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Influence of Personality on Ethical Decision-Making in Communication Sciences and Disorders

Jennifer K. Binkley

Abilene Christian University, jenniferkaybinkley@gmail.com

Terry W. Baggs

Abilene Christian University, twb07c@acu.edu

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Abstract

Purpose: A relationship between personality and ethical decision-making has been demonstrated in professions both within and outside of healthcare. However, this relationship has not been examined in the rehabilitation therapies, including speech-language pathology (SLP). Given the ethical dilemmas faced by therapists, it is important to assess this relationship and to modify ethical training when warranted. **Methods:** A total of 175 undergraduate communication sciences and disorders students participated in completing the Kiersey Temperament Sorter II and the Defining Issues Test-2. Scores were statistically compared to determine the relationship between the two assessments. **Results:** Based on a model of moral reasoning development, high scores on the DIT-2 are believed to correlate with post-conventional reasoning skills. Higher scores were statistically related to personality scores of strong introversion (I) and strong intuiting (N). **Conclusion:** Participants with strong introversion (I) and strong intuiting (N) traits may have natural skills for higher levels of moral reasoning. This implies that training modules for students and therapists should recognize personality differences and assist all individuals in developing best methods of problem solving in the face of specific personality traits.

Author Bio(s)

Jennifer Binkley, PhD, CCC-SLP, is an Assistant Professor in the Department of Communication Sciences and Disorders in the College of Health and Behavioral Sciences at Abilene Christian University in Abilene, TX. She is also a licensed and certified speech-language pathologist in the state of Texas.

Terry Baggs, Ph.D., CCC-SLP, is Interim Vice Provost and Associate Professor of Communication Sciences and Disorders in the College of Health and Behavioral Sciences at Abilene Christian University, in Abilene, TX. He is a licensed and certified speech-language pathologist in the state of Texas.

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Jennifer K. Binkley

Terry W. Baggs

Abilene Christian University

United States

ABSTRACT

Purpose: A relationship between personality and ethical decision-making has been demonstrated in professions both within and outside of healthcare. However, this relationship has not been examined in the rehabilitation therapies, including speech-language pathology (SLP). Given the ethical dilemmas faced by therapists, it is important to assess this relationship and to modify ethical training when warranted. **Methods:** A total of 175 undergraduate communication sciences and disorders students participated in completing the Kiersey Temperament Sorter II and the Defining Issues Test-2. Scores were statistically compared to determine the relationship between the two assessments. **Results:** Based on a model of moral reasoning development, high scores on the DIT-2 are believed to correlate with post-conventional reasoning skills. Higher scores were statistically related to personality scores of strong introversion (I) and strong intuiting (N). **Conclusion:** Participants with strong introversion (I) and strong intuiting (N) traits may have natural skills for higher levels of moral reasoning. This implies that training modules for students and therapists should recognize personality differences and assist all individuals in developing best methods of problem solving in the face of specific personality traits.

Keywords: personality, ethical decision-making, speech-language pathology

INTRODUCTION

Allied health professionals find themselves oftentimes facing ethical dilemmas, as patient care requires complex decision-making. Even experienced clinicians can have difficulty with ethical decision-making.¹ Thus, training in ethics, critical thinking, and decision-making is an important educational component for both pre-professional students and licensed, professional therapists. All accrediting agencies for the academic training of pre-professional rehabilitation therapy (physical, occupational, and speech-language pathology) students require training in ethics.²⁻⁴ Pedagogical application of these standards varies with the institution and may include case scenario discussions, lectures on the professional codes of ethics, and ethical framework presentations. Continuing education opportunities abound for professionals, but these courses may train to the professional code or laws without teaching how to make appropriate clinical ethical decisions using established ethical frameworks. Professional codes of ethics are a necessary basis upon which healthcare professionals should practice but can only provide limited assistance in solving unique and potentially complex ethical problems.⁵⁻⁶

The complexity of clinical environments necessitates training in critical thinking, and a systematic approach to decision-making based on an established ethical framework is a precursor to clinical decisions after pre-professional education.^{5,7-8} Kenny et al. propose a dynamic model of ethical reasoning that incorporates an initial awareness of the clinical context of the ethical issue. Contextual awareness includes not only concerns directly related to the patient but also one's own values and personality and how they inform decision-making.^{8,10-13}

