

**Challenging the “Cookie Cutter”: Premedical Student Responses to  
Institutional Shaping**

by

Tora Oliphant

Submitted in partial fulfilment of the requirements  
for the degree of Bachelor of Arts with Combined Honours in Sociology and Microbiology &  
Immunology

at

Dalhousie University  
Halifax, Nova Scotia  
April 2017

© Copyright by Tora Oliphant, 2018

## **ABSTRACT**

*Medical education has long been considered a process of collective professional socialization – a process which turns students into trusted professionals. Lots of research has been devoted to characterizing the unintended effects of this socialization process and how they impact our healthcare system. Something which has received considerably less scholarship is the socialization and institutional shaping that occurs during the premedical years. As Canadian medical institutions have recently altered admissions criteria with the aim of creating a more diverse and empathetic physician population, the present moment in medicine provides an interesting field in which to study the institutional shaping of premedical students. This project asks the question – How are premedical students’ extracurricular activity choices influenced by changes in medical school admissions criteria? Data was collected through qualitative, semi-structured interviews with six premedical students attending Dalhousie University in Halifax, Nova Scotia. Findings suggest that premedical students employ different approaches to selecting extracurricular activities depending on their perception of the role this component of the application plays in admissions decisions. These perceptions seemed to be influenced by the levels of social and cultural capital which premeds access based on their position in the social field. Additionally, premeds seemed to be both aware of, and deliberately oblivious to, the ambiguity which exists in the medical school selection process – a phenomenon which accounts for some of the anxiety reported by premedical students. Overall, this research provides a solid argument in support of the need for more studies on how premedical students perceive and respond to changes in medical school admissions standards.*

**KEYWORDS:** Premedical education, institutional shaping, medical admissions, extracurricular activities, holistic review, social capital, cultural capital, ethnomethodology, Canada

## ACKNOWLEDGMENTS

First and foremost, I would like to thank my research participants for generously sharing their insights and perspectives on the medical school admissions process. Their enthusiasm and dedication to the project of improving patient care in this country has been a continuous source of inspiration for me throughout this project. I find that I am much less cynical about the premed process knowing that at the end of the day, it is folks like these who will walk the halls of our medical institutions.

I extend my eternal gratitude to my wonderful supervisor, Dr. Laura Eramian, for her teaching, patience, and encouragement throughout this process. I am also indebted to many members of the SOSA faculty for their thoughtful guidance around the theory that helped me frame and understand the trends I was seeing in my data. Specifically, these include Dr. Emma Whelan, Dr. Jean-Sébastien Guy, Dr. Karen Foster, and Dr. Margaret Robinson.

I also need to thank the many wonderful people who supported me personally throughout this process, by acting as sounding boards, editors, cheerleaders, and therapists – sometimes all at the same time. This includes my many wonderful colleagues in the Honours Cohort, my lovely roommates Evelyn Elgie and Olivia Tucker, and the unclassifiable Brynn Walker who has radically redefined the role of lab partner in the past year.

Finally, I would like to thank the countless premeds who informally contributed to this project through anecdotes shared over brunch, insights mentioned in passing, or discerning questions which forced me to re-evaluate how I was approaching this project. Their interest in my research, and willingness to openly share their successes and struggles with this program have kept me grounded in the importance of doing this work.

## **Table of Contents**

<b>ABSTRACT .....</b>	<b>1</b>
<b>ACKNOWLEDGMENTS .....</b>	<b>2</b>
<b>INTRODUCTION.....</b>	<b>4</b>
<i>Socialization in medical and premedical education .....</i>	<i>6</i>
<i>Changes in medical school admissions criteria .....</i>	<i>7</i>
<i>Previous research on the premedical experience .....</i>	<i>9</i>
<i>Bourdieuian capitals in medical school applications .....</i>	<i>12</i>
<i>Making meaning out of ambiguity.....</i>	<i>13</i>
<b>METHODS .....</b>	<b>14</b>
<i>Qualitative methodology.....</i>	<i>14</i>
<i>Recruitment.....</i>	<i>15</i>
<i>A note on ethics .....</i>	<i>16</i>
<b>FINDINGS .....</b>	<b>17</b>
<i>Extracurricular Tension: Instrumental versus Genuine .....</i>	<i>18</i>
<i>Leveraging Capital .....</i>	<i>22</i>
<i>Navigating Ambiguity .....</i>	<i>27</i>
<b>CONCLUSIONS .....</b>	<b>30</b>
<b>REFERENCES .....</b>	<b>33</b>
<b>APPENDICES.....</b>	<b>34</b>
<i>Appendix A: Interview Guide .....</i>	<i>34</i>
<i>Appendix B: Coding Guide .....</i>	<i>37</i>
<i>Appendix C: Personal Facebook Recruitment Post .....</i>	<i>38</i>
<i>Appendix D: Poster.....</i>	<i>39</i>
<i>Appendix E: Medical Science Society of Dalhousie University Email .....</i>	<i>40</i>
<i>Appendix F: Study Consent Form .....</i>	<i>41</i>

## INTRODUCTION

In a 2003 article defending changes being made to the medical school admissions process, Saleem Razack, the assistant dean of Admissions, Equity, and Diversity at McGill university was quoted saying, “We want a class where not everyone... [appears as if they came out of the same] cookie cutter” (Chami, 2010). The idea of a cookie cutter came up a lot in my interviews with premedical students, and was frequently used as an adjective to describe other premeds. One participant cautioned me that if you wanted to get into medical school, you did not want to “be cookie cutter”, you needed to show how you were different than other applicants. Another participant lamented that so many of the premeds in her program “look like the cookie cutter people who will get into med school.” She was concerned that institutions would not recognize her alternative path to medical education because she was not cookie cutter enough.

And while my participants talked about cookie cutter premeds, it is important to recognize that in this analogy, the premeds are not the cookie cutter. They are the cookies. The cookies which are being molded and shaped by the by the medical school admissions process – the real cookie cutter – or, as this research suggests, sometimes rejecting this shaping.

So, while medical school admissions statements such as the one presented by Dr. Razack have good intentions of creating a diverse pool of physicians to serve our diverse population, they neglect to account for the fact that the admissions process is not simply a matter of medical schools reaching into the applicant pool and pulling out the candidates that they think make up their beautifully diverse class. The premeds they are seeking to select want to maximize their chances of gaining admission by guessing what the cookie cutter looks like and shaping themselves to fit this mold. So, my research is interested in the cookies. How do they determine what the cookie cutter looks like, and what do they do with this knowledge? Ultimately, do their actions undermine or fulfill the goals of the cookie cutter?

My interest in understanding the social context of premedical students stems from the fact that I spent the better part of a decade identifying as a premed. During this time, I was acutely aware of how my medical school ambitions shaped many different aspects of my life, a phenomenon which I often struggled to explain to non-premeds. I also shared in the crushing anxiety described by many of my participants around the low acceptance rates of medical schools and the seemingly endless question of what I was supposed to be doing to maximize my chances of being admitted. As I slowly came to the conclusion that this was not the right educational path for me and started transitioning away from this educational identity, I began to become more analytical about the premed process. I started asking questions about what made the premed experience so unique, especially given that it is not the only educational path where students face intense competition, rigorous testing, and low professional school acceptance rates. These questions are what inspired this research project.

Given that medical schools have recently started adjusting their admissions procedures to deliberately create more diverse and empathetic classes of medical students, this seemed like an interesting site around which to consider how medical school ambitions affected the lives of premedical students. This led me to focus in on the research question: *How are premedical students' extracurricular activity choices influenced by changes in medical school admissions criteria?*

While I have made a deliberate effort to sideline my premedical experience throughout the course of this research in order to avoid influencing the collection and analysis of premedical student narratives, it is inevitable that my personal experience has shaped the way I approach and understand this research. This paper proceeds with this in mind.

