

**Does the Level of Caring Behavior Exhibited by Mentors Impact Students'
Sense of Mattering in Mentoring Relationships?**

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Abstract

This study investigates the relationships between the level of personal investment and supportive attitudes of mentors — both faculty and peer — and students' sense of mattering in mentoring relationships. Drawing from existing literature on mentoring and student well-being, the research questions whether mentors' caring behaviors significantly impact students' perceptions of their significance and value. I hypothesized that such caring behaviors from mentors would positively influence students' sense of mattering. Using self-report questionnaires, we conducted a study with a sample size of 224 students to measure the impact of faculty and peer mentoring. The findings indicate that while both faculty and peer mentors are positively correlated with students' sense of mattering, the caring behaviors of peer mentors exhibit a stronger and more significant relationship. This suggests that peer relationships, characterized by perceived equality and shared experiences, are particularly impactful. However, the significant results for faculty mentors also underscore their essential role in student support. Recognizing the unique contributions of both faculty and peer mentors can enhance the design of mentoring programs. Training for mentors should emphasize caring behaviors such as empathy, active listening, and encouragement. Additionally, integrating principles from self-determination theory, which emphasizes autonomy, competence, and relatedness, can further improve student motivation and well-being. Implementing collaborative systems between faculty and peer mentors could optimize both academic performance and emotional well-being. Despite limitations like the use of self-report questionnaires and demographic homogeneity, this study provides a robust foundation for future research on the impact of caring behaviors in mentoring relationships.

Keywords: peer mentoring, student mentoring, faculty mentoring, self-determination theory, caring, mattering, academic outcomes

Does the Level of Caring Behavior Exhibited by Mentors Impact Students' Sense of Mattering in Mentoring Relationships?

The main focus of any university is to offer programs that can lay the groundwork for a successful academic career for their students. This success is based on a multitude of factors both inside and outside the university. While a student's repertoire such as personal skills or self-regulatory learning strategies are important predictors of academic outcomes (Richardson et al., 2012), the interaction with the university itself is also a significant indicator of said outcomes (Abed et al., 2024). Therefore, the main priority of any academic institution should be to invest in improving and facilitating both resources. Many studies have already focused on different aspects of improving learning overall, such as creating more interactive environments (Weber-Bezich, 2015). However, this thesis focuses on analyzing one of the most direct forms of student-university interaction: mentoring programs.

Mentoring has an impact on students' outcomes on multiple levels. The quality of teaching has a direct link to an improved GPA and retention rate (Bourgeois, 2008). Additionally, it positively correlates with overall better emotional well-being (Claro & Perelmiter, 2022) and building motivation and resilience (Wu et al., 2022). Both hard/numeric measurements and soft measurements are equally important in determining the achievement of a student. These factors influence the groundwork for the later stages of students' careers; a good GPA opens more career opportunities (Sulastri et al., 2015), while positive mentoring relationships also enhance career readiness (Olwell, 2016).

Historically, mentoring has evolved from informal teacher-student relationships to structured programs designed to support students' academic and personal growth (Schwiebert, 2000). In ancient times, mentorship was a fundamental part of education, with students learning directly from scholars and philosophers. Over time, the concept of mentoring expanded to include apprenticeships and formalized education systems. In modern higher education, mentoring programs have become more structured and diverse, with universities implementing various formats to address the unique needs of their student populations (Dawson, 2014). These formats range from one-on-one mentoring and group

mentoring to peer mentoring and e-mentoring, each offering distinct benefits and challenges (Bitter, 2000).

The importance of mentoring in education, especially in higher can hardly be overemphasized. Mentoring provides students with the guidance, support, and encouragement they need to navigate their academic journeys and personal development. It fosters a sense of belonging and helps students build essential skills such as critical thinking, problem-solving, and effective communication (Dearden, 1998). Moreover, mentoring helps students establish professional networks and gain insights into their chosen fields, which are invaluable for their future careers (Johnson, 2007).