A significant relationship between personality and ethical decision-making has been demonstrated in professions outside of healthcare. Allmon et al. used a version of the Myers Briggs Type Indicator (MBTI) and the Ethics Position Questionnaire (EPQ) and found that personality impacted the way their business students addressed ethical issues.^{10,14} Specifically, participants who were considered both intuitive (N) and feeling (F) were more likely (65%) to be situationists (ethical individualists), whereas students who were both intuitive (N) and thinking (T) were more likely (46%) to be absolutists (rule based). Approximately half of their participants designated as both sensing (S) and feeling (F) and sensing (S) and thinking (T) were situationists. A large percentage (45%) of both sensing (S) and feeling (F) students were absolutists. They found a significant interaction between religious involvement and responses to ethical issues.

Similarly, a study by Rallapalli et al. found their business students were likely to make certain ethical decisions based on their personality type.¹⁵ For example, individuals with a high propensity to take risks were likely to believe actions are reasonable that other individuals might consider morally questionable. Using a version of the Big Five Traits Scale, Ozbag found that agreeableness (being more responsive to the needs of others) was the most powerful personality trait that predicted ethical leadership, and this was confirmed in a different study by Abbasi-Asi and Hashemi.¹⁶⁻¹⁷

Research in healthcare have found similar results. Othman and colleagues assessed the impact of personality on decision-making in medical students.¹⁸ Using the Big Five Personality Test and the General Decision-Making Style Inventory, they found that higher agreeableness and conscientiousness were significantly related to higher rational (deliberate and logical) decision-making styles. A study of nursing professionals using the Big Five assessment found that emotional stability was directly related to increased moral reasoning.¹⁹⁻²⁰ Nursing students who demonstrated lower conscientious scores were found to demonstrate higher moral disengagement (contradictory beliefs to behavior).²¹

PURPOSE

Given the volume of research that demonstrates a relationship between personality and ethical decision-making, it is assumed that research in rehabilitation therapy would demonstrate similar findings. Unfortunately, there are no known studies of the relationship between personality and decision-making in rehabilitation therapy students (physical, occupational, and speech-language pathology). This present study examined whether there is a relationship between personality preferences and moral reasoning in communication sciences and disorders (CSD) students early in their education with limited clinical exposure.

METHOD

Participants

Undergraduate students at three universities (public and private/religious) with a declared major in communication sciences and disorders (CSD) and enrolled only in introductory coursework were asked to participate following IRB approval. (It is commonplace for undergraduate students to major in CSD and then specialize in either speech-language pathology [SLP] or audiology at the graduate level.) Of those, 175 students agreed to participate, resulting in a 100% response rate with 95 students from private/religious institutions and 80 from a public institution. At the point of this research study, participants had little and relatively

equal knowledge and experience in communication sciences and disorders. A large majority of the students were female (94%), as is common in CSD.²²

Data Collection

Participants were consecutively administered two paper assessments, the *Keirsey Temperament Sorter II* (KTS-II) and the *Defining Issues Test-2* (DIT-2).²³⁻²⁴ The KTS-II is a self-reported personality inventory based on Jungian theory and extended by Isabel Myers. (Jung theorized there are four opposing psychological functions and Myers added two more that control the way people see the world—thinking vs feeling, sensing vs intuition, judging vs perceiving, and there are two fundamental, opposing life attitudes of extraversion vs introversion.) The 70-question test allows for the determination of 16 possible personality types and four temperaments, based on the participant’s numerical scores for the four bipolar constructs: extroversion-introversion (E-I), sensing-intuiting (S-N), thinking-feeling (T-F), and judging-perceiving (J-P). The KTS-II provides similar scores and demonstrates an acceptable degree of validity and reliability compared to the popular *Myers-Briggs Type Indicator*.²⁵⁻²⁸ The DIT-2 uses five stories to assess a participant’s level of moral reasoning based on Kohlberg’s three level model of moral development.²⁹ These levels are (1) pre-conventional, where there is a sense of right and wrong but decisions are based primarily on self-interests, (2) conventional, where decisions are dependent on group influence, primarily from societal rules, codes, and laws, and (3) post-conventional, where decisions are made for the benefit of others, recognizing the limitations of codes or laws. The DIT-2’s validity and reliability have been found to be strong, with no significant cultural or gender bias.³⁰⁻³¹ Among several possible scores available from the DIT-2, the N2 score was used, as it is considered the best general index of the DIT-2 and moral development.³² N2 scores were derived from the DIT-2 and correlate positively with levels of moral reasoning. A higher N2 score represents a person who is able to use Kohlberg’s post-conventional schema, recognizing what might be best for the patient within a complex context. According to Bebeau and Thoma, it is desirable to see both the ability for a person to have the highest level of moral reasoning in addition to having the ability to know when to reject ideas that are too simplistic or biased.³³