## **THEORETICAL FRAMEWORK**

### ***Socialization in medical and premedical education***

Medicine was one of the first disciplines to use a regulated education process to secure institutional control over the practice of its profession, something it accomplished in the early 20<sup>th</sup> century (Geer, Hughes, Strauss, & Becker, 1961). In the time since, much research has been done on the professionalization process undergone by medical students and how this shapes the physicians who serve our population (see Geer et al., 1961; Haizlip, May, Schorling, Williams, & Plews-Ogan, 2012; Merton, Reader, & Kendall, 1957). However, this body of research often neglects to consider the raw materials that medical schools choose to work with. This overlooks the possibility that some of the developments that scholars have attributed to the medical school professionalization process are actually ingrained in students in their premedical years (P. Conrad, 1986; Lin et al., 2013, 2014). These premedical students, also known as premeds, are not yet part of the medical education institution, yet their desire to enter the profession leads them to orient their lives in ways that fulfill the expectations of the kinds of people they think medical schools are looking to admit to their programs (Broadhead, 1980; Lin et al., 2013, 2014).

While much of the existing research approaches medical education as a form of collective socialization (Broadhead, 1980; Geer et al., 1961), the premedical years are different because they are far less collective. Premeds pursue undergraduate degrees in a wide variety of subjects, take classes with non-premed students, and are independently responsible for determining what medical school admissions requirements are and how to fulfill them. Because of this, when considering whether and how premeds undergo institutional shaping, it is important to recognize that this shaping is not the product of the collective experience of pursuing a formalized course of education. Rather, this shaping is the product of premeds enacting the tasks required to fulfill

medical school admissions requirements. These requirements “amount to a type of cultural pressure that contributes to the socialization of future physicians” (Lin et al., 2013, p. 27). Some of these requirements, can be completed in a matter of weeks or months, such as writing the MCAT or filling out personal statements and application data, while others, such as developing a competitive grade point average (GPA), prolonged extracurricular involvement, and ample leadership experience, take years to cultivate. In the past 40 years, we have seen institutions show a renewed interest in influencing the characteristics of future physicians by altering the premedical requirements that shape them (Lin et al., 2013).

### ***Changes in medical school admissions criteria***

Medical admissions are an important component of medicine because they determine the composition of the physician pool, which in turn establishes who sets the agenda for medicine, and who will be admitted into medical education in the future – a cyclical relationship (Monroe, Quinn, Samuelson, Dunleavy, & Dowd, 2013). Admissions requirements were introduced in the early 20<sup>th</sup> century during the rise of institutionally regulated medicine, with the aim of limiting access to medical education to people who would be respected by society: white, upper middle class men. Starting in the 1980s there was a push to alter admissions requirements, after research showed they were a barrier to entry into medical school for many students, including women, people of colour, and those from lower socioeconomic classes (Monroe et al., 2013). This was brought about by several factors. In the mid-1980s, American medical schools started seeing a decline in the number of applicants to medical school, which raised concerns that there would be a drop in the academic quality of those admitted (Clark, Killian, & Mitchell, 1990). Around the same time, it was coming to light that the lack of diversity amongst physicians was negatively



impacting the care of marginalized groups (Monroe et al., 2013). This led to many medical schools adjusting admissions standards to make application requirements more accessible to members of marginalized groups, a process which involved removing challenging courses that were designed to weed out weaker students, such as physics and organic chemistry, among other measures (Monroe et al., 2013). Additionally, there were concerns that the prioritization of academic qualification was producing physicians who lacked empathy and were bad at patient care, leading schools to add sections considering the non-academic qualifications of applicants to the admissions process (Lin et al., 2013; Monroe et al., 2013). This allowed them to assess the interpersonal characteristics of students, on top of the more traditional qualifications.

This shift was institutionalized with the development of Association of American Medical Colleges' (AAMC) Holistic Review Project in 2002<sup>1</sup>. The Holistic Review Project worked towards improving student diversity by encouraging medical schools to assess applicants holistically, by considering a balance of their experiences, attributes, and academic metrics (Association of American Medical Colleges, 2013).

These shifts seem to have had the desired impact in Canada, where twice as many people are applying to medical school as were twenty years ago (The Association of Faculties of Medicine of Canada, 2017), with an applicant pool that includes people from more diverse backgrounds (Monroe et al., 2013). However, the increased volume of applications has led medical schools to adopt two- or even three-stage admissions processes to reduce the number of applicants remaining at each stage (Monroe et al., 2013). This forces admissions committees to rely more heavily on quantifiable and pre-interview data, meaning that applicants are judged first

---

<sup>1</sup> All 17 accredited Canadian medical schools are members of the AAMC, so this is not just an American trend.

and foremost by how they look on paper (Witzburg & Sondheimer, 2013). This puts pressure on premedical students to carefully develop qualifications and experiences that will represent them favorably in their pre-interview application data<sup>2</sup>. Of these qualifications and experiences, their extracurricular activity record will be of particular importance to this project.

While institutions' descriptions of changing admissions standards are often laden with jargon and buzzwords – for example “strategically-designed, evidence-driven, mission-based, diversity-aware processes” (S. S. Conrad, Addams, & Young, 2016, p. 1472) – research shows that there is a lack of consensus around what medical schools are looking for in candidates (Kreiter & Axelson, 2013). This has led to issues with the implementation of changes in admissions standards and variation in admissions requirements between institutions (Kreiter & Axelson, 2013). Some even going so far as to say that “selection [...] is as much an art as a science” (S. S. Conrad et al., 2016, p.1472). This ambiguity in medicine's idea of what makes a good applicant translates to broad admissions requirements and a lack of specific guidance around how to be successful with the admissions process – ambiguity which we will see influences the premedical experience.

### ***Previous research on the premedical experience***

Given the role of premeds as prospective future physicians, it would be reasonable to expect this to be a well-studied population. In reality, there is very little research that has been

---

<sup>2</sup> It is worth noting that Dalhousie Medical School does not pre-screen applicants' non-academic qualifications, as interview offers are determined solely based on GPA and MCAT scores (with a few exceptions). Non-academic qualifications at this school are only assessed after interviews have been completed. This means that at Dal, pre-interview data does not include students' extracurricular activity involvement, potentially undermining the claim that these activities have become a more important part of the admissions process. However, as Dalhousie is the only Canadian medical school to conduct admissions in this way, and since all but one of the premeds I interviewed applied to other Canadian medical schools, the implications of this discrepancy will not be discussed in this thesis.

done on premeds. Most of what research there is has focused on two topics: (1) explaining why some students leave the premedical track, and (2) defining personality traits and stereotypes of premedical students (Lin et al., 2013). The majority of this research was done in the 1970s and 1980s. During this period, several studies sought to characterize what is called the premed stereotype or “premed syndrome” (Hackman, Low-Beer, Rosenbaum, Wilhelm, & Wugmeister, 1978; Sade, Fleming, & Ross, 1984). These studies were done primarily through surveys administered to premedical students, non-premedical students, and faculty at a variety of universities in the United States. They found that all groups surveyed (including premeds) had a negative view of premedical students, characterizing them as “excessively hard working, competitive, and grade conscious; narrow in interests; less sociable than others; and more interested in money and prestige” (Hackman et al, 1979, p. 310). However, interview-based research done by Conrad (1986) calls the reality of this stereotype into question by demonstrating many instances of cooperation among premed students. Conrad proposed that while the admissions requirements of medical schools require premeds to enact some parts of the stereotype, for the most part the myth of the cut-throat premed is maintained because of the function it serves in premed culture “as a culturally available explanation for failure and success in the premedical program” (Conrad, 1986, p.151). That being said, the persistence of this myth, on top of the less pathological competition that permeates the premed experience, often produces a stressful and anxiety-provoking premed environment.

