usual stuff. Like patients commenting on things like what you're wearing, how you look, that you look young, that you're pretty or this and that. Like all this stuff that's just not relevant to an interaction. Whereas a male…my male colleagues will rarely get things like that...You know, inappropriate sexual comments. And mostly from patients, older men. But the odd time a preceptor or other healthcare providers. Like I've had a couple bad experiences with male healthcare providers in the hospital who have made inappropriate comments." ~Resident Physician 12, PGY-1, Family Medicine*

An interesting point that one resident spoke about with regards to forming their identity during residency was the lack of female role models in leadership position. This resident felt that she had had mostly male mentors an in leadership positions despite working in a speciality that was more female dominant.

> *"Like most of the department heads are male. And even in pediatrics where like it's a very obviously female dominated field. Like it's disproportionately number of people who are like…who go in compared to like the number of people who end up in leadership positions...But in terms of having like sort of mentors and role models that I look to like for my own career, I would say like a lot of them for me have been male. And I think that's just because that's who's there, not because I'm like specifically looking for anyone…like for a male mentor, right...But yeah, a lot of the people that I sort of look up to and who I've been closer to as mentors have been male. And I think a lot of that is because that's who's in sort of leadership positions." ~Resident Physician 10, PGY-3, Pediatrics*

The barriers and facilitators that residents experience with regards to seeking support for mental health are multi-faceted with challenges at the individual, organizational, and systems level.

5 | Discussion

The focus of this research study was to better understand the mental health experiences of resident physicians, explore their knowledge and awareness of programs, policies and services and to scope out the barriers and facilitators to utilizing resources and seeking care. This section will examine the findings from the resident physician interviews in light of the existing broader physician mental health literature and the environmental scan.

Mental Health Experiences of Resident Physicians

Anxiety, burnout, and depression were the main mental health experiences the residents I interviewed spoke about experiencing themselves or seeing in their colleagues. First, it is understandable that residents will experience anxiety over the course of their residency. Given their dual role as trainees and practicing clinicians they are working in the clinical environment while consecutively learning more about practicing medicine through the academic component of their residency program. Resident physicians have the core clinical knowledge from medical school to treat patients however they are practicing more autonomously in residency and actively treating patients largely on their own. This knowledge as well as balancing their academic duties can be taxing and become a source of anxiety for residents.

Feelings of anxiety varied from what was identified as 'healthy anxiety' that helped residents focus and remain on task, being aware of their responsibilities. This anxiety could sometimes cross over into unhealthy levels that could hinder residents from practicing effectively. In some cases, one interview participant indicated that they or colleagues would require anti-anxiety medications to help with their anxiety. While anxiety is an issue identified in the literature,[3] there is not much focus on understanding the impact of anxiety in resident physicians.

Second, many of the residents physicians interviewed also identified feelings of burnout in residency, especially during challenging rotations, or when scheduling resulted in a poor work-life balance. The literature cites three dimensions of burnout - "emotional exhaustion, depersonalization and low personal accomplishment."[46,59] While the participants interviewed did not mention these dimensions explicitly, they identified and shared experiences that fit the definitions of these three dimensions of burnout. The use of the term 'burnout' by resident physicians may not necessarily meet the criteria of the formal definition of the occupational syndrome of burnout but there was a definite indication that they experience many of the

dimensions over the course of their residency which could eventually result in them becoming 'burned out'. This is in line with the findings from a study by Dewa et al. (2014) that indicates "long-term exposure to high work stress can result in burnout." [46] Another study in the Canadian literature estimated that there was a significant cost of burnout[59] in the health system with early retirement and reduced clinical hours. While retirement is not a concern for those in residency, early career attrition may be, as interviewed residents cited that the reduction of clinical hours by colleagues increased their workload. Leaves of absence taken by colleagues experiencing physical or mental challenges led to a deficit in the human resources on the healthcare team that had to be shouldered by their resident colleagues. This additional clinical burden often led to residents being stretched too thin and beginning to exhibit indications of burnout. Both this study and the physician mental health literature identify burnout as a significant issue that affects physicians. Boudreau et al. succinctly summarize that "burnout is a fact of life for physicians and we need to take an active role in looking after our health providers."[18] The resources available for supporting resident physicians are discussed further in the availability of programs, policies and services section.

Third, depression was another issue brought up by resident physicians interviewed in the study. Some identified feelings of depression during certain points in their residency that brought down their mood. These feelings of depression were sometimes attributed to adjustment disorder as residents are constantly moving from rotation to rotation, working with different staff and health care teams and different hospitals in different locations or even cities. Firth-Cozens et al. identified some correlating factors that can be predictive of depression such as "difficult relationships with senior doctors, staff and/or patients, lack of sleep, issues dealing with death, making mistakes, loneliness, 24-hour responsibility and self-criticism" as challenges present in the work and practice environment.[72] Many of these predictors were identified by the resident physicians I interviewed - these were also cited as sources of stress in their personal, academic, and clinical environments.

Fourth, substance use was an issue brought up by residents as a coping mechanism used by some colleagues. While none of the residents interviewed identified themselves as turning to substance use - two participants in particular highlighted that substance use was present and at times prevalent among their colleagues. Two substances in particular were identified by residents - alcohol and marijuana. Residents noted that substance use was well hidden and the subject was not often discussed openly or widely. This is in line with the findings in the literature where alcohol use was identified as a significant problem.[110-112] Interestingly, findings in the literature indicated that physicians were less inclined to use illicit drugs, such as marijuana which was one of the substances identified by a resident physicians.[45] This could be due to temporal circumstances - when the interviews with resident physicians were conducted

(Autumn 2018), Canada was in the process of legalizing the use of cannabis through the Federal Cannabis Act.