In the following section, I will delve into the key aspects of mentoring, focusing on its essential components and the significant impact it has on students. First, I will outline the foundational elements of mentoring as defined by Haggard et al. (2011), highlighting the reciprocal, developmental, and consistent nature of these relationships. Then, I will distinguish between two types of mentoring: faculty mentoring and peer/student mentoring, examining their respective roles and benefits. Furthermore, I will explore the concept of caring within mentoring relationships, discussing its definition, importance, and influence on student outcomes. Finally, I will introduce the concept of mattering, emphasizing its role in enhancing students' academic motivation, well-being, and overall sense of belonging within the academic community.

Mentoring

Considering the importance of mentoring, one needs to understand what it entails. According to Haggard et al. (2011), mentoring involves three key aspects: it is reciprocal, meaning that the relationship is mutually beneficial, it is developmental, with the mentor playing a significant role in the mentee's work and career-related growth, and the interaction is regular and consistent, often integrated into the students' weekly schedules. Reciprocity ensures that both mentor and mentee invest in and gain from the relationship, leading to a more committed and engaged interaction (Straus et al., 2013). The developmental nature of mentoring highlights its role in guiding students through their academic and career paths, providing them with the skills and insights needed for future success. (Martins et al., 2024).

Consistency in interactions helps in building trust and a strong rapport, which are essential for meaningful and impactful mentorship (Malik, 2000).

Furthermore, in our analysis, we focus on two different kinds of mentoring: faculty mentoring and peer/student mentoring. Understanding these aspects is crucial as they lay the foundation for effective mentoring practices.

Faculty mentors are experienced academic staff who guide students in their academic pursuits by offering insights, support, and advice grounded in extensive knowledge and experience. This type of mentoring has been shown to enhance academic performance, particularly in numeric outcomes (Bourgeois, 2008). Moreover, these mentors help students navigate the complexities of academic demands and career planning, contributing to a stronger career foundation and better preparation for future achievements (Johnson, 2007).

Peer or student mentoring, on the other hand, involves students collaborating in a supportive environment, typically with more senior students helping newer ones. This form of mentoring, known as supplemental instruction, is a common and successful practice (Dawson, 2014). Supplemental instruction fosters a sense of community and belonging, which are important for overall well-being (Klik et al., 2023). Student mentors provide relatable advice and encouragement based on shared experiences, which can lead to the mentees building motivation and resilience (Wu et al., 2022). Further pilot research also seems to show a link between peer mentoring and numeric academic outcomes as well (Alegre-Ansuategu et al., 2018). Understanding the diverse aspects both kinds of mentors can provide is crucial for identifying better practices and potential areas of improvement in university interactions, ultimately leading to better student outcomes.

An approach to measuring the quality of mentor-mentee relationships is to analyze which traits are associated with a positive relationship, for example, traits such as approachability and commitment (Li & Hackman, 2018). While there are multiple traits that can be explored, this paper will focus on one specific trait in detail later.

Moreover, another form of measuring the success of mentoring relationships would be understanding students' motivation and well-being. Self-determination theory adds another layer to this understanding. SDT posits that motivation is driven by the need for

competence, autonomy, and relatedness (Ryan & Deci, 2000). By promoting a nurturing environment through caring and ensuring students feel they matter, mentors could significantly enhance feelings about themselves, which in turn positively impacts their academic and emotional outcomes (Klik et al., 2023).

Despite the identified importance of the aforementioned traits, there is a lack of research linking specific mentor traits to specific student outcomes. Furthermore, direct comparisons between the effects of faculty and peer mentors are rare. This thesis aims to fill this gap by exploring how the trait of caring impacts students' feelings of mattering in two different mentoring contexts.

Caring

According to Webb and Blond (1995), caring is defined as the mentor's ability to listen actively, provide emotional support, and show empathy towards the students' challenges and successes. This definition of caring encompasses both an attitude and a set of behaviors that contribute significantly to the quality of the mentoring relationship. It involves creating an atmosphere of trust and mutual respect, which is essential for effective mentorship.

The concept of caring in mentoring relationships is fundamental, as reported by Gentile et al. (2020) it involves demonstrating genuine concern for the well-being of the students. This trait establishes a supportive and nurturing environment where students feel valued and understood. Research emphasizes that when students perceive their mentors as caring, they tend to experience deeper levels of connectedness and overall well-being (Anderson, 2023).

