Understanding reasons for electing gap years between undergraduate education and medical school, and the impact of gap years on the student experience of medical education

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Abstract

Gap years have grown in popularity among students attempting to go to medical school in recent years. According to the Association of American Medical Colleges (AAMC), more than half of matriculated students now have taken time off between their undergraduate studies and medical school. While many claim benefits to taking gap years, research on the impacts of these experiences on medical students is largely nonexistent. This study aims to qualitatively analyze the gap year phenomenon and its impacts on medical students through semi-structured interviews conducted at the University of Central Florida College of Medicine. Through these interviews, the research team collected in-depth responses that were thematically analyzed. Analysis revealed the following major themes regarding the impacts of gap years: *1)* adaptability to change and failure, *2)* professional identity formation and understanding of team role, *3)* understanding the "real world", *4)* refocusing of goals, 5) resilience and stress management, and *6)* reinforcement of motivation.

Snapshot

More than half of matriculated students in US allopathic medical schools take time off between their undergraduate studies and medical school. In-depth interviews with current medical students identified six major themes describing positive impacts of their gap years : *1)* adaptability to change and failure, *2)* professional identity formation and understanding of team role, *3)* understanding the "real world", *4)* refocusing of goals, 5) resilience and stress management, and *6)* reinforcement of motivation.

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Introduction

In recent years, it has become increasingly common for students to elect one or more gap years between college and medical school (1). As a period of time which an individual takes out of formal education upon completion of an undergraduate program and prior to matriculating into medical school, a gap year can manifest in various forms. The Association of American Medical Colleges (AAMC) recognizes strengthening Grade Point Average (GPA), studying for the Medical College Admissions Test (MCAT), and taking time for reflection and rejuvenation as some of the common uses of gap years (2). Furthermore, many students take this time to participate in structured activities such as volunteer tourism, part-time or full-time work in health care delivery, as well as part-time or full-time work in non-medical disciplines (3). Other students elect to take gap years to participate in unstructured activities including leisure travel and relaxation activities. Yet still, many students become “gappers” due to unsuccessful medical school application attempts. Regardless, all types of gappers have in common the ‘gap’ between their undergraduate and medical educations during which time they participated in experiences not, generally, afforded to traditional medical school applicants. A quick internet search on medical school and gap years yields a plethora of blog posts and personal testimonies of students who have participated in gap year activities. However, research looking at gap years in relation to medical education is scarce and large-scale studies have not been conducted. Undoubtedly, there is great interest amongst educators and students alike on how gap year experiences translate to student outcomes in medical school, and what motivates or predisposes students to elect them in the first place.

A study by Birch and Miller (4) attempted to analyze the determinants of electing a gap year between high school and university and found that students with lower academic achievements in high school were more likely to defer their undergraduate studies. Conversely, students with higher academic achievement, as measured by high school exam scores and university entrance exams, were less likely to defer an acceptance to a university. The study also found students living in rural areas to be more likely to take gap years, and older students to be less likely. Interestingly, they reported that gappers earned higher grades in university, with stronger relationships and larger gains reported for students on the lower end of the grade distribution in high school. These findings suggest there are some tangible benefits of gap years at the university level, but the study's basis in correlating grades performance alone misses out on capturing the motivational essence behind these decisions (4).

Another study by the University of Sydney attempted to deconstruct the post-secondary gap year phenomenon while analyzing the academic profiles of university students who participated in gap year experiences (3). The researchers found that uncertainty regarding post-high school studies and lower academic motivation predicted an inclination towards taking a gap year, where lower academic performance and lower motivation predicted the aforementioned uncertainty. They then found that gap year experiences were positively correlated with and predicted academic motivation during university. Assessing gap years in the context of motivational factors, both before and after participation, arguably provides a richer understanding of the phenomenon's impact.

The value of gap year experiences has further been assessed through their impacts on the career decision-making process, as indicated in a case study designed by Coetzee and Bester (5). This qualitative study, framed in a constructivist-interpretivist model, utilized a hermeneutic and dialogical approach to understand career development in South Africa, recognizing that many cultural and social perspectives would lend to this development. By using this model, they aimed to contextualize the personal factors and experiences of gap year students in relation to certain career development theories. The study showed that in regard to career development and the career decision-making process, the primary value in a gap year experience may be found in the extra time it allows for finalizing career decisions and the personal growth lent by the experience. Personal growth as result of a gap year experience is itself part of a complex learning process enjoined with moral and intellectual development. O'Shea's research showed that delaying higher education, particularly for involvement in community, social, or volunteer work, allowed students to make "significant gains in personal, civic, moral, and intellectual development." They further indicated these gains may help students take "full advantage of their university experience" (6).