Finally, suicidal ideation in physicians was a phenomena mentioned in the literature[113-115] however the resident physicians interviewed did not mention having thoughts of suicide. This was interesting as the Canadian Medical Association National Physician Wellness survey conducted in 2017 reported that "suicidal ideation among physicians (including residents) has been recently reported at 19% (lifetime) and 9% (in the last year)."[42,78] Three of the interview participants brought up that they knew of a physician that had committed suicide and that this was an issue that left an impression on them.

Overall, with regards to the mental health experiences of resident physicians, there is evidence of a shift in culture but the historical cultural factors continue to pervade and affect the mental health of physicians across all career stages. One of the interview participants brought up the notion of institutional health - indicating that the onus is still largely on the individual to maintain their well-being - and highlighting that the organization and system have to step up as well to support physicians and other health care workers. [6,93]

Sources of Stress in Residency

Residency is a particularly challenging phase in the career path to becoming a fully licensed physician. It can be overwhelming for resident physicians as they transition from the role of learner to physician - fulfilling dual roles as trainees in postgraduate medical education as well as practicing physicians in health care settings. I explored three main contexts that residents may experience stress in throughout their residency - their personal, academic and clinical contexts. Each of these unique environments overlaps and while each may have distinct sources of stress, they can accumulate to exacerbate the overall stress a resident physician experiences over the course of their residency. These have important consequences for their personal mental well-being as well as in their academic and professional spheres.

With regards to the clinical and academic environment resident physicians cited that long work hours, work overload, sleep deprivation, and work conflicts were sources of negative stress that made it challenging to maintain their personal well-being. These were also cited in the literature as sources of stress.[15,116] Another source of stress that residents identified was the varied schedule as they moved across rotations, and locations - working with different staff and health care teams. The depth and breadth of knowledge to learn was identified as stressful as well. Expected contributions through research activities was another requirement of most residency programs that was burdensome. Studying for certifying exams and participating in

subspecialty matches (for disciplines such as internal medicine and pediatrics) were noted as significant milestones in residency that were quite stressful.

There are few individual-based resources that residents can employ to face the burden that these organizational factors generate. Efforts have been made by residency programs and resident representative bodies (such as PARO) to enforce duty hour restrictions and call regulations.[81] National organizations such as the Royal College of Physicians and Surgeons of Canada have launched a Fatigue Risk Management toolkit while the Resident Doctors of Canada has released a National Resiliency Curriculum. [95] While these resources are helpful, there is still a need for a significant shift in medical culture - especially around the training and support of resident physicians in order to train the next generation of physicians to be well-rounded as well as well-balanced. It is difficult to change a culture that is so pervasive and long-standing and there needs to be a concerted effort from all generations and all members of the healthcare team to change the current environment in medicine.

Stressors in their academic and clinical working environments ultimately affected residents' personal circumstances. Residents identified the long work hours as affecting their work-life balance, resulting in less time for them to care for their personal well-being. The literature also indicates that work hours are a significant source of stress for physicians and affect their work-life balance.[117] As a transitional phase in the path to becoming a physician, resident physicians are additionally burdened by a heavy debt load from medical school - and while they earn a salary in residency it was more often the case that more money was spent than being saved. For example attending conferences for academic development and paying for certifying exams were identified as a further monetary burden. West et al. found that symptoms of burnout were associated with higher educational debt.[118]

Residents also identified that moving to a new city for residency could be taxing as they were away from family and friends (their usual support system) and could experience isolation and loneliness (which is further compounded by their long work hours). Residency also impacts resident physicians' ability to work on fostering personal relationships - one of the interview participants identified that residency often coincided with the time that others their age were finding partners, getting jobs, and settling down - which is a challenge for residents given their schedules. Similarly, in a systematic review by Raj the author cites that age 28-33 is known as the "Age 30 Transition" in adult development circles - a period where most pursue their aspirations and establish themselves in society and begin raising families.[119] The author notes that "in residency training, inherent structural constraints present barriers to satisfactory progression through this developmental stage." [119] Indeed it is interesting to note that medicine is one of the few professions in which trainees begin careers in their late twenties to early 30s.

It was important to understand the different sources of stress that originate from the professional (academic and clinical) as well as personal spheres of resident physicians in order to understand other factors that may affect their mental well-being.

Availability of Programs, Policies and Services

An environmental scan of resident wellness programs, policies, and services available to resident physicians across the six post-graduate medical education (PGME) faculties in Ontario was conducted after completion of the interviews. By conducting an environmental scan, I had a better appreciation of the services available for residents at their local academic/hospital level, city-wide, as well as province-wide. This gave me the opportunity to compare the availability of resident focused resources that could be publically searched and contrast it with the knowledge of resources that resident physicians I interviewed spoke about.