Gavin's (2022) research indicates that caring mentors positively influence various aspects of their students' lives. One of the critical outcomes of perceived caring is better academic performance. Students who feel that their mentors genuinely care about them are more likely to be engaged in their studies, show higher levels of motivation, and achieve better grades. Additionally, these students often report higher overall satisfaction with their courses, which can lead to a more fulfilling educational experience.

Beyond academic success, Goss's (2023) research highlights that caring mentors

significantly impact long-term outcomes, including career readiness and interpersonal skill development. Students who have nurturing mentoring relationships are better equipped for the workforce, exhibiting confidence and competence in navigating their careers. These students also possess stronger interpersonal skills, essential for both professional and personal success. Thus, a caring mentor creates an environment where students feel valued and understood, fostering their overall development and success.

The choice of caring as a focus in mentoring research is sensible, given the demonstrated impact on numerous positive outcomes for students stated earlier. However, to fully understand its role, it is crucial to investigate the specific mechanisms through which caring influences these outcomes.

Mattering

A theorized important dependent variable influenced by caring is the feeling of mattering. Mattering, especially in the educational context, involves making the student feel valued and recognized within the academic community (Moschella & Banyard, 2021). This sense of connectedness is crucial as it directly impacts students' academic motivation and relatedness (Kavousian et al., 2017). When students feel that they matter, France and Finney (2010) show that they are more likely to be engaged and motivated in their academic pursuits, exhibiting higher levels of intrinsic motivation and persistence. This research also highlights that a strong sense of mattering negatively correlates with maladaptive help-seeking behaviors, so they seek assistance proactively, enhancing their learning experience and academic satisfaction. Furthermore, according to Guidry (2016), the sense of mattering is closely linked to the overall well-being of students. When students feel that they are an important part of their academic community, it positively affects their mental health, reducing feelings of isolation and anxiety. This psychological well-being is a crucial outcome of effective mentoring, as it contributes to the development of students (Klik et al., 2023).

Understanding mattering in the context of mentoring involves exploring how mentors can cultivate this sense of value and recognition. When mentors demonstrate genuine care, they not only create an environment conducive to academic and personal growth but could enhance the student's feelings of mattering. This insight can inform the development of a

more tailored and impactful mentoring program, ensuring that both the academic and emotional needs of students are met.

One area that warrants further exploration is the connection between caring and the concept of mattering. Investigating the potential link between these concepts could provide deeper insights into how caring contributes to students' overall well-being and success. Furthermore, understanding this relationship can help us uncover the mechanisms through which caring mentorship fosters a sense of belonging and motivation in students, ultimately enhancing their academic and personal development. My research seeks to compare the impacts of caring in mentoring on mattering, aiming to provide a better comprehension into effective mentoring practices. I hypothesize that the level of caring behavior exhibited by both peers and faculty mentors positively influences the feeling of mattering in students. Specifically, students who perceive higher levels of caring are more likely to report a stronger sense of mattering. Additionally, I anticipate that students mentored by peers will report higher levels of mattering compared to those mentored by faculty, due to factors like shared experiences and relatableness (Wu et al., 2022).

In conclusion, the interplay between caring and mattering is critical in mentoring relationships. Caring mentors could foster a sense of mattering, making students feel valued and recognized within the academic community. This feeling of mattering is a strong predictor of academic motivation, relatedness, and overall well-being, while also reducing maladaptive behaviors (France & Finney, 2010). Exploring this connection further can provide deeper insights into the mechanisms through which effective mentoring leads to positive student outcomes, ultimately guiding the creation of more effective mentoring programs.