Although gap years have been studied at other academic levels, there is a significant gap in the research with regard to the impact of gap years on medical students and medical education. Medical school is a demanding and unique form of higher education that is seeing increasing diversity in the profile of applicants and their experiences. The term "nontraditional student" is generally used to refer to any type of student coming into medical school with some sort of unconventional academic background or delay in starting school due to extensive 'other' experience following completion of an undergraduate degree. As many do, Jauhar claims they

"bring maturity, diversity, broader perspectives, [and] 'life experience'" (7). Certainly, it is becoming increasingly common for students to apply to medical school with such experiences. According to the AAMC, over 65% of matriculating medical students indicated a gap of at least one year between college graduation and matriculation into medical school in the 2019 AAMC Matriculating Student Questionnaire (1).

A study conducted at the University of Texas Medical School at Houston in 1987 attempted to examine whether there were any significant differences in the performance of students accepted through the traditional application process, and those who were initially rejected but then accepted in the same admission cycle. This was due to the state legislature changing the entering class size from 150 to 200 students in 1979 which required the admissions committee to select 50 additional students from the applicant pool who were previously interviewed but ultimately rejected. Finding no meaningful differences between the two groups, the study's emphasis fell on the interview process and its inability to adequately predict future performance of medical school applicants through the MD program and post-graduation. The study does make an important point: "There are no generally accepted criteria for identification of the 'good physician,' nor are there valid predictors of effective performance" (8). This indicates a general difficulty with medical education research, where attempts to predict success beyond performance on medical knowledge tests often fall short of significant findings.

The aim of the present study is to provide new perspectives on the experiences of gap year students and the impacts these experiences may have on their medical school experience.

METHODS

Research design

We elected to use a qualitative research methodology to uncover a rich understanding of the topic. The chosen method utilized principles derived from the contemporary qualitative methodology of interpretive phenomenological analysis (IPA), based in theories of phenomenology, hermeneutics, and idiography. Phenomenology refers to the "study of human experience and the way in which things perceived as they appear to consciousness,"; hermeneutics refers to the "practice or art of interpretation"; idiography refers to the "concern for individuality and a commitment to a rigorous finely-textured analysis of contingent, unique, and often subjective phenomena" (9). In-depth one-on-one interviews were used to obtain the firsthand stories of medical students who had taken time off between college and medical school.

The two-person research team was composed of a premedical undergraduate student (HR) who conducted the interviews and undertook the interpretative analysis of the interview transcripts, and a faculty member (JK) who recruited the study participants and reviewed the coding data for rigor and consistency. The purpose of IPA studies is to attempt to achieve an "insider's perspective," to extract the meanings that life experiences have for the participants. This requires a blend of trying to be empathetic to the participants as well as taking a questioning stance. It is a dynamic process where the researcher takes an active role, including their own conceptions to make sense of the participant's world, taking their side and trying to understand what it is like from their point of view (10). Since HR conducted this study in the

senior year of his undergraduate studies for his honors thesis, and himself planned to take a gap year, he was well situated to take an empathetic stance to data analysis. However, to mitigate against bias and ensure a simultaneous questioning approach was taken, JK, as the faculty supervisor, read over all of HR's coding notes in an effort to ensure consistent interpretations were made across subjects, and that themes were defensible and logical to the outside observer.

Participants and recruiting

All participants were volunteers recruited from the University of Central Florida College of Medicine (UCF COM). IPA-based studies use purposive sampling to obtain a fairly homogeneous sample of individuals with lived experience of the phenomenon of interest, in this case having taken at least one gap year prior to matriculating into medical school. Sample sizes in IPA studies typically range from 1-12 participants with a need to find a compromise between detailed analysis of individual experiences and alignment between subjects to identify general themes (11). An email to all currently enrolled students plus a post made in the UCF COM Facebook group yielded 9 respondents, who were each promptly contacted via email to schedule a personal online interview. Participation was strictly on a volunteer basis, with no financial compensation or class credit awarded to students, and all participants provided informed consent. The study was approved by the University of Central Florida's Institutional Review Board.