Data Analysis

Personality profiles were extracted from the participants’ responses per the procedures outlined in Keirsey.²³ Two investigators randomly checked scoring to assure for accuracy. DIT-2 assessments forms were scored electronically by the publisher and according to their protocol.

All data derived from these two assessments were statistically analyzed using SPSS 27. Although participants may be characterized as demonstrating a specific personality type (e.g., introversion), it is conceivable that a range of personality strengths regarding a specific type could impact the assessment of a relationship between personality and moral reasoning. Therefore, it was also of interest to determine the strength of the personality type. Based on the potential median score for each pole, participants were divided into those who demonstrated a weaker preference and those with a stronger preference toward a personality type. See Table 1 for the participant data related to personality types and their strengths. One-Way ANOVAs assessed for differences among the personality bipolar constructs with the N2 scores and between the two types of universities (public vs private/religious).

Table 1. Frequency and Proportion of Personality Preferences and Strengths

Preference	Frequency	Proportion	Frequency Strong Preference	Proportion with Strong Preference	Frequency Weak Preference	Proportion with Weak Preference
E	97	59%	57	59%	39	40%
I	68	41%	32	47%	34	50%
S	132	78%	51	39%	77	58%
N	37	22%	8	22%	27	73%
T	24	14%	3	13%	20	83%
F	150	86%	84	56%	67	45%
J	142	86%	58	41%	82	58%
P	24	14%	1	4%	22	92%

Note. The frequency of the poles (E-I, S-N, T-F, and J-P) does not always equal the total *N*, as a personality preference could not be determined if there was a tied score. Likewise, the frequency and proportion for strength do not total 100%, as some participants’ personality type scores were tied and were considered neither strong nor weak.

RESULTS

Analysis of Variances (ANOVAs) compared the personality bipolar constructs, weak and strong preferences for each personality construct, and the personality bipolar constructs for strong-only preferences, using the N2 score as the dependent variable. Of the bipolar constructs, only the sensing (S) and intuiting (N) poles were found to be significantly different in N2 scores (Table 2) [F(1, 165)=4.73, p=.03]. Persons who are designated as intuiting (N) tended to have significantly higher moral reasoning scores.

Table 2. ANOVA Personality Pole Preference and N2 Score

Preference	M (SD)	95% CI	Preference	M (SD)	95% CI	F
E	27.92 (13.1)	25.3, 30.6	I	30.78 (13.9)	27.4, 34.2	1.79
S	27.87 (13.3)	25.6, 30.2	N	33.16 (12.7)	29.0, 37.3	4.73*
T	26.51 (9.9)	22.1, 30.9	F	29.74 (13.6)	27.5, 31.9	1.3
J	28.74 (13.5)	26.5, 31.0	P	28.57 (11.8)	23.8, 33.3	0.0

*p<.05, **p<.01

Perhaps a clearer picture of the relationship between personality and moral reasoning is demonstrated when participants with weaker and stronger preferences within the same personality pole were compared (Table 3). Results showed that strong introverts (I) have higher N2 scores compared to individuals who are weak introverts (I) [F(1, 64)=5.73, p=.02]. Strong sensing (S) individuals have significantly lower N2 scores compared to their weak sensing (S) counterparts [F(1, 126)=10.02, p=.002]. Although mean scores for participants with strong intuiting (N) preference was considerably higher than their weak intuitive (N) counterparts, it was not statistically significant. Strong thinking (T) persons have significantly lower N2 scores, although only three participants had this preference [F(1, 21)=5.09, p=.04]. When only participants with strong preferences are compared (Table 4), strong introverts (I) had higher N2 scores compared to strong extroverts (E) [F(1, 86)=5.6, p=.02]. Strong intuiting (N) individuals have higher N2 scores compared to persons who are considered strong sensing (S) types [F(1, 55)=8.5, p=.005].