Method

Participants

To be eligible, participants had to be psychology students at the University of Groningen, who were at the time of data collection enrolled in a first-year practical course. This course entailed being taught by a student as well as a faculty mentor. Participants were recruited using a convenience sampling method as the study was part of the SONA (Sona

Systems, n.d.) program. Additionally, participants were recruited using a snowball sampling method where students referred each other to fill out the questionnaire, which was available on Qualtrics (Qualtrics, Provo, UT). Initially, our study involved 224 participants, of whom 44 were excluded. Among the excluded participants, 21 were omitted because they did not complete the survey, seven did not meet the inclusion criteria, and two were previews submitted by our team. Since the survey had multiple questionnaires, it required a plentiful time to finish so the remaining 13 individuals were excluded due to not allocating sufficient time to complete the survey (i.e., less than 500 seconds). A final 180 participants were included in the study, out of which 127 identified as female, 47 as male, two as other, two preferred not to share this information, and the remaining two did not answer the question. The minimum age in our sample is 17, while the oldest participant is 35 years old ($M = 19.77$, $SD = 1.96$). Furthermore, the participants were asked to share their nationalities with 117 of them stating to be Dutch, 17 stating to be German, and 46 belonging to another nationality.

Material

This work was part of a larger project for the bachelor thesis. In total, the thesis included eight different scales, however my part only incorporated three of them.

Mattering

To collect data on the variable of mattering we used the General Mattering Scale (GMS) from Marcus and Rosenberg (1987) as well as the Anti-Mattering Scale (AMS) from Flett et al. (2021). The questions focused on both aspects simultaneously to assess positive and negative feelings and outcomes from mentoring interactions. These questionnaires measure how much individuals feel they matter to others in their social and personal relationships. Both questionnaires consist of five items on a 4-point Likert scale ranging from 1 = 'not at all' to 4 = 'a lot'. The scale includes items that address feelings of significance, recognition, and dependence by others. Examples include questions such as "How important are you to others?" and "How much would you be missed if you went away?" or for the AMS "How much do you feel like you don't matter?". The GMS and AMS were created based on theoretical frameworks of self-esteem and social integration. These scales demonstrated reliability and validity as measures of mattering and consist of a Cronbach-alpha of 0.85 for

AMS and 0.74 for GMS, which indicates overall good external validity.

Caring

The Student-Instructor Rapport Scale-9 (SIRS-9) by Lammers (2012) was used to measure the extent of caring among the mentors. This questionnaire aims to assess the degree to which the mentors exhibit caring attitudes towards their students in the academic context. It consists of nine Likert scale items, questions ranging from 1 = 'not at all' to 5 = 'very much so'. Examples of these questions are "Your instructor understands you.", "Your instructor encourages you." and "Your instructor cares about you."

The scale was successful in demonstrating measurements of caring in validity and reliability and a Cronbach's alpha of 0.91 was calculated, which indicates strong external validity.

Procedure

This study used a cross-sectional, correlational, observational design to examine the proposed relationship between caring and mattering. It was part of a larger bachelor thesis project and was approved by the Faculty Ethics Committee. Data was collected via an online survey created by Qualtrics (Qualtrics, Provo, UT). Students were invited to participate in the research on the SONA system (Sona Systems, n.d.) or via Qualtrics directly. The SONA system is a platform to recruit participants online. Students at the University of Groningen have to earn a certain amount of credits in the SONA system to pass a first-year course. They earn credits by participating in different surveys or experiments.

Initially, the survey was only available through the SONA project. However, to reach the desired sample size, we relied on the snowball sampling method and shared the Qualtrics link with the groups of students who matched our inclusion criteria. The choice to participate was voluntary and there was no monetary compensation. The only remuneration involved was for students who accessed the survey through SONA as they received credits required to pass a course.

The primary prerequisite for participation was that participants had to confirm that they were psychology students enrolled in the Academic Skills Course. Only those who met this requirement were able to proceed, and those who did not were redirected to the end of

the survey. Before starting the questionnaire, participants were presented with detailed information regarding the study's objectives and procedures. They received information outlining the research's aim to investigate participants' perceptions of mentoring experiences and personal values and participants' informed consent was required. They were encouraged to carefully read the provided information and to ask questions before providing consent. Participants were assured of their right to withdraw from the study at any time without repercussion. Upon consenting, participants were then asked to provide demographic information such as gender, nationality, and age before proceeding to fill in a series of questionnaires covering topics such as perceptions about mentoring in the Academic Skills Course. Each participant filled out the same questionnaire in a fixed order and the estimated completion time for the questionnaire was approximately 20 - 30 minutes. At the end of the questionnaire, the participants were thanked for their time.

