



2023

## Structured Ethics Education in Speech-Language Pathology Graduate Students

Jennifer N. Gaylord

Murray State University, [jgaylord1@murraystate.edu](mailto:jgaylord1@murraystate.edu)

Stephanie M. Schaaf


Murray State University, [sschaaf@murraystate.edu](mailto:sschaaf@murraystate.edu)

Laura Liljequist

Murray State University, [lliljequist@murraystate.edu](mailto:lliljequist@murraystate.edu)

*See next page for additional authors*

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### Recommended Citation

Gaylord, Jennifer N.; Schaaf, Stephanie M.; Liljequist, Laura; and Guffey, Kristie Ed.D. (2023) "Structured Ethics Education in Speech-Language Pathology Graduate Students," *Teaching and Learning in Communication Sciences & Disorders*: Vol. 7: Iss. 2, Article 11.

Available at: <https://ir.library.illinoisstate.edu/tlcsd/vol7/iss2/11>

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## Structured Ethics Education in Speech-Language Pathology Graduate Students

### Abstract

This investigation compared the effect of ethics training embedded within a curriculum to structured ethics training regarding the ethics knowledge and self-reported comfort levels of first-year graduate students in speech-language pathology. Two equal, non-randomized groups of participants completed an ethics test and survey at three different times over the course of the investigation. The test and survey were administered prior to and after structured ethics training and ethics training embedded within the curriculum. The results of this study showed a significant difference in ethics knowledge after completion of the structured ethics training module for both groups. After receiving structured ethics training, there was no difference between groups regarding comfort in identifying and solving ethics problems. These findings add to the literature regarding the need for structured ethics training for graduate students in healthcare professions. Structured ethics training in speech-language pathology graduate students increased the knowledge of ethical foundations and decision-making models prior to clinical practice in the field.

### Keywords

ethics, ethics education, speech-language pathology, graduate students, ethics training, ethical dilemmas

### Authors

Jennifer N. Gaylord, Stephanie M. Schaaf, Laura Liljequist, and Kristie Guffey Ed.D.

Healthcare professionals, regardless of the occupational field, must be able to synthesize and organize information quickly in order to plan assessments and treatments that are best for the individuals and families they serve. Practicing professionals may focus solely on an individual's capacity to benefit from an evidence-based treatment rather than considering the factors of need, equity, fairness, and personal choice. Other professionals struggle to consider all ethical principles equally when making decisions (Knight et al., 2017; Rogers, 2004). This notion makes a case for ethics education for healthcare professionals, including students in a given field, knowing they will be making treatment decisions and developing a plan of care with consideration of bioethical factors. Fox et al. (1995) indicated that by the incorporation of ethics and professionalism throughout a healthcare student's training, "ethics ceases to be a theoretical discipline and begins to become a professional code of conduct" (p. 766). By facilitating a professional code of conduct early in the education of a healthcare student, the integration of ethical practice into service provision is more likely. Ethics education for healthcare professionals has been found to have a significant impact on the use of ethical resources and confidence in determining solutions and acting when faced with ethical problems (Grady et al., 2008).

Developing professional and ethical practitioners requires foundational knowledge as well as the ability to generalize and apply skills in a given situation. The ability to act ethically relies on an integration of all ethical facets to facilitate a consistency between what is said, decided, and ultimately done (Hughes & Rushton, 2022). This consistency must be expediated through ethics education at all levels of professional practice. In graduate school, students are often creating their professional and moral identities and so exposure to more formal methods of ethics education has the potential for setting the novice professional up for greater success. Canaerts et al. (2014) found that healthcare professionals felt that specific ethical training courses would be best situated at the beginning and throughout professional training. By developing the student's understanding and knowledge of ethics early in the education process, those skills may become more established in the student as essential rather than an afterthought.

While ethics knowledge is an imperative skill to ensure that professionals are able to make appropriate and effective ethical decisions that affect the individuals served, this knowledge is also important to the sustainability and integrity of the profession as a whole. Current literature describes a theory to practice gap in ethics education in which healthcare students report a lack of structured ethics training and opportunities to practice ethical decision-making models (Kenny et al., 2019; Pollard et al., 2018). This lack of training then impacts service provision at the professional level, often leading to ethical distress or confusion and potentially unethical behavior. While ethical theory and bioethical terms are commonly used across professions, there is no standardized protocol or proven, regimented method of education for ethics training. While it is expected that students in a professional field develop ethics knowledge and skills, there is no tool to monitor development of ethics skills within a program.

Ethics education and training in a given health field are essential for professionals to make ethical decisions that may impact the individuals they serve as well as colleagues and the public. According to VanderKaay and colleagues (2018), the ability to successfully formulate solutions to ethical problems has been correlated with improved clinical skills and performance among health students and professionals. Research in allied health fields has indicated gaps in professional knowledge of ethics and the ability to use that knowledge to make sound decisions when faced

with ethical dilemmas (DeFoor et al., 2020; Huynh & He, 2018; VanderKaay et al., 2018). In many health fields, professionals provide education and supervision to students training in that particular field. If these professionals are lacking in ethics knowledge, the education of students in ethics may also be affected (VanderKaay et al., 2018).

Similar to other healthcare professions, speech-language pathology has minimal research published as to the effects of ethics training with students as well as how they use that training in the future to make ethical decisions (Bourne et al., 2013). According to Krautscheid (2017), the ability of an individual to appropriately respond to ethical situations depends on a history of opportunities to practice identifying and rehearsing responses to ethical dilemmas. By integrating ethical awareness and training in an educational curriculum, students are allowed to examine their own values and grow along an ethical continuum. Additionally, practice with ethical situations allows students to gain confidence in their abilities to solve ethical problems (Bourne et al., 2013; Krautscheid, 2017).

