



Developing Virtuous Leaders in Medical School

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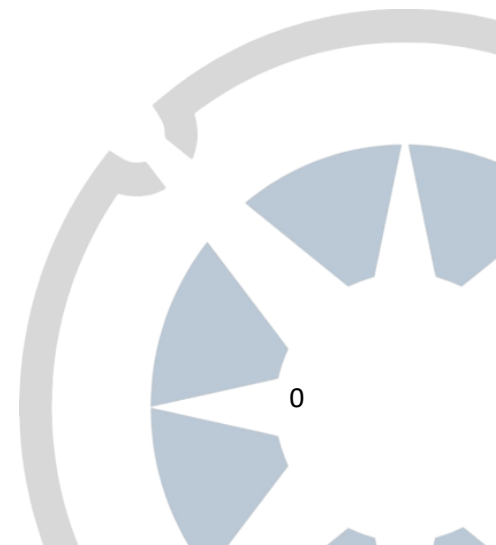
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Developing Virtuous Leaders in Medical School

by

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Abstract

Most medical school curricula offer little virtues-based guidance on how to be a “good physician.” We designed a seed grant program to develop programmatic interventions by students within a medical school. We met with the students quarterly during the program year to discuss their progress and engage in virtues-based reflections on their leadership. During these meetings, we employed six of the seven strategies put forth by Michael Lamb (Lamb, M., et.al., 2021): 1.) habituation through practice, 2.) reflection on personal experience, 3.) engagement with virtuous exemplars, 4.) dialogue that increases virtue literacy, 5.) awareness of situational variables, and 6.) friendships of mutual accountability (seventh strategy not employed was “moral reminders”). This past year, we interviewed five student leaders and three faculty mentors to reflect on their experience.

Introduction

Each year, newly graduating physicians stand and recite a medical oath, a virtuous covenant between physician and patient. By embodying virtuous leadership, doctors earn the trust of their patients, colleagues, care teams, and the wider community. They serve as role models, inspiring and guiding others in upholding the highest ethical standards in healthcare. Yet most medical school curricula offer little to no virtues-based guidance on how one might become a “good physician” or a “virtuous leader.”

For the past six years, we have been experimenting with virtues-based reflective dialogue as a means of nurturing virtuous leadership skills among medical students and residents within a seed grant program designed to teach innovative skills in program development. It has been an iterative process that began with introducing the concept of character strengths to students in their program development. We then added “character coaches” and met with teams quarterly to discuss their program development and the character strengths they were imparting to their program recipients. We then evolved our discussions to explore how program leaders were developing their own character strengths as they were implementing their programs (Decker, M.C., and Schmitt, J.A., 2023). From our experience and an ongoing review of the literature, we hypothesized that guided, virtues-based reflective dialogue based on a concrete context (i.e., their program development) would assist in the development of character strengths that contribute to virtuous leadership and wise reasoning skills in medical students.

In this paper, we will first provide a review of the research and methodologies that guided our reflective dialogue intervention. Then, we will briefly describe the seed grant program which was the context for the intervention, as well as detailing the intervention itself. Next, we will describe the method we employed in our post-intervention interviews with students and mentors. Finally, we will explore our findings and their potential relevance to medical education.

Within this paper, we will utilize the following two definitions put forth by VIA Institute on Character (2023) 1.) Virtue: Traits of excellence, and 2.) Character Strength: Psychological processes that define a virtue.

Background

Today's medical students are not receiving a comprehensive education, one that prepares them with virtue literacy, wise reasoning and leadership skills necessary for a career in medicine. In U.S. medical training, the curriculum focuses on the performative and technical components of medicine. "...one could argue that there has been a focus on the techne, or the technical knowledge and expertise of medicine, but a failure to develop the phronesis or practical wisdom necessary to do medicine in the best way possible" (Plews-Ogan, M., et.al., 2022).

Medical school is a highly transformative personal experience for students where virtue development occurs but is not nurtured or guided. Psychologists argue this time in a young adult's life (ages 18-29) is an important transformation period for professional identity and character formation, where emerging adults "try on" roles, responsibilities and relationships as they consider what kind of person they want to become (Arnett, J. J., 2000). Many scholars point to the clinical learning environment, where students directly engage with patients, as a fruitful place to try virtues-based reflective dialogue to engage medical learners to reflect on their patient care experiences and habituate wise reasoning (Epstein, R.M., 2008; Kaldjian, L.C., 2010).