All six PGME faculties had sub-pages or entire websites dedicated to resident wellness. There are Wellness Offices within each PGME at all of the six facilities in Ontario. These services are similar across the six schools in that they are a point of contact for residents to reach out to when in need of resources to support their well-being. These programs most often offered the services of a counsellor or psychologist for sessions with resident physicians. Therapy was also a common intervention suggested in the literature for residents struggling with mental health. [93,119] All of the webpages cited additional resources available locally as well as more broadly that resident physicians could also seek out. The 24-hour helpline offered through the provincial resident physician representative body PARO (Professional Association of Residents of Ontario) was mentioned by every wellness program as a resource. There was often mention of employee assistance programs (EAP) that residents could access through their benefits as employees of the hospital. The use of EAPs has also been studied in the literature – Graessle et al. (2018) noted that "residents mainly use EAP as a result of a referral from a program director or colleague, not on a voluntary basis."[120]

The six PGME Wellness Offices differed in their overall organization, structure and delivery of services otherwise. Each Wellness Office website was unique to the school - with information about activities and resources offered at the school as well as contact information for Wellness Program Deans or Directors. Unfortunately, activities on the websites were not always up to date (as of the time I conducted the environmental scan) and sometimes had information dating to three to four years back which might be a hindrance for resident physicians actively seeking help. Few of the PGME Faculty Wellness Offices offered services that addressed the sources of stress that interviewed residents identified such as academic

accommodations. Shanafelt and Noseworthy cite that there are effective organizational strategies that can promote engagement and reduce burnout in physicians[38] - it would be worthwhile if PGME faculties could integrate some of these strategies in residency programs to alleviate some of the stressors of residency and provide alternate options for residents struggling with their well-being.

It was interesting to note that many of the resources available to residents were more focused on the individual rather than addressing the system or culture of residency training, this finding was also reported by Ripp et al. in their call for action on well-being in graduate medical education.[44]

I was able to achieve saturation in the themes of mental health experience and sources of stress in my thematic analysis of the interviews. In terms of saturation of the themes of awareness of services and facilitators and barriers - this was achieved in the overall sample however it could not be achieved by school given the number of interviews per school. However this was a single descriptive case study of Ontario and the six PGME's were embedded units in the study and contributed to an overall understanding of knowledge and utilization of services by residents in the province.

Understanding the resources available to residents was helpful as it provided more context for the responses from the resident physician interviews. This furthered my research objectives by elucidating the help-seeking behaviours of resident physicians in relation to the awareness and utilization of these services.

Knowledge and Utilization of Programs, Policies, and Services

When asked about their knowledge of resident wellness resources or programs at their school, most of the resident physicians were aware that they had some sort of resources available. Residents would often mention the Wellness Office at their school and had a basic idea of the support they provided. Most of the knowledge that residents had about wellness resources stemmed from the beginning of their residency (most often orientation) in which the Wellness Office was introduced to residents. Residents would periodically receive messages or emails from the Wellness Office or through their program about events that promote wellness. Some of the resident physicians that volunteered to participate in the study had an interest in resident well-being or worked on resident wellness initiatives and had more knowledge of resources available. This may have affected the level of input I received from all of the resident participants as other residents appeared to have less knowledge of resources in comparison.

While most of the residents interviewed had knowledge of the resources available through their PGME when it came to utilization of these services, few had actually used the full scope of resources available to them. There is support in the literature that residents have several concerns when seeking interventions to improve their well-being - namely time, potential utility, and confidentiality.[119] There was quite a bit of contrast in residents' responses to seeking support. Some participants had reached out to their Wellness Office for support and while they received a response they did not necessarily receive the services they were looking for. Others chose to avoid the Wellness Office due to concerns of seeking support from their academic institution. In a systematic review by Raj, there was an association of concerns about helpfulness and stigma and unwillingness to use programs and interventions to improve well-being. [119]

Barriers to seeking support

There were several barriers that residents cited with regards to seeking support for their mental well-being, some of which were also highlighted in the literature. [119,121] Time was the biggest barrier that residents identified with regards to seeking support - their daily schedule could be fairly unpredictable and they found it difficult to schedule a time for appointments for their general health much less their mental health. Residents identified the one time they were available during the day time would be on a day they were post-call, which was often set as a day to rest and recuperate from being awake overnight. Guille et al. also found that time constraints and lack of convenient access to services were barriers to seeking mental health treatment.[121] Residency programs do not appear to provide protected time for residents to book their own medical appointments - as many other workplaces would do. Protected time for trainees to attend appointments is cited as a factor that could increase the use of mental health services. [119] This missed time from work as well as placing an additional burden on colleagues is one of the barriers to seeking support for mental health.

Another large barrier identified was the stigma around seeking help for mental health. Many residents feared letting their colleagues or residency programs know that they were struggling with their mental health. Since mental well-being is characteristically an invisible condition and can remain hidden and untreated, residents preferred not to bring attention to themselves by disclosing mental health challenges. Asking for time for medical appointments when you appear physically fine was also deemed challenging, especially if the resident did not want to disclose if they were seeking mental health support. One study found that residents at risk for depression preferred to manage problems on their own rather than seeking support - this was also linked to the social stigma of shame with struggling with psychiatric disorders or psychological problems. [121]

Relating to stigma, confidentiality when seeking services was another barrier cited by residents in interviews as well as in the literature.[119,121] While the services offered by the Wellness Office though the PGME Faculty are guaranteed confidential, residents were hesitant to disclose and seek support with resources within their academic institution. There was also the fear of meeting someone familiar when going for an appointment at the Wellness Office and having colleagues know that they were seeking resources at the Wellness Center.

The pervasive culture of medicine was something with which medical residents identified. The wellness dialogue is fairly new in academic and clinical centers, whereas there is a much longer history of long work hours and challenging work conditions. Residents related that their senior staff could sometimes share stories of how medicine used to be in "their time" and although it went unspoken, the newer generation felt the need to meet these expectations. This stigma in the workplace culture was also cited in the literature.[122] Conversely, some residents identified mentors and wellness champions in their work and training spheres that were vocal about their challenges and open to speaking with residents. Providing support and educating resident physicians in health and wellness methods helps instill a sense of responsibility in caring for their personal health and builds good practices for when residents transition to practice.