Table 3. ANOVA Personality Preference Strength and N2 Scores

Preference	Weak Preference		Strong Preference		F
	M (SD)	95% CI	M (SD)	95% CI	
E	28.73 (12.2)	24.8, 32.7	27.27 (13.6)	23.7, 30.9	0.29
I	26.56 (12.9)	22.1, 31.1	34.43 (13.9)	29.4, 39.4	5.73*
S	30.8 (12.6)	27.9, 33.7	23.41 (13.4)	19.7, 27.2	10.02**
N	32.99 (12.4)	28.1, 37.9	38.14 (12.1)	28.0, 48.3	1.07
T	27.72 (9.6)	23.2, 32.2	14.99 (2.6)	8.7, 21.3	5.09*
F	28.92 (13.4)	25.6, 32.2	30.12 (14.0)	27.1, 33.2	0.28
J	28.66 (13.6)	25.7, 31.7	28.94 (13.7)	25.3, 32.5	0.01
P	29.2 (12.5)	23.7, 34.8	19.77 (-)	-	-

*p<.05, **p<.01

Table 4. ANOVA Personality Pole Preference Strength (Strong) and N2 Score

Strong Preference	M (SD)	95% CI	Strong Preference	M (SD)	95% CI	F
E	27.2 (13.8)	23.5, 30.9	I	34.34 (13.9)	29.4, 39.4	5.6*
S	23.25 (13.6)	19.3, 27.1	N	38.14 (12.1)	28.0, 48.3	8.49**
T	14.99 (2.5)	8.7, 21.3	F	30.12 (14.0)	27.1, 33.2	3.45
J	28.94 (13.7)	25.3, 32.5	P	19.77 (-)	-	-

p<.05, **p<.01

Results of participants from the types of universities (religious affiliated vs. public) were compared to determine if university type influenced moral reasoning. ANOVA found no statistical difference in the N2 score means for students at religious affiliated universities compared to a public university (M=30.5 [SD 12.9] vs. M=27.5 [SD 13.6]), [F(1, 174)=2.28, p=.133]. Thus, institutional affiliation does not seem to influence students' moral reasoning skills at an early stage in pre-professional, clinical education.

In summary, these findings demonstrate that individuals who are described as intuiting (N), particularly those who are strongly intuiting, tend to have significantly higher moral reasoning scores relative to Kohlberg's model. This trend is also true for those

individuals who have a strong introversion (I) preference. Moral reasoning scores are not statistically different whether students are enrolled in public or private, religious-affiliated universities.

DISCUSSION

For undergraduate students in communication sciences and disorders, the results of this study reveal a relationship between certain personality preferences and moral reasoning, as defined by Kohlberg.²⁹ The reader should be reminded that Kohlberg's model of moral reasoning does not assign value (good or bad) to ethical behavior but assigns levels of development relative to how decisions are made. Therefore, an individual with a higher N2 score should not be considered as being more ethical but more likely to utilize post-conventional reasoning when faced with ethical decisions to be made. At this level, one's ability to resolve ethical dilemmas efficiently and confidently requires the ability to look beyond self-interest, rules, and laws and consider the context of the individual patient. In a clinical setting, the professional who can use the post-conventional level of moral reasoning will be better equipped to resolve a wide array of complex ethical dilemmas.

An example of these stages of moral development can be found in healthcare where a patient is known to be aspirating thin liquids. For the therapist who is typically functioning at a conventional level of moral reasoning, in spite of the patient's protest, the therapist insists the patient receive thickened liquids to prevent aspiration. Although there is research support for the use of thickened liquids, a different therapist using a post-conventional level of decision-making will consider the context of the patient, including the available research. Does the current evidence and best-practice suggest the possibility of alternatives? Are there rehabilitative or compensatory techniques, cognitive resources, and learning strategies available that could allow for thin liquids in specific contexts? Will the patient tolerate thickened liquids and consume enough to maintain adequate hydration? Will the family cooperate? Will the patient have appropriate supervision with thin liquids when necessary? A consideration of all of these questions helps the therapist make an informed and contextually based decision for the patient. This contextual reasoning is the hallmark of post-conventional decision-making.