Across medical professions, ethics education has been shown to increase ethical awareness in allied healthcare students as well as improve ethical decision-making skills and ethical competence. Although the value of ethics education for students is known and has been demonstrated in various studies, often the structure of ethics education for allied healthcare students is confusing and lacks an organized approach (Cannaerts et al., 2014; Kenny et al., 2019; Pollard et al., 2018). Additionally, studies have shown that allied healthcare students desire more ethics education than they initially received as they felt unprepared and ill-equipped to make challenging ethical decisions in practice (Grady et al., 2008; Huynh & He, 2018).

Graduate students in speech-language pathology undergo rigorous training and must demonstrate competency prior to graduation in a variety of areas. Graduate education for speech-language pathology students is completed through programs that are accredited by the Council on Academic Accreditation (CAA), an organization associated with the American Speech-Language-Hearing Association (ASHA). The Council for Clinical Certification in Audiology and Speech-Language Pathology (CFCC) defines the standards for clinical certification for graduate students, including those skills related to ethics in the profession (American Speech-Language-Hearing Association [ASHA], 2020). The CFCC indicates that students must have a demonstrated knowledge of ethical conduct standards as well as knowledge of professional issues. The recommended method for educating graduate students in speech-language pathology is embedding ethics and professionalism in courses in a curriculum with no specifications as to how that should look or be assessed. University graduate programs in speech-language pathology are encouraged to develop ways to embed ethics training in the curriculum rather than provide ethics-specific training (American Speech-Language-Hearing Association [ASHA], 2020). There is no standardized, regimented protocol for ethics education for speech-language pathology graduate students based upon the recommendations of governing bodies in the field (American Speech-Language-Hearing Association [ASHA], 2020).

Much research has been completed regarding the different types of educational methods for ethics training such as case studies (Cannaerts et al., 2014; Laliberte et al., 2015; Miyasaka et al., 2011; Pollard, 2015), discussion groups (Bourne et al., 2013; Kenny et al., 2015; Lin et al., 2010; Mantie-Kozlowski, 2013), and simulation (Grillo & Thomas, 2016; Jansen, 2015; Krautscheid, 2017; Pinar & Peksoy, 2016; Ruyak et al., 2017). Cannaerts and colleagues (2014) completed a systematic

review of the above-mentioned ethics educational methods. In the articles reviewed, students reported ethical lectures to be boring and not motivating. Students and instructors found the use of case studies to be engaging and instructional in ethics education. Students reported the case studies helped to improve ethical decision-making although, they indicated they would have liked more time to examine the case studies used. Students and instructors also touted the use of group discussions as the students were able to learn from peer responses. The authors found that simulation activities allowed students to experience negative feelings that may occur but in a safe environment, therefore preparing them for clinical practice. Currently, there is minimal evidence in the literature regarding the most successful and appropriate approaches to educate students regarding ethics terminology and how to solve ethical dilemmas effectively.

This pilot study investigated the efficacy of the recommended informal method of instruction for ethics in a graduate speech-language pathology program using content embedded in existing curriculum as compared to a structured ethics training program. The study answered the following question: Which method of ethics training results in higher self-reported comfort levels and higher accuracy in understanding of ethical terminology and ethical decision-making in speech-language pathology graduate students?

## Method

**Setting and Participants.** Once approval was obtained from the Murray State University Institutional Review Board (IRB), participants for this investigation were recruited from the speech-language pathology graduate program in the Center for Communication Disorders at Murray State University. Speech-language pathology graduate students completing coursework in the first year of the program were recruited for participation in this study. Upon admittance to the graduate program, students are randomly placed in two separate cohorts designated by a color. During the timeframe of this research, the first-year graduate student cohorts were designated as yellow and blue cohorts, with 12 students in each cohort. Each cohort followed the same plan of study with a slightly different sequence of coursework involving two courses within the first year. The yellow cohort was enrolled in a voice disorders course during the first fall semester of their programming whereas, the blue cohort was enrolled in a speech disorders course. During the second semester, in the spring, this course sequence switched with the yellow cohort enrolled in speech disorders and the blue cohort enrolled in voice disorders. All other courses are delivered in the same sequence for both cohorts throughout the two years of the graduate program.

If individuals chose to participate in the study and met inclusion and exclusion criteria, participants completed the ethics survey and ethics test three times during the investigation in addition to the structured ethics training module. Individuals were included in this study if they were attending the graduate speech-language pathology program in the Center for Communication Disorders at MSU. Participants were excluded from this investigation if they had received ethics training that was external to the curriculum in communication disorders at MSU. To maintain anonymity and confidentiality, participants were assigned a code for all instrumentation throughout the study instead of using any potentially identifying information. While subjects were graduate students attending classes, completion of the ethics test and survey was not tied to a grade and involvement in the study was completely voluntary.

**Instrumentation.** Upon a search of literature, no validated ethics knowledge assessment instruments in speech-language pathology were able to be located. The primary researcher created a 10-item, multiple choice pre- and post-test to assess knowledge of ethical terms and principles as well as ethical decision making of participants. During measurement development, construct validity was determined by administering the ethics test to faculty members in the Center for Communication Disorders as well as senior undergraduate students in the communication disorders major. Faculty members are practicing professionals and have completed structured ethics training as part of certification maintenance for professionals whereas, undergraduate students in the communication disorders major have not had structured ethics training. Upon first administration of the ethics test during measurement development, four items that addressed terminology of ethical principles had a high success rate among both faculty and undergraduate students. These items were reworked to increase the level of difficulty from defining the terminology to applying the definition of the terminology to various ethical situations. Upon first administration of the revised ethics test to faculty and undergraduate students, there was no significant difference in scores between groups,  $t(8) = 1.73$ ,  $p > .05$ . There was a significant difference between faculty and undergraduate scores on the second version of the ethics test,  $t(8) = 2.44$ ,  $p < .05$ , such that the faculty scored higher ( $M = 4.25$ ,  $SD = 1.09$ ) than the undergraduate students ( $M = 2.75$ ,  $SD = 0.83$ ).

