(RESEARCH ARTICLE)

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DIRT: A designed intentional relational theory for near- peer-mentoring

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Abstract

This study explores a theory for near-peer mentoring based on student-led direction and ownership in healthcare programming. Students in the communication sciences and disorders program at Unidentified University built a system for helping themselves and their peers achieve in the program through tutoring and mentorship in classes. This system resulted in a mechanism that was deemed beneficial by the tutored/mentored students from the results of this mixed-method study. Chi-squared analysis of a questionnaire and thematic coding of focus groups were used to derive the data results.

Keywords: Near-peer mentoring; Directional intentional relational theory

1. Introduction

In the fall of 2023, students in Unidentified University's Communication Sciences and Disorders (CSD) program established a near-peer mentoring system to determine the influential impacts that it would have on students within the program regarding both academics and sense of community within the program.

The students involved in the creation of this near-mentoring system designated themselves as the official tutors for a semester's worth of courses. These tutors expected active participation from most of the students within the CSD program because of the predicted benefits that would be imposed upon the students; however, the tutors also considered the many limitations that would be faced throughout the experiment such as time conflicts and an insufficient level of attendance due to a lack of interest from already successful students. Upon contemplating all the potential opportunities and obstacles that could be faced throughout this experiment, the tutors ultimately concluded that following through with the experiment would be worth the attempt in hopes of providing a useful and effective resource for their fellow peers.

1.1. Definitions

Near-peer mentoring: "A near-peer (or step-ahead peer) is a mentor who has successfully advanced in some measure beyond the career path of the mentee" (Stanford Medicine, 2023).

Directional intentional relationship theory (DIRT): "DIRT is a top-down student leadership theory based on past knowledge and experiences of good mentorship and driven by schema from previous theories and social determinants" (M. Spencer, personal communication, August 22, 2023). DIRT is grassroots and steeped in social behavior theories including the premises of Bandura's Triadic Reciprocal Model of Causality and Deci and Ryan's Self-Determination Theory (Adams, 2015; Bandura, 1969; Deci & Ryan, 1980; Yoon, 2019).

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1.2. Theoretical Framework

The DIRT theory recognizes that students must learn to be autonomous professionals who possess competence and ownership of their practice (Deci & Ryan, 1980). Within the mentoring model, students utilize the neurobiology of learning which employs high empathy, neuroplasticity, and neuronal mirroring with grassroots (Bandura, 1969; Deci & Ryan, 1980; Yoon, 2019). This narrative demonstrates the relatedness of circumstances as the mentor has recently finished enrolment in the curricula being presented paired with the neurobiology of learning to elaborately encode a social narrative for their near-peer mentoring group to follow. The whole of the DIRT model is to create an environment for both students and faculty to grow and develop in respectful team ownership. The model implements high flexibility and vulnerability with an open failure model meaning that all involved learn that different models of learning may not work for everyone and may need to change and that no one is infallible in the learning process and both faculty, student mentors, and student mentees must be upfront and honest when a failure has occurred so the whole team can learn from the mistake (Adams, 2015; Bandura, 1969; Deci & Ryan, 1980). The team is not afraid to get 'dirty' learning to fail but has competence and ownership in the vulnerability process.

1.3. Purpose

The near-peer tutors designed this experiment intending to fulfill specific goals geared toward the overall benefit of the communication sciences and disorders (CSD) student body. These goals include: providing additional resources (such as study guides, outlines of course material, and supplemental instruction), forming interpersonal relationships between under and upperclassmen alike to strengthen the sense of community within the program, increasing the confidence of the students' overall understanding of course material and subject matter to potentially encourage class participation through discussion and building rapport with professors, and instilling the values and positive impacts of this experiment within those involved with the ultimate goal of designating new tutors to continue this experiment indefinitely.

The research questions included the hypothesis:

- A near-peer mentoring program overall benefits CSD students.
  and
- How does a near-peer mentoring program overall benefit CSD students?