Results

The response statistics and relationships of the variables are presented in Table 1. Table 2 summarizes the coefficients of the ANOVA model. All assumptions were checked and met before performing Pearson correlation analysis and multiple linear regression. The original sample of 180 was reduced to 174 due to outlier removal.

Table 1

Descriptive Statistics

	1	2	3	M	SD	n
1. Mattering	-			32.02	5.48	174
2. PeerCaring	0.21**	-		28.78	4.48	174
3. FacultyCaring	0.15*	0.43***	-	26.71	5.62	174

Note. Mattering = Total score of mattering in students, PeerCaring = Total score of caring in peer mentors, FacultyCaring = Total score of caring in faculty mentors.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Descriptive statistics showed that participants had a moderate to high sense of mattering. Caring behaviors were perceived from both faculty mentors and peer mentors,

with slightly higher scores for peer mentors. Pearson correlation coefficients indicated positive associations between mattering and caring from both faculty mentors and peer mentors. These results suggest that higher levels of perceived caring from both faculty and peer mentors are associated with a greater sense of mattering among participants.

A multiple regression analysis was conducted to further investigate the predictive power of caring on mattering (Table A1). The overall model showed an R-value of 0.22, indicating a small to moderate relationship between the predictors and the outcome variable. The R-squared value was 0.05, suggesting that approximately 5% of the variance in the sense of mattering could be explained by the combined effects of caring from faculty and peer mentors.

To determine the statistical significance of the regression model, an ANOVA test was performed (Table A2). The ANOVA results indicate that the regression model was statistically significant, $F(2, 171) = 4.25, p = .02$. This suggests that an increase in the combined influence of caring from faculty and peer mentors significantly enhances the feelings of mattering among participants.

Table 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.93	2.81		8.53	<0.001
	PeerCaring	0.22	0.1	0.18	2.14	0.03*
	FacultyCaring	0.07	0.08	0.07	0.87	0.39

Note. Mattering = Total score of mattering in students, PeerCaring = Total score of caring in peer mentors, FacultyCaring = Total score of caring in faculty mentors.

a. Dependent Variable: Mattering.

* $p < .05$.

Further analysis of the regression coefficients provided additional insights. Caring from faculty and peer mentors is positively correlated to mattering in a linear regression

model. For each increase in caring, faculty caring increases by 0.07 units. While this is a positive correlation, it did not significantly predict mattering when caring from peer mentors is held constant. In contrast, caring from peer mentors was a significant predictor of the feelings of mattering, even when accounting for caring from faculty. This indicates that higher levels of perceived caring from peer mentors are more strongly associated with a greater sense of mattering.

In summary, the results indicate that both types of caring — caring from faculty and caring from peer mentors — are positively related to the sense of mattering among participants. However, caring from peer mentors appears to have a stronger and more significant impact on mattering compared to caring from faculty mentors.

Discussion

My study aimed to explore the relationships between caring behavior exhibited by mentors and students' sense of mattering. The findings indicate that both caring from peer as well as faculty mentors are positively correlated with students' sense of mattering, with caring from peer mentors showing a stronger and more significant correlation. This directly supports my hypothesis that the level of personal investment and supportive attitude exhibited by peer and faculty mentors significantly impacts students' perception of their significance and value in mentoring relationships.

