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Medical Ethics: From the Perspective of Undergraduate Pre-Health Students

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Honors Thesis

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Abstract

The burden of ethical decision-making is a significant contributor to compassion fatigue in healthcare professionals. Due to the impact of moral conflicts, it may be beneficial to reassess the effectiveness of current ethics education and training. While previous studies have surveyed a range of medical professionals and students, it remains unclear if exposure to ethics topics during undergraduate education could better prepare future healthcare workers. Thus, there is a need to identify the necessity of introducing ethics courses into the required pre-health curriculum. The following study took the first step to gauge this by surveying undergraduate pre-health students on their self-perceived preparedness to face issues related to medical ethics. Over half of respondents indicated that they have not taken an ethics course but do recognize the importance of medical ethics. This was reflected by responses that also revealed that there are varying opinions on whether an ethics course during undergraduate studies would improve their sense of preparedness for post-graduation education or career. Further research questioning the reasons for discrepancies between values and actions as well as evaluating the methods and efficacy of ethics education are necessary to determine if ethics coursework at the undergraduate level would benefit aspiring healthcare professionals.

Keywords: preparedness, awareness, pre-health curriculum, ethical decision making

Medical Ethics: From the Perspective of Pre-Health Students

The emotional consequences of confronting and resolving ethical dilemmas are a significant burden for healthcare professionals, and there are a variety of factors that can exacerbate the impact of this stress (Berger, 2013; Whitehead et al., 2015). As the Covid-19 pandemic has emphasized, a lack of supplies such as ventilators can lead to difficult allocation decisions that often result in the loss of lives. In such situations, healthcare professionals must confront both their duty to save patients and the distress of choosing the lives they save (Peterson et al., 2020). Constant exposure to such emotionally taxing conditions can aggravate trauma, especially without sufficient psychological support (Pfefferbaum & North, 2020). Work environments lacking such resources in addition to weak leadership contributes to medical providers' job dissatisfaction and burnout. Professionals with such experiences are also more likely to leave their positions. Not only does this intensify stress and existing staffing shortages but it can have a detrimental impact on the quality of patient care (Abbasi et al., 2019; Rangachari & Woods, 2020).

The issue at the core of distress caused by ethical decision-making in healthcare professionals, however, goes beyond material shortfalls and inadequate support. Instead, the underlying deficit may be the effectiveness of ethics training. A literature review by Andersson et al. (2022) found that ethics competence training improves emotional awareness and management amongst a range of medical professionals and students. The impact of ethical dilemmas on nurses are of particular interest due to constant direct patient contact. Ethics training may alleviate emotional conflicts nurses face, as professionals with ethics education report a higher confidence in their ability to find and use ethics resources (Grady et al., 2008). Implementation of interprofessional ethics training may be another effective attempt to address

the importance of making collective ethical decisions as a medical team (Whitehead et al., 2015). Relatedly, a specialized consulting staff with which to discuss ethical matters may also help mitigate the burden of ethical decision-making (Leuter et al., 2018).

Despite the positive outlook, current training efforts may be insufficient or ineffective. For instance, providers with end-of-life care or pain management training report a higher average level of distress than those who do not receive such training. The discrepancy indicates a potential incongruity between education and the cases seen in medical settings (Whitehead et al., 2015). Medical residents report a need for case-based practice and a lack of support with ethical issues from their advisors. The latter issue suggests attending physicians also need further education on how to address ethical concerns (Boer et al., 2022). Thus, there is a need to examine the efficacy of ethics training and the skills clinicians have for resolving ethical conflicts. To do so, it may be beneficial to reevaluate exposure to ethics concepts during education prior to experiences in a professional environment.