2. Literature review

2.1. Tutoring Programs

Research regarding peer, near-peer, and mentoring programs across different universities and fields each has its unique benefits and challenges. Careful examination of benefits such as "one-to-one instruction, opportunities for error correction, increased time spent on academic behaviors,... [and] social interactions between students" (Bowman-Perrot et al., 2016, p. 360) are needed to understand where to start building a program. No program can start running at perfection but by focusing on positive outcomes and being aware of challenges that can arise the seeds of success can be sown (Abbot, Graf, Chatfield, 2018; Bowman-Perot, 2016, Skoglund, Wall, Kiene, 2018).

Four schemas were found in the literature regarding the implementation of near-peer mentoring, peer-mentoring, and mentoring programs: role clarity, mentor preparedness, mutual relationship, and common goals.

2.2. Role Clarity

Defining personal roles in peer and near-peer mentoring is challenging, and many students wonder: "If I am qualified to tutor, then how am I no longer a peer to those I tutor. On the other hand, if I am a peer to my tutees, how can I be qualified to tutor?" (Trimbur, 1982, p. 23). However, questions must be answered for an interactive approach to learning (Callese et al., 2019; Trimbur, 1982). Allowing the students to be in control of the learning process leads to positive implications including investment and purpose for the learning curriculum (Callese et al., 2019; Sheu, Chung, Dawes, 2022; Pilot et al., 2023: Wass & Rogers, 2021).

Mentor and mentee connections that involve matches of personality traits and goals lead to a sense of belonging for both the mentee and mentor in both formal short-term mentoring and informal mentoring especially among students who are in their first year of a program (Fullick et al., 2012; Phinney et al., 2014).

2.3. Mentor Preparedness

When a mentor has not prepared themselves to guide others, it can leave them with anxiety and vulnerability about their position as a leader (Abbot, Graf, Chatfield, 2018; Skoglund, Wall, Kiene, 2018; Matthews, 2018). Many programs have clear training programs and meetings to ensure that each tutor understands their role (Alexander et al., 2022; Amstutz, Wimbush, Snyder, 2010; Lozada & Turner Johnson, 2018; Toby et al., 2016).

Psychosocial supports received in mentoring programs often lead to stress reduction due and positive relationships (Collins et al., 2014; Demir et al., 2014; Fullick et al., 2012; Lane, 2020; Phinney et al., 2011; Skjevik, 2020). As discussed previously, mentoring by also faculty impacts the effects of near-peer and peer mentoring. Faculty prepared to discuss career choice, study strategies, ethics, life planning, and conduct positively influence the preparedness for student mentors (Fullick et al., 2012; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Snowden & Hardy, 2012-2013). Student mentors need mentors to create a cycle of mentorship (Demir et al., 2014; Fullick et al., 2012; Lane, 2020; Phinney et al., 2011). Faculty engaging in group mentoring of life skills teach that healthcare is team-oriented and involves everyone helping each other to achieve (Lane, 2020; Skjevik, 2020; Snowden & Hardy, 2012-2013). While group mentoring preparedness and creating a cycle is essential, one-on-one preparedness is not all lost (Collins et al., 2014; Demir et al., 2014; Skjevik, 2020). One-on-one mentoring helps teams to parse through vulnerabilities (Collins et al., 2014; Demir et al., 2014; Fullick et al., 2012; Snowden & Hardy, 2012-2013). Reflecting on vulnerabilities of social interactions and relational skills in one-on-one mentorship transfers to strength on the team, a sense of belonging, and the setup for the mentee to become the mentor (Collins et al., 2014; Demir et al., 2014; Fullick et al., 2012; Lane, 2020; Phinney et al., 2011).

2.4. Mutual Relationships

Building mutual relationships was found to benefit both the mentor and mentee (Collins et al., 2014; Demir et al., 2014; Fullick et al., 2012; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Snowden & Hardy, 2012-2013; Tinto, 1975). Some barriers to achieving relationships include the timidness of mentees reaching out to mentors and shared chemistry in the relationships (Fullick et al., 2012; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Snowden & Hardy, 2012-2013). Therefore, it is important in near-peer and peer mentoring to set up students according to personality traits and that faculty encourage mentors to constantly make contact points with their mentees (Collins et al., 2014; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Tinto, 1975).