Research shows that wisdom and wise reasoning are skills that can be learned. "Wisdom is a human capacity that sits apart from intelligence, cleverness, or knowledge. Wisdom depends on understanding people deeply (a kind of expertise), understanding relevant aspects of the world deeply (another kind of expertise), but also being attuned to other people's needs, concerns, and values while being able to control one's own needs and concerns in evaluating a situation." Wise reasoning is the application of wisdom, grounded in humility, analytical reflection on social issues, perseverance in intellectual challenges, and empathetically considering others' perspectives. (Nusbaum, H.C., 2020).

Model Programs at Medical Schools and Universities

The University of Virginia School of Medicine established a longitudinal experience called "The Phronesis Project" that touches every medical student throughout the four-year curriculum. The program is designed to foster students' character formation in the clinical education setting. The program design includes five strategies: 1.) role modeling, coaching, and mentoring, 2.) reflective practice, 3.) focus on team-oriented practice as the practice of medicine has evolved to a team effort, 4.) continuity of relationships with teams, mentors and patients, and 5.) building uncertainty training into health professions education. (University of Virginia, 2023). The last strategy, uncertainty training, is intriguing as it introduces learning scenarios that are intentionally opaque, uncertain, and complex that will inherently elicit decision making that is dependent on context and the wisdom of the individual solving them (Plews-Ogan, M., et.al., 2022). This program not only fills a gap in medical education, but it elevates the development of ethical or moral judgment as equally important to clinical knowledge and the development of technical skills.

Wake Forest School of Medicine launched the Center for Personal and Professional Development (CPPD) which guides and supports students, residents and medical professionals in developing virtues such as compassion, empathy, resilience, and wisdom, in their lives and work. A key function of the CPPD is “pairing a coach with every incoming medical student to provide individualized and comprehensive support for all students with the long-term goals of developing students’ capacities of character and advancing a culture of shared purpose, growth and belonging” (Wake Forest, 2023). CPPD works in collaboration with The Program for Leadership and Character at Wake Forest, which employs seven strategies for character development (Lamb, M., et.al., 2021).

Michael Lamb, the executive director of the The Program for Leadership and Character at Wake Forest, collaborated with Jonathan Brant and Edward Brooks from the Oxford Character Project at the University of Oxford to put forth practical strategies for developing character based on research in philosophy, psychology, and education. They developed a holistic program for character formation embedded in a post-graduate training program at Oxford University called the Global Leadership Initiative (GLI). The context was a leadership training program that offered training with a focus on the virtues of gratitude, humility, sense of vocation, and commitment to service. Broadly, rationale for limiting the program’s focal virtues to four was based on work by Peter Meindl (2018) that demonstrated it was more effective. GLI selected these four focal virtues because they shifted the narrow, self-interest focus of post-graduate training outward toward a sense of common good, which many consider essential for effective leadership. This GLI study employed seven strategies of character development: 1.) habituation through practice, 2.) reflection on personal experience, 3.) engagement with virtuous exemplars, 4.) dialogue that increases virtue literacy, 5.) awareness of situational variables, 6.) moral reminders, and 7.) friendships of mutual accountability. This context-specific, practical approach of integrating virtue development outside the curriculum was an effective way to add formative virtues-based learning into the over-crowded post-graduate curriculum.

At the University of Iowa, Lauris Kaldjian (2010) developed a situationally-specific practical wisdom reflection model that was informed by Aristotle and Thomas Aquinas. He asserts “the relationship between clinical judgment and practical wisdom is so close because both arise from the same primary moral grounds - the good of the patient” (pg. 560). What makes this model distinctive compared to today’s medical education paradigm is that there is a deliberate incorporation of moral virtues and principles in the means of solving the ultimate end, which is patient health. He goes further to say that clinical training is experiential problem-solving, offering a clinical context that requires many years of training to deepen clinical judgment or practical wisdom to become a sound physician.