Ethics training is a part of medical school curricula but there is evidence of a disparity between medical education and professional experience (Andersson et al., 2021; Calton et al., 2008). For instance, a study by Majeed et al. (2020) suggests fourth year medical students have a lower perception of comfort in resolving ethical dilemmas than third year students. This conclusion not only reflects the deficiencies of ethics education but also the disconnection between what is taught in class and clinical experiences (Majeed et al., 2020). To address this discrepancy, medical schools could consider integrating case-based exercises into conceptual lessons to highlight when and how to apply ethics knowledge (D'Ignazio et al., 2019). Small-group, discussion oriented classes with opportunities to support and learn from fellow medical students can also improve medical ethics curriculum (Sullivan et al., 2020). Additionally,

residents report a greater sense of confidence in facing ethical issues in comparison to medical students with minimal clinical experience, which emphasizes the importance of opportunities to engage with and discuss ethical cases with fellow residents (Silverman et al., 2013).

One significant challenge for evaluating preparedness and ethical decision-making skills is the variety of possible surveying methods. This lack of standardization could weaken validity and consistency between current studies (Lohfeld et al., 2012). Although direct patient contact is a significant element of the burden of ethical dilemmas, the available research also depicts a perspective limited to a narrow range of professions and time frames (Andersson et al., 2020). Specifically, there is a need to investigate the perceptions of and preparedness for ethical decision-making of a variety of healthcare professionals prior to medical school or workplace experiences. The following study addresses these shortfalls by examining undergraduates on a range of pre-health tracks.

Novel Approach and Focus

As the literature review illustrates, there has been extensive research on the impact of medical ethics on healthcare professionals. This indicates not only an interest but also a concern for the consequences of difficult ethical decisions. Less has been reported, however, on whether an earlier, conceptual introduction to ethics before entering the medical field could help minimize the emotional burdens of ethical decision-making as a professional. Intervening at the undergraduate level may be important because it can impact students' dedication to and perceptions of a career in medicine. Although some may counter that a foundation in science is more fundamental in undergraduate education, ethics courses can help students draw pragmatic connections between science and broader applications (McGowan, 2013). Regardless, ethical

competence is an important professional skill for providing holistic patient care (Mitchell et al., 1993).

The first step to determine whether ethics coursework is necessary at the undergraduate level is to gauge current perceptions. The purpose of this study was to address this need; I surveyed students about their awareness of ethical issues and ethical preparedness. All participants were students intending to pursue a career in healthcare. The main hypothesis was that surveyed undergraduate pre-health students will convey little experience with ethics topics. Two specific predictions were that respondents would indicate a lack of exposure to ethics coursework and convey a need for more opportunities to directly explore ethical issues in medicine. The results of the study may provide insight into students' perceptions about ethics coursework and better inform future studies on the efficacy of undergraduate pre-health ethics curricula.

Methods

Survey Design

Previous studies with similar objectives have focused on surveying medical school students and healthcare professionals (Majeed et al., 2020; Silverman et al., 2013). To better reflect potential experiences of undergraduate students on a pre-health track, this survey asked novel questions that aimed to assess general perceptions of and experiences with ethics coursework. The online Qualtrics survey consisted of 10 demographic questions and a mix of multiple choice, rating, and free response questions (See Appendix A). Responses to the rating questions were categorized into three groups: perception, consideration, and preparedness.

Survey Distribution

Three groups at the University surveyed received a link to the survey: Students in the Honors Program, students who receive advising from the Health Careers Resource Center (HCRC), and members Pre-Health Physicians' Club (PHPC). The survey was distributed on March 7, 2022 and was active until March 23, 2022.

Participants

All students on a pre-health track at a medium sized, metropolitan, public University were eligible to respond to the survey. The University HCRC provides information on 22 health related professions, but for the purposes of this survey, respondents were categorized as pre-medicine, pre-physician's assistant, pre-nursing, pre-dentistry, pre-physical/occupational therapy, pre-optometry pre-pharmacy, pre-veterinary. Notably, ethics courses are not required for pre-health students at this college except for those on the registered nursing track. According to information provided on the University HCRC website, ethics courses are recommended as a part of the general humanities coursework for occupational therapy, pharmacy, and veterinarian tracks but are not required.

A total of 66 students representing a range of pre-health tracks responded to the survey (See Figure 1). Due to considerable overlap between the populations of the three groups that distributed the survey, it is difficult to confirm how many students received a link to the survey.