Data collection and analysis

Semi-structured interviews were conducted over confidential virtual Zoom calls, lasting approximately 60 minutes each. Questions were structured and presented in a manner that allowed interviewees to explore their experiences in depth and provide rich responses. A few standardized interview questions formed the basis of every interview and are shown in Table 1. These questions were used to jumpstart conversations while various follow-up questions, comments, and sub-conversation topics were used to advance discussions and garner further data from respondents. Each interview was recorded and transcribed verbatim for analysis.

Transcripts were analyzed through QDA Miner-Lite software. In the first stage, transcripts were read and reread to get as close to the data as possible. The transcripts were broken down line-by-line and descriptive codes were initially assigned to singular instances in the data. Our coding process was iterative, returning in the next phase to document potential themes in one case, then seeking clusters of similar ideas and connections within and between each new case. Using QDA Miner's code analysis function, observing the coding frequencies from the first round of coding also helped to reveal common experiences across respondents, with codes prevalent in at least 5 out of 9 cases taking precedence. Going back over the whole dataset, lists of codes converged into larger themes through a process of reflection and conceptual abstraction. An example of original text, together with descriptive codes, an illustration of coding frequencies, and extrapolation to a corresponding theme, is shown in Figure 1 in an effort to make the data analysis process transparent. Both researchers finally reviewed the data to confirm that codes were consistently applied and to reach a consensus that each thematic conclusion HR had drawn was firmly grounded in the primary data. In the end, six themes emerged from the over 590 codes (with repeats) applied to the transcripts.

RESULTS

Of the 9 respondents, 2 were first year medical students, 3 were second year students, 1 was a third year student, and 3 were fourth year students. There were 5 males, and 4 females. Age was not collected. Only 4 students were pre-med throughout college, while 5 students started their undergraduate studies in different majors or with different career outlooks. All students were STEM majors throughout college. Five students were solely interested in MD programs near the time of their graduation, while 4 students were also interested in research-focused programs such as PhD, MD/PhD, and Master's programs. Seven of the 9 respondents took 2 gap years, 1 took 3 gap years, and 1 took a single gap year before matriculating into the MD program at UCF. For additional population context, we may also provide the following figures regarding the overall number of students at UCF COM who had taken at least one gap year in each class of 120 students: Class of 2024, 82/120; CL2023, 76/120; CL2022, 85/120; CL2021, 75/120. This results in an average of 65.8% of students each year.

Six of the 9 students interviewed had previously applied to medical schools and been rejected prior to taking their gap year(s). Six students labelled their gap years as "forced", while 3 students effectively elected gap years by choice. Of these, 2 had taken them with the intent of initially exploring research careers. Every student engaged in activities expected of pre-medical students, such as clinical shadowing, community service, and research during their undergraduate years. However, this was variable, with some students having extensive experience in one or more of these areas and others only having minimal experience. Overall, 6

of the participants felt their medical school applications could use improvement, particularly in the area of clinical experience, but only 4 students cited this as a reason to elect a gap year. Five students explicitly referenced experiencing burnout during college, and 4 cited a motivation to take time off from school before continuing with medical school.

Five students primarily spent their time in non-clinical occupations, including areas of research, corporate work, and family business, while 2 students primarily spent their time in clinical work as medical scribes. The remaining 2 students, with double gap years each, had both clinical and non-clinical primary experiences, where the first gap year was spent in non-clinical work or research and the second gap year was spent in medical scribing. All 9 students had some sort of clinical experience during their gap years, with non-clinical gappers engaging in clinical activities in their free time, including part-time scribe work, shadowing, and medical mission trips. Six students also engaged in service-based activities during their gap years, and 7 students gained some sort of research experience. Five students explicitly referenced experiencing burnout during college, and 4 cited a motivation to take time off from school before continuing with medical school. Key data are summarized in Table 2.

Six themes were synthesized from the data regarding the impacts of gap years on medical students: *1)* adaptability to change and failure, *2)* professional identity formation and understanding of team roles, *3)* understanding the "real world", *4)* refocusing of goals, 5) resilience and stress management, and *6)* reinforcement of motivation. These are expanded below, with each subsection opening with a selection of quotes derived from the subjects.