A pre- and post-survey made up of a total of five questions was also created by the primary investigator. Three questions used a 5-point Likert scale to determine the comfort level of participants in navigating ethical situations. Two questions on the survey were yes/no questions asking about prior ethics training as well as if the participant has experienced an ethical/unethical situation previously.

**Procedures and Data Collection.** Prior to the second half of the 2021 fall semester, individuals were recruited for participation in the study from the yellow and blue graduate cohorts of students enrolled in the Murray State University Center for Communication Disorders speech-language pathology graduate program. Individuals in the yellow cohort enrolled in CDI 624 Assessment and Treatment of Voice Disorders and individuals in the blue cohort enrolled in CDI 620 Speech Sound Disorders who chose to participate, completed the ethics test and survey. The test and survey were identical at each administration. Over the next six weeks, participants in the yellow cohort completed a structured ethics training module on the learning management platform Canvas (Instructure©, 2022).

A more formal format for the structured ethics training was utilized as a standalone topic whereas the embedded/informal ethics training occurred organically in the context of teaching other topics in speech-language pathology. The structured ethics training module on Canvas (Instructure©, 2022) was comprised of short video presentations (Gaylord & Brumbaugh, 2019), online discussion boards with peer-to-peer engagement, access to resources regarding ethics in speech-language pathology, case studies based upon actual examples (American Speech-Language-Hearing Association [ASHA], n.d.-a), student reflections upon peer posts, and small group discussions with the instructor and peers to introduce ethical terminology and principles as well as ethical decision-making models (Pollard et al., 2018) (see Appendix A). Peer feedback was utilized with the discussion board posts and the group presentations. In order to fully allow for engaged peer discussion during the activities, instructor feedback was only provided to indicate if a

response was explicitly incorrect. While the structured ethics training module was embedded in a voice disorders course, the ethical situations were not specific to voice assessment or intervention.

During this same timeframe, participants in the blue cohort received ethics training that was embedded within the curriculum of the CDI 620 course. Within the current study, informal ethics training embedded within the course curriculum included discussions regarding ethical principles and terminology and ethical decision-making examples provided through case studies during class time with no additional coursework focused solely on ethics. It should be noted that ethical principles within the course without the structured training module were frequently discussed in a case study format or whole group discussion specific to speech sound disorders. At the end of six weeks, prior to the end of the fall 2021 semester, participants completed the ethics test and survey again.

At the beginning of the spring 2022 semester, participants in the blue cohort were then enrolled in CDI 624 Assessment and Treatment of Voice Disorders and completed the structured ethics training module. Participants in the yellow cohort were enrolled in CDI 620 Speech Sound Disorders and received ethics training that was embedded within the curriculum and provided during class time. At the end of six weeks, prior to midterm of the spring 2022 semester, participants in both cohorts completed the ethics test and survey. This was the final administration of the test and survey.

## Results

Twenty-three of 24 potential participants agreed to participate in the investigation. One student in the blue cohort was not available at the initial recruitment for this investigation due to illness. One of the questions posed on the ethics survey inquired about prior ethics training outside of Murray State University's curriculum. Three participants (13%) indicated that they had received ethics training outside of the curriculum, therefore excluding these participants from the investigation. These participants completed the structured ethics training module and each administration of the survey and test but this data was excluded from the data analysis.

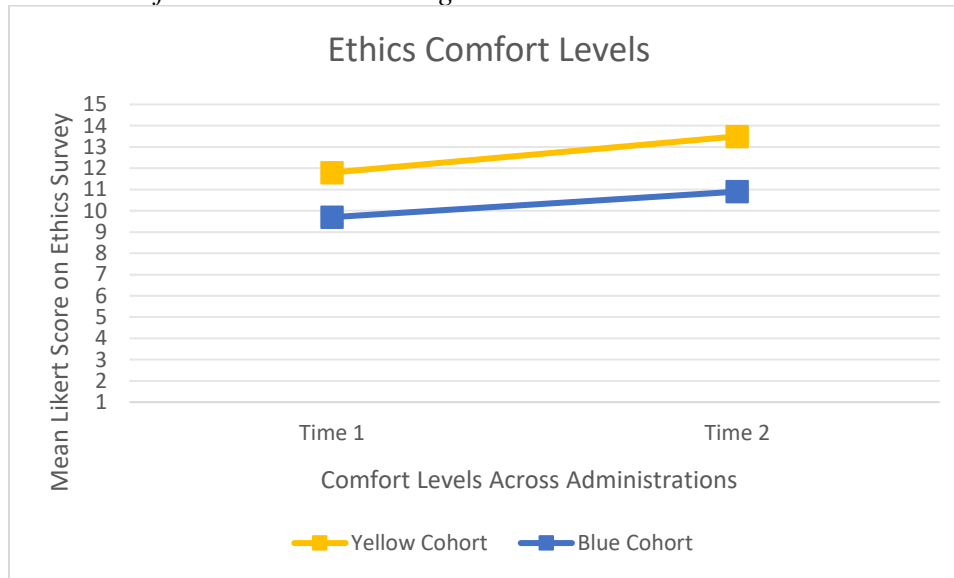
**Ethics Survey.** One purpose of this study was to determine which method of ethics training resulted in higher self-reported comfort levels with ethical decision-making as measured on a pre- and post-survey. Prior to completing the Likert portion of the survey, a second yes/no question on the survey asked about participant experiences with unethical situations that made them feel uncomfortable. Of the participants ( $n=20$ ) that were eligible for the study, 65% reported they had experienced an unethical situation that made them uncomfortable.