More contemporary research on premedical culture analyzed the narrative premedical students tell about their experiences, to better define how premeds orient their educational lives in relation to the perceived admissions expectations of medical schools (Lin et al., 2014). This research described how premeds emphasize the personal qualities of achievement, perseverance,

and individualism when discussing their preparation for applying to medical school (Lin et al., 2014). It also highlights the tension between competition and cooperation that permeates premed culture, where cooperation is considered to be important for success in academic courses, but helping a fellow premed succeed reduces the number admissions spaces available for oneself (P. Conrad, 1986; Lin et al., 2014). These admissions expectations have been described as promoting a hidden curriculum in premedical education, because of the behaviours and the narratives about these behaviours that this process encourages premeds to adopt (Lin et al., 2014; Williams, 2016).

On the question of how changes in the admissions process have affected premeds, research by Lin et al. (2013; 2014) and Conrad (1986) suggests that adjusting admissions requirements alone will not alter the hidden curriculum of premedical education. They argue that unless there is a shift in “the qualities perceived to be valuable for success in the practice of medicine” (Lin et al., 2013), premedical students will continue to perpetuate an informal culture rife with uncertainty, anxiety, and competition.

While a solid grounding in the current scholarship on medical admissions and premedical education were important prerequisites for this research, as I delved into my data analysis, it quickly became clear that I needed to involve several sociological concepts to better make sense of the trends I was seeing in my data. For the purposes of understanding how class differences affect premeds, I draw on Bourdieu’s (1984) concepts of social and cultural capital, and to better understand premed anxiety, I rely on several concepts from the field of ethnomethodology. These theories will be briefly explained here, and expanded and applied in my findings section.

### *Bourdieuian capitals in medical school applications*

Bourdieu defines capital as “accumulated goods devoted to the production of other goods” (Allan, 2013, p.179). He describes four primary forms of capital which can be invested in different contexts to produce other kinds of capital or favourable social realities. Economic capital is generally determined by one’s monetary wealth, and is closely associated with one’s quantities of the other three types of capital. Symbolic capital is a far more complex concept, but can loosely be thought of as the capacity of an individual to use symbols to shape or create social realities (Allan, 2013). While these capitals can definitely be seen at work in the premedical context, they are not as deliberately employed as the other two forms of capital which this thesis will focus on.

Social capital involves the networks a person has access to, and their ability to mobilize these connections for financial, symbolic, or cultural gain. Cultural capital on the other hand involves the “informal social skills, habits, linguistic styles and tastes that a person garners as a result of his or her economic resources” (Allan, 2013, p. 181). These two forms of capital, can be inherited, as they are largely internalized as the result of a person’s position in the social field. Since the social field that one is exposed to as a child is determined by one’s parents’ position in the social field, those from more affluent backgrounds tend to have higher levels of these capitals (Bourdieu, 1984). It is worth noting, that the value of these types of capitals are contextually dependent. For example, knowing Kendall Jenner is not a relationship I can leverage to get a job in the Halifax job market. Similarly, having an advanced degree in art history would not help me be successful in a prison setting. In order to be productively invested, the capital has to match the field. Given that medical school admissions have largely been the domain of the upper socioeconomic classes, the social and cultural capitals that can be productively invested in this

process are ones which are developed in upper/upper-middle class environments. This cyclical relationship helps to explain how the upper and middle classes have maintained control over these institutions for such a long time.

### ***Making meaning out of ambiguity***

The second sociological theory that was important for understanding my findings was the sub-discipline of ethnomethodology. This is an approach to sociology, pioneered by Harold Garfinkel, which seeks to understand how humans organize social action in such a way as to create a sense of order (Allan, 2013). This theory arose in response to other social theories which tried to claim that all social order is the product of outside social structures and constructs which tell people how to behave and act. Garfinkel rejected this claim, saying that this would imply that social actors sleep walk through the world with no sense of what they are doing, or why they are doing it, other than a vague sense that something outside themselves is forcing them to do it. He shows that this is not the case through a series of breaching experiments which he uses to demonstrate that people are able to give an account of what they are doing and why they are doing it (Garfinkel, 1984). Garfinkel proposes that rather being the product of outside forces, social order is the result of the practical actions taken by people to make what they are doing recognizable as social achievements. This creates a sense of social order, even though under the surface there is nothing forcing this to be so. This concept is important for understanding how premeds navigate the ambiguity in the application process and will be further described in my findings section.

With a solid understanding of the previous research on the topic, and several important sociological theories in hand, this project sought to answer the question: *How are premedical*

*students' extracurricular activity choices influenced by changes in medical school admissions criteria?* To answer this question, I conducted six semi-structured interviews with premedical students at Dalhousie University.

## **METHODS**

### ***Qualitative methodology***

Much of the previous research on premedical students has been done using quantitative methods, primarily surveys (Hackman et al., 1978; Merton et al., 1957; Sade et al., 1984). This focus on quantifying the premed experience has left us mostly in the dark about how premeds experience and negotiate this educational pathway (Lin et al., 2013). Shedding light on the experiences and perspectives of premeds is the primary aim of this project. Therefore, as this is exploratory research, a qualitative approach is more appropriate. Qualitative methods, and more specifically interviews, are recognized for their ability access the meanings, interpretations, and perspectives participants have about their social contexts (Berg & Lune, 2012; Kvale, 1996). This suited my research question which sought to discover both why and how premeds choose their extracurricular activities. Interviews that are semi-structured have the additional advantage of leaving space for participants to introduce ideas and explanations that I had not previously considered. This flexible format was important to me as I being cautious not to impose my previous experience as a premed onto the experiences of others.

Semi-structured interviews were chosen because they allowed me to introduce several different topics of interest, while still leaving room for participants to expand on topics that were important to them (Kvale, 1996). My data consisted of six, semi-structured, qualitative interviews with premeds from Dalhousie University. All participants were female and none were visible minorities, although this was not intended by the recruitment methods. Five of the six

were in their fourth year of undergraduate degree programs, and one was pursuing graduate education. All but one had applied to medical schools in the 2017-2018 cycle, and the one who had not intended to do so in the following cycle. In terms of educational backgrounds, the majority of participants were enrolled in the medical sciences program with the rest pursuing other science majors. Each interview lasted between 45 and 75 minutes, and covered a broad range of topics related to being a premed. The interview guide was loosely modeled after the one used in the study done by Lin et al. (2014), and was divided into three main sections (1) what drew the student to pursue medicine, (2) how had the student prepared for applying to medical school, and (3) how had the student learned what to do to prepare (Appendix A). With the participants' consent, all interviews were transcribed and they were given pseudonyms to protect their identities.

Transcripts were coded based on the principles of grounded theory, where the ideas that participants emphasized, highlighted, or spoke to at length were drawn out, rather than applying my own constructs to their stories. Once the themes that were significant to participants had been accounted for, interviews were then compared to one another looking for instances of convergence or divergence between the themes. A copy of the final coding guide can be found in Appendix B. Unfortunately, due to the limited time frame of this project, findings did not undergo any sort of member checking.

### ***Recruitment***

Inclusion criteria for this study was that a student had to be attending Dalhousie University, have applied to medical schools or intend to do so within the next 2 years, and self-identify as a premed. The study was advertised through posts on my personal Facebook page



(Appendix C), posters around campus (Appendix D), and through a recruitment email sent out by the Medical Sciences Society of Dalhousie University (Appendix E). Participants had to self-select into the sample. Following each interview, I asked the participant to pass word of the study on to other premeds in their circle who they thought may be interested in participating.