Data Analysis

Online Qualtrics analysis tools were used to aggregate quantitative information, but I examined qualitative responses individually to identify the trends and nuances of survey responses.

Results

Forty-five out of the 66 respondents indicated that they have not taken an ethics course at the college level. The 21 students who had taken an ethics course did not necessarily take an ethics course related to medicine (See Figure 2). Regarding the perception of ethics, a majority of respondents agree ethics education is important, and more than two-thirds of respondents perceive a need for more exposure to ethics in the pre-health curriculum (See Figure 4). In comparison, only one-third have undertaken ethics related coursework. Notably, over two-thirds of respondents indicated that their undergraduate education has either somewhat or not helped them establish a sufficient background ethics education (See Figure 5). Relatedly, while about one-third of respondents felt their undergraduate education has prepared them extremely well in the sciences, a similar proportion of students answered that their undergraduate education has prepared them only slightly well or not well at all on ethics (See Figure 6).

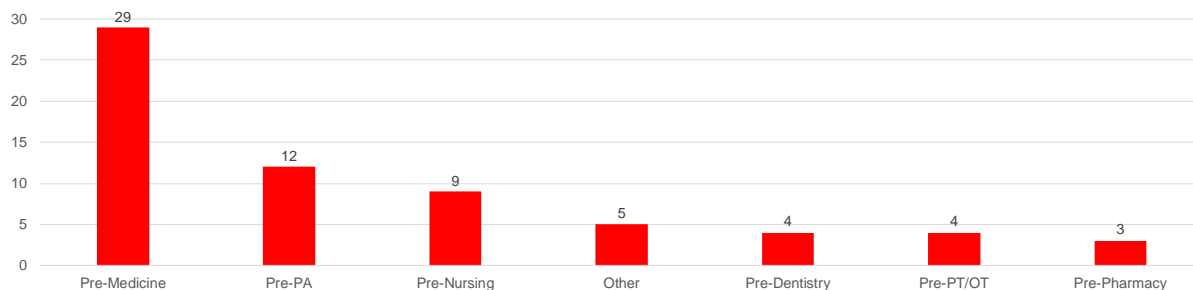


Figure 1. Pre-Health Tracks

The bar graph above shows the distribution of pre-health track designations of the survey respondents. “PA” represents physician’s assistant and PT/OT stands for physical therapy/occupational therapy. Two respondents in the “other” category did not specify a track, one indicated pre-optometry, one indicated pre-veterinary, and one respondent indicated pre-dental/medicine.

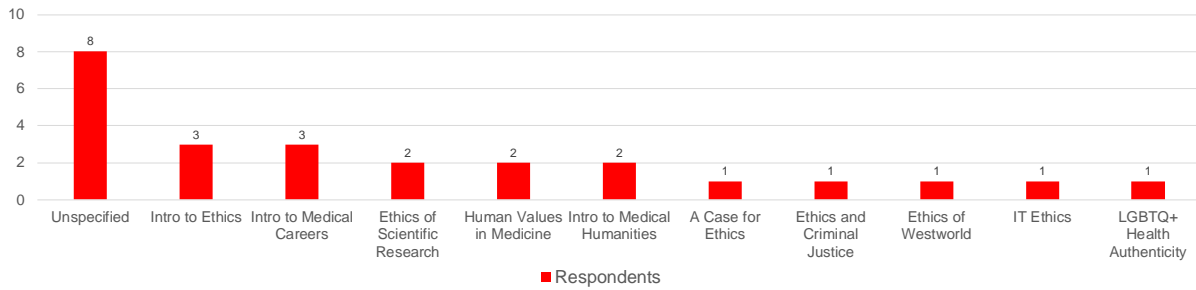


Figure 2. Types of Ethics Courses Reported

With regard to the ethics courses respondents have taken, 3 were introductory courses in ethics, medicals careers, and medical humanities. Less than half of the classes reported, namely Introduction to Medical Career, Ethics of Scientific Research, Human Values in Medicine, and Introduction to Medical Humanities, were related to medicine or science. Seven of the unspecified ethics courses were reported to be associated with medical humanities and one unspecified ethics course was only identified as a general ethics course.