Participants completed a short, Likert-scale survey to rate level of comfort in identifying unethical or illegal situations as well as making ethical decisions. According to the results, 55% of participants (11/20) reported feeling comfortable or very comfortable with identifying and solving ethical problems prior to any training. Interestingly, 55% of participants (11/20) demonstrated no change in comfort or decreased comfort after the structured ethics training was completed while 45% (9/20) reported an increase in comfort after training. A t-test analysis was completed between groups across the first and second administrations of the survey. At the first administration of the survey, there was a significant difference in the comfort levels between groups,  $t(18) = 2.10$ ,  $p =$

0.05, such that the yellow cohort reported higher comfort levels ( $M = 11.8$ ,  $SD = 1.93$ ) than the blue cohort ( $M = 9.7$ ,  $SD = 2.50$ ) (see Table 1). At the second administration of the survey, after the yellow cohort had completed the structured ethics training module and the blue cohort had received ethics training embedded in the curriculum, there continued to be a significant difference in the comfort levels between groups,  $t(18) = 2.28$ ,  $p < 0.05$  (see Figure 1 and Table 1).

**Figure 1**

*Ethics Comfort Level Mean Changes Across Administration Times*



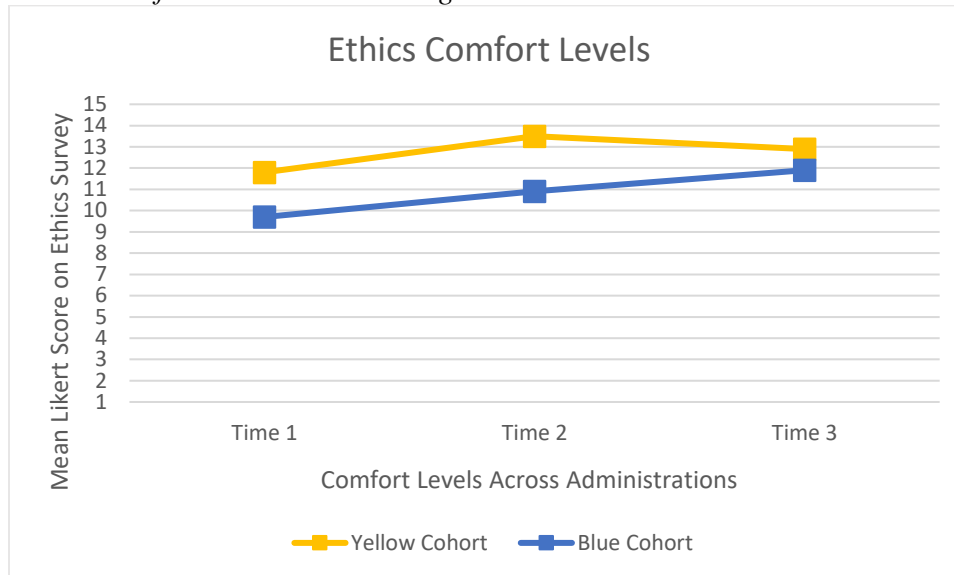
**Table 1**

*Means and Standard Deviations Across Administration Times*

| Skill Measured   | Yellow Cohort (n=10)                |                                     |                                     | Blue Cohort (n = 10)                |                                     |                                     |
|------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                  | Time 1<br><i>M</i><br>( <i>SD</i> ) | Time 2<br><i>M</i><br>( <i>SD</i> ) | Time 3<br><i>M</i><br>( <i>SD</i> ) | Time 1<br><i>M</i><br>( <i>SD</i> ) | Time 2<br><i>M</i><br>( <i>SD</i> ) | Time 3<br><i>M</i><br>( <i>SD</i> ) |
| Ethics Knowledge | 5.6<br>(1.26)                       | 6.1<br>(1.66)                       | 5.8<br>(1.23)                       | 4.9<br>(1.37)                       | 3.6<br>(1.84)                       | 6.4<br>(1.78)                       |
| Ethics Comfort   | 11.8<br>(1.93)                      | 13.5<br>(1.65)                      | 12.9<br>(1.37)                      | 9.7<br>(2.50)                       | 10.9<br>(3.21)                      | 11.9<br>(1.73)                      |

Once the blue cohort completed the structured ethics training module and the yellow cohort received ethics training embedded in the curriculum, the ethics survey was administered again. At the third administration, there was no significant difference in comfort levels between groups, indicating no difference in comfort in identifying and solving ethical problems after both groups had received the training,  $F(1) = 2.05$ ,  $p > 0.05$  (see Table 1 and Figure 2).



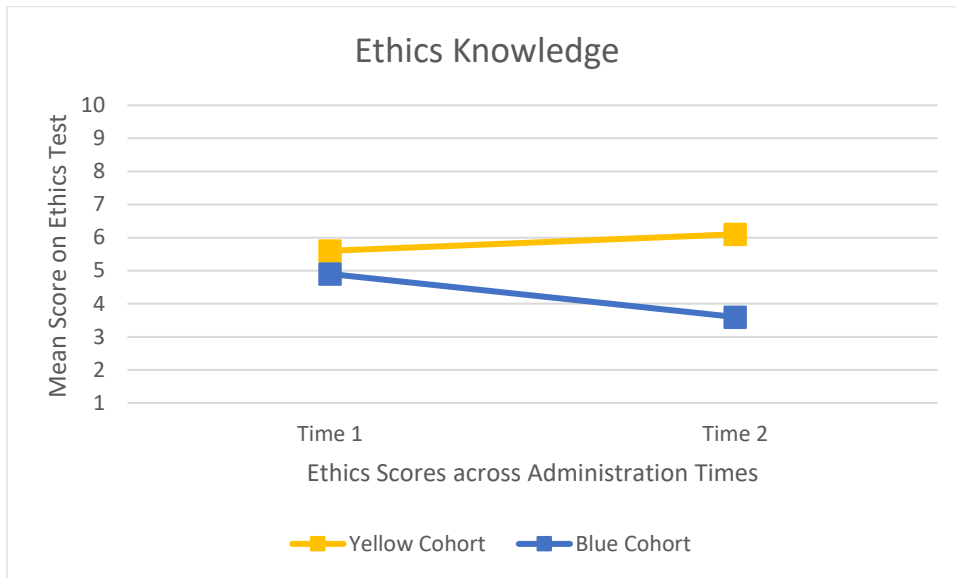
**Figure 2***Ethics Comfort Level Mean Changes Across Administration Times*