An example of these stages of moral development can also be found in school-based settings where speech-language pathologists often have large caseloads with a wide variety of diagnoses and severities. For a therapist who is typically functioning at a conventional level of moral reasoning, in spite of the child's unique service delivery needs, the therapist might feel compelled to include them in a group session or with a certain number of therapy minutes based upon logistical convenience, which would still follow federal guidelines and generally meet the child's needs. Although there is research that supports the effectiveness of group sessions and service delivery minutes, a different therapist using a post-conventional level of decision-making would consider the individual needs of the child, including the diagnosis and severity, and might choose a more unique approach to service delivery that would be logistically possible. For example, a child with a single-sound error might benefit more from shorter, more frequent individual "drill" sessions as opposed to being included in a group session twice per week. A child with complex language needs might benefit from so-called "push in" services within the classroom rather than being included in a "pull out" group session that is de-contextualized from academic needs. Considering the options that might better fit the individual needs of a client and using contextual reasoning would illustrate post-conventional decision-making in the school setting.

Persons with the preference of intuiting (N) and in particular strong intuition (N) preferences were found to have significantly higher N2 scores, as compared to those with the preference of sensing (S) or those with a strong preference for sensing (S) who had significantly lower N2 scores. These results are not surprising in that individuals who prefer to gather information using the sensing (S) preference tend to focus on the facts and details and have less desire to interpret meaning or utilize more holistic thinking. They focus on "what is" and not necessarily on "what can be." Metaphorically, individuals who prefer sensing (S) find it easier to see the individual trees, rather than the forest. If a rule is in place, they are inclined to follow it, and may not look or are not likely to look beyond the rules.³⁴ In the same respect, individuals who prefer to gather information using intuition (N) tend to determine relationships among individual pieces of information, and to understand others' perspectives. Metaphorically speaking, this group sees the forest before seeing the individual trees. Intuiting (N) individuals are more inclined to view situations through another's perspective. This skill is needed to move past the lower levels of moral reasoning in Kohlberg's model. This S/N dimension of one's personality was also found to be related to moral reasoning by Redford et al.³⁰

A similar finding was that the few participants who had a strong preference for thinking (T) had significantly lower N2 scores compared to their weak personality preference counterparts. Persons who have a thinking (T) preference tend to rely on logic and objective information, whereas, feelers (F) are more subjective and may have a tendency to identify with the patient's situation.

For a professional whose preference is sensing (S), the propensity to rely solely upon codes and rules could become an internal conflict for which appropriate ethical training can help to manage. Speech-language pathologists are often required to make ethical

decisions within multifaceted contexts. Codes of ethics can support and guide the decision-making process, but complex contexts require the ability to shift among the perspectives of all individuals involved in a situation, potentially requiring a more intuitive (N) mode for understanding the issues.³⁰ A therapist must be able to weigh opposing variables within the patient context in order to make the best treatment recommendation.³⁵

A strong introversion (I) preference often resulted in higher N2 scores in this study. People who are strong introverts (I) tend to be more self-reflective and self-reliant in decision-making. This is opposed to extroverts (E) who may be more reactive in their decision-making. According to the current results (Table 1) and Baggs, a large proportion of SLP students are extroverts (E).³⁶ Thus, many CSD students may be less likely to use higher levels of moral reasoning due to their preference for extroversion (E). Although extroversion (E) is a powerfully positive trait for therapists, it has the potential to negatively impact thorough decision-making. Thus, decision-making training to facilitate reflective processing may be warranted.

Given the findings of this study, it is important for educators to help their learners understand their personality traits and how they potentially make important decisions that could reflect those traits. Training to the professional codes of ethics is necessary but when applied to decision-making, it can limit one to a conventional level of moral reasoning. Instead, ethical education should emphasize the use of ethical models and case studies that require post-conventional reasoning. Assisting students in self-discovery regarding their personality and decision-making skills will assist in this effort. This is true for both students in higher education and professional continuing education post-degree.

Suggestions of religion impacting ethical decision-making was not supported by the present study.¹⁰ N2 scores between students in these institutions were not statistically significant. This is consistent with Maeda et al, who also found higher N2 scores with students from religious affiliated universities but not at a level of statistical significance.³⁷ Although this finding may appear peculiar, it is important to remember that the DIT-2 does not test for degree of ethical behavior but of the level of development of moral reasoning, and students choose to attend institutions of higher educations for many reasons.