Interestingly, while caring from faculty mentors was positively correlated with mattering, its predictive power was not as strong as that of caring from peer mentors. This is suggested in the regression analysis. Despite the overall model explaining a small portion of the variance in mattering, caring from peer mentors emerged as a significant predictor, highlighting its unique contribution. This further underscores the importance of caring from peer mentors. Additionally, it may indicate that peer relationships, where there might be more perceived equality and shared experience, are more impactful in fostering students' sense of mattering compared to traditional hierarchical faculty-student relationships. Peer mentors, who often share similar experiences and challenges with their mentees, might create a more relatable and supportive environment, thereby enhancing the mentees' perception of being valued and significant. This suggests that student mentors who

demonstrate caring behaviors such as understanding, encouragement, and respect can positively impact how much their students feel that they matter. This finding is particularly relevant for educational institutions aiming to enhance student engagement and well-being through mentoring programs. It suggests that training mentors to exhibit caring behaviors could be a crucial component in developing effective mentoring relationships and adding to the overall satisfaction of students. The findings confirm that mentors who invest personally and show a supportive attitude significantly influence students' perceptions of mattering, therefore validating my hypothesis.

The findings align with previous research that emphasizes the role of supportive interpersonal relationships in peer mentorships, which foster a sense of belonging and value among students (France & Finney, 2010). However, it is important to note that caring from faculty mentors still yielded significant results, underscoring their crucial role in fostering feelings of mattering among students. This finding supports the notion that peer mentoring can offer unique benefits that complement the support provided by faculty as also supported by previous research (Stapley et al., 2013). The perception of equality and shared experience in peer relationships (Wu et al., 2022) likely contributes to the increased impact of caring behaviors on students' sense of mattering.

Limitations

Despite the strength of my findings, the study is not without its limitations. One of the limitations is the use of self-report questionnaires, which can introduce response biases such as social desirability bias. Participants might have rated their experiences more positively or negatively based on their perceptions rather than objective criteria. Additionally, the cross-sectional design of the study limits the ability to draw causal inferences from the observed relationships. Longitudinal studies would be beneficial to examine how caring behaviors influence the sense of mattering over time.

Another limitation is the sample size and demographic homogeneity. Although the sample size was large enough for the statistical analyses conducted, the generalizability of the findings might be limited to similar educational contexts, as the demographic is predominantly WEIRD (Western, Educated, Industrialized, Rich, and Democratic). Future

research should aim to include more diverse samples to validate and extend the findings across different populations and settings.

This study also focused exclusively on the variables of caring and mattering without considering other potential factors that might influence these relationships. Variables such as the quality of the mentor-student relationship, the duration and frequency of mentoring interactions, and individual differences among students could provide a more comprehensive understanding of contributing factors to the sense of mattering. Including these factors in future studies could help identify additional mechanisms through which caring behaviors impact students' perceptions of their significance. Furthermore, they might help determine the exact behaviors that foster positive relationships with their students. Additional research should continue to explore the intricate dynamics of peer mentoring relationships, considering additional variables and employing longitudinal designs to better understand the causal pathways.

Practical Implications

Despite the given limitations, the results of this study have important practical implications. Educational institutions can benefit from recognizing the value of peer mentoring programs and the significant role that caring behaviors play in these relationships. Training programs for mentors should emphasize the development of caring attitudes and behaviors, such as empathy, active listening, and encouragement. By doing so, institutions can enhance the effectiveness of their mentoring programs and contribute to the overall well-being and academic success of their students (Guidry, 2016).

Under Ryan and Deci (2000) incorporating principles from self-determination theory, which emphasizes the importance of autonomy, competence, and relatedness, into mentoring programs can further enhance student motivation and well-being. When mentors display caring behaviors, they fulfil students' needs for relatedness, thereby enhancing intrinsic motivation and promoting a positive learning environment. This theoretical framework supports my findings and provides a robust basis for developing mentoring programs that address these fundamental psychological needs.

To integrate SDT into the mentoring program, I propose implementing these

principles within the curriculum as courses and as explicit components of mentor training. In the courses, support for autonomy can be provided by offering students choices in project topics and assignment methods, fostering a sense of control over their education.

Competence can be enhanced through skill development sessions covering study strategies, time management, and critical thinking, as well as through peer collaboration projects that build community.

Mentor training should include modules on SDT principles, teaching mentors to encourage goal setting, provide constructive feedback, and recognize student achievements to enhance competence. Training should also emphasize the importance of building strong, supportive relationships through regular check-ins and informal conversations as well as making sure to create an inclusive environment. By incorporating these strategies into both the potential course and mentor training, the institution could support students' needs for autonomy, competence, and relatedness, thereby enhancing their motivation and well-being (Escandell & Chu, 2023).