There were several limitations to this sampling method. First and foremost, it did nothing to promote the recruitment of a representative sample. While achieving a representative sample is not the aim of qualitative research, the homogeneity of my sample is quite pronounced. It entirely leaves out the experiences of premeds who are not white, and those who are not female. While white women currently make up the largest proportion of students who apply to medical school (The Association of Faculties of Medicine of Canada, 2017), they are by no means the only students who apply, so these findings can in no way be considered to apply to all premeds. This study also focuses on a very small sample, and there were no saturation points reached in terms of data collection, further limiting the generalizability of these findings. Additionally, the self-selection requirement for participation in this project means that those who participated had to be motivated enough to participate in my research, and more importantly, had to see themselves as some sort of authority on the premed experience. This is likely a certain type of premed – perhaps a confident one – and again, limits the applicability of these findings to the experiences of all premeds.

### ***A note on ethics***

This project was designed to comply with the standards set out by the Dalhousie Research Ethics Board and the TCPS2. It was considered a minimal risk project, as the risks or discomforts potentially experienced by participants were unlikely to exceed those experienced in

everyday life. With that being said, as the medical school application process is quite competitive and premed identities are often stigmatized, I was careful to set up the interviews as a safe space where participants would not feel I was judging their qualifications as a premed. I have protected the identities of my participants by assigning them each pseudonyms and removing identifying information from their transcripts. To ensure participants remain unrecognizable even to the small and insular premed community here at Dalhousie, in sections where there might be enough specific information to identify a participant, quotes were de-identified to mask the identities of participants. I was also cognisant of my dual role in this research, as both the researcher, and as a former member of the premed community. I was careful not to use my relationships with other premeds to coerce anyone into participating in my research, and I made clear to any participants who I had previous relationships with that anything they shared in our interviews would have no impact on our relationship outside this study. Finally, potential risks were discussed with participants before the interviews to establish free and informed consent, which participants indicated by signing a consent form (Appendix F).

## **FINDINGS**

My participants raised many more interesting ideas and concerns about the premed experience than could fit in a thesis of this size, so I will focus on the most interesting ones in this analysis. It became apparent early in the interview process that there were multiple perspectives amongst the premeds I spoke with around the role of extracurricular activities in the med school application process. These divergent understandings also translated to different behaviours around the way premeds engaged in activities. This split in understandings can be seen as part of a wider culture of uncertainty around what the appropriate way to prepare for medical school is.

Navigating this ambiguity was clearly an important part of the work of being a premed, and my participants described this shaping them in many important ways.

### ***Extracurricular Tension: Instrumental versus Genuine***

As previously discussed, changing admissions standards have led to more emphasis being placed on extracurricular engagement, as this is considered representative of premeds' non-academic qualifications and is relatively easy to use in pre-interview screening (Monroe et al., 2013). While the narratives premeds craft about these experiences in personal statements and in the interview context have been shown to be an important consideration for premeds (Lin et al., 2014), this project focused on what activities premeds chose to participate in, and how they came to make these choices. There seemed to be two different approaches premeds took when deciding which activities to participate in, and these appeared to stem from different understandings of the role of the extracurricular activities section in the medical school admissions process. On the one hand, there were premeds who felt that the extracurricular activities section provided them an opportunity to demonstrate to admissions committees that they could do things that they thought medical schools looked for in applicants. These premeds described feeling the need to be instrumental about the activities they participated in, and what those activities said about them. Other premeds disagreed with this strategic use of activities, explaining that they thought medical schools used the extracurricular section to get a sense of the character of applicants, and would use this judgement to determine whether the student was a good fit for their institution. These people indicated that they felt it was important to be genuine about the extracurricular activities they engaged in, as they felt these activities should be an accurate reflection of their true selves.

The premeds who were strategic, or instrumental, about their participation in extracurricular activities, did so in several different ways. Interestingly, these choices communicate something about what premeds think med schools look for in students. Something that came up in several interviews was the need to be consistent with one's participation in activities. As Amelia put it, "I was told from a very early age [...] to do things that I love, and to do them for a long time, because continuity is important." She told me that because of this, she continued participating in activities even after she found she no longer enjoyed them in order to, as she put it, "show that I dedicated a part of my undergrad to [the activity] and wanted to see it through." Likewise, Caroline described how she felt the need to "keep up" her extracurricular activities, even as her life has gotten busy in ways that made this challenging. When asked about the rationale for long term engagement in activities, Amelia explained that, "on your med school application, they want to see that you're not, sort of like flakey I guess. That you have passions for certain things and you're willing to follow through with them. You won't just give up after a year or something [sic]." Here, we can see that as a result of shifting admissions processes, passion, something that is hard to convey in the 300-word activity description space on a medical school application, becomes operationalized as the amount of time a premed has dedicated to an activity.

Another important thing premeds described trying to convey with their extracurricular activities was their ability to do the kinds of things that are traditionally associated with physicians, most notably, leadership (Monroe et al., 2013). Fiona described how even though she was not naturally drawn to activities that involved leading others, she intentionally participated in activities that demonstrated that she was capable of leading others:

I'm not maybe the biggest leader, I don't have issues with talking in front of people, but I'm not the most vivacious and exciting presenter that you've ever had, that's just not typically something that I'm drawn to in terms of activities. So I think that things like that, I force myself to be involved with to show that I have that capacity to do it, but if I wasn't pursuing this career specifically, I probably wouldn't do those things.

Similarly, Alissa described how she knew that being involved as the president of a society would say something about her qualifications as an applicant. She said, "I definitely think that I did that intentionally, like, it's a small society, so being the president won't be super hard, [...] but the leadership potential, or like, the leadership position I had as president of the society [...] is geared towards medicine". It is important to note here that while these people described being strategic about which activities they were involved in, this did not mean that they were not passionate about their activities, or that they were somehow bad participants in the activities. They simply had a keen sense of how these activities contributed to their admissions profile, and tailored their engagement based on this.

For some participants though, engaging in activities simply because of how they reflected on one's medical school application was seen as counterproductive for a number of reasons. These premeds described how they felt it was better participate in activities that they loved, and let go of activities that they had discovered they did not enjoy or were bad at, despite how medical admissions committees might perceive these choices. Emily described how she felt that her extracurricular activities should reflect who she was as a person, so in her eyes it was almost deceitful to continue participating in an activity that she did not enjoy. To her, this would present a poor reflection of who she was to admissions committees. She told me:

Something that really bothers me is people doing things because they think it looks good on their resume. [...] I just kind of decided for myself that I'm not doing anything I don't want to do, because if this is what should get me into medical school, then it should be something that I enjoy, and like, who I am.

Camilla had slightly different concerns, describing how, "I wanted to look like I was well rounded and volunteering a lot, but I also didn't want to be doing things that I was just doing for the sake of getting volunteer hours, because I think that that's really counterproductive, not just for society, but also for yourself." In both of these quotes we can see how these participants think that while extracurricular engagement is an important part of what one does to get into medical school, it should also be meaningful beyond its usefulness in the application process.

But meaningfully engaging in extracurricular activities, while also conveying their suitability as medical school applicants, was seen as a real challenge by the premeds I spoke with. Part of this arose from the fact that most of these premeds felt that medical schools' ideal applicants participated in far more activities than were humanly possible. As Fiona described:

I think that they want to see, sort of, super human individuals – people who can get really really good grades [sic], and can be involved in their community in a service capacity, in a sports capacity, in a leadership capacity [and then] they want to know that you're also a person and that you have hobbies. And those are things that draw on a lot of different personality traits, and someone might not have all of those.

Thus, presenting themselves as embodying the traits medical schools were looking for, while also meaningfully engaging with the things they were doing to demonstrate their fulfillment

of those traits, was seen as a bit of an impossible task. As Camilla put it, “I think it’s very difficult to be, like, a strong applicant and also to be true to yourself and a genuine person.” This shows that tensions exist between what premeds feel they have to offer, and what they think medical schools are looking for in applicants. Negotiating this gap is part of the project premeds undertake in preparing to apply to medical school. All the premeds I spoke with seemed to indicate that an important arena for this negotiation was in their engagement with extracurricular activities. This suggests that premeds have an awareness of the changing structure of the application process, and the resulting need to communicate their suitability as candidates in pre-interview screening material (Monroe et al., 2013).