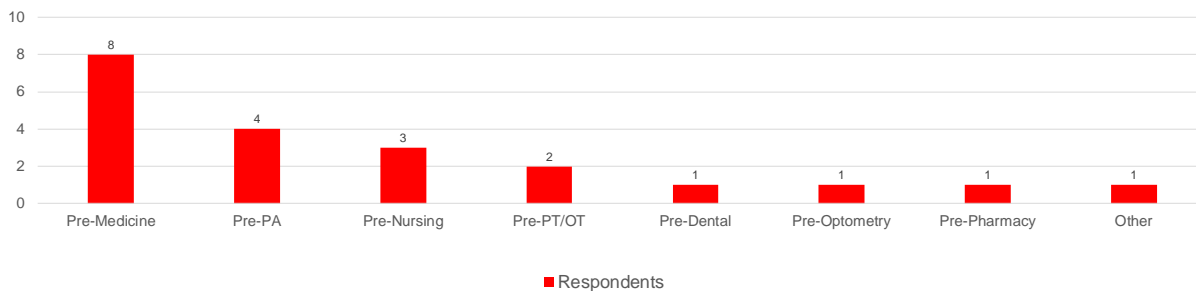


Figure 3. Pre-health Track of Those Who Have Taken an Ethics Course

As the figure above indicates, about one-third of respondents who have taken an ethics course are on the pre-medicine track. This, and the number of respondents for the other tracks shown in the figure, is roughly proportional to the pre-health track designations of the entire survey population. One person, shown as “other,” did not specify their pre-health track.

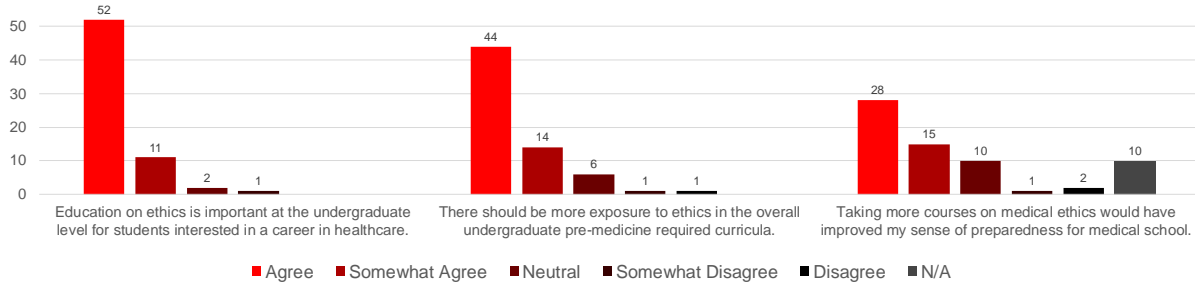


Figure 4. Perceptions of Ethics

The purpose of the second set of questions was to gauge how students perceive ethics in the context of healthcare and the pre-health curriculum. As the leftmost bar graph indicates, over two-thirds respondents indicate that they recognize the importance of ethics in medicine. The need for exposure to ethics concepts during undergraduate education, however, is less agreed upon. Further division is evident in the response to the statement on the perceived effectiveness of courses in ethics; less than half of students believe that a medical ethics course could have better prepared them for medical school or a career in medicine (See Appendix A, survey item 11 for the complete prompt).