Reflective Dialogue and Wise Reasoning

The programs described above each utilized virtues-based reflective dialogue. Reflective dialogue involves engaging in a conversation with a trusted colleague or mentor to reflect on an experience and the related emotions. The intended outcome of reflective dialogue is to develop wise reasoning skills. Virtue (wise) reasoning involves reflecting on and then acting in accordance with one's moral values, characterized by the ability to integrate cognitive, emotional, and ethical aspects into actions and decision-making (Sternberg, R.J., et.al. 2005). Igor Grossmann (2017) synthesized four facets of wise reasoning: 1.)

intellectual humility or recognition of the limits of our own knowledge, 2.) appreciation of perspectives broader than the issue at hand, 3.) sensitivity to the possibility of change in social relations, and 4.) compromise or integration of different opinions. These four facets of wise reasoning align with the virtues deemed necessary for wise and effective leadership (Kempster, S., et.al., 2011).

Additionally, wise reasoning has been shown to promote psychological well-being by enabling individuals to make choices that align with their values, and thereby reducing the likelihood of regret or other emotionally negative outcomes. It has also been positively associated with eudaimonic processes and superior emotional regulation abilities, which increases a person's ability to balance between positive and negative experiences (Grossman, I., 2017). Similarly, VanderWeele (2017) argues that one of the four most important pathways to flourishing roots from a person's work life and diagrammed how it relates to five key domains of human flourishing: 1.) happiness and life satisfaction, 2.) physical and mental health, 3.) meaning and purpose, 4.) character and virtue, and 5.) close social relationships. These views encourage us to think about what flourishing at work looks like for physicians, and how we might use virtues-based reflective dialogue to develop and habituate wise reasoning as a means to educate toward flourishing.

Seed Grant Program Background

The Transformational Ideas Initiative (TI²) is a seed grant program at the Medical College of Wisconsin, funded by the Kern Institute for the Transformation of Medical Education. The program was designed, developed and implemented by M. Chris Decker, MD and Julia A. Schmitt who are trained facilitators in human-centered design, project development and change management. The purpose of the program was to provide an opportunity for students and residents to learn innovation-based skills and to co-create their academic environment through curricular and cultural projects. The year-long program began with summer training workshops which guided participants in the development of their ideas using human-centered, innovative skills. These sessions prepared students to test and iterate their pilot projects throughout the course of the following academic year. Throughout the program, students were coached on the performative aspects of their pilot project, such as managing budgets, goal setting, navigating institutional culture, and project iteration using human-centered, innovation skills. The goal was for each team to end the year with a successfully vetted program that was viable to continue within the college for years to come. (Decker, M.C., Schmitt, J.A., 2022)

Throughout the course of the pilot project year, we met with teams to discuss their project, providing guidance and assistance as needed. During these meetings, we noticed that students were learning through reflection on partial failures occurring in their iterative journey. This sparked our curiosity to explore the leadership skills and character strengths they were activating during the implementation of their projects. We began intentionally asking and recording their reflections during our meetings, paying particular attention to how they negotiated the virtue conflicts they experienced.

We chose to adapt the situationally-specific practical wisdom reflection model put forth by Lauris Kaldjian (2010). It's components were the following: 1.) pursuit of a goal, 2.) perception of a concrete circumstance, 3.) commitment to moral virtues and principles, 4.)

deliberation that integrates the above, and 5.) motivation to act on what was deliberated. This model was helpful for a number of reasons. First, it was easy to use. It reflects how healthcare providers think about quality improvement process steps with the addition of character strengths. Second, it aligns with the training of clinical decision-making for patient care, making it easily transferable to this context. Lastly, it is a natural place to use character strength language and as it balances project and character development. We led the reflective dialogue based on the virtues of practical wisdom (prudence), courage, temperance, and justice (fairness). We used relatable language to discuss the virtues, and created a safe, trusting environment where students were comfortable being vulnerable. The construct and related questions we asked of each student are depicted below in Figure 1.



Figure 1: The column on the left is the practical wisdom/clinical judgment construct developed by Kaldjian (2010). The column on the right are the questions we asked students during four reflection meetings over the course of their pilot project year.

Methods

As a pilot this year, we interviewed student leaders and mentors who had completed the TI² seed grant program 1-2 years prior to the interview. We followed the familiar questioning pattern they had become accustomed to in our quarterly meetings during their pilot project year. We asked open-ended, reflective questions connected to the virtues of (prudence), courage, temperance (poise), justice (fairness), and leadership. The students and mentors used their own personal definitions for each of the virtues during the discussion.

When interviewing the student leaders, the questions we asked were rooted in the context of the year they spent developing and piloting their seed grant project, and included: 1.) Tell me about a time when you showed courage or a time when you wished you had, 2.) Describe a time when you showed poise, 3.) Tell me about a time when you demonstrated decency or fairness toward someone else, a time when someone else showed you decency or fairness, or a lack thereof, 4.) Describe a scenario when you needed to show leadership,

and what character strengths did you activate? and 5.) How is your perspective different now than it was when you first started your project?