A MANOVA statistical analysis was used to examine the association between graduate student comfort levels in solving ethical problems as the dependent variable and time as the independent variable. Comfort level changes across administration times were found to be significant (Wilks' Lambda = 0.64,  $F(2, 17) = 4.80$ ,  $p = 0.02$ ), indicating that comfort levels were different depending on the time the data were gathered (i.e., prior to or following the ethics training). There was no significant interaction between time and group for comfort levels (Wilks' Lambda = 0.81,  $F(2, 17) = 2.03$ ,  $p = 0.16$ ).

**Ethics Test.** Another purpose of this study was to determine which method of ethics training resulted in higher accuracy in understanding of ethical terminology and ethical decision-making as measured on a pre- and post- ethics assessment. At each data collection time, participants were instructed to complete an ethics test. The results on the ethics assessment, prior to any ethics training for both groups, demonstrated no significant difference in knowledge between groups,  $t(18) = 1.19$ ,  $p = 0.45$  (see Table 1 and Figure 3). After structured ethics training was completed by the yellow cohort and ethics training was embedded in the curriculum for the blue cohort, the ethics test was administered again. There was a statistically significant difference in knowledge between groups at the second administration time,  $t(18) = 3.19$ ,  $p < 0.01$  (see Table 1 and Figure 3), such that the yellow cohort scored higher ( $M = 6.1$ ,  $SD = 1.66$ ) than the blue cohort ( $M = 3.6$ ,  $SD = 1.84$ ) (see Table 1).

**Figure 3**

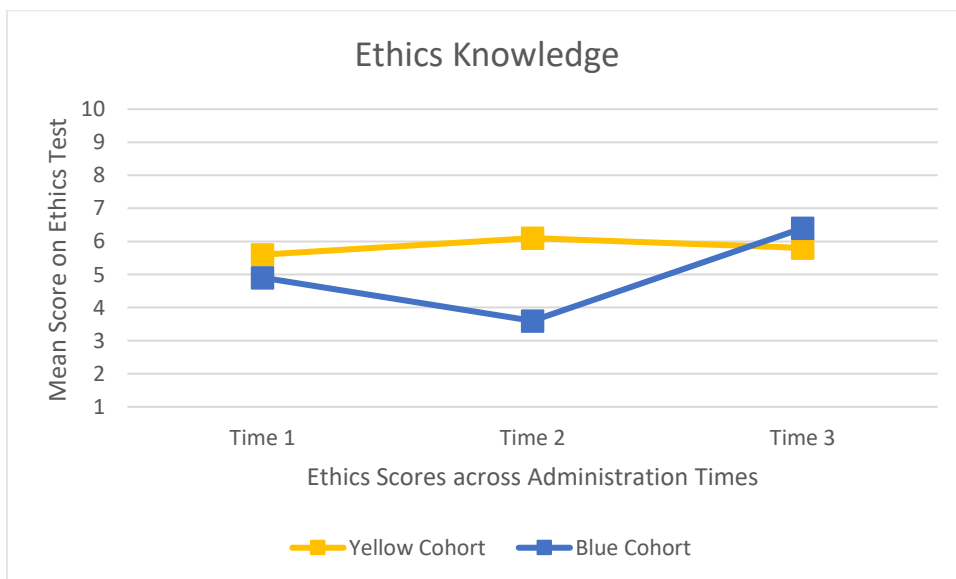
*Ethics Knowledge Mean Changes Across Administration Times*



After the blue cohort completed the structured ethics training module and the yellow cohort received ethics training embedded in the curriculum, the ethics test was administered again. At the third administration time, after both groups had received the structured ethics training, there was no significant difference in ethics knowledge between groups,  $t(18) = 0.77, p = 0.39$  (see Table 1 and Figure 4).

**Figure 4**

*Ethics Knowledge Mean Changes Across Administration Times*



A MANOVA statistical analysis was used to examine the association between graduate students' ethics knowledge as the dependent variable and time as the independent variable. When collapsed across groups, there was a significant change in scores over time (Wilks' Lambda = 0.57,  $F(2, 17) = 6.38$ ,  $p = 0.009$ ). There was also a significant interaction between time and group for ethics knowledge (Wilks' Lambda = 0.49,  $F(2, 17) = 8.94$ ,  $p = 0.002$ ).

## Discussion

The purpose of this research investigation was to examine the efficacy of the recommended informal, embedded method of instruction for ethics in a graduate speech-language pathology program using content embedded in existing curriculum as compared to a structured ethics training program. The methods of instruction were assessed regarding their impact on the dependent variables of self-reported comfort in identifying and solving ethical problems and ethics knowledge across two participant groups. The findings of this study support the use of structured ethics training to increase ethics knowledge in first-year speech-language pathology graduate students.

**Ethics Comfort Levels.** New graduates in speech-language pathology often report experiencing distress or uncertainty when faced with an ethical dilemma (Bourne et al., 2013). As reported by Kenny and colleagues (2007), new speech-language pathology graduates indicated feeling uncomfortable and not prepared to identify and solve ethical dilemmas in their workplace after graduating, often secondary to feeling overwhelmed with being in a new environment. Huynh and He (2018) also reported new healthcare professionals experience stress and anxiety when dealing with ethical conflicts in addition to all other duties. Over half of the participants in this study (65%) indicated that they had experienced an ethical situation that made them uncomfortable. Additionally, almost half of the participants (45%) reported that they did not feel completely comfortable in identifying or solving ethical problems prior to any ethics training. These findings correlated with previous studies that indicated new healthcare professionals often demonstrate discomfort in facing and working through ethical dilemmas (Bourne et al., 2013; Buelow et al., 2010; Cannaerts et al., 2014; Huynh & He, 2018; Kenny et al., 2007).