Adaptability to change and failure

> *"The people who had taken gap years and are used to changes of plans and, you know, people just being rude or people not doing this or not doing that. You know, they're like, 'oh, okay. That's the change, cool we can work with it.'"*
>
> *"…roll with it. You can't really, you know, complain about it too much. You can just be like 'oh [expletive removed], well that kind of sucks.' But you know, you just got to keep going so."*

Across virtually all responses, one of the primary things students spoke about was the connection between their gap year experiences and a greater sense of adaptability in medical school. One after the other, students consistently credited work-life experiences from their gap years for their enhanced ability to withstand change and failures. Many even referenced the COVID-19 pandemic as a present-day example of this, speaking about how changes to curriculum and education delivery were easier for them to adapt to since they had frequently been in positions previously in professional settings where last-minute changes occurred regularly with little notice.

There was consensus among respondents that their peers who had come straight to medical school from college were less willing to accept change, more likely to complain and pushback against school policies, and less likely to adapt to the implicit ambiguity they were already facing as students in medical school.

Professional identity formation and understanding of team roles

> *"You're not the most important one anymore…the patient is and taking care of the patient is more important than your learning…and you are working as a team a lot more and you have to figure out what your roles are in that team…"*
>
> *"…going out into the real world and you're practicing and you're making a difference, you're the moving piece in the puzzle…I think it gives you more of a sense of camaraderie…"*

References to the idea of being a "physician for the patient" were made across all interviews and students often spoke about how they were more concerned about being present for the patient and fulfilling their role on the patient care team versus their own learning as students.

One student spoke to the concept of "camaraderie" learned in their gap year while working full-time in a research lab, which exemplifies many other responses that spoke similarly to realizations through gap year experiences that showed students they weren't "the focus" anymore. This was in reference to undergraduate studies, which all interviewees believed revolved around the student. Students also spoke of how they further observed fellow gappers to have a better grasp on the professional aspects of being a medical student, especially in 3rd and 4th year where students round with residents and attending physicians on clinical rotations.

Understanding the "real world"

> *"…looking back it was probably one of the most influential experiences for me, you know, interacting with people that were older than me, people from other countries, people that had different, you know, goals."*
>
> *"…it's a great feeling knowing I know stuff. That kinda all goes out the window when you enter the real world…you're in a new field, instead of answering questions, now you've got to use your knowledge to create something and your deliverables could be as simple as a bar graph…but now you have consequences."*

Across almost all interviews, students pointed to their gap years as giving them an opportunity to see how the world works outside of school and the confines of the education space. By gaining experience in various full-time and part-time roles, students picked up on and/or honed certain professional skills to a degree they believe would not have been possible through similar involvement in college. Students spoke highly about the diversity in perspectives they received through working with different people of different ages, backgrounds, and competencies, in their workplaces. Many students talked about having to work with difficult people, managing conflict, productivity, consequences, and more as being takeaways from their

256 "real world" experiences that they are now able to apply in medical school, especially in their
257 clerkship years.

258 *Refocusing of goals*

> *"…students, myself included, that took gap years. I feel like we try to connect with patients more. We realize that there's a bigger emphasis on connecting with patients, being a physician for the patients…"*

> *"Everyone's pretty much going to be a doctor…You're going to get there. So then our next goal kind of refocuses to well if everyone's going to be a doctor, then I want to be the best doctor I can be…"*

259 Interviewees largely believed their gap year(s) helped them better prioritize and assign
260 importance to items in their lives by providing them with the time to reflect about what was
261 important to them in the long run. Heard across all interviews was the idea that medical school
262 only constituted a part of one's life and was not to *be* one's life.

263 Students recounted that non-gappers had a more difficult time reconciling this. Exemplified by
264 the second quote above, the majority of these students spoke about how since they had
265 already gotten into medical school and felt they were bound to be doctors, they're goals then
266 refocused to how to become the "best doctor" versus being the best student.