When interviewing the mentors, the questions we asked were rooted in the context of the year they spent mentoring their student team through the development and piloting of their project, and included: 1.) Tell me about a time when you noticed your mentee demonstrate courage, 2.) Describe a time when you noticed your mentee show poise, 3.) Tell me about a time when your mentee demonstrated decency or fairness toward someone else, a time when someone else showed them decency or fairness, or a lack thereof, 4.) Describe how your mentee showed leadership during their project, and what character strengths did they activate in doing so? and 5.) How did you notice your mentee’s perspective evolving throughout the project year?

With permission from each of the student leaders and mentors, we recorded the interviews for later review and coding. In coding the interviews, we used the definition of each character strength put forth by VIA Institute on Character (2023). Two reviewers independently listened to each of the interviews and coded the character strengths present (mentioned or described) in each interview. The reviewers then met and reconciled differences in coding to develop the results. Reviewer components included the project name, project year, character strengths stated during the interview (mentioned or described), and additional observations. All data was de-identified of interviewee name, project name, and project year.

Results

VIA Virtues & Related Character Strengths	Character Strengths Mentioned or Described in Interview with Student N=5	Character Strengths Mentioned or Described in Interview with Mentor N=3
Virtue: Wisdom	84%	20%
Creativity	60%	0%
Curiosity	100%	66%
Judgment	100%	0%
Love of Learning	60%	66%
Perspective	100%	66%
Virtue: Courage	75%	58%
Bravery	80%	100%
Perseverance	100%	100%
Honesty	40%	0%
Zest	80%	33%
Virtue: Humility	53%	78%

Love of Learning	60%	100%
Kindness	0%	33%
Social Intelligence	100%	100%
Virtue: Justice	87%	66%
Teamwork	60%	66%
Fairness	100%	33%
Leadership	100%	100%
Virtue: Temperance	80%	42%
Forgiveness	20%	0%
Humility	100%	100%
Prudence	100%	33%
Self-Regulation	100%	33%
Virtue: Transcendence	36%	7%
Appreciation of Beauty and Excellence	0%	0%
Gratitude	80%	0%
Hope	60%	0%
Humor	20%	0%
Spirituality	20%	33%

Table 1: Table showing percentage of character strengths mentioned or described by students and by mentors. Percentages noted in the rows of Virtues are the summation of the percentages of the Character Strengths noted for that Virtue divided by the N of the column.

We interviewed five student leaders from four project teams and three mentors from three project teams. Two of the mentors had previously developed their own projects as part of the TI² program in an earlier cycle, however we asked them to reflect on the student leaders they had mentored rather than on their own experience in the program.

In the interviews with student leaders, 22 of the 24 character strengths were observed, and all six virtues were represented. See Table 1. Interestingly, ten character strengths were observed in all five student leader interviews (100%): From the virtue of wisdom, they were curiosity, judgment and perspective. From the virtue of courage, it was perseverance. From the virtue of humanity, it was social intelligence. From the virtue of justice, they were fairness and leadership. From the virtue of humility, they were humility, prudence and self regulation. From the virtue of transcendence, none of the character strengths were observed in all five interviews. Among virtue categories, the most observed virtue within the student leader interviews was justice, followed by wisdom, temperance, courage, humility and transcendence.

In the interviews with the mentors, 14 of the 24 character strengths were observed, and all six virtues were represented. See Table 1. Of note, six character strengths were observed by all three mentors (100%): From the virtues of wisdom and transcendence, no character strengths were observed by all mentors. From the virtue of wisdom, courage, bravery and perseverance were noted. From the virtue of humanity, love of learning and social intelligence were noted. From the virtue of justice, leadership was noted. From the virtue of temperance, humility was noted by all mentors. Among virtue categories, the most observed virtue by the mentors was humility, followed by justice, courage, temperance, wisdom, and transcendence.

Interview Quotes

INTERVIEW

Student Quotes

On Courage
"Implementation took courage. We were putting our work out there...reaching out to deans in a hierarchical space...having people determine whether it was valuable or not."



On Poise
"We developed poise as we were presenting our work. We were little ducklings in the beginning and with each presentation we learned what to say and how to work together better."