### *Leveraging Capital*

[Note: Quotes have not been attributed to particular participants in this section to protect the identities of my participants.]

As the previous section shows, deciding which extracurricular activities to pursue and how to go about this is an important part of the premed project, and is accomplished in different ways by different people. To better understand what produces these differences, a central aim of this research was determining how premeds learned what to do to prepare for applying to medical school. My participants provided interesting insight into the answer to this question. Students who had parents with post-secondary degrees described referencing guidance from their parents and family friends in their selection of extracurricular activities, while those who self-identified as coming from working class families relied on advice from other sources, such as their academic programs and other premed friends.

Looking at this phenomenon through the lens of Bourdieusian capitals, we can see that premeds from more affluent backgrounds are utilizing social and cultural capital derived from their inherited position in society to guide their extracurricular decisions. One participant described how her choices were influenced by, as she put it, “my parents [and] by other professionals that I surrounded myself with just naturally [sic] from... my family friends and things like that.” This “natural” access to professionals who could advise her activity choices is not natural, but rather is the product of the social capital she wields based on her position in the social field. In gathering advice from these professionals, we can see this premed investing this social capital to gain cultural capital: the know how these professionals have about how to be successful in the medical school application process. Similarly, a different premed described participating in certain extracurricular activities at the recommendation of her father, who had experience sitting on the admissions committee of a Canadian medical school.

Affluent participants were able to leverage their capitals to gain more than just advice. One participant described how her connection with “a close family friend” led her to her first lab volunteer position, as well as several subsequent lab positions. Another described how her laboratory supervisor, who was a physician herself, had helped her practice and develop her interviewing skills in preparation for medical school interviews. Here, we can see that access to a combination of social and cultural capitals, derived from participants’ inherited social class, benefits them in ways that potentially give them an advantage over other premeds.

This advantage was made even more apparent when compared with the experiences described by participants who self-identified as coming from working class backgrounds. One such participant described how “no one in my family knew anything about university, so I was



super on my own for that.” She explained the effects of this on her preparation for medical school describing how:

When I entered into university from high school, I didn’t really have a huge conceptualization [sic] of like, how important it was to have a solid extracurricular activity situation going on [sic], so my first year was kind of sporadic.

She went on to describe how she tried out several different extracurricular activities in her first few years at university to determine which ones she enjoyed and wanted to pursue, and which ones were not right for her. Another participant who described her parents as “working class people,” went through a similar trial and error process with her extracurricular activities. Limited access to the cultural capital that informed the extracurricular activity decisions of premeds from more affluent backgrounds seems to result in these premeds doing more independent exploration in their first few years at university.

Despite their initially limited access to cultural capital, these premeds did not remain in the dark in the long term. Both described making connections with people who were able to mentor them through the premed process. A phenomenon which could perhaps be attributed to their development of what Bourdieu would call educational capital (Bourdieu, 1984, p. 80). One such premed described how she “randomly” ended up working in a lab in her second year which resulted in “all these amazing relationships with all these super great people in the [names research center in Halifax].” She went on to describe how one of these people played an important role in altering the way she approached her extracurricular activities:

One of the PhDs in my lab, when I was in second year [...] he said to me, “you wanna apply to medicine, like, so does everyone else that you’re gonna talk to, so look, here’s

what you gotta do. You gotta make yourself different. You're volunteering in a hospital? Nobody cares." And as a second-year student, I was volunteering at the [names hospital in Halifax] and that was great, but I didn't really like the volunteer work I was doing at the time, and yeah, I just remember him saying like [...] what makes you different?

She went on to describe how this advice led her to completely change the way she was approaching her extracurricular activities. Another premed discussed making friends with medical students as an "extremely useful resource" that she had the gained access to later in her academic career.

The experiences of these premeds may indicate that those from working class backgrounds gain access to the cultural capital that can guide extracurricular activity selection later in their academic careers, often resulting in an initial trial and error period where these students attempt to independently determine which activities to participate in. As this period necessarily involves the process of picking up and dropping different activities, something which other premeds in my sample identified as being perceived as "flakey" or a sign of limited passion, it would be interesting to see whether these trial and error premeds are penalized by admissions committees for this inconsistent period in their non-academic record. The recommendations put forth in the Witzburg & Sondheimer (2013) study speak to this problem. They recommend that medical schools be careful to consider the social context that each applicant comes from at all stages of the application process, including in the pre-interview screening when these non-academic records would be reviewed.

Connecting this finding to the first one I described, it was interesting that this second group of premeds, who underwent a trial and error period while selecting their extracurricular

activities, were far more likely to advocate that premeds take a genuine, or non-instrumental, approach to their selection of activities. They were skeptical of the position of other premeds who criticized them for dropping activities, saying things like, “[When I told them I dropped a volunteer position], my friends were like, ‘Oh my god, you can’t, like, start a volunteer opportunity and then drop it. That’s gonna look so bad,’” and then I’m like, oh well, that’s what I’m doing. This is my life.” In fact, these premeds were more likely to be skeptical of any sort of instrumental approach to activity selection. As one premed put it, “It’s about finding things that I love, and like, reasons to do those things, instead of like, finding things that I can put on my resume to get me into medical school.” So, the approach these premeds took to selecting their extracurricular activities can be seen to be, at least in part, the product of their social situation.

In a similar fashion, those who described being instrumental about their choice of extracurricular activities tended to be the people with the social and cultural capital required to guide this instrumental behaviour. Another factor inspiring this instrumental behaviour may be a desire on the part of these premeds to maintain the social position that they were born into. This is nicely illustrated by a joke that one of these affluent premeds made when I asked her if she ever thought about what would happen if she did not get into medical school. She replied, “Yes. All the time. Probably live in a box outside of McDonalds,” and then in response to my laugh, “No, that is, like, a genuine fear that I have.” While this was obviously a hyperbolic statement, the fact that she suggests that the only alternative to achieving her doctor goals is a cultural reference to absolute poverty, highlights the fact that for this premed there are only two ways of life – the way she was born into, which requires her to get into medical school, or failure to get into medical school, which imagines as an experience akin to absolute poverty. When seen from this perspective, it is easy to understand why these premeds feel the need to be instrumental with

how they prepare for medical school. This is their way of maintaining control over the process that will determine the continuity of their lifestyle as they have known it.

This joke also represents another pattern in my data, where even those with the most cultural capital discussed feeling lost, anxious, or confused by the medical school application process. It did not seem to matter how much advice a premed had received about what they were supposed to be doing, or how well connected they were to people who had been successful with this process in the past, they all expressed doubts about whether their efforts would result in a successful admissions bid. These doubts highlight a key flaw with using the capitals theory to understand med school admissions: it assumes that actors know the all the rules of the social situation. But as we have seen, no one really knows the rules for medical school admissions. Even medical schools remain divided about what qualities make a good applicant (S. S. Conrad et al., 2016; Kreiter & Axelson, 2013). This means that premeds cannot be sure that they have invested their capital in accordance with the rules of the situation in a way that would guarantee a return on their investment. This ambiguity produces a lot of anxiety amongst premeds, and will be the final theme discussed in this thesis.