Building mutual relationships is mostly found to help students acquire the psychosocial tools to cope with stress and view barriers more optimistically (Demir et al., 2014; Lane, 2020; Skjevik, 2020; Snowden & Hardy, 2012-2013; Tinto, 1975). Students are found to have more control over their choices or a more defined internal locus of control throughout their university program versus their non-mentored peers, thus leading to better retention in the program and at the university (Demir et al., 2014; Lane, 2020; Skjevik, 2020; Snowden & Hardy, 2012-2013; Tinto, 1975).

The increased ability to cope with stress, reducing anxiety, and planning with goals in mind assists in deterring over-zealous teaching approaches, as well (Area-Tirado, Fernández-Martin, Fernández-Balboa, 2011; Schäfer, Baess, & Frings, 2022; Wass & Rogers, 2021). Some students have the potential to be overzealous and have unrealistic expectations such as "my major objective would be to fire up my students to want to attack their writing" (Trimbur, 1982, p. 21). Shaping realistic expectations with a defined plan and reducing anxiety through preparation is vital to a successful tutor (Schäfer, Baess, & Frings, 2022; Munley, Garvey, McConnell, 2010; Toby et al., 2016).

Perceived social supports within mentorship that reduce anxiety and build positive self-esteem within the mentorship relationship derive from Tinto's theory of student retention (Lane, 2020; Tinto, 1975). Tinto suggests that self-awareness and coping skills are derived from the integration of academic and social experiences within the first year of an academic program (Lane, 2020; Tinto, 1975). Mutual relationships among near-peers already in the program build prior knowledge and confidence in student skills (Collins et al., 2014; Demir et al., 2014; Fullick et al., 2012; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Snowden & Hardy, 2012-2013; Tinto, 1975).

2.5. Common Goals

The session outlines and frequency for tutoring differ greatly depending on the goal of the tutoring program, so the literature outlines that it is important to make a distinction between implementing a tutoring program for grades, versus implementing one for conceptual understanding (Abbot, Graf, & Chatfield, 2018; Pilot, et al., 2023). While new student mentors tend to measure success by grades, these do not necessarily demonstrate gross learning (Skoglund, Wall, & Kiene, 2018; Schäfer, Baess, & Fring, 2022). Freshman-level students may simply want a higher grade because they do not yet understand the need for a comprehensive conceptual understanding of the subject, which is crucial in

healthcare education (Sheu, Chung, Dawes, 2022; Pilot et al., 2023). Self-direction by navigation of real-world applications synthesizes healthcare learning, thus practice and shared experiences help meet essential learning outcomes (Munley, Garvey, McConnell, 2010; O'Shea, Bennett, & Delahunty, 2017; Pilot et al., 2023).

Student mentors bridge between experts with content knowledge and lived experience and then peers (Sheu, Chung, Dawes, 2022; Pilot et al., 2023; O'Shea, Bennett, & Delahunty, 2017). Student leaders also serve as the bridge between faculty and the student body helping facilitate growth and bonding within a program or driving a wedge within a program depending on the goals and communication of all three parties (Alexander et al., 2022; Arco-Tirado, Fernández-Martín, & Fernández-Balboa, 2011). Relationships and communication are put at the forefront of successful mentoring programs (Amstutz, Wimbush, & Snyder, 2010; Callese et al., 2019).

Holistic and common traits that had a positive impact on persistence within the mentoring relationship include goal setting, path development, emotional support, and academic support (Collins et al., 2014; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Snowden & Hardy, 2012-2013; Tinto, 1975). Goals set by mentors and mentees orient stress levels. Common goals that the mentor and mentee wish to achieve lead to reduced stress and a sense of belonging to the program (Collins et al., 2014; Lane, 2020; Phinney et al., 2011; Skjevik, 2020; Snowden & Hardy, 2012-2013; Tinto, 1975).