Moreover, implementing systems where both peer and faculty mentors complement each other and potentially collaborate could improve mentoring programs. Such integrated approaches would incorporate the unique strengths of both types of mentors, combining perceived equality and shared experiences of peer mentors with the extensive knowledge and guidance provided by faculty mentors. Collaboration between peer and faculty mentors could foster a more holistic support system for students, enhancing both their academic performance and overall well-being.

Another practical implication is the potential for technology to enhance mentoring relationships. Online platforms and apps designed to facilitate communication and support between mentors and students could make mentorship more accessible and consistent, especially in large or remote educational institutions. These tools can help maintain regular contact, track progress, and provide resources that support caring interactions.

Conclusion

In conclusion, this study sheds light on the critical role of caring in fostering feelings of mattering among students, as it is a key component in providing a good learning

environment (Morinaj & Hascher, 2022). The results suggest that caring from mentors, particularly peer mentors, has a significant positive impact on students' perceptions of their importance and value. These findings underscore the importance of supportive interpersonal relationships in educational settings and provide a foundation for future research, while also introducing practical interventions aimed at enhancing student engagement and well-being through effective mentoring practices. By deepening the understanding of how caring influences mattering, the teaching body can develop more targeted and effective strategies to support students in their academic and personal lives.

Moving forward, it is essential for educational institutions to recognize and leverage the unique strengths of both peer and faculty mentors to facilitate students' sense of mattering. Developing comprehensive mentor training programs that emphasize the importance of caring behaviors and creating environments that support meaningful mentor-student interactions is a critical aspect. Future research should continue to explore these dynamics, considering diverse populations and longitudinal impacts, to further refine an understanding and improve mentoring practices.

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Appendix A

Table A1

Model Summary^a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.22 ^b	0.05	0.04	5.39

Note. Mattering = Total score of mattering in students, PeerCaring = Total score of caring in peer mentors, FacultyCaring = Total score of caring in faculty mentors.

a. Dependent Variable: Mattering.

b. Predictors: (Constant), FacultyCaring, PeerCaring.

Table A2

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2	123.09	4.25	0.02 ^b
	Residual	171	28.96		
	Total	173			

Note. Mattering = Total score of mattering in students, PeerCaring = Total score of caring in peer mentors, FacultyCaring = Total score of caring in faculty mentors.

a. Dependent Variable: Mattering.

b. Predictors: (Constant), FacultyCaring, PeerCaring.

Appendix B

Figure B1

General Mattering Scale (Marcus & Rosenberg ,1987)

Please answer the following questions in regards to feelings about the people around you in your Academic Skills class

	Not at all (1)	Slightly (2)	Considerably (3)	A lot (4)
How important are you to others? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do others pay attention to you? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much would you be missed if you went away? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How interested are others in what you have to say? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do other people depend on you? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure B2

Anti-Mattering Scale (Flett et al., 2021)

Please answer the following questions in regards to the people around you in your Academic Skills class

	Not at all (1)	Slightly (2)	Considerably (3)	A lot (4)
How much do you feel like you don't matter? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you been treated in a way that makes you feel like you are insignificant? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To what extent have you been made to feel like you are invisible? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much do you feel like you will never matter to certain people? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How often have you been made to feel by someone that they don't care what you think of what you have	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

to say? (5)

Figure B3

Student-Instructor Rapport Scale-9 (Lammers, 2012)

Reflect upon your personal interaction with and observations of your **faculty mentor** in Academic Skills thus far. Evaluate these questions on a scale from one to five, one being “not at all” and 5 being “very much so”:

	1 = not at all (6)	2 (7)	3 = somewhat (8)	4 (9)	5 = very much so (10)
Your faculty mentor understands you. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your faculty mentor encourages you. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your faculty mentor cares about you. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your faculty mentor respects you. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your faculty mentor treats you fairly. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your faculty
mentor has
earned your
respect. (5)

In general,
you are
satisfied with
your
relationship
with your
faculty
mentor. (6)