Facilitators to seeking support

With regards to facilitators to seeking support for mental health, participants cited both organizational factors that could help alleviate the stressors that reduced their mental well-being as well as factors that would make the resources available more practical and suited to those in the training environment.

There were several factors in the training environment that affect resident physician's well-being. Shanafelt and Noseworthy cite workload and job demands, control and flexibility, work-life integration, and organizational culture and values as some of the drivers that can either drive physicians to burnout if poorly optimized or become more engaged if correctly optimized.[38] The resident participants identified many of the aforementioned drivers as sources of stress for them in residency. If residency programs made a conscientious effort to improve these factors, they could foster a healthier work environment for residents and proactively prevent the burden of stress and burnout that can lead to mental health challenges.

Resident participants also identified several facilitators that would make support services more accessible for them and potentially increase their likelihood of seeking these

services. The first was having protected time through their residency program for medical appointments - a recommendation that the literature also supports. [111] In this vein, provision of wellness services with extended office hours was also another facilitator as business hours were not always ideal for residents. Guaranteed confidentiality and the ability to seek services with the privilege of privacy was another important facilitator to helping residents seek support for mental health challenges. Confidentiality was cited as a notable barrier to seeking mental health resources.[111] Utility and helpfulness of programs for mental health was cited in the literature as a barrier to seeking support. [111,123] Residents highlighted that having services provided by those familiar with medical culture and the healthcare environment was also a facilitator to them seeking support.

Preventative measures and provision of relevant and accessible care have an impact on resident physicians' decisions to seek support. By taking into account the realities that resident physicians face and developing programs that respond to resident physicians' needs, there is a greater likelihood of residents reaching out for supports.

Programs are moving towards a more proactive and preventative strategies - focusing on providing services for wellness and self-care as well as health promotion. Residents tend to perceive these as temporary solutions - the programs offered are helpful but do not address the needs of residents - i.e. taking time off from residency, taking leaves of absence etc. Supports offered lean more towards a focus on the individual and specific cases rather than addressing the stressors that affect the mental health of resident physicians more broadly. There is much work to be done to make the residency environment a mentally healthy workplace. Wellness should move beyond a topic that is covered in orientation – in fact, it should be a key component of touchpoints throughout residency with program directors taking the time to check-in with residents and the Wellness Office consistently reminding residents of the resources. Above all, there should be a more conscientious effort to destigmatize utilization of resources to support mental well-being.

Emerging viewpoint on gender experiences in residency

When speaking with both male and female resident physicians I found that there were emergent findings regarding the mental health experiences and sources of stress in residency as well as utilization of services. Male and female physicians appear to have different experiences in residency and unique perspectives on well-being while in training.[107] The literature also reports that gender plays a role in residents' use of support services for well-being. [111] Given that the composition of the overall sample as well as the participants selected for in-depth analysis were largely female, gender differences that emerged did not reach

saturation. Thus it is difficult to say unequivocally what the key gender differences experienced by male and female resident physicians are from a comparative gender framework.

Reflections on the NAM Conceptual Framework from a Canadian Residency Experience

One of the key gaps in the literature noted at the outset of my study was in relation to the mental health experiences of Canadian residents. Drawing upon the National Academy of Medicine (NAM) conceptual model of factors affecting clinician well-being and resilience was a means to identify common and unique experiences in the Canadian context.[96] Given that health care is universal and publically funded in Canada the resident physician experience can differ from that of trainees in America in light of its different model of health care delivery.

My research corroborates with several of the factors identified in the NAM conceptual framework (within the learning/practice environment, health care role, and personal domains) while exploring underlying contributing factors to clinician well-being and resilience in the Canadian landscape. Canadian residents may not identify with the business factors such as insurance company policies that are challenging to navigate and can affect clinician well-being in America, which primarily has privately-funded health coverage. Furthermore, health IT interoperability and usability/electronic health record (EHR) are identified in the NAM conceptual framework as another stressor that can impact well-being. [96] While EHR's are present in Canada and the increasing burden of administrative work was cited as a source of stress for residents that participated in this study, it is currently not as dominant an issue as compared to America.

Importantly, over the course of this research study, it became apparent that resident physicians in Ontario are well-supported and have tools and resources at several levels that support their well-being. Many residents cited the Professional Association of Residents of Ontario (PARO) as an organization that advocated on their behalf offering protections for important issues such as working conditions, duty hour limitations, leaves, employee benefits etc. There are supports for well-being at the residency program level, post graduate medical education (PGME) faculty level, provincial level (PARO and Ontario Medical Association) as well as nationally (Canadian Medical Association). There is a network of resident advocates that represent the issues of resident physicians and facilitate a positive dialogue around mental well-being. This level of organization across multiple levels of healthcare in Ontario and Canada was not apparent in the American medical landscape (as represented in the NAM framework) and this sets the Canadian residency experience apart from some of the factors that affect clinician well-being and resilience. [96]

Contribution to the field of Physician Health, in the case of Residency

This is one of the first qualitative studies of resident physician mental health in the Canadian context to examine awareness and barriers and facilitators to utilization of mental health resources. Many studies to date in the physician health literature are quantitative in nature, historically focusing on physical well-being of physicians and more recently on mental well-being.[4] This study adds to the Canadian literature on physician health, focusing on the unique experiences of resident physicians from diverse settings.

Studies exploring mental well-being of physicians often use survey methodology or questionnaires to measure the prevalence of burnout or depression or other mental health conditions that limit a physician's ability to practice at their optimal levels.[4] There are few studies on the qualitative side – this methodology allows for rich and descriptive exploration of the narrative experiences of resident physicians.[12] I purposely chose a qualitative approach to understand mental health challenges among resident physicians, a population whose experiences have not been studied in depth. This allowed the opportunity to explore a whole spectrum of mental health experiences and better understand the sources of stress that residents experience (personally and professionally).