3. Methodology

The impacts of near-peer tutoring were evaluated using a mixed-method approach utilizing a survey and focus groups. The survey included 10 questions and took students approximately 15 minutes to complete. Questions consisted of the effects of the study sessions that were held and the evaluations of the tutors. The survey was analyzed using Chi-Square and the focus group responses were analyzed using thematic coding. Both the sessions and surveys were different tools to evaluate the program and helped see the areas that needed to be improved. The surveys included two main sections: focus groups and category ranking.

The IRB approval for the study was through Unidentified Institutional Review Board (IRB) Committee. The research site, the university, accepted the IRB approval of an exempt study with a review from the provost of the university. The impacts of near-peer tutoring were evaluated using a mixed-method approach utilizing a survey and focus groups. To properly explain the sections within the survey, the demographic of those involved must be identified.

Unidentified University is a small, private institution in rural Unidentified state. The university consists of 1,485 students of which surveyed 78% identify as white, 11% as Black, 1% as 2 or more races, 1% as Asian, 0.5% as American Indian or Alaska Native, 0.05% as Native Hawaiian or Other Pacific Islanders, and 0.05% as Hispanic or Latino. The Unidentified University's Communication Sciences and Disorders program is comprised of 31 females and 1 male, all identifying as White. This total can be further broken down by grade level, which would include 6 seniors, 2 Juniors, 9 sophomores, and 15 freshmen. With this demographic in mind, the focus groups were asked a series of questions that focused on the ability of the tutors in every class that had a senior tutor.

The questions for the focus group included the overall benefits and limitations of the tutoring sessions, frequency of sessions, and knowledge of the material before and after the sessions. These questions were asked in an open forum format with the professors of the said classes asking the questions without the tutors in the room. The responses were then recorded and filed into our drive for our review.

4. Results

The tables for these surveys were calculated using a Likert Scale. The Likert Scale was chosen because it was a simple transcription of the opinions calculated into numerical values. The surveys were based on a scale of 1-4 with 1 being the least helpful and 4 the most helpful. The first survey primarily focused on the mentor regarding the sessions that they lead. The questions were based on preparation, effectiveness of teaching, relevance of material, and overall helpfulness. The results of the survey were compiled into a single chart and were reviewed by the seniors. The percentage data tables can be found in Tables 1 and 2. The observed values can be found in Table 3 while the expected values can be found in Table 4.

The results of the responses can be seen in the tables below:

Table 1 The Mentor Interactions N=19

Mentor Interactions	1	2	3	4
Preparation for session	0%	5.3%	36.8%	57.9%
Effectiveness in teaching	0%	5.3%	26.3%	68.4%
Effectiveness of material	0%	5.3%	15.8%	78.9%
Overall session helpfulness	5.3%	5.3%	15.8%	73.7%

For preparation, the mentors had 57.9% of the most helpful in their preparation for each of the sessions and had the biggest split with a combined percentage of 42.1% for a helpful and less helpful ranking. For effectiveness in teaching style, most participants ranked it a 4 with 68.4%. The rest of the participants came to a combined percentage of 31.6%. Next for effectiveness in material, the results were vastly different, with the most helpful ranking having a percentage of 78.9%. Finally, in overall session helpfulness 73.7% of participants ranked it as most helpful. the mentors were most helpful in their preparation for each of the sessions.

Table 2 The Mentee Interactions N=19

Mentee Interactions	1	2	3	4
Prepared outside of tutoring	0%	15.8%	42.1%	42.1%
Studying was best used in tutoring	10.5%	10.51%	15.8%	63.2%
Tutoring equipped me for exams	0%	5.3%	36.8%	57.9%
Increased peer bonding	0%	21.1%	31.6%	47.4%
Reduced course anxiety	5.3%	5.3%	36.8%	52.6%

Upon reviewing the results, the researchers find improvements to the program's original design. For instance, some courses needed hands-on sessions where practical dilemmas were set up whereas other courses mainly needed to focus on course material. With the results of the survey in mind, each session will be more individualized and geared to its respective course.