Cannaerts and colleagues (2014) reported that to achieve ethical competence, individuals must be able to perceive what an ethical situation presents, reflect upon personal moral values and ethical values of a profession, and then apply ethical decision-making models. While 45% of participants in this investigation indicated discomfort in their ability to identify or solve ethical problems, 55% indicated that they felt comfortable or very comfortable in their ethical abilities prior to any ethics training. Interestingly, one participant group reported higher means of comfort than the other group and these differences were statistically significant prior to any structured training. Although participants rated perceived comfort at varying levels, 55% of participants rated their comfort the same or lower after training. This finding correlated with research completed by Persky and colleagues (2020) in which the Dunning-Kruger effect is described as the phenomenon that occurs when individuals overestimate their abilities prior to education or training. This also relates to the research by Kenny et al. (2007) that indicated new speech-language pathology graduates experienced ethical uncertainty when finally employed in the field after graduate school.

In the current study, after both groups had received the structured ethics training, there was no longer a significant difference between groups in comfort levels in identifying and solving ethical dilemmas. This finding correlated with Kenny and colleagues (2010) in which the authors determined a need to facilitate ethical reasoning skills in new speech-language pathology graduates in a more formal, structured manner. Huynh and He (2018) indicated that without structured ethics training and practice, new healthcare professionals tended to deal with ethical conflicts using their own moral code and eventually changed views to imitate expectations of others rather than a code of ethics. The results of this study indicated that structured ethics training facilitated a better understanding of the use of the ASHA Code of Ethics when confronted with ethical dilemmas, therefore establishing a code for graduate students to reference, rather than their own moral code.

**Ethics Knowledge.** Current literature has identified a theory to practice gap indicating that while healthcare students may benefit from informal methods of ethics education, more structured, formal methods of education may help to close the gap and facilitate ethical professional practice when in the field (Kenny et al., 2019; Pollard et al., 2018). In the present study, two cohorts of speech-language pathology graduate students demonstrated similar ethics knowledge with no significant difference prior to any method of ethics training. Pollard and colleagues (2018) found minimal evidence as to the most appropriate and effective methods of educating healthcare students about ethical principles, bioethical terms, and management of ethical issues. Structured ethics training in the current study was comprised of training to the American Speech-Language-Hearing Association's code of ethics, bioethical terms, ethical principles, and ethical decision-making models using a flipped-class approach as well as reflections, discussions, case studies, and application of decision-making models (Pollard et al., 2018).

After the yellow cohort received structured ethics training and the blue cohort received ethics training embedded within the curriculum, ethics knowledge significantly increased in the yellow cohort as compared to the blue cohort. Interestingly, the participants in the blue cohort actually demonstrated decreased knowledge after receiving ethics training embedded in the course. This finding correlated with research completed by Cannaerts and colleagues (2014) that indicated that unstructured ethics education for healthcare professionals often demonstrates a lack of a logical approach and leads to confusion rather than understanding. The authors suggested that ethics training for this population would be best addressed with structured, ethics-specific training modules (Cannaerts et al., 2014).

After the blue cohort completed the structured ethics training module, ethics knowledge for this group significantly increased. There was no longer a difference in ethics knowledge between groups after both groups completed the structured ethics training. These results correlated with findings by Kenny and colleagues (2019) that suggested that by focusing on and practicing the use of bioethical terms and ethical principles, the language of ethics is facilitated in a way that generalizes to ethical dilemmas. In providing a structured ethics training module for speech-language pathology graduate students, the ethical distress and confusion that has been reported in previous studies may be reduced (Cannaerts et al., 2014; DeFoor et al., 2020; Huynh & He, 2018).

There were some limitations to this study. Murray State University is a small, regional university in western Kentucky and typically accepts 24 students into the speech-language pathology graduate program each year. This is comparative to most of the universities in the Midwest region

of the United States (American Speech-Language-Hearing Association [ASHA], n.d.-b). There were only 24 potential participants available that met the inclusion criteria for this study, therefore limiting the total number of participants that completed the ethics survey and ethics test which allowed outliers that could skew the data.

Another limitation of this investigation was the lack of standardized assessment for ethics knowledge in speech-language pathologists or speech-language pathology graduate students. A search was completed to determine the existence of a standardized assessment but none was found. The investigator created a survey and ethics knowledge assessment for this investigation and the lack of standardization with these instruments potentially increased error in measurement of ethics knowledge (Portney & Watkins, 2015).

It should be noted, participants involved in this research investigation were enrolled in a graduate program including coursework and clinical practicum opportunities. This study did not collect information on ethical experiences in clinical practicum during the time of the investigation. Influences from other opportunities in the graduate program during the study cannot be ruled out.

Research is ongoing with another group of first-year graduate students at Murray State University. Additionally, other Midwest regional universities have reached out for the training module and will be collecting data using the tools provided which will improve generalizability of the results. Additional data will provide further guidance in developing a standardized, structured ethics training that other speech-language pathology graduate programs can readily adopt.