The case study context combines an environmental scan with resident interviews to explore the resources available to residents across six unique faculties of post-graduate medical education. By conducting an environmental scan of programs available and examining the knowledge and utilization patterns of resident physicians I was able to reinforce findings in the literature around barriers and facilitators to seeking care while also identifying factors unique to the residency environment.

The implications of this study indicate that there is a need for structuring of residency programs to develop a training environment for residents that is more conducive to maintaining mental as well as physical health. This allows residents to focus on providing their best care to patients and developing good practices for when they begin their careers as independently licensed practitioners. The findings of this study also provide suggestions for how residency programs can develop wellness programs and policies that can better respond to the mental health service needs of resident physicians through development of more robust resources that focus on better provision of services at the educational, organizational, and systems level more broadly.

Limitations

As with any research study, it is important to take into consideration the limitations of the methodology and approach. While rich and descriptive, qualitative research by nature has a smaller sample size. While I conducted a much larger number of interviews than anticipated, temporal constraints and shortage of resources hindered the ability to analyse the whole data set collected. Efforts were also made to have accurate representation across specialities and PGY- year however there was greater participation from the medical specialities and this study may reflect their experiences more astutely than the experiences of other specialties (such as surgical residents).

In selecting interviews for in depth analysis, there was inadvertent exclusion of surgical specialities from the overall participant pool. Recruitment of surgeons was incredibly difficult as their work hours are prohibitive and was only possible through word of mouth from previous participants. I ultimately secured four interviews from residents in surgical fields and when reviewing for inclusion, these interviews were much shorter and less introspective and did not have enough substrate for thematic analysis; participants were not very forthright when speaking about mental health and it was not a subject readily discussed.

While I received ethics approval of conducting focus groups and actively recruited residents to participant, the realities of resident physician scheduling did not allow for focus group discussions, which would have allowed for a more robust discussion on mental health experiences and programs in the context of schools across Ontario.

Although an environmental scan was completed, the opportunity to conduct interviews with wellness program directors across the remaining five PGME faculties would have provided further background and context to the services available to residents across the sites in Ontario. Due to overwhelming response of resident physician participants, it was not possible to engage personally with staff from Wellness Offices in the province with the exception of one interview with the Program Director of a Wellness Office. This could have provided further background and context to the services available to residents, statistics on use of these programs etc. across the sites in Ontario and enriched the findings of this case study.

It is important to note that although the qualitative findings are representative of the participants' perspectives, this analysis may not necessarily incorporate all possible views of resident physicians working in Ontario. While this research is unique to the case study setting of Ontario, it is important to note that while the findings may not be generalizable for all residents across Canada I've taken an approach that allows readers to evaluate transferability.

Recommendations

In the case study context in Ontario, there were two main recommendations from the findings.

Firstly, wellness should be integrated into residency and move beyond a topic that is covered in orientation – in fact, it should be a key component of touchpoints throughout residency with program directors taking the time to check-in with residents and the Wellness Office consistently reminding residents of resources.

Furthermore, preventative measures and provision of relevant and accessible care have an impact on resident physicians' decisions to seek support. By taking into account the realities that resident physicians face and developing programs that respond to resident physicians' needs, there is a greater likelihood of residents reaching out for supports.

Future Research

Over the course of this study, there emerged some key avenues for future research.

As a next step it would be valuable to explore the transition from medical school to residency to early career with regards to the programs, policies, and services available to better understand the availability of resources over a physician's career.

The notion of bullying, intimidation, and harassment was brought up by select participants as another factor that sullied the culture in medicine. Studying the hierarchical relationships of resident physicians and staff as well as interdisciplinary relationships with resident physicians and the rest of the health care team could provide more insight into other aspects of medical culture that impact well-being.

With regards to programs, policies and services, it would be helpful to interact personally with the different wellness offices to gain a better understanding of their resources as online content may not be reflective of the services provided. Furthermore it would be worthwhile to compare and contrast Wellness Programs across the 17 postgraduate faculties of medicine to gain a better appreciation of resources available across Canada.

6 | Conclusion

This research was conducted to better understand the mental health experiences, resources, and challenges in post-graduate medical education of resident physicians. Set in the context of six postgraduate medical education faculties in Ontario, 40 resident physician interviews were conducted with 12 interviews purposively selected for in-depth analysis. Mental health experiences of the resident physicians interviewed aligned with mental health challenges identified in the physician health literature with anxiety, burnout, and depression being cited by residents most frequently. Resident physicians had some level of awareness of the different types of resources available to them at the academic, hospital, and provincial level. Resources were introduced early in residency (often at orientation events), however follow up and consistent reminders of the resources available varied across the six PGME faculties. While residents were aware of resources, their utilization of these resources was variable and dependent on several factors. Time to seek services was identified as the biggest barrier, followed by stigma and fear of negative professional consequences. Facilitators for accessing services identified by residents included extended hours for services (as opposed to 9 am - 5 pm business hours), various modes of service (in person, by phone, video call) as well as protected time in their residency program.