### ***Navigating Ambiguity***

This third theme is best captured in the conversation Emily and I had around how she used internet research to guide her extracurricular activity decision making. She described that “it is ridiculous how hard it is to find information, but...it all has to do with the *ambiguity* right?” Her use of the word ambiguity here, and the intentional emphasis she placed on it, convey multiple layers of meaning. At the surface, this highlights what we have already discussed, and can be seen as her recognition that there are no fixed rules for how to go about applying to

medical school. But her framing of this as the cause of the fact that it is hard to find information, seems to imply that medical schools are being deliberately ambiguous, for some unknown ends of their own. Additionally, her assumption that I would understand what she meant by “the ambiguity” conveys that this uncertainty a known quantity amongst premeds.

This speaks to something that remained largely unspoken throughout the rest of my interviews. Namely, despite the fact that all of these premeds spent upwards of an hour describing what they had done to prepare for applying to medical school, and how they knew to do these things, underneath all these generously shared perspectives was the reality that these decisions were made based upon their interpretation of something unknowable. What they were sharing with me was their constructed interpretation of the meanings behind the medical school admissions process.

It is most useful to understand this by considering it through an ethnomethodological lens: as part of a project of applying meaning to something ambiguous for the sake of maintaining the appearance of social order (Allan, 2013). Garfinkel described his research subjects as being accountable, since these people could give an account of what they were doing, and why they were doing these things, in such a way that allowed them to present what they were doing as a recognizable social achievement (Allan, 2013). Thus, social order was achieved not because of any external factors, but because of how people framed their actions in a way that produced the appearance of social order (Allan, 2013). My participants can be seen as doing this in the way they can give an account of what they are doing to prepare for applying to medical school and why it is that they are doing this. Thus, even though the admissions standards that claim to order this process are ambiguous, the way premeds frame their activities as fulfilling

what medical schools look for in applicants, creates the sense that this is an ordered and meaningful process.

This ordering masks the inherent ambiguity in the process, which seemed to be what was producing a lot of the anxiety that my participants described. The fact that all premeds appear to present their extracurricular activity decisions as being based upon a single, ordered and concrete understanding of what medical schools want, leads premeds to believe that there is, in fact, a single, ordered and concrete understanding of what medical schools want, which there is not. Understandings of what medical schools want is something that premeds individually produce, based their experiences, and as we have seen, things they learn through their position in the social field. Even within my very small sample of premeds we saw big differences in these understandings. Anxiety arises when the understanding of one premed is exposed to the understanding of another premed, and it is discovered that these are not the same. This undermines the sense of meaningful order that the premeds have constructed to rationalize the way they make their extracurricular activity involvement decisions.

There were several instances that my participants described that really highlight this negotiation, and contestation, of the understanding of what medical schools want. Fiona, in her discussion of other premeds and why she finds them frustrating, described how “they kind of compare between each other [sic], like, “Well what’s this person doing? Does that make them a better candidate?” This reported conversation between other premeds can be interpreted as a kind of search for a concrete understanding of what the ideal thing to be doing to get into medical school is. This negotiation can produce anxiety when it suggests that what a premed has been doing to prepare is flawed, because there is a different thing that it would be better for them to be doing. Emily described actively working to avoid comparing herself to others in a way that might

cause this, saying, “I can look to my left and right every day and find somebody who has something that I don’t. But like, I don’t want do that because it’s so easy to get lost in comparison and forget what you have to offer.” In addition to calling into question the activity choices of premeds, hegemonic ideas of what it is to be a good applicant can be exclusionary towards those who do not conform to this norm. Alissa, who had followed a fairly non-traditional path towards applying to medical school, described how she felt that her colleagues who had pursued more traditional premed paths “see that image of medicine as the way to get into medicine... and that if you don’t fit that, then you’re not going to get in. [And in my interactions with them,] I feel like are judging me for not fitting that mold.” These three examples show that the masking of ambiguity in the application process creates the sense that there must be one right answer to the question of what to do to get into medical school. This creates anxiety amongst premeds by devaluing what they have been doing to get into medical school, while also not having answers as to the question of what they should be doing instead.

## CONCLUSIONS

Returning to the main question posed by this research: *How are premedical students’ extracurricular activity choices influenced by changes in medical school admissions criteria?* Results from interviews with six premedical students at Dalhousie University suggest that changing admissions criteria have put increased emphasis on how an applicant presents themselves in the extracurricular activities section of their application – changes which resulted in premeds thinking more intentionally about what activities they engaged in and why they were doing this. This analysis suggests that different premeds approach the problem of choosing their activities from different understandings of what it is that medical students want to see in their applicants. These differences may stem from differing access social and cultural capital which

can inform a premed's ability to be strategic in their extracurricular engagement. Additionally, these differing approaches to activity selection highlight the ambiguity that premeds face when interpreting admissions requirements. This ambiguity can be understood as contributing to premed anxiety, as the social order that premeds construct out of this ambiguity is continually challenged in their interactions with other premeds.

These findings are significant because they provide a new perspective on the effects of changing admissions criteria in the medical school application process. Most of the previous research in this area has focused on the aims and intentions of medical schools in their adoption of new processes (Association of American Medical Colleges, 2013; Monroe et al., 2013; Witzburg & Sondheimer, 2013). The impact of these changes on premedical students is something that has not received enough scholarship, especially given the fact that these changes have the potential to alter the hidden curriculum that premeds internalize during their premedical years (Lin et al., 2014; Williams, 2016). Some have suggested that changes in admissions procedures have increased the ambiguity around what medical schools are looking for in future med students (Kreiter & Axelson, 2013; Witzburg & Sondheimer, 2013). My findings provide evidence to suggest that this increased ambiguity may be contributing to premed anxiety. Furthermore, while these changes in admissions procedures have the stated aims of increasing the representation of marginalized groups in medical school classes, differing access to the cultural capital needed to inform decisions about which extracurricular activities to engage in may be hampering the ability of premeds from lower socioeconomic backgrounds to develop competitive non-academic qualification in the earlier part of their undergraduate career. This finding supports the recommendations put forth by Witzburg & Sondheimer (2013) which assert that in order for the holistic review process to meaningfully remove barriers to access, it is



important that institutions carefully consider the social context that each applicant comes from at all stages of the application process, including in pre-interview screening.

While the scope and practical impact of this research are limited by the nature of the honours project, this study does raise several theoretical findings which contribute to the literature on the topics addressed here. My data shows that institutional shaping of students is not just the work of formal institutions. It is important to consider how the informal interactions of people in these institutions also shape expectations in ways that conform to or undermine the intentions of the institution. Additionally, this research provides an excellent illustration of the usefulness of Bourdieusian capitals for understanding the practical implications of social class, while also highlighting the limitations of this theory for understanding instances where the rules are blurry and not fully understood by social actors.

It is important to keep in mind the limitations of this study. A sample of six students simply cannot provide enough data to make claims about trends we may be seeing in the broader premedical context. In addition to this, the lack of representation of non-white, non-female participants limits this discussion to the experience of a certain type of premed with a certain experience of the world. A follow up study with more participants from diverse backgrounds could add to this research and further explore the trends described here. This could be combined with a policy review of programs designed to increase the diversity of medical school classes, allowing for an assessment of whether these programs are meaningfully achieving what they set out to do. Finally, the question of premed anxiety is an interesting one, especially in the context of reported trends of increasing student anxiety in all areas of the university (Bradshaw & Wingrove, 2012). Gaining a better understanding of the many sources of premed anxiety, as well

as what factor help mitigate this anxiety, has the potential to improve learning conditions for all students.