On Decency
"Competing for credit on the project was distracting and getting out of that mindset was the key to moving forward. We were able to balance collaboration and credit."



On Perspective
"We put together one pilot module for learners and then we vetted iterations of it with many others to gain diverse perspectives, adjusting to the new ideas."



On Leadership
"Recognizing that each person has different strengths and trusting others to do their part was a pivot point. The project turned out way better because we leaned into each other's strengths."

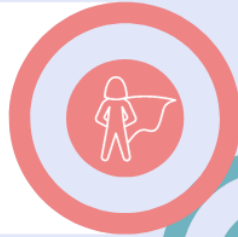


INTERVIEW

Mentor Quotes

On Courage

"She had bravery as a disposition. There were many times she was rebuffed along the way and she stayed true to her project idea, learning from each experience."



On Poise

"Before they were scheduled to teach in front of large groups, they practiced and practiced to develop poise. It also took courage to be in front of such large groups."



On Decency

"Her topic was viewed as controversial, so the dean wouldn't give her access to communication channels that other team leaders had been given. She was respectful and eventually got access."



On Perspective

"They began to develop perspective as soon as they starting setting their goals, and synthesizing their work was a great way to gain additional perspective."



On Leadership

"Each time I checked in with her, I'd learn she had made a new ally or collaborator on the project. She was mindful to include all the many different perspectives."



Discussion

We believe that virtues-based reflective dialogue is promoting significant virtue formation and wise reasoning and leadership skills within this program, as noted by both students and mentors. In all cases, we found that including virtues-based reflective dialogue was welcomed and a natural extension of their personal and professional development. Whilst engaging in reflection with the students, we were activating and strengthening their humility, curiosity, perspective-gathering and self-regulation. When we prompted performative strengths related to their project development, such as discussions on next steps, we were strengthening perseverance, leadership, and bravery to act.

The conversations during interviews were active and animated. We found that the questions functioned as a doorway into a broader discussion on the foundations of virtuous

leadership, including other intellectual, civic, moral, and performative character strengths. Students reflected on times when they had wanted to act in a more virtuous way in a certain circumstance, but had not, which led to interesting dialogue on how they might be more virtuous in the future. Academic leaders who served as their mentors noted that their mentees developed a robust language set regarding character strengths and described virtuous decision-making thought processes which they had not historically seen among their students in the past. We also discovered that students found, when interviewing for postgraduate specialty training, their project development and leadership was viewed as a differentiator for them among other candidates, helping them to be accepted into their desired program and institution.

We hypothesize that we may have had a glimmer of the presence of practical wisdom as these students discussed the many character strengths at play during particular situations. We recognized that character strengths were being used at different measures and even simultaneously, while some may have competed with each other (e.g., bravery vs. perspective). In our work, this is an opportunity for us to better understand how different character strengths work together or against each other in relational clusters, and a pursuit to understand what and how to measure this.

We found it interesting that the mentors observed different character strength development than the mentees recognized within themselves. It could be that, as a mentor, they saw different strengths than the student did, or perhaps the student didn't share that strength development in their mentoring discussions. Additionally, perhaps mentors, since they are faculty and have habituated evaluating traditional medical school skills-based outcomes, are not attuned to readily recognizing character strength development. It was only when we asked them directly, did they respond in an intentional way regarding character strength development. Also, the questions we asked the mentor may not have been aligned with the area in which they mentored their team (e.g., they may have had a particular expertise in the content of the specific project and mentored exclusively toward that). Lastly, we may have functioned, to some degree, as mentors to these teams as we met with them regularly and discussed their work in the context of their character strength development, leadership growth, and innovative skills.

We recognize that the interviews we conducted this past year were more of a summative reflection on their 14-month program experience. During their participation in the program there would likely have been different answers regarding what they were experiencing and how they were developing. For example, some portions of their project may not have been evolving in a way they had hoped, triggering negative feelings. Through coaching during quarterly meetings, we often re-shaped those experiences into learning opportunities.