Most of the programs, policies, and services offered through the PGME faculties or provincially were geared towards individual physicians. There were a few initiatives at the organizational (program/hospital) level that focused on wellness more generally (academic retreats, yoga, pet therapy) as well as a couple initiatives that focused on mental health challenges (ice cream rounds, resilience workshops). System level approaches to address the mental health challenges of residents were scarce, with trainees identifying several sources of stress at the systemic level that contributed to challenges in their academic and clinical environments, often causing ripples in their personal spheres as well. Many participants identified the pervasive and persistent culture of medicine that historically prevails and the structure of residency programs with expectations that could feel unrealistic at times as a hindrance to their well-being. Growing patient complexities and expectations as well as an increasing burden of paperwork were also identified as systemic issues affecting resident mental health.

The findings of this research reinforce that the onus is largely placed on individual physicians to take ownership of their wellness in their training years with organizational and systemic burden weighing them down rather than alleviating their stress. These findings highlight the need for culture change in medicine at the organizational and systems level to reduce the systemic stressors and stigma that impact trainees and support resident physicians

in their foundational years. Furthermore, this research identifies that while programs and supports are available to residents these resources do not respond acutely to the specific needs of the target audience of resident physicians. There needs to be changes implemented across multiple levels of residency training programs from the individual to organizational level to foster a healthier culture in medicine and cultivate the next generation of physicians. Healthcare needs are constantly changing and health systems expanding to meet these new requirements. It is crucial that we also support those working in the health care system and provide relevant and accessible supports to foster the growth of a healthy and resilient workforce that can support the healthcare of Canadians for generations to come.

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Appendices

Appendix A: Key Informant Interview Guide

The Key Informant Interview Guide will be used when conducting interviews with program administrators at postgraduate faculties of medicine with physician health programs/services.

We are interested in the mental health experiences of resident physicians in Ontario and are exploring the mental health service utilization patterns of resident doctors. Of particular interest are the programs and policies that can respond to the mental health service needs of resident doctors.

1. Are there any programs/services at your postgraduate faculty of medicine for resident physicians struggling with mental health issues?
2. How are these programs made accessible to residents?
3. What services do these programs offer?

If they do have a program, probe further to get an understanding of the structure and services provided to residents.

4. On average (providing an estimate) how many resident physicians use your services?
    a. In a month
    b. In a year
    c. Is there a particular time of year when there are more residents *(such as during the Royal College exams period)*
5. What mental health issues/conditions are 'treated'/seen by your service.

Appendix B: Resident Physician Interview Guide

We are interested in the mental health experiences of resident physicians in Ontario and are exploring the mental health service utilization patterns of resident doctors. Of particular interest are the programs and policies that can respond to the mental health service needs of resident doctors. In this interview, we would like to hear about your experiences on the mental health issues among resident physicians and the perceived facilitators and barriers to utilization of mental health services. We are more specifically interested in the programs and policies that respond to the mental health service needs of resident doctors.

Mental Health Experiences

1. What are the main mental health issues that you/or your colleagues in your program experience in general? (anxiety, burnout, depression, suicidal ideation, etc.)
2. What are sources of stress that affect you/ or your colleagues mental wellbeing?
    a. Personal factors?
    b. In your role(s) as a student/(s) in post-graduate medical education?
    c. In your role(s) as a care provider/(s) dealing with patients?

Programs/Policies/Services

3. Are you aware of any programs, policies or services in your faculty of medicine, provincially or broadly where you or your colleagues could go to seek support for mental health issues?
    a. If there are services available – would you/ or your colleagues consider using them?
4. What would facilitate your use of these programs?
5. What would you describe as barriers to seeking support for mental health issues as a resident physician?
6. How do you think gender influences resident physicians when seeking help for mental health issues?
    a. How do the services and programs respond to mental health issues with residents of different genders?

Appendix C: Ethics Approval Package

19/07/2018

Université d'Ottawa
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Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-06-18-745
Titre du projet / Project Title	Resident Physicians: Mental Health Experiences, Resources, and Challenges in Post-Graduate Medical Education - A Case Study of Ontario
Type de projet / Project Type	Thèse de maîtrise / Master's thesis
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	19/07/2018
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	18/07/2019

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Nabeelah AHMED	École de gestion Telfer / Telfer School of Management	Chercheur Principal / Principal Investigator
Ivy BOURGEAULT	École de gestion Telfer / Telfer School of Management	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

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Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

Le Comité d'éthique de la recherche (CÉR) de l'Université d'Ottawa, opérant conformément à l'*Énoncé de politique des Trois conseils* (2014) et toutes autres lois et tous règlements applicables, a examiné et approuvé la demande d'éthique du projet de recherche ci-nommé.

L'approbation est valide pour la durée indiquée plus haut et est sujette aux conditions énumérées dans la section intitulée "Conditions Spéciales ou Commentaires". Le formulaire « Renouvellement ou Fermeture de Projet » doit être complété quatre semaines avant la date d'échéance indiquée ci-haut afin de demander un renouvellement de cette approbation éthique ou afin de fermer le dossier.

Toutes modifications apportées au projet doivent être approuvées par le CÉR avant leur mise en place, sauf si le participant doit être retiré en raison d'un danger immédiat ou s'il s'agit d'un changement ayant trait à des éléments administratifs ou logistiques du projet. Les chercheurs doivent aviser le CÉR dans les plus brefs délais de tout changement pouvant augmenter le niveau de risque aux participants ou pouvant affecter considérablement le déroulement du projet, rapporter tout évènement imprévu ou indésirable et soumettre toute nouvelle information pouvant nuire à la conduite du projet ou à la sécurité des participants.

The University of Ottawa Research Ethics Board, which operates in accordance with the *Tri-Council Policy Statement* (2014) and other applicable laws and regulations, has examined and approved the ethics application for the above-named research project.