## REFERENCES

- Allan, K. (2013). *Contemporary social & sociological theory : visualizing social worlds* (3rd ed.). Los Angeles: SAGE.
- Association of American Medical Colleges. (2013). AAMC Holistic Review Project: Achieving Improved Learning and Workforce Outcomes through Admissions. Retrieved April 14, 2018, from <https://www.aamc.org/download/358700/data/hrp2-pager.pdf>
- Berg, B., & Lune, H. (2012). *Qualitative Research Methods*. Boston: Pearson.
- Bourdieu, P. (1984). *Distinction: A Social Critique of the Judgement of Taste*. Cambridge: Harvard University Press.
- Broadhead, R. S. (1980). Individuation In Facework: Theoretical Implications From A Study Of Facework In Medical School Admissions. *Symbolic Interaction*, 3(2), 51–68. <https://doi.org/10.1525/si.1980.3.2.51>
- Chami, G. (2010). The changing dynamic of medical school admissions. *CMAJ: Canadian Medical Association Journal = Journal de l'Association Medicale Canadienne*, 182(17), 1833–1834. <https://doi.org/10.1503/cmaj.109-3679>
- Clark, D. S., Killian, C. D., & Mitchell, K. J. (1990). The declining applicant pool and MCAT scores. *Academic Medicine*, 65, 219–220.
- Conrad, P. (1986). The Myth of Cut-Throats Among Premedical Students: On the Role of Stereotypes in Justifying Failure and Success. *Journal of Health and Social Behavior*, 27(2), 150. <https://doi.org/10.2307/2136313>
- Conrad, S. S., Addams, A. N., & Young, G. H. (2016). Holistic Review in Medical School Admissions and Selection. *Academic Medicine*, 91(11), 1472–1474. <https://doi.org/10.1097/ACM.0000000000001403>
- Garfinkel, H. (1984). *Studies in Ethnomethodology*. Cambridge: Polity Press.
- Geer, B., Hughes, E., Strauss, A., & Becker, H. S. (1961). *Boys in White: Student Culture in Medical School*. Dubuque, Iowa: Brown Reprints.
- Hackman, J. D., Low-Beer, J. R., Rosenbaum, J. E., Wilhelm, R. C., & Wugmeister, S. (1978). The Premed Stereotype. *Journal of Medical Education*, 54(1), 308–313.
- Haizlip, J., May, N., Schorling, J., Williams, A., & Plews-Ogan, M. (2012). Perspective: The Negativity Bias, Medical Education, and the Culture of Academic Medicine: Why Culture Change is Hard. *Academic Medicine*, 87(9), 1205–1209. <https://doi.org/10.1097/ACM.0b013e3182628f03>
- Kreiter, C. D., & Axelson, R. D. (2013). A Perspective on Medical School Admission Research and Practice Over the Last 25 Years. *Teaching and Learning in Medicine*, 25(sup1), S50–S56. <https://doi.org/10.1080/10401334.2013.842910>
- Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. London: SAGE.
- Lin, K. Y., Anspach, R. R., Crawford, B., Parnami, S., Fuhrel-Forbis, A., & De Vries, R. G. (2014). What must I do to succeed?: Narratives from the US premedical experience. *Social Science & Medicine*, 119, 98–105. <https://doi.org/10.1016/J.SOCSCIMED.2014.08.017>

- Lin, K. Y., Parnami, S., Fuhrel-Forbis, A., Anspach, R. R., Crawford, B., & De Vries, R. G. (2013). The undergraduate premedical experience in the United States: a critical review. *International Journal of Medical Education*, 4, 26–37. <https://doi.org/10.5116/ijme.5103.a8d3>
- Merton, R., Reader, G., & Kendall, P. (1957). *The student-physician; introductory studies in the sociology of medical education*. Cambridge: Harvard University Press.
- Monroe, A., Quinn, E., Samuelson, W., Dunleavy, D. M., & Dowd, K. W. (2013). An overview of the medical school admission process and use of applicant data in decision making: What has changed since the 1980s? *Academic Medicine*, 88(5), 672–681. <https://doi.org/10.1097/ACM.0b013e31828bf252>
- Sade, R. M., Fleming, G. A., & Ross, G. R. (1984). A survey on the “premedical syndrome”. *Journal of Medical Education*, 59(5), 386–391.
- The Association of Faculties of Medicine of Canada. (2017). *Canadian Medical Education Statistics 2017*.
- Williams, D. (2016). CRACKING THE CODE ON THE “HIDDEN CURRICULUM” IN THE MEDICAL EDUCATION PIPELINE AND ITS CONTRIBUTION TO A TTRITION. *Journal of Unschooling and Alternative Learning*, 10(19), 82–99.
- Witzburg, R. A., & Sondheimer, H. M. (2013). Holistic Review — Shaping the Medical Profession One Applicant at a Time. *New England Journal of Medicine*, 368(17), 1565–1567. <https://doi.org/10.1056/NEJMp1300411>

## APPENDICES

### *Appendix A: Interview Guide*

#### Opening:

- Description of study: Interested in learning how you see yourself as a premed, and how you learned to be this way. Also interested in how being a premed fits in with the rest of your life.
  - Dual role
  - Questions?
  - Review consent form
  - Can skip any questions or stop the interview at any point
  - Not judging you as a premed or an applicant
1. Tell me about how you decided to go into medicine.
    - When did you make this decision?
    - Were there any people or events who influenced this decision?
    - What appeals to you about a career in medicine?
  2. What do you think makes a person right for medicine?

3. For the next few questions I'd like to get a sense of what have you done to prepare for applying to medical school, and how you learned you should do these things.
  - Have you done anything with your educational path that you think prepares you for applying to medical school?
  - MCAT?
  - Extracurricular activities?
  - Domestic or international volunteering?
  - Relationships or personal life?
  
4. Now I'd like to dig a bit more into how you learn about what you should be doing to prepare for applying. What sources would you say have influenced what you have done to prepare for med school?
  - Other students?
  - An older student who serves as your "mentor"?
  - Family member?
  - A particular faculty member?
  - Academic advisors?
  - Assistance through the career center?
  - Online resources?
  
5. Switch gears and ask more specifically about how you understand yourself as a premed. Do you consider yourself a premed?
  - What do you think makes you a premed?
  - How does being a premed fit in with your personal life?
    - Do you ever feel like you make sacrifices in your personal life to fulfil your medical school goals?
  - Do you think being a premed changes how other people feel about you/interact with you?
  - When do you tell people you are a premed?
  - Do you ever avoid telling people you are a premed?
    - In what context?
  
6. What are your relationships with other premeds like?
  - Do you ever ask fellow premeds for advice or guidance around your premed journey?
    - In what kind of situations?
    - Do you follow this advice?
  - Do you ever offer advice to fellow students around premedical things?
    - What leads you to do this?
  - In your experience, is there ever a sense of competition between premeds?
    - When does this arise?
    - How do you navigate this?
    - Do you ever discuss scores or admissions potential with other premeds?
      - (If yes) In what contexts does this happen?

- (If no) Is this a personal choice, or do you think it's typical of most premeds?
      - (If typical) How do you know not to discuss these?
      - (If personal) What led you to make this choice?
    - Do you tend to socialize with other premeds or with students in other majors?
- 7. Do you read/follow/or contribute to any premed forums, blogs, or social media accounts?
  - How do you decide which media to consume?
  - How are these useful in your life?
  - Do you ever find them harmful or stressful?
    - When does this happen?
- 8. Do you ever think about what will happen if you don't get into medicine?
  - Do you have a back-up plan?
    - What is it? How did you decide that this should be your back up plan?
  - When will you know that it is time to switch to the back up plan?
- 9. What have you found to be the most rewarding part of your premed experience?

If not addressed:

- What program and year are you in?
- Are there any physicians in your family?