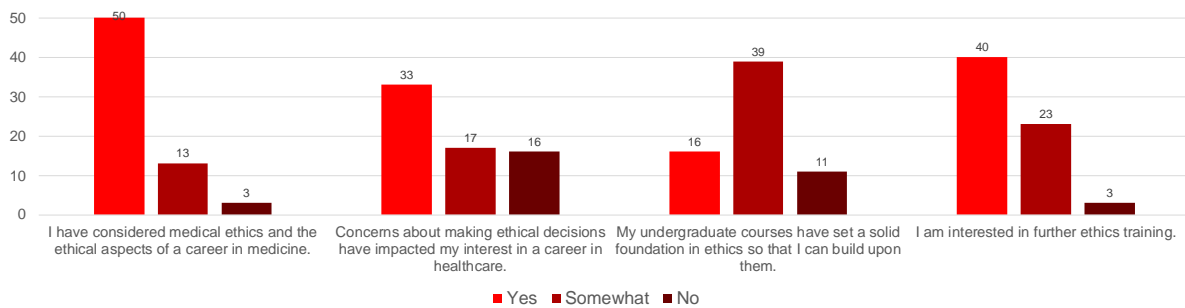


Figure 5. Consideration of Medical Ethics

This figure illustrates that respondents have thought about the potential impact of ethics in medicine. Half of the surveyed students indicated that these considerations have affected their interest in a career in medicine. The responses also show a majority of students are interested in receiving more training in ethics, which reflects the finding that a similar proportion of students

feel that their undergraduate education has only somewhat prepared them for future ethics education or training.

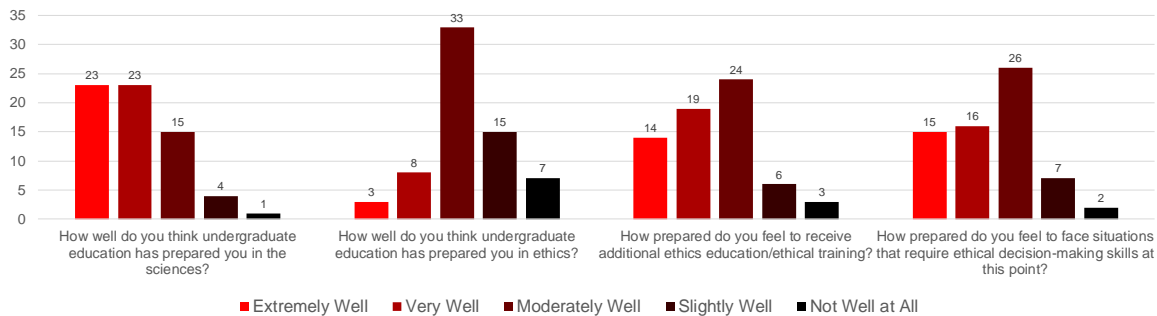


Figure 6. Preparedness for Ethics Education and Making Decisions

As shown in the first two bar graphs of this figure, a survey of the perceptions of preparedness amongst pre-health students indicate a greater sense of preparation in the sciences than in ethics. Despite this, a majority of respondents indicated that they feel moderately well, very well, or extremely well prepared to receive ethics training and to confront situations related to ethical decision-making.

Discussion

The purpose of this study was to survey perceptions of and previous experiences with ethics education in a population of undergraduate pre-health students. The responses suggest that while medical ethics is thought to be important, many pre-health students do not believe a course would improve their preparedness. This may be an indication that a classroom setting is not perceived as the optimal or preferred method of learning about ethics, which echoes the findings of past studies in which medical school students indicated a preference for case-based simulation training (Stites et al., 2018; Sullivan et al., 2020). Additionally, the finding that about two-thirds of those surveyed have not taken an ethics course supports the initial hypothesis that pre-health students lack experience with ethics coursework. The results of the survey items about the

effectiveness of ethics courses, however, does not necessarily support the prediction that undergraduates seek opportunities to explore ethics issues.

To determine if there is a need to incorporate ethics classes into the required pre-health coursework, the next step is to evaluate the why students do not take ethics courses. Like information on pre-health students' perceptions of ethics, there is a lack of reports on factors that affect interest in ethics. Potential variables to explore include time, tuition costs, and awareness of potential ethical conflicts. There may also be a need for pre-health programs to identify whether undergraduates seek opportunities to practice with hypothetical but realistic ethics cases. This may motivate pre-health students to engage with ethical issues in earlier stages of career exploration and develop a holistic perspective of the demands of healthcare professions. Current studies suggest a direct-experience ethics education approach has been effective in increasing the confidence of medical residents to confront ethical dilemmas; thus, this may be applicable to pre-health undergraduates as well (D'Ignazio et al., 2019).