Limitations

A seeming limitation of this study is that the population used included university students in the southern region of the United States. It could be argued that the culture of these students may not allow generalization to all areas of the United States. However, the DIT-2 scores gathered herein were closely related to the normative scores provided by Bebeau and Thoma and do appear to be within the expected N2 score outcomes, and personality preferences of the students were consistent with students from other regions of the country.^{33,36, 38-39}

CONCLUSIONS

The population for this study was limited to undergraduate CSD students early in their education. It is believed that this reduced the likelihood of training bias. Future research is needed in order to determine whether or not there is a shift in moral reasoning scores over the course of training for students. There is some evidence that over the course of one's undergraduate experience, particularly at a religiously affiliated school, moral reasoning scores can change.⁴⁰ It would be of interest to longitudinally study the effectiveness of educating students on their personality preference(s) and the potential influence on moral reasoning and decision-making. Given the large volume of research on personality and decision-making in multiple professions, it is believed that students in occupational therapy or physical therapy with similar strong introversion (I) and intuiting (N) preferences would demonstrate similar findings. Nonetheless, the current research suggests that additional research in occupational and physical therapy be implemented, and the current knowledge base be considered while teaching decision-making skills.

This study provides an important consideration that has previously been missing from the training of CSD students for ethical decision-making. The interrelated roles of personality and moral reasoning can help guide the direction of appropriate ethics education for CSD students and practicing SLPs and audiologists. This is particularly important when looking at the predominant personality preferences of CSD students. Given this knowledge, ethics education that acknowledges the tendency for certain personality preferences to utilize lower levels of moral reasoning and to train them to use higher levels, is warranted and recommended. This type of training has the potential to equip therapists to appropriately and effectively deal with the clinical dilemmas they will inevitably face in their practice.

REFERENCES

1. Kenny B, Lincoln M, Blyth, K., Balandin, S. Ethical perspective on quality of care: The nature of ethical dilemmas identified by new graduate and experienced speech pathologists. *Int J Lang Commun Disord.* 2009;44(4):421-439.
2. Accreditation Council for Occupational Therapy Education. 2018 Accreditation Council for Occupational Therapy Education (ACOTE®) Standards and Interpretive Guide. Available at <https://acoteonline.org/wp-content/uploads/2020/10/2018-ACOTE-Standards.pdf>. Accessed September 27, 2022.
3. Commission on Accreditation in Physical Therapy Education. Standards and required elements for accreditation of physical therapist education programs. Available at <https://www.capteonline.org/globalassets/capte-docs/capte-pt-standards-required-elements.pdf>. Accessed September 27, 2022.
4. Council on Academic Accreditation. Standards for accreditation of graduate education programs in audiology and speech-language pathology. Available at <https://caa.asha.org/siteassets/files/accreditation-standards-for-graduate-programs.pdf>. Accessed September 27, 2022.
5. Eadie T, Charland L. Ethics in speech-language pathology: Beyond the codes and canons. *J Speech Lang Pathol Audiol.* 2005;29(1):27-36.
6. Limentani A. The role of ethical principles in health care and the implications for ethical does. *J Med Ethics.* 1999;25:394-398.
7. Alfrandre D, Schumann J. But doctor, you have to do everything!: Managing end-of-life ethical dilemmas in the hospital. *Semin Med Pract.* 2007;10:30-36.
8. Kenny B, Lincoln M, Balandin S. A dynamic model of ethical reasoning in speech pathology. *J Med Ethics.* 2006;33(9):508-513.
9. Schumann J, Alfrandre, D. Clinical ethical decision making: The four topics approach. *Seminars in Medical Practice.* 2008;11:36-42.
10. Allmon D, Page D, Roberts R. Determinants of perceptions of cheating: Ethical orientation, personality, and demographics. *J Bus Ethics.* 2000;23:411-422.
11. Bloom A, & Snow R. Ethical decision making styles in the workplace: Relations to the Keirsey Temperament Sorter. *Systems Research.* 1994;11(2):59-63.
12. Klug L. Ethical decision making and personality type. *Review.* 2001;29(3):16-19.
13. Mills R. The Keirsey Temperament model: A model for helping educational administrators facilitate ethical decision making. *Educ.* 2006;126(3):512-517.
14. Forsyth D. A taxonomy of ethical ideologies. *J Pers Soc Psychol.* 1980;39(1):175-184.
15. Rallapalli K, Vitell S, Wiebe F, Barnes J. Consumer ethical beliefs and personality traits: A exploratory analysis. *J Bus Ethics.* 1994;13:487-495.
16. Ozbag G. The role of personality in leadership: Five Factor Personality Traits and ethical leadership. *Procedi Soc Behav Sci.* 2016;235:235-242.
17. Abbasi-Asi R, Hashemi S. Personality and morality: Role of the Big Five Personality Traits in predicting the four components of moral decision making. *Int J Behav Sci.* 2019;13(3):123-128.
18. Othman R, Othman R, Hallit R., Obeid S., Hallit, S. Personality traits, emotional intelligence and decision-making styles in Lebanese universities medical students. *BMC Psychol.* 2020;8(46).
19. Scott S, Bruce R. Decision-making style: The development and assessment of a new measure. *Educ Psychol Meas.* 1995;55(5):818-8331.
20. Kuilman L, Jansen G, Middel B, Mulder L, Roodbol P. Moral reasoning explained by personality traits and moral disengagement: A study among Dutch nurse practitioners and physician assistants. *J Adv Nurs.* 2019;75:1252-1262.
21. Fida R, Tramontano C, Paciello M, Kangasniemi M, Sili A, Bobbio A, Barbaranelli C. Nurse moral disengagement. *Nurs Ethics.* 2016;23(5):547-564.
22. ASHA. A demographic snapshot of SLPs. *The Asha Leader.* 2019;24(7):32.
23. Keirsey D. *Please understand me: Temperament, character, and intelligence.* Del Mar, California: Prometheus Nemesis Book Company;1998.
24. Rest J, Narvaez D, Thoma S, Bebeau M. DIT-2: Devising and testing a revised instrument of moral judgment. *J Educ Psychol.* 1999;91(4):644-459.
25. Carlyn M. An assessment of the Myers-Briggs Type Indicator. *J Pers Assess.* 1977;41(5):461-473.
26. Kelly K, Jugovic H. Concurrent validity of the online version of the Keirsey Temperament Sorter II. *J Career Assess.* 2001;9(1), 49-59.
27. Quinn M, Lewis R, Fischer K. A cross correlation of the Myers-Briggs and Keirsey instruments. *J Coll Stud Dev.* 1992;33:279-280.