Debrief:

- Snowball Sample
  - People you tell may deduce that you participated in this research
  - Will not confirm who interviewed with me
- Transcript?
- Study results?
- Withdrawing data, by March 1<sup>st</sup>

***Appendix B: Coding Guide***

<b>Code</b>	<b>Description</b>
Decision	Decision to pursue medicine
Cliché	Cliché/premed trope as indicated by participant
Contribute	Idea of needing to give back
Stereotype	Relates to premed stereotypes
Background	Parental or familial background information
Interaction	Discussion of empathetic/interpersonal medicine
Exception-Interaction	Notable exception to idea of interaction medicine
Checklist	Approaching extracurriculars as a checklist to fulfill
Genuine	Approaching extracurriculars as something to enjoy
Source	Source of information about what to do to prepare for applying to medical school
Stats	Discussion of admissions potentials
Committee	Mention of admissions committees, medical institutions, the nameless 'they'
Support	Premeds struggling together, sense of comradery between premeds
Self-present	Discussion of how they present themselves to others
Other	Mention of other premeds

Process	Discussion of the process of applying to medical school as a whole
MD prep	Things done to prepare for being a doctor/for future as a doctor
Reason for extra-curric	Reason for doing an extracurricular activity other than 'genuine' or 'checklist'
Differentiate	Discussion of need to make oneself different from other premeds
Compare	Comparing self to other premeds
Ethno	Trying to figure out what med schools want
Competition	Discussion of competition in premed

### ***Appendix C: Personal Facebook Recruitment Post***

Hi folks!

I'm doing an honours project for my sociology degree at Dalhousie this year, which involves conducting some independent research. For this project I am studying the social, cultural, and educational factors that shape premedical student identities, so I'm looking to chat with some premeds. If you have applied to medical school or intend to do so within the next two years and are currently working on either an undergraduate or graduate degree at Dalhousie, I would love to interview you for this project. If you know someone else who you think would be interested in being interviewed, I would be grateful if you passed this information along to them as well.

Interviews will take about an hour and can be scheduled at a time and location convenient for you. If you are interested in participating, or want more information about the study, you can get a hold of me by email [tora.oliphant@dal.ca](mailto:tora.oliphant@dal.ca) or by phone (250) 540-7869. Hope to hear from you soon!

*Appendix D: Poster*

## **Do you want to be a doctor?**

Have you applied to medical school or are you planning on doing so in the next 2 years? Are you currently studying at Dalhousie University? Do you consider yourself a premed student?

I am a sociology honours student at Dalhousie doing research about what social, cultural, and educational factors shape premedical student identities. I am looking for premeds to interview about their educational experiences and future career goals. Being a part of this study will involve participating in a single interview lasting about an hour.



Please contact Tora Oliphant if you are interested, or to find out more information.

tora.oliphant@dal.ca

250-540-7869

*Appendix E: Medical Science Society of Dalhousie University Email*

Hi Med Sci Folk,

My name is Tora Oliphant and I'm a sociology honours student here at Dal. For my honours project I am looking to study the social, cultural, and educational factors that shape premedical student identities. I am specifically looking to conduct interviews with premed students as I feel this is a relatively unique educational identity, and I'm wondering how this experience shapes us as students, and as people more generally.

I am emailing MSSDU about this project as I am currently recruiting interview participants and know that your program is home to a lot of premeds. I'm hoping you might be able to pass word of my study onto your members so that they might choose to contact me if they are interested in participating.

The following text describes recruitment details and can be emailed to potential participants or posted to your facebook page. I have also attached it to this email as a word document in case that is more convenient for you.

Hi folks!

I'm doing an honours project for my sociology degree this year, which involves conducting some independent research. For this project I am studying the social, cultural, and educational factors that shape premedical student identities, so I'm looking to chat with some premeds. If you have applied to medical school or intend to do so within the next two years, and are currently working on either an undergraduate or graduate degree at Dalhousie, I would love to interview you for this project. If you have a friend who you think would be interested in being interviewed, I would be grateful if you passed this information along to them as well.

Interviews will take about an hour and can be scheduled at a time and location convenient for you. If you are interested in participating, or want more information about the study, you can get a hold of me by email [tora.oliphant@dal.ca](mailto:tora.oliphant@dal.ca) or by phone (250) 540-7869. Hope to hear from you soon!

Thank you for your time and consideration, and please feel free to contact me by email or phone (250-540-7689) should you have questions.

All the best,

Tora

### *Appendix F: Study Consent Form*

#### Consent Form



#### **Doctored Identities: An Exploration of the Social, Cultural, and Educational Factors that Shape Premedical Student Identities**

*Faculty of Arts and Social Sciences  
Social Sciences*

You are invited to take part in research being conducted by me, Tora Oliphant, an undergraduate student in sociology, as part of my honours degree at Dalhousie University. The purpose of this research is to explore the social, cultural, and educational factors that shape premedical student identities. I will write up the results of this research in a paper for my class, called the honours thesis.

As a participant in the research you will be asked to answer a number of interview questions about your experiences as a premed student and your ambitions for the future. The interview will take about an hour and will be conducted in a quiet location of your choice, either on campus, or at a nearby café or other public place. With your permission, the interview will be

audio-recorded. If I quote any part of it in my honours thesis, I will use a pseudonym, not your real name, and I will remove any other details that could identify you from the quote.

Your participation in this research is entirely voluntary. You do not have to answer questions that you do not want to answer, and you are welcome to stop the interview at any time if you no longer want to participate. If you decide to stop participating after the interview is over, you can do so until March 1. I will not be able to remove the information you provided after that date, because I will have completed my analysis, but the information will not be used in any other research.

Information that you provide to me will be kept private and will be anonymized, which means any identifying details such as your name will be removed from it. Only the honours class supervisor and I will have access to the unprocessed information you offer. I will describe and share general findings in a presentation to the Sociology and Social Anthropology Department and in my honours thesis. Nothing that could identify you will be included in the presentation or the thesis. When my thesis is complete, I will keep anonymized information so that I can learn more from it as I continue with my studies.

The risks associated with this study are minimal, but include potentially experiencing stress or anxiety in response to questions about your experience as a premed. To mitigate this risk I will remind you that I am not interested in judging you as a potential medical school candidate or comparing you to other research participants, and that you are free to skip answering any questions or stop the interview at any point. Another potential risk arises from the fact that the premed community is relatively small at Dalhousie making it possible for people to guess who participated in my research, potentially compromising your privacy. To mitigate this risk any identifying information will be altered in my final report and presentation of the research and I will combine the experiences of participants into “composite characters” to further protect people’s identities, while not altering the findings of the research.

There will be no direct benefit to you in participating in this research and you will not receive compensation. The research, however, will contribute to new knowledge about the experience of pre-professional education and how professional identities and ambitions can influence personal identities, and vice versa. If you would like to see how your information is used, please feel free to contact me and I will send you a copy of my honours thesis after April 30.

If you have questions or concerns about the research please feel free to contact me or the honours class supervisor. My contact information is [tora.oliphant@dal.ca](mailto:tora.oliphant@dal.ca) or (250) 540-7869. You can contact the honours class supervisor, Dr. Laura Eramian, at the Department of Sociology and Social Anthropology, Dalhousie University on (902) 494-6754, or email [leramian@dal.ca](mailto:leramian@dal.ca).

If you have any ethical concerns about your participation in this research, you may contact Catherine Connors, Director, Research Ethics, Dalhousie University at (902) 494-1462, or email [ethics@dal.ca](mailto:ethics@dal.ca).

**Participant's consent:**

I consent to having the interview audio recorded (please initial): \_\_\_\_\_ Yes \_\_\_\_\_  
No

I consent to being quoted in the presentation of this research provided my identity is concealed through the use of a pseudonym (please initial): \_\_\_\_\_ Yes \_\_\_\_\_ No

After the completion of this research project, the anonymized copy of my interview transcript should be:

\_\_\_\_\_ Securely destroyed.

\_\_\_\_\_ Securely stored by the researcher for review in light of new research or further studies on the \_\_\_\_\_ topic.

I have read the above information and I agree to participate in this study.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Researcher's signature: \_\_\_\_\_

Date: \_\_\_\_\_