Table 2 questions reflected the students' opinions regarding the overall benefits of the sessions. The questions included in the survey were designed to focus on what the individual students did to excel in the courses on their own time. These questions were broken up into five categories including Preparation, Self-Motivation, Tutoring Benefits, Peer relationships, and Course Anxiety. In the Preparation category, 42.1% prepared outside of class for these tests/quizzes.

However, a combined 57.9% of students did not confidently prepare for the exams outside of the sessions or class. The data supports that data by analyzing the self-motivation in studying with the sessions as 63.2% strongly agreed that studying was best done in the sessions, from hearing from students after the survey was sent out, most benefited from a set time slot. The issue became how to schedule the times to work best for everyone. Next, the data for the benefits of tutoring was extremely encouraging, 57.9% strongly believed that the sessions were a benefit to them. Only 5.3% disagreed with the question in ranking, and it was very encouraging to the tutors. With increased peer bonding, the data was split. The most confident ranking received 47.4%, and the least confident ranking of a 2 was 21.1% of the scores. Finally, with reduced course anxiety most of the student body strongly agreed that the study sessions helped with 52.6%.

Next, the Chi-square analysis is shown in Tables 3, 4, and 5.

Table 3 Observed N=19

Question	1	2	3	4	Row Total
My tutor was prepared for the session	0	1	7	11	19
My tutor answered my questions	0	1	5	13	19
Sessions were relevant	0	1	3	15	19
Sessions were helpful overall	1	1	3	14	19
I prepared outside	0	3	8	8	19
My time was used best in tutoring	2	2	3	12	19
I felt equipped	0	1	7	11	19
I built closer relationships	0	4	6	9	19
Sessions reduced anxiety	1	1	7	10	19
My confidence increased	2	1	7	9	19
Column Total	6	16	56	112	190

Table 4 Expected N=19

Question	1	2	3	4
My tutor was prepared for the session	0.6	1.6	5.6	11.2
My tutor answered my questions	0.6	1.6	5.6	11.2
Sessions were relevant	0.6	1.6	5.6	11.2
Sessions were helpful overall	0.6	1.6	5.6	11.2
I prepared outside	0.6	1.6	5.6	11.2
My time was used best in tutoring	0.6	1.6	5.6	11.2
I felt equipped	0.6	1.6	5.6	11.2
I built closer relationships	0.6	1.6	5.6	11.2
Sessions reduced anxiety	0.6	1.6	5.6	11.2
My confidence increased	0.6	1.6	5.6	11.2

Table 5 Chi-Square Analysis N=19

Question	1	2	3	4
My tutor was prepared for the session	0.60	0.23	0.35	0.00
My tutor answered my questions	0.60	0.23	0.06	0.29
Sessions were relevant	0.60	0.23	1.21	1.29
Sessions were helpful overall	0.27	0.23	1.21	0.70
I prepared outside	0.60	1.23	1.03	0.91
My time was used best in tutoring	3.27	0.10	1.21	0.06
I felt equipped	0.60	0.23	0.35	0.00
I built closer relationships	0.60	3.60	0.03	0.43
Sessions reduced anxiety	0.27	0.23	0.35	0.13
My confidence increased	3.27	0.23	0.35	0.43

Table 5 shows the relation of the chi-square results to the hypothesis. In this case, H0=A near-peer mentoring program overall benefits CSD students, and Hα=A near-peer mentoring program does not overall benefit CSD students. The chi-square renders at 27.56 and the p-value as 0.43. Thus, the p-value renders no significance if $p > 0.05$. There is not sufficiently strong evidence to reject the null hypothesis.

In the focus groups, the professors of the courses were given questions to ask the students within the class and were instructed to record their answers. After reviewing these recordings, those involved in the research found the following codes, which were then categorized into themes. The themes that were found include structure, relationship, and preparation. Results can be found in Table 6 below.