Ethics approval is valid for the period indicated above and is subject to the conditions listed in the section entitled "Special Conditions or Comments". The "Renewal/Project Closure" form must be completedfour weeks before the above-referenced expiry date to request a renewal of this ethics approval or closure of the file.

Any changes made to the project must be approved by the REB before being implemented, except when necessary to remove participants from immediate endangerment or when the modification(s) only pertain to administrative or logistical components of the project. Investigators must also promptly alert the REB of any changes that increase the risk to participant(s), any changes that considerably affect the conduct of the project, all unanticipated and harmful events that occur, and new information that may negatively affect the conduct of the project or the safety of the participant(s).

Kim THOMPSON
Responsable d'éthique en recherche / Protocol Officer
Pour/For **Daniel LAGAREC** Président(e) du/ Chair of the **Comité d'éthique de la recherche en sciences sociales et humanités / Social Sciences and Humanities Research Ethics Board**

Ethics Renewal Certificate

19/07/2019

Université d'Ottawa
Bureau d'éthique et d'intégrité de la recherche

University of Ottawa
Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

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Type de projet / Project Type	Thèse de maîtrise / Master's thesis
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Ivy BOURGEAULT	École de gestion Telfer / Telfer School of Management	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

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19/07/2019

Université d'Ottawa

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University of Ottawa

Office of Research Ethics and Integrity

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Marc Alain BONENFANT
Coordonnateur de l'éthique / Ethics Coordinator
Pour/For **Daniel LAGAREC** Président(e) du/ Chair of the **Comité d'éthique de la recherche en sciences sociales et humanités / Social Sciences and Humanities Research Ethics Board**

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Email Recruitment Script for Stakeholders, Key Informants, and Resident Physicians (via publically available email or listservs)

Resident Physicians: Mental Health Experiences, Resources, and Challenges in Post-Graduate Medical Education - *A Case Study of Ontario*

Dear _____,

We are contacting you to invite you to participate in an important research study on resident physician mental health and wellbeing conducted by Nabeelah Ahmed (MSc Health Systems candidate) and Dr. Ivy Bourgeault at the University of Ottawa.

This case study is a part of a larger study examining the mental health experiences of a range of knowledge/professional service workers (including doctors, nurses, midwives, dentists, academics, teachers, accountants). We are interested in how these experiences affect their work lives, specifically, staying at work while ill (i.e., presenteeism) or leaving work for short or long periods of time, and in turn how this affects their work setting (e.g., employers, managers, co-workers) and how these leaves are accommodated.

In this case study, we are interested in the mental health experiences of resident physicians and are exploring the mental health service utilization patterns of resident doctors. Of particular interest are the policies and programs that can respond to the mental health service needs of resident doctors. We would like to hear about your experiences with regards to mental health issues among resident physicians and their perceived facilitators and barriers to utilization of mental health services. We are specifically interested in the programs and policies that respond to the mental health service needs of resident doctors.

If you are interested in getting more information about taking part in this study, please read the letter of information (attached) or contact **Nabeelah Ahmed** by email.

Please note that you are not required to participate in this study. We will not inform anyone at the organization about your participation. Taking part or not taking part in this study will not affect your status at the organization. At any point you can withdraw participation without recourse.

This study has received approval by the University of Ottawa Research Ethics Board. If you have questions or concerns about your rights as a participant or about the way the study is being

conducted you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa, ON K1N 6N5
Tel.: (613) 562-5387
Email: ethics@uottawa.ca

Sincerely,
Nabeelah Ahmed, BSc
MSc Health Systems Candidate
Telfer School of Management | University of Ottawa

Letter of Information

Resident Physicians | **Interview**

École de gestion Telfer
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Title of Study

Resident Physicians: Mental Health Experiences, Resources, and Challenges in Post-Graduate Medical Education - *A Case Study of Ontario*

Investigators

Nabeelah Ahmed
Telfer School of Management
University of Ottawa

Principal Investigator (Graduate Student)

Dr. Ivy Lynn Bourgeault
Telfer School of Management
University of Ottawa

Thesis Supervisor

Invitation to Participate

You are invited to participate in the above mentioned research study conducted by Nabeelah Ahmed *(MSc Health Systems candidate)* as part of her thesis research under the supervision Dr. Ivy Lynn Bourgeault at the Telfer School of Management, University of Ottawa.

Purpose of Study

We are interested in the mental health experiences of resident physicians in post-graduate medical education. This project explores both informal and formal mental health service utilization patterns of resident doctors - identifying facilitators and barriers to service utilization. We will examine policies, programs, and services aimed at resident physicians who have experienced mental health challenges either personally or have observed peripherally in fellow colleagues as well as their awareness and utilization of mental health programs and services. This research will help inform other resident physicians, stakeholders, and policy makers of the

unique mental health service needs of resident physicians (by gender and across a variety of faculties of post-graduate medical education).

Participation

As a participant in this study, you have been asked to participate in an **interview**. We are interested in the experience of personal or peripheral mental health issues affecting resident-physicians in post-graduate medical education. We are specifically interested in how these experiences affect their dual roles as students in postgraduate medical education as well as practicing physicians in academic settings.

The audio-recorded interview is anticipated to take 20-40 minutes of your time and will be conducted at time and location convenient to you.

Honorarium

Resident physician participants will be given the option to receive an *Honorarium* of $20 for their participation in an interview. Participants that choose to withdraw will still be eligible to receive an honorarium.

The honorarium will be in the form of a gift card of the participant's choice (between Amazon.ca, Tim Hortons and the Apple Store).

Upon special request, in place of a gift card, participants may request an e-deposit (sent to a provided email address). This will be at the discretion of the principal investigator.