## **Conclusions**

The results of this study add to the existing empirical evidence regarding the effectiveness of structured ethics training in healthcare professionals. While ethics training embedded in a program curriculum may provide opportunities for discussion about ethical dilemmas, the lack of structured training regarding the language of ethics impacts the abilities of the new healthcare professional to be adequately prepared to apply ethical decision-making models effectively (Huynh & He, 2018; Kenny et al., 2010). Often, traditional university speech-language pathology graduate curricula reflect traditional silos of study in which ethics and professional issues are taught in an unstructured, embedded manner (Buelow et al., 2010; Kenny et al., 2010). The results of this investigation correlated with current literature as to the benefit of providing students with structured training to ethical foundations, ethical language, and decision-making frameworks which represent a set of skills that are necessary for practicing systematic and effective healthcare (Buelow et al., 2010). This study demonstrated that structured ethics training in speech-language pathology graduate students increased the knowledge of students prior to clinical practice, therefore approximating the theory-to-practice gap that currently exists (Kenny et al., 2019; Pollard et al., 2018).

## **Disclosures**

There are no nonfinancial or financial disclosures to report.

## References

- American Speech-Language-Hearing Association (n.d.-a). *Examples of typical ethics inquiries*.  
<https://www.asha.org/practice/ethics/ethics-inquiries/>
- American Speech-Language-Hearing Association (n.d.-b). *ASHA EdFind*.  
<https://www.find.asha.org/ed#sort=relevancy>
- American Speech-Language-Hearing Association (2016). *Code of ethics*.  
<https://www.asha.org/code-of-ethics>
- American Speech-Language-Hearing Association. (2020). *2020 Standards and implementation procedures for the certificate of clinical competence in speech-language pathology*.  
<https://www.asha.org/Certification/2020-SLP-Certification-Standards/>
- Bourne, E., Sheepway, L., Charlton, N., Kilgour, A., Blackford, J., Alam, M., & McAllister, L. (2013). Ethical awareness in allied health students on clinical placements: Case examples and strategies for student support. *Journal of Clinical Practice in Speech-Language Pathology*, 15(2), 94-98.
- Buelow, J. R., Mahan, P. L., & Garrity, A. W. (2010). Ethical dilemmas as perceived by healthcare students with teaching implications. *Journal of College Teaching & Learning*, 7(2), 85-92.
- Cannaerts, N., Gastmans, C., & Dierckx de Casterle, B. (2014). Contribution of ethics education to the ethical competence of nursing students: Educators' and students' perceptions. *Nursing Ethics*, 21(8), 861-878. <https://doi.org/10.1177/0969733014523166>
- DeFoor, M. T., Chung, Y., Zadinsky, J. K., Dowling, J., & Sams, R. W. (2020). An interprofessional cohort analysis of student interest in medical ethics education: A survey-based quantitative study. *BMC Medical Ethics*, 21(26), 1-9.  
<https://doi.org/10.1186/s12910-020-00468-4>
- Fox, E., Arnold, R. M., & Brody, B. (1995). Medical ethics education: Past, present, and future. *Academic Medicine*, 70(9), 761-768.
- Gaylord, J. N. & Brumbaugh, K. (2019, November 21-23). *Ethical issues in speech-language pathology* [Conference session]. American Speech-Language-Hearing Association Convention, Orlando, FL, United States.
- Grady, C., Danis, M., Soeken, K. L., O'Donnell, P., Taylor, C., Farrar, A., & Ulrich, C. M. (2008). Does ethics education influence the moral action of practicing nurses and social workers? *American Journal of Bioethics*, 8(4), 4-11. <https://doi.org/10.1080/15265160802166017>
- Grillo, E. U. & Thomas, C. M. (2016). Using high-fidelity simulation to facilitate graduate student clinical learning. *Perspectives on Issues in Higher Education*, 1(10), 4-15.
- Hughes, M. T. & Rushton, C. H. (2022). Ethics and well-being: The health professions and the COVID-19 pandemic. *Academic Medicine*, 97(3S), S98-S103.
- Huynh, A. & He, H. (2018). RN-BSN students desire more healthcare ethics education. *International Journal of Nursing & Clinical Practices*, 5(300), 1-5.  
<https://doi.org/10.15344/2394-4978/2018/300>
- Jansen, L. J. (2015). The benefits of simulation-based education. *Perspectives on Issues in Higher Education*, 18, 32-41.
- Kenny, B., Lincoln, M., & Balandin, S. (2007). A dynamic model of ethical reasoning in speech pathology. *Journal of Medical Ethics*, 33, 508-513.  
<https://doi.org/10.1136/jme.2006.017715>