Table 6 Thematic Coding

Code	Theme
Not all classes are equal	Structure
Scheduling issues	Structure
Mixed-level classes help relationships	Relationship
Builds Pre-knowledge for comprehensive learning	Structure
Needs consistency	Preparation
Everyone is willing to help	Relationship
Wanting more overview than test preparation	Structure
Good frequency of sessions	Preparation
Increased approachability to each other	Relationship
Helps with test preparation	Structure

Note: Data collected through focus groups

5. Discussion

Three concepts that can be derived from the results include the importance of relationships, ownership, and student-led learning outcomes which are complemented by the themes of relationship, preparation, and structure. These three major themes were derived from coding the qualitative data and matching it to question grouping results in the qualitative data.

It's All About Relationships. The culture of the program helped develop the relationships among students along with self-determinism from the senior-level students (Deci & Ryan, 1980; Sheu et al., 2022; Yoon, 2019). Students who participated either as mentors or mentees were not required by the program to participate but saw the value of one another's success (Adams, 2015; Amstutz, Wimbush, Snyder, 2010; Bandura, 1969). Relationship categories in the qualitative data include tutoring benefits, peer relationships, and course anxiety. The codes were then matched to the mentor and mentees' desire to help, mentor approachability increasing throughout the process, and mentor and mentees being in classes with their peers. Student comments in this section included:

- "My mentor has studied it too, so it is just easier to discuss things out of class I may not understand".
- "I think when you do that (see mentors outside of class) they give you a different perspective, maybe something you didn't pick up in class".
- "It definitely helped; it gave me more opportunity to feel comfortable with them (upperclassmen)"
- "They are still very willing to help you even if you can't be there (in sessions)"
- "Sometimes it's less intimidating to ask questions to an upper-class student than ask a question in class".

Combining these data results, there is evidence of Tinto's model "that a student's ability to socially integrate is dependent on the ability to separate from the former group (e.g., high school friends) and adopt the values and norms of the new college group" (French, 2017, p. 103).

Ownership Matters. Students mentioned the ownership of both their preparation and their peers' preparation as factors that might influence their experience while recognizing the value that they have in each other to engage in the learning process for success (Adams, 2015; Alexander et al., 2022; Amstutz, Wimbush, Snyder, 2010; Bandura, 1969; Lozada & Turner Johnson, 2018; Toby et al., 2016). Themes included the students understanding that their preparation is part of the ownership process such as the need for their consistency of having sessions and being able to say that they had a good frequency of sessions. Ownership categories in the qualitative data include preparation, course anxiety, and self-motivation.

- "I am now taking turns with my clinic lead to discuss sessions with parents and it is not as scary anymore".
- "This semester was a step up from my freshman year when I only had two CSD classes. It's a lot more information and you realize that all the classes are connected, you know that what we learn in clinical methods we are also going to connect and talk about in your next class, so having that support helps in class and in study sessions".
- "I think just like kinda like sending things out to schedule things better because my schedule changes literally by the hour sometimes so if I know four days in advance, then I know I will be here".
- "For clinic, my clinic lead gave me opportunity to start planning sessions, then eventually lead them. I liked this so I felt more comfortable as I will be a lead next year".
- "Limitations is time, it's hard to find something that matches everyone" "Helping you, getting you prepared".

Combining these data results, there is evidence of Deci and Ryan's self-determination theory in that