Resilience and stress management

> *"…if I had not decided to take a gap year and I had gone ahead with like matriculating into medical school I would not have had any time to decompress and so I would have carried all of that stress and anxiety and tension from undergrad over…"*
>
> *"…once you've come to experience the real world and you've experienced real world stressors, then the stress of school, not that it's not stressful, but you just learn to deal with it more."*

Burnout was prevalent across the dataset with most students recalling that they experienced it during college. Then, one of the secondary motivations for students to take a gap year was to take a break from school because of the burnout they experienced. This gave students a chance to decompress, relax, and develop strategies for better stress management in medical school. While still engaged in relatively stressful experiences and occupations during these gap years, students recalled that the stresses experienced there were different than those experienced in school.

One student put it that in a job, your stresses largely stay at work and boundaries can be drawn between work and home, whereas school follows you everywhere, most especially, into your home. Most students rather enjoyed the stresses of work and viewed them as challenges from

which to learn. They said, these responsibilities and experiences in their gap years, as well as having a break from school, helped them better manage stress in medical school.

There was strong consensus among students that their non-gapper peers tended to get stressed more and had greater difficulty bouncing back from challenges, whereas gappers found it easier to take confrontation, challenges, and setbacks in stride.

Reinforcement of motivation

> *"…it just helps you reset and figure out what you want to do with your life and really like, cause I feel school's just really go go go go go go go go. Like you don't have time to stop and think, like is this what I want?"*
>
> *"…doing a job that wasn't medicine kind of made me understand that I need to go into medicine cause I can't be the kind of person that sits in a cubicle. I went crazy."*

Six students stated that at the time of their first application cycle, they were not entirely sure if they could make a convincing argument for why they wanted to go to medical school. Across the dataset, we saw that students solidified and reinforced their convictions for going to medical school during their gap year(s), even if medical school was always their plan. On the other hand, some of these students were also exploring alternative research-based careers, and it was their gap year(s) that led them to ultimately decide on medicine. Some students felt their

motivation for medicine was reinforced after they started medical scribing during their gap years. Other students found greater passion for medicine while working health-aligned research jobs, where they felt deterred by the non-health aspects and simultaneously pulled by the clinical overlap present in these positions, or by part-time clinical activities they were engaged in concurrently.

Other findings

A relationship between gap years and long-term career goals can be drawn, with 5 students stating that they entered medical school knowing what field of medicine they want to specialize in because of their gap year experience(s). Regarding broader career outlooks, all students spoke about non-clinical areas they would like to be involved in, such as research, advocacy, and teaching, and identified experiences from their gap year(s) that motivate them to think about these future directions.

Furthermore, we find no significant advantages or disadvantages to taking gap years on academic performance specifically. Students did not generally find that their experiences helped better prepare them for the didactic content of the curriculum, besides 3 respondents who conservatively said they had slight advantages in some introductory material due to specialized gap year experiences in certain research fields. These same students then noted that these advantages were insignificant in the long run. However, when speaking about the Focused Inquiry & Research Experience (FIRE) research project, a component of the UCF COM curriculum, 4 students with extensive gap year research experience did say that their experiences helped them with the research components of the curriculum. Additionally, 4

students said they initially felt at a slight disadvantage academically for coming back into the academic environment after a lengthy break, but then also that the disadvantage was short-lived and insignificant.

The consensus among students was that most of the benefits of their gap year(s) manifested as other skills, competencies, and virtues, including patient interface skills, greater maturity, empathy, humility, and patience. Virtually all students spoke to all of these qualities.

DISCUSSION

Strengths and limitations of IPA methodology. It is important to appreciate that this kind of study is not attempting to produce a representative sample of all gap-year applicants to medical school, nor is it the intention to produce generalizable findings. These are inherently different outcomes that an IPA study produces. This approach instead provides deeper insight into the lived experience of a specific group of individuals in a particular context. The reader must judge the extent to which the findings in our context may be transferable to their situation.