- Kenny, B., Lincoln, M., & Balandin, S. (2010). Experienced speech-language pathologists' responses to ethical dilemmas: An integrated approach to ethical reasoning. *American Journal of Speech-Language Pathology*, *19*, 121-134.
- Kenny, B., Lincoln, M., & Killian, F. (2015). Ethics cases: Do they elicit different levels of ethical reasoning? *Journal of Academic Ethics*, *13*, 259-275. <https://doi.org/10.1007/s10805-015-9234-6>
- Kenny, B., Thomson, K., Semaan, A., Di Michele, L., Pollard, N., Nicole, M., Jimenez, Y., & McAllister, L. (2019). Ethics in professional practice: An education resource for health science students. *International Journal of Practice-based Learning in Health and Social Care*, *7*(1), 86-101. <https://doi.org/10.18552/ijpblhsc.v7i1.552>
- Knight, C., Mayo, R., & Porter, M. (2017). Interdisciplinary ethics learning in higher education: Students' perceptions. *Teaching and Learning in Communication Sciences & Disorders*, *1*(2), 1-24. <https://doi.org/10.30707/TLCSD1.2Knight>
- Krautscheid, L. C. (2017). Embedding microethical dilemmas in high-fidelity simulation scenarios: Preparing nursing students for ethical practice. *Journal of Nursing Education*, *56*(1), 55-58. <https://doi.org/10.3928/01484834-20161219-11>
- Laliberte, M., Hudon, A., Mazer, B., Hunt, M. R., Feldman, D. E., & Williams-Jones, B. (2015). An in-depth analysis of ethics teaching in Canadian physiotherapy and occupational therapy programs. *Disability and Rehabilitation*, *37*(24), 2305-2311. <https://doi.org/10.3109/09638288.2015.1015687>
- Lin, C-F., Lu, M-S., Chung, C-C., & Yang, C-M. (2010). A comparison of problem-based learning and conventional teaching in nursing ethics education. *Nursing Ethics*, *17*(3), 373-382. <https://doi.org/10.1177/0969733009355380>
- Mantie-Kozlowski, A. (2013). Cognitive presence in ethics training: A comparison of online and face-to-face learning communities. *Contemporary Issues in Communication Science and Disorders*, *40*, 50-58.
- Miyasaka, M., Sakai, S., & Yamanouchi, H. (2011). How should ethics be taught to medical, nursing and other healthcare students? *Eubios Journal of Asian and International Bioethics*, *21*, 91-95.
- Persky, A. M., Lee, E., & Schlesselman, L. S. (2020). Perception of learning versus performance as outcome measures of educational research. *American Journal of Pharmaceutical Education*, *84*(7), 993-1000.
- Pinar, G. & Peksoy, S. (2016). Simulation-based learning in healthcare ethics education. *Creative Education*, *7*, 131-138. <https://doi.org/10.4236/ce.2016.71013>
- Pollard, C. L. (2015). What is the right thing to do: Use of a relational ethic framework to guide clinical decision-making. *International Journal of Caring Sciences*, *8*(2), 362-368.
- Pollard, N., Nisbet, G., Kenny, B., Sheepway, L., Jacobson, J., Tartakover, E., Kilgour, A., & McAllister, L. (2018). Strategies for ethics education with health profession students before, during, and after placements. *International Journal of Practice-based Learning in Health and Social Care*, *6*(2), 95-110. <https://doi.org/10.18552/ijpblhsc.v6i2.405>
- Portney, L. G. & Watkins, M. P. (2015). *Foundations of clinical research: Applications to practice* (3<sup>rd</sup> ed.). F. A. Davis Company.
- Rogers, W. A. (2004). Evidence based medicine and justice: A framework for looking at the impact of EBM upon vulnerable or disadvantaged groups. *Journal of Medical Ethics*, *30*, 141-145. <https://doi.org/10.1136/jme.2003.007062>

- Ruyak, S., Wright, M., & Levi, A. (2017). Simulation to meet curricular needs in ethics. *Clinical Simulation in Nursing*, 13(3), 121-126. <https://doi.org/10.1016/j.ecns.2016.11.006>
- Vanderkaay, S., Letts, L., Jung, B., & Moll, S. E. (2018). On-line ethics education for occupational therapy clinician-educators: A single-group pre-/post-test study. *Disability and Rehabilitation*, 41(23), 2841-2853. <https://doi.org/10.1080/09638288.2018.1473510>

## **Appendix A**

### **Structured Ethics Training Module**

#### **Activity 1 – Discussion board (comprised of brief video lecture from instructor, ASHA resource, and discussion among peers):**

Watch the brief video presentation describing the ASHA Code of Ethics (2016) and the ethical principles of non-maleficence, beneficence, autonomy, and justice (Gaylord & Brumbaugh, 2019). Using what you learn in the video as well as the attached ASHA Code of Ethics (2016), create a discussion post and state what ethical principles (beneficence, non-maleficence, justice, and autonomy) have been violated in the following scenario as well as what rules in the ASHA Code of Ethics (2016) have been violated. **Make sure to comment on at least one other person's post.**

Ethical situation: You work at an outpatient clinic and you know that to maintain confidentiality of your clients, you must bring mom or dad into the therapy room with the door shut to discuss the day's session. Typically, it is difficult to transition your client out of the therapy room due to behavior. To save time, you decide to just discuss the client's progress and session in the waiting room where other clients/caregivers may hear the conversation (American Speech-Language-Hearing Association [ASHA], n.d.-a).

#### **Activity 2 – Discussion board (comprised of brief video lecture and discussion among peers):**

Watch the provided presentation regarding ethics and law and the difference between the concepts of illegal versus unethical (Gaylord & Brumbaugh, 2019). Using what you learn in the video, answer the following questions in a discussion post:

If something is unethical, is it always illegal as well? Why or why not? Give an example of a situation in speech-language pathology that may be unethical but is legal.

**Comment on at least one other person's post.**

#### **Activity 3 – Discussion board (comprised of brief video lecture, ethical decision-making case study, and discussion among peers):**

Watch the provided presentation that describes ethical decision-making and models that can be used to facilitate decisions in ethical dilemmas (Gaylord & Brumbaugh, 2019). In a discussion post, answer the following questions about the given ethical scenario. Use the ASHA Code of Ethics (2016) and previous videos to help you with this post.

Ethical situation:

Your supervisor tells you to make sure to bill a certain code even if you are treating the patient/client for something else because the company will be paid more for that code (American Speech-Language-Hearing Association [ASHA], n.d.-a).



Answer the following questions:

What is the situation?

Who is involved?

What ethical codes, if any, are violated?

What ethical principles are at stake or in conflict with this situation?

What are the potential impacts on client care?

Who can I talk with about this?

**Activity 4 – Group assignment (comprised of ethical decision-making case study and discussion among peers)**

Using the People tab, you have been placed into groups of 3 and have been provided an ethical situation (American Speech-Language-Hearing Association [ASHA], n.d.-a). For this assignment, as a group, you will present the ethical problem and your solution to the class as a PowerPoint or Google Slides presentation for discussion. In your presentation, you will need to describe the ethical problem, the rules of the code of ethics and bioethical principles that have been violated (if any). You will also describe at least one possible solution to the problem using the decision-making model in the previous discussion board. You will present this problem and your solution to the class as a PowerPoint or Google Slides presentation for discussion.