Risks

The questions asked during the interview include questions pertaining to psychological distress (e.g. burnout, depression, suicide) which may cause psychological or emotional discomfort. Participants may refuse to answer any questions that may cause such discomfort. You may also choose withdraw from participation in the study.

Participants experiencing distress at any point are encouraged to seek assistance from the following

resources:

- PARO 24 Hour Helpline
  1-866-HELP-DOC (1-866-435-7362)
- Ontario Medical Association – Physician Health Program
  1-800-851-6606
- Ontario Mental Health Helpline (ConnexOntario)
  1-866-531-2600
- Ontario Distress and Crisis Centres
  Call a distress centre in your area

Benefits

Taking part in this study will not benefit you directly. However, this research may bring some indirect benefits to you. In particular, in doing this research, we hope to learn more about the mental health experiences and service utilization practices by examining policies, programs and services aimed at Canadian resident physicians in post-graduate medical education who have experienced mental health and/or cognitive impairment issues either personally or have observed peripherally in fellow colleagues.

We hope that what is revealed through this study will help us suggest systemic changes in terms of interventions (i.e., policy, programs and practices) related to mental wellbeing of resident physicians. For that reason, we are committed to making the results of our study known to key policy decision-makers so that such changes could be initiated.

Confidentiality

The interviews will be audio-recorded. The information that you will share will remain strictly confidential and will be used solely for the purposes of this research. The only people who will have access to the research data are Nabeelah Ahmed and Dr. Bourgeault. Your answers to open-ended questions may be used verbatim in presentations and publications but you will not be

	identified. Should you choose to withdraw, your data will be destroyed and will not be used in the study.
Anonymity	Anonymity is guaranteed for participation in this study. There is no identifying information that will link you to your particular data set and you will in no way be identified in any written publication resulting from the study. In an effort to maintain confidentiality, participants will be identified using participant codes that will be randomly assigned. If you agree to the use of anonymized quotes, your participant code will be used if your data is used in future publications.
Data Storage	Confidentiality of all collected data will be ensured at all times. Physical records will be kept in the locked office of the principal investigator, Nabeelah Ahmed. Electronic documents (such as recordings of interviews and transcripts) will be stored in a password-protected, encrypted folder file on the primary researcher's computer with a secondary back-up on a protected folder in a flash drive. The audio files will be available only to the primary researcher, the thesis supervisor and individuals transcribing the interviews.
Voluntary Participation	You are under no obligation to participate. If you choose to participate, you may refuse to answer any questions. You indicate your consent to participate in the study by signing and returning this consent form. If you change your mind about participating, you may simply inform one of the investigators of your desire to withdraw.
Information about Results	The research findings will be made available to participants and other interested parties upon completion of the study via e-mail.

If you have any questions or require more information about the study itself, you may contact the researchers at the numbers mentioned above.

If you have any questions with regards to the ethical conduct of this study, you may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 154, Ottawa ON K1N 6N5, tel.: 613-562-5387 or ethics@uottawa.ca

Thank you for your time and consideration.

Sincerely,

Nabeelah Ahmed, BSc
MSc Health Systems Candidate
Telfer School of Management | University of Ottawa

Consent form

Resident Physician | **Interview**

I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason. I agree to take part in this study through participation in an audio-recorded interview.

Please review and answer the options below and sign your consent to confirm participation.

	Yes	No	
1. I would like to receive the $20 honorarium	☐	☐	
2. Please indicate your preferred gift card option (if "Yes" selected above)	☐ Amazon.ca	☐ Tim Hortons	☐ Apple Store
3. I agree to the use of anonymized quotes in publications	☐	☐	
4. I would like to receive a summary of the study's results.	☐	☐	

If you indicated "Yes" for #1 or #4, please provide your email address _____

_____	_____	_____
Name of Participant	Signature	Date
_____	_____	_____
Name of Researcher	Signature	Date

École de gestion Telfer
Telfer School of Management
613-562-5731
info@telfer.uOttawa.ca
telfer.uOttawa.ca
55 Laurier E.
Ottawa ON K1N 6N5
Canada

ARE YOU A RESIDENT PHYSICIAN IN ONTARIO?

Please consider participating in an

INTERVIEW

for our research study on resident wellness!

Contact

Nabeelah Ahmed
Principal Investigator and MSc candidate

for more information or to volunteer in this study

- Where: **Phone call** *or In person*
- Time: **20-40 minutes**
- **$20 Honorarium**
  (gift card for amazon.ca, Tim Hortons, Apple Store)

We are interested in the MENTAL HEALTH EXPERIENCES of resident physicians, with a focus on policies & programs that can respond to your unique mental health service needs.

We would like to hear about mental health challenges during residency, available support resources, and challenges with seeking mental health services.

uOttawa

The ethical components of this project have received approval by the University of Ottawa Research Ethics Board

Please note that this study is conducted in English

We sincerely thank all respondents for their interest. As we are looking for a diverse sample population representing both male and female resident physicians from the unique faculties of post-graduate medical education in Ontario a select group of participants will be invited to participate in an interview.

ARE YOU A RESIDENT PHYSICIAN

Please consider participating in a

FOCUS GROUP

for our research study on resident wellness!

Contact

Nabeelah Ahmed
Principal Investigator and MSc candidate

for more information or to volunteer in this study

- Where: **Web conferencing** *or teleconference*
- Time: **45-60 minutes**
- **$20 Honorarium**
  (gift card for amazon.ca, Tim Hortons, Apple Store)

We are interested in the MENTAL HEALTH EXPERIENCES of resident physicians, with a focus on policies & programs that can respond to your unique mental health service needs.

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