The first general research question was to discover motivations and reasons for taking gap years. In our sample, 6 of 9 individuals took a gap year due to an unsuccessful prior application to medical school. Three of our respondents had taken gap years by choice, of which 2 had taken them with the intent of initially exploring careers in research. For these individuals we further thematized uncertainty, to some degree, regarding choice of post-graduate studies and career direction as a motivator for taking time off. This was supported by the experiences of the

group of students who were unsure about whether to pursue medicine or research, as well as two other students who expressed some uncertainty for medicine while speaking about their first application attempts. This we also see in the findings of the University of Sydney study, in which uncertainty regarding post-secondary studies was found to be a motivator for taking gap years (3). Interestingly, even though 6 students spoke about their gap years as forced, 4 also spoke about having a motivation to take time off due to experiencing burnout. Thus, it became evident to us that there was some overlap between students' reasons to take gap years. Most interesting was when we encountered forced gap year students talking about burnout as a motivation for taking a gap year. This seems conflicting, given that our understanding of these students was that they did not *elect* to pursue their gap year(s). Additionally, some of these students did not seem particularly upset for being forced to take gap years in the first place, and one student explicitly stated that they almost wanted to be rejected during their first application attempt.

Perhaps, then, labeling a gap year as either forced or by-choice is an over-simplification that must be used cautiously as it risks taking away from the true essence of gappers' experiences. This further indicates the problem with the conversation surrounding gap years in medical education and medical admissions circles, where a desire to categorize and standardize oftentimes brushes over student experiences with too thick a brush. We would recommend medical school interviewers take some time to ask about the motivational foundations and experiences during gap years to gain valuable insights into their candidates. Nonetheless, regardless of the reason, the unifying features observed across all students' experiences

included a break from academia, and opportunities to engage in experiences outside of school. We found all students interviewed in this study were able to speak to the reality of having more time to reflect because of their gap year(s), and each further demonstrated a high degree of self-reflective capacity through their responses. Despite the distribution in experiences, motivations, and outcomes, the themes outlined in the section prior regarding the *impacts* of the common "gap" were confidently elucidated from these responses.

With adaptability to change and failure, we speak to the idea of tolerance to ambiguity—a crucial quality whose command points to an ability to tolerate uncertainty, unpredictability, and changing plans among others. Previous studies have shown that tolerance to ambiguity is a crucial competency for physicians to embody in their practice of medicine, and we already know that tolerance to ambiguity is found to be higher in older students in medical school (12). Beyond their responses to the interview questions, we believe our subjects have further demonstrated enhanced adaptability and tolerance to ambiguity through their managing of sometimes multiple medical school rejections, and the short-term uncertainty in their career outlooks that came as a result. This is also correlated with the overarching sense of humility seen among these students, largely stemming from failures, and especially medical school rejections. We additionally see these concepts at play with the issue of some students feeling a slight academic *disadvantage* upon returning to academic life after a break; all students who felt this promptly followed up saying the disadvantage dissipated quickly and became entirely insignificant, which we connect to this discussion on enhanced adaptability. Undoubtedly, these attitudes are valuable qualities to embody in the difficult and ever dynamic environment of

medical school. More specifically as well, students cite these qualities in feeling greater ease in communicating with patients, resulting in better patient interactions.

This is then further related with resiliency and stress management where students speak to an enhanced ability to bounce back from setbacks and manage stressful situations due to their gap year experiences. While there is not much research on the resilience of medical school gappers, literature on resilience in medical school already finds that medical students with greater resilience levels have better quality of life and fare better in medical school and beyond (13). By being able to better triage the stresses of medical school, students are able to *do* better and be happier while doing so. This competency is made even more interesting when considering the burnout experienced by a lot of the students; while experiencing burnout in college, these students felt they had better stress management skills in medical school. Given that medical students are assessed to experience greater psychological stress compared to their peers in other fields or academic tracks, it is crucial to put a greater emphasis on resiliency and effective stress management strategies in predicting student success (14).

Students developed and/or honed these skills due to the sheer break from schooling, as well as the experience of dealing with “real-world” stressors through their gap year experiences. This concept of the real-world was invoked many more times throughout our interviews with students feeling strongly about having the opportunity to temporarily step out of the academic environment and be *fully* immersed in work life. Through their own reflections, they demonstrated a greater understanding of the real-world in a professional sense, better grasping

the responsibilities, diversity, and everyday stressors of a 21st century workforce. It is crucial for medical students and physicians to understand how the world functions outside of their spheres of influence, given that the people of the real-world, with their everyday stressors and concerns, are the ones they serve to treat. One student spoke about how her gap year experience working on a farm helped her to identify with other people her age who had directly gone off into careers after college, and thus gave her a better understanding of what caused them stress and was potentially impacting their health. The same student also spoke about how working with and among farmers gave her a better understanding of their health needs, as well as legitimate health issues that they were passing off as regular occupational risk. This is just one anecdote that exemplifies the importance of such broadening of perspectives. By engaging in professional activities *full-time* before starting medical school, gappers have an edge on traditional students whose first fully immersive, full-time professional experience would most likely be in residency. The advantage here being that gappers can already start to apply those perspectives in medical school.