- "SDT also postulates that there are basic psychological needs that universally must be satisfied for people to experience ongoing growth, integrity, and wellness, namely needs for competence, autonomy, and relatedness. Although there are a vast number of human desires, goals and preferences, autonomy, competence, and relatedness.
- stand out as essential nutriments for these outcomes." (Deci & Ryan, 2012, p. 1).
- Students Led Learning Outcomes. It is important to note that this model also helps match the program-level outcomes in CSD education at the university including the American Speech-Language-Hearing Association standards and the Association of American Colleges and Universities high-impact practices all including these principles:
- "Interpret appropriate verbal, nonverbal, written, and electronic communication in collaboration with the health care team while understanding the scopes of practice of each team member and requirements for their certifications (The Council for Clinical Certification in Audiology and Speech-Language Pathology (CFCC) Standard(s) IV-H, V-A; Essential Learning Outcome (ELO) 5-Oral Communication; ELO 4-Written Communication)" (Spencer, 2021).
- Standard V-A: "The applicant must have demonstrated skills in oral and written or other forms of communication sufficient for entry into professional practice" (ASHA, 2020).
- Collaborative Assignments and Projects: "Collaborative learning combines two key goals: learning to work and solve problems in the company of others and sharpening one's understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences. Approaches range from study groups within a course, to team-based assignments and writing, to cooperative projects and research" (AACU, 2023).
- Capstone Courses and Projects: "…these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they've learned…" (AACU, 2023).
- Learning Communities: "The key goals for learning communities are to encourage integration of learning across courses and to involve students with "big questions" that matter beyond the classroom. Students take two or more linked courses as a group and work closely with one another and with their professors. Many learning communities explore a common topic and/or common readings through the lenses of different disciplines. Some deliberately link "liberal arts" and "professional courses"; others feature service learning" (AACU, 2023).

These curricular components complimented the theme of structure and students' understanding of program structure to develop peer mentoring. Codes within the theme included students' understanding that not all classes are equal and some need more attention than others, scheduling issues are something that professors must handle daily and students gain an appreciation for as they schedule their mentees, that a near-peer-mentoring program helps with test preparation but also builds pre-knowledge for comprehensive learning and that comprehensive learning is far more than a test, but reduplicated competence. Student-led learning outcomes in the qualitative data include self-motivation and tutoring benefits. Student comments include:

- "Some of us transferred in so we have differing perspectives depending on how many classes we are taking at one time".
- "I feel like I am more comfortable with the material this year and know more about what I'm actually supposed to do with my career".
- "Harder courses such as Anatomy could use two mentors, while some do not need any. Audiology has a lot of information that is new, but a project-based class like clinical methods requires less need".
- "We did like a study hall, then a test prep in anatomy and that was really helpful because sometimes with my brain how it works sometimes, I just memorize and I feel like the study hall makes you learn it."
- "More than last semester, but also the more classes you take, the more you can see them connecting. We will be talking about early intervention in phonological disorders, and you make that connection because of background information".
- "I understand how what we learn in class connects more and more to my patient when I learn from my peers in clinic, and I understand how to make goals for them."

Combining these data results, there is evidence of Bandura's social-learning theory in that

- "Most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions, this coded information serves as a guide for action." (Bandura & Walters, 1977, p. 22).

Limitations

This study was designed to understand a student-designed model for near-peer mentoring in healthcare education. Generalizations and replication should consider the context of the study. First, the study provided findings from a small university and class size in one rural town in Tennessee. Second, the findings were based on the perceptions of a small number of rural students from one university program. To help reduce this limitation, a mixed-methods approach was used to help triangulate the data.

6. Conclusion

This exploration has helped define successful near-peer mentoring structures for student-led programs and potential needs as students take the lead in their education. The overall results of this study seem to imply that near-peer tutoring was overall effective. It was found that this program was beneficial in various areas and the researchers plan to continue this program; however, they do plan to make necessary changes based on the focus group and questionnaire results. The recommendations below were made for other programs interested in establishing similar programs:

- It is recommended that courses that require more comprehensive work, such as Anatomy and Physiology and Audiology, have a more significant focus than other courses.
- It is recommended that a more structured and consistent tutoring schedule be implemented to help students structure their time.
- It is recommended that tutors/mentors encourage a more comprehensive understanding of the material involved in the coursework, rather than solely focusing on tests to truly meet course competencies.
- A designed intentional relational theory to near-peer mentoring leads to self-efficacy in students to meet program outcome and their designed expectations. The influence among three variables: relationships, ownership, and student-led learning outcomes influence group behavior and social learning within the program.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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