Like Oxford's GLI study (Lamb, M., et.al., 2021), we evolved a skills-based training program into a character development program. The environment in which we engaged the students successfully employed six of the GLI's seven strategies for character development, as described and discussed below:

1. **Habituation through Practice**
We met with project teams and engaged in virtues-based reflective dialogue at least four times in a 12-month period, as well as engaging in virtue literacy during the preceding two months of innovation training.
2. **Reflection on Personal Experience**
We reflected on concrete circumstances surrounding their personal experience of project implementation.
3. **Engagement with Virtuous Exemplars**
Each team was assigned a faculty mentor and in our quarterly meetings with each project team, we invited a “character coach” who was a bioethicist from our University’s medical humanities department to ask questions and provide feedback. However, we could have been more intentional about this strategy.
4. **Dialogue that Increases Virtue Literacy**
Students were exposed to the VIA Institute of Character website and required to take the online survey and discuss their strengths as a team. Throughout their project, they used their own recalled definitions of the character strengths, however we were intentional about provoking virtue literacy-expanding discussions during our quarterly meetings.
5. **Awareness of Situational Variables**
During our quarterly meetings, we talked about real life circumstances that impeded their project development efforts (e.g., pressures of medical school, being treated in an unjust way, personal circumstances that arose, etc.). We often made adjustments to accommodate those real life constraints so that they could be successful.
6. **Moral Reminders**
While we did discuss situational-specific experiences on a quarterly basis, we were not as intentional about this strategy as we could have been.
7. **Friendships of Mutual Accountability**
We believe that the relationships developed between ourselves, the character coaches and the project teams functioned as friendships of mutual accountability. We were able to create a psychologically-safe environment to have formative discussions on both skills building and character formation in this context.

In summary, we feel confident that we achieved six of the seven GLI strategies within our program methodology.

Next Steps

In 2023, the Medical College of Wisconsin (MCW) redesigned their medical school curriculum, which now includes learning communities for all incoming students. Today, all medical students are sorted into a learning community of 8 students at the beginning of their first year of medical school. The learning community meets weekly or biweekly throughout their four-year medical school career and is led by a faculty “Navigator.” The purpose of the learning community is to create a student support system to achieve curricular objectives and foster well-being in a psychologically-safe environment. This provides a home for each student to learn and engage within a safe group regarding topics such as ethics, implicit bias, and conflict resolution, etc. Developing character strengths and practical wisdom is a key part of the learning community mission, and how to accomplish this is still being defined.

This past November, we presented this work to the MCW Learning Community Navigators with the intent on convening a group to define how the GLI's seven strategies might be adapted into their individual learning communities. We hope this effort will promote the expansion of virtue literacy, the skill of conducting a virtues-based reflective dialogue with students, and the future development of wise reasoning among medical students at the Medical College of Wisconsin, functioning as a pilot for medical schools across the United States. As of the writing of this paper, we have received commitment from ten LC Navigators, representing 80 medical students within their individual learning communities.

Our long-term goal is to determine whether this construct might contribute to physician flourishing. Being a medical physician in the United States has long been associated with high levels of stress and burnout, leading to increased instances of depression, substance abuse, and suicide. Recent studies indicate that the prevalence of burnout among practicing physicians, defined as emotional exhaustion, depersonalization (treating patients as objects), and low sense of accomplishment (Post, S.G., 2011), is increasing. According to a national study published by Mayo Clinic in 2022, 62.8% of physicians reported at least one manifestation of burnout in 2021 (compared to 38.2% in 2020). Our aim is to take a significant step toward designing ways to educate physician learners on the skills and practices needed to achieve happiness and flourishing in their professional lives.

Might investing in virtues-based reflective dialogue in medical school to habituate wise reasoning by adopting the GLI's seven strategies bring us closer to preparing the next generation of medical physicians to be well themselves so that they can lift up their communities as virtuous leaders?

Limitations

This was a pilot survey with a relatively small number of student and mentor interviewees. Our goal was to get a glimpse into what our next steps could be to develop an intervention to promote character formation within a small group learning community. In short, we treated this as discovery data for program development. Also, if we had engaged more evaluators, we would have had a more robust reconciliation of what we observed in each of the interviews, eliminating bias. Our choice of virtues may also have biased us on what we heard and observed in the interviews. Lastly, if we had used surveys, we may have elicited different answers.

Conclusion

The practical wisdom reflection model (Kaldjian, 2010) proved to be an effective intervention tool. A skills-based seed grant program proved to be fertile ground for medical students and faculty mentors to reflect on the character strengths they activate in situationally-specific contexts, which leads to the development of wise reasoning and virtuous leadership skills. The program aligned well with Oxford's GLI seven strategies to cultivate virtue (Lamb, M., et.al., 2021) and has the potential to be transferable to many different contexts.

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