Intertwined with these perspectives gained from being in the real-world, these students were better able to assign importance to tasks that needed to be completed in medical school as well as relationships, hobbies, and other external interests. We refer to this collectively as a refocusing of goals, where students linked their real-world exposure to approaching medical school with a decreased sense of novelty and increased sense of humility. It is interesting to see gappers, who may arguably be more well-accomplished than traditional students given their additional experiences, speak with little regard for the obvious pride and prestige that comes

with being in medical school. Instead, they were more focused on trying to embody the values of established physicians as early on as their first years in medical school.

Kalet et. al exclaim professional identity formation as one of the major goals of medical education around the country, whereby the core beliefs and values of a physician are instilled in medical students (15). Thus, it is significant that our students already showed accelerated understanding of these values and demonstrated a greater focus on their professional identities as physicians, or physicians-in-training, as a result of their gap year experiences. Conversely, they were less concerned about outcompeting other students or performing the best academically. Most interesting was that it was obvious most of these students viewed and identified themselves as part of the patient care team *before* they identified as students. This is a significant finding given that fostering such a mindset is an important goal of medical education. Furthermore, the discussion on refocusing of goals also plays into that of effective stress management skills and reduced stress. By being more focused on being "physicians-for-the-patients" (to borrow from one respondent) even as students, gappers experience less stress with school, which feeds back and allows even more space to focus on being that "physician-for-the-patient".

Finally, the reinforcement of motivation resulting from gap years is interesting for the connections that can be drawn to the earlier discussion on uncertainty being a motivating factor for taking a gap year. The students who were less certain and less motivated for medical school before taking gap years, were later more exceptionally motivated for medical school.

Even the students who were always certain about medicine further solidified and reinforced these motivations. This, of course, isn't to say that traditional students cannot be as motivated. However, the opportunity provided by gap years in experiencing other professional fields and activities with fuller time and commitment creates a potential for developing greater surety for a chosen career in medicine. This bolstered surety and reinvigorated passion for medicine translates once again to better patient interactions and outcomes in medical school, as these students themselves recall as well. Furthermore, the students who said they already know what they want to specialize in because of their gap year experiences give additional credence to the motivating impacts of gap years beyond medical school. These motivations go even further, with all students having spoken about additional areas they would like to diversify into, including research, advocacy work, and academia, and directly relating those passions to experiences they had in their gap years.

All themes elucidated play into what we and the interviewees discuss to be "The Good Doctor", borrowing from the UCF College of Medicine tradition led by Dr. Deborah German, Dean of the College of Medicine, as part of the white coat ceremony for entering classes (16). During this activity, medical students entering UCF COM are asked to brainstorm the values and qualities they believe make up "The Good Doctor", with all terms collected on a blackboard placed in the UCF COM rotunda. Participants in this study spoke to several qualities that they believed embody "The Good Doctor", including the following: humility, genuineness, resilience, honesty, patience, empathy, and maturity. While there is no one way to define "The Good Doctor", in

463 the context of this study, we bring together all the themes demonstrated to us and put them
464 forth towards “The Good Doctor” (see Figure 2).
465
466 Through their strong self-reflective capacities, these students have indicated significant growth
467 through their gap years, and attribute this growth, captured in the themes above, to better
468 outcomes in medical school— most especially at the physician-patient front. They strongly
469 believe they will be better physicians, “The Good Doctors”, as a result. The students were
470 mindful to point out that the benefits they see today are due to a combination between taking
471 time off, the experiences they engaged in, as well as (generally) somewhat greater age, and
472 that the removal of either one of these factors may have resulted in different outcomes. They
473 were also careful to add that the growth they experienced may too be experienced by non-
474 gappers in medical school, but rather that the ‘*jumpstart*’ they received allows them to start
475 reaping the benefits in medical school early. Indeed, gap years provide considerable space and
476 potential for such experiences.
477
478 We hope knowledge gained from this study, as well as future studies, shed more light on the
479 impact of gap years on medical education outcomes, which may be helpful in improving pre-
480 medical resources and the selection process.
481
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Figure Legends