Further research could also help establish if ethics coursework would be a beneficial addition to the already demanding pre-health curriculum. To evaluate this, a survey of current medical professionals or medical students could examine whether the undergraduate ethics education they did or did not receive was sufficient preparation for the demands of their past or present experiences. Longitudinal studies to observe changes in self-perceived preparedness for ethical issues over time could also identify the efficacy of early ethics education (D'Ignazio et al., 2019; Majeed et al., 2020). The results of such studies, in addition to the results of this survey of pre-health students, can help determine if ethics education would be valuable at the undergraduate level.

Lastly, there were two apparent deficiencies of the survey used in this study. First, it did not present a “0” option for questions on how many of the ethics course taken were required and how many were related to medicine. Consequently, substantial conclusions could not be drawn from these questions. Secondly, albeit for the sake of brevity and survey completion rates, respondents were not asked about the reasons for taking or not taking an ethics course. Despite these shortfalls, additional surveys of this kind could address the lack of standardization evident in previous studies (Lohfeld et al., 2012). This study also provides insight into pre-health students’ perceptions of ethics, which has not yet been widely explored (Andersson et al., 2022).

Conclusion

Based on the results of this study, it seems that pre-health undergraduate students have little experience with ethical concepts and decision-making. There are many potential reasons for this trend, one of which may be that ethics coursework is not required for most pre-health tracks at the institution surveyed. Although it seems students perceive ethics to be a significant part of healthcare, completing ethics coursework does not seem to be of forefront importance for undergraduates preparing for a career in medicine. Overall, the current survey provides a starting point for further studies on the perceptions of medical ethics of aspiring healthcare providers. Identifying the interests and needs of these students will be crucial to not only providing the necessary academic background but also the practical skills needed to become holistic and morally resilient medical professionals.

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Appendix A

Below are the complete survey items and options if applicable:

Demographics:

1. Email address
2. Gender
3. Ethnic Background
4. What is your current class standing?
5. Pre-health track (pre-medicine, pre-nursing, pre-dentistry, pre-PA, pre-pharmacy, etc.)
6. Intended career or career of interest

Rating Items:

Ethics experience –

7. Have you taken ethics courses at the college level?
8. (If yes) What ethics courses have you taken?
 - a. How many of these courses related to medicine?
 - b. How many of these courses were required?
 - c. Did these courses change your view on ethics or medical ethics? If yes, how so?

Perceptions of Ethics – (Agree, Somewhat Agree, Neutral, Somewhat Disagree, Disagree, N/A)

9. Education on ethics is important at the undergraduate level for students interested in a career in healthcare.
10. There should be more exposure to ethics in the overall undergraduate pre-medicine required curricula.
11. Taking more courses on medical ethics would have improved my sense of preparedness for medical school.

Consideration of Ethics – (Yes, Somewhat, No)

12. I have considered the medical ethics and ethical aspects of a career in medicine.
13. Concerns about making ethical decisions have impacted my interest in a career in healthcare.
14. My undergraduate courses have set a solid foundation in ethics so that I can build upon them in graduate school or a healthcare setting.
15. I am interested in further ethics training.

Preparedness for Ethics Education and Making Decisions – (Extremely well, Very well, Moderately well, Slightly well, Not well at all)

16. How well do you think undergraduate education has prepared you in the sciences (biology, chemistry, etc.)?
17. How well do you think undergraduate education has prepared you in ethics?
18. How prepared do you feel to receive additional education on ethics or ethical training?
19. How prepared do you feel to face situations that require ethical decision-making skills at this point?

Free Response

20. What kind of coursework on or experience with ethics do you expect post-undergrad (healthcare setting, medical school, dental school, etc.)?
21. Is there anything else you would like to include about your perception of medical ethics in undergraduate education?