28. Tucker I, Gillespie B. Correlations among three measures of personality type. *Percept Mot Skills*. 1993;77, 650.
 29. Elm D, Weber J. Measuring moral judgment: The Moral Judgment Interview or the Defining Issues Test? *J Bus Ethics*. 1994;13:343-355.
 30. Redford J, McPherson R, Frankiewicz R, & Gaa J. Intuition and moral development. *J Psychol*. 1995;12:91-101.
 31. Xu Y, Iran-Nejad A, Thoma S. Administering Defining Issues Test online: Do response modes matter? *Journal of Interactive Online Learning*. 2007;6(1):10-27.
 32. Rest J, Thoma S, Narvaez D, Bebeau M. Alchemy and beyond: Indexing the Defining Issues Test. *J Educ Psychol*. 1997;89(3):498-507.
 33. Bebeau M, Thoma S. Guide for the DIT-2: A guide for using the Defining Issues Test, version 2 ("DIT-2") and the scoring service of the Center for the Study of Ethical Development. Minneapolis, MN: Center for the Study of Ethical Development at the University of Minnesota;2003.
 34. Kroeger O, Thuesen J. *Type talk: The 16 personality types that determine how we live, love, and work*. New York: Dell Publishing;1989.
 35. Sharp H, Genesen L. Ethical decision-making in dysphagia management. *Am J Speech Lang Pathol*. 1996;5(1):15-22.
 36. Baggs T. Has speech-language pathology changed? Personality types of contemporary students. *Internet J Allied Health Sci Pract*. 2013;11(1).
 37. Maeda Y, Thoma S, Bebeau M. (2009). Understanding the relationship between moral judgement development and individual characteristics: The role of educational contexts. *J Educ Psychol*. 2009;101(1):233-247.
 38. Fraas M, McConn A, Hull R, Weiler E., Sandman D, Van Vliet L. Personality types at 3 universities. *Hearsay: J Ohio Speech Lang Hear Assoc*. 2005;17:41-45.
 39. Sabo R, Shingles R, Lopes J, Toner J, Naeve-Velguth S, Woods S. Using online instruments to assess learning styles of health professions students: A pilot study. *Internet J Allied Health Sci Pract*. 2012;10(2).
 40. You D, Penny N. Assessing students' moral reasoning of a values-based education. *Psychol Res*. 2011;1(6):385-391.
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