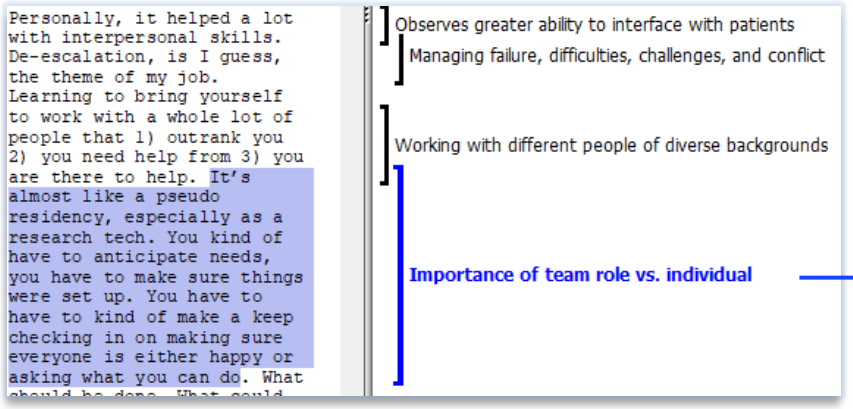
Figure 1. Simplified Representation of Data Analysis Highlighting Movement of a Single Code From Transcript Through Theme

Figure 2. Model Proposing How Facets Supported by Gap Years Contribute to Developing Qualities of “The Good Doctor”

Coded Transcript
(sample)

List of Codes
(compiled from across transcripts, sample)

Resulting Theme



Code	Cases (of 9)	Total Count	% Codes
Sees medicine's defining virtue as a need to help people and give back	7	9	1.50%
Managing failure, difficulties, challenges, and conflict	5	14	2.40%
Experienced burn-out in undergrad	5	7	1.20%
An understanding that the patient comes first and learning second	6	11	1.90%
Different feeling in full time experience and break from academia	5	7	1.20%
Importance of team role vs. individual	5	18	3.10%
Greater adaptability to changes and unexpected outcomes	6	10	1.70%
Doesn't worry about being best academically, worries about being best doctor	6	11	1.90%
Responsiblity and regard for role on clinical care team	5	6	1.00%

Professional identity formation

- - - - ▸ Codes entering from cases, unshown

--------- Codes contributing to theme, unshown

Refocusing of goals
Resilience and stress management
Professional identity formation
Understanding the real world
"The Good Doctor"
Adaptability to change and failure
Reinforcement of motivation

Table 1. Interview questions.

Interview Topic	Questions
What are the main motivations or reasons that students elect to take gap years?	Rapport building: self-disclosure of interviewer Where did you do your undergraduate degree and what was your major? What activities were you involved in during your gap year(s) between undergraduate and medical school? Why did you decide to do those activities in particular during your gap year? When did you first think about doing a gap year?
What were the perceived benefits (if any) of taking a gap year prior to entering medical school?	What year are you in? Can you give me a quick overview of what kind of things you have done so far in the MD program? Extracurriculars? In what ways do you think your gap year experiences helped to prepare you for medical school? Are there specific experiences that made some parts of the curriculum easier? Do you think skills and experiences from your gap year have helped you become, or relate in any way to, what Dean German describes as “The Good Doctor?” Do your gap year experience(s) relate in anyway to longer term career goals?

Table 2. Summary of demographic data

	Students
General	
Year in medical school (M1/M2/M3/M4)	2/3/1/3
Gender	4F/5M
Pre-med from beginning of college	4 out of 9
STEM majors in college	9 out of 9
Reapplicants	6 out of 9
Gap Year (GY) Characteristics	
GY by choice	3 out of 9
GYs taken (1/2/3/4)	1/7/1/0
Non-clinical full-time GY experience	5 out of 9
Clinical full-time GY experience	2 out of 9
Both non-clinical AND clinical full-time GY experiences	2 out of 9
Clinical involvement during GY (regardless of primary experience)	9 out of 9
Research involvement	7 out of 9
Community service involvement	6 out of 9