How does a Peer Mentor's Socially Congruent Teaching Style Influence Students' In-class Engagement? A Moderated Mediation Analysis.

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PSB3E-BT15: Bachelor Thesis

Group 013

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July 10, 2022

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Abstract

Social congruence has been identified as an important concept in peer-mentoring in university contexts for its positive influence on students' academic achievement. However, the exact nature of the relationship between social congruence and such achievement is not entirely clear. Based on the similarity-attraction paradigm and Self-Determination Theory, liking is proposed as a mediator between social congruence and in-class engagement. Furthermore, this mediation pathway is proposed to be stronger for students high in agreeableness. Therefore, this study aimed to clarify, how social congruence exerts its influence on students' learning processes, by using a cross-sectional survey design. One hundred and one participants aged 18-34 (75 females, 24 males, 2 other) completed the questionnaire. A moderated-mediation analysis was performed, using a bootstrapping method from Andrew Hayes' PROCESS macro for SPSS. No support was found for the proposed moderated-mediation model; however, the results indicate a direct link between social congruence and in-class engagement, which is in line with previous research. Agreeableness moderates the social congruence-liking link, such that students low in agreeableness require more perceived social congruence to achieve a high level of liking. Social congruence can compensate for personality differences and promote a facilitating learning environment for a variety of students. Future research should investigate different mediators and moderators of the relationship between social congruence and in-class engagement, such as respect, trust, or student trait anxiety, as well as develop practical techniques on how peer-mentors can incorporate more socially congruent behaviors into their teaching style.

Keywords: Peer-mentoring, social congruence, in-class engagement, liking, agreeableness

How does a Peer Mentor's Socially Congruent Teaching Style Influence Students' In-class Engagement? A Moderated Mediation Analysis.

Over the past decades, peer-mentoring has gained increasing importance in university curricula (Herrmann-Werner et al., 2017). In line with social-constructivist perspectives on learning (Herrmann-Werner et al., 2017; Kraiger, 2008; Palincsar, 1998), peer-mentors have been found to be effective facilitators of learning processes (Bulte et al., 2007; de Rijdt et al., 2012; Yew & Yong, 2014), that promote positive student outcomes such as better understanding of difficulties, deeper learning, and increased academic performance (Herrmann-Werner et al., 2017), increased self-efficacy, reduced anxiety (Lockspeiser et al., 2008), intrinsic motivation and academic engagement (Schmidt & Moust, 1995). Some authors have argued that this impact might be the result of peer-mentors' greater social congruence (Chng et al., 2011; Lockspeiser et al., 2008; Loda, Erschens, Nikendei, Giel, et al., 2020; Loda, Erschens, Nikendei, Zipfel, et al., 2020; Loda et al., 2019; Schmidt & Moust, 1995; Yew & Yong, 2014). However, little research has investigated the nature of the relationship between social congruence and learning outcomes. Building on findings from the interpersonal relationship literature (Byrne, 1997; Reeve, 2012), some recent educational research suggests that the degree to which students like their teacher is an important predictor of student achievement (Hampton et al., 2019; Hickson et al., 1978; Isen, 2001; Isen et al., 1991; McCroskey & McCain, 1974; Noe, 1986; Sparks et al., 2015). Therefore, the primary aim of this paper is to investigate whether liking mediates the association between social congruence and in-class engagement in the peer-mentoring context. Furthermore, the personality variable agreeableness is associated with greater positive affect for others (Goldberg, 1992; Nikitin & Freund, 2015; Varela et al., 2015) and might exacerbate the predicted relationship between social congruence and liking.

Social congruence has been described as having shared similar social roles (Loda et al., 2019). The concept can further be described as an ability to effectively form rapport and positive relationships (Yew & Yong, 2014) and is thus comprised of certain behavioral components. Some concrete behaviors have been identified that increase social congruence, such as being able to communicate informally and empathically, and to create an open atmosphere (Chng et al., 2011; Schmidt & Moust, 1995; Yew & Yong, 2014). Interpersonal interactions between socially congruent people are characterized by enjoyment, approachability and interest in the other's problems and concerns (Loda, Erschens, Nikendei, Zipfel, et al., 2020; Schmidt & Moust, 1995; Yew & Yong, 2014). Understanding and respecting the other's feelings and opinions appears to be another important hallmark of socially congruent behaviors (Yew & Yong, 2014). Social congruence has been shown to directly affect group functioning (Schmidt & Moust, 1995) and student achievement (Chng et al., 2011).

Regarding these findings, peer-mentors might arguably be more socially congruent to their students than faculty staff. As "student[s] among students" (Schmidt & Moust, 1995, p.709), peer-mentors have gone through the same experiences (Lockspeiser et al., 2008), such as revising for and taking exams, and are able to relate to students' fears, anxieties and other concerns (de Rijdt et al., 2012). Furthermore, peer-mentors are arguably similar to their students in a variety of aspects, such as age, interests and style of communication. Evidence from the literature on similarity in the teaching context points to positive outcomes of having a mentor that is similar to oneself, such as open-mindedness and being more at ease (Good & Good, 1973; Levenson & Unes, 1974), communicative effectiveness and positive relationships (Hickson et al., 1978; Turban et al., 1988), supportive behaviors such as listening and empathizing (Westmaas & Silver, 2006), positive emotional states (Varela et al., 2011; Westmaas & Silver, 2006; Wexley et al., 1980), and higher teacher ratings (Abrami &

Mizener, 1983; Yew & Yong, 2014). According to Byrne (1997) similarity with an interaction partner leads to more interpersonal attraction. Similarity, through its' positive outcomes on interpersonal communication and affect, is perceived as rewarding and should thus lead to more liking (Byrne, 1997). Accordingly, social congruence should lead to more liking for the peer-mentor through perceptions of similarity. Once a positive affective relationship with a teacher, i.e., liking, is established, this should pave the way for effective learning processes and beneficial student outcomes.

Evidence from the interpersonal literature suggests that, the more we like someone, the more influence they have on us in interpersonal communication (McCroskey & McCain, 1974). So, the more students like their peer-mentor, the more receptive they might be to the subject matter and to the peer-mentor's values and opinions. The positive affect resulting from positive student-mentor relationships might also influence cognitive flexibility and openness to information (Isen, 2001), as well as reduce anxiety, which further facilitates conditions for learning (Varela et al., 2011). In fact, students' motivation to learn has been shown to be influenced by supportive relationships between students, their peers and their mentors (Noe, 1986). Relatedness, a concept embedded in Self-Determination Theory (SDT; Ryan & Deci, 2002), offers a framework of how liking affects motivation to engage specifically.

SDT posits that three different basic needs precede proactive behavior: autonomy, competence, and relatedness. Psychological need satisfaction activates students' inner motivational resources, leading to more behavioral engagement (Reeve, 2012). Relatedness in particular is important to the current discussion, as it reflects the need to be cared for and to be connected to the social surroundings (Reeve, 2012). The quality of interpersonal student-teacher interactions can either act as facilitators or inhibitors of motivation, depending on whether or not relatedness is satisfied (Reeve, 2012). The sense of connection, belonging and

support that socially congruent behavior might offer through liking should satisfy these relatedness needs (Chen et al., 2021; Fedesco et al., 2019; Furrer & Skinner, 2003; Hughes & Chen, 2011). Consequently, relatedness need satisfaction should lead to autonomous motivation (Autin et al., 2022) and increased student engagement (Sparks et al., 2016). Furthermore, when students feel cared for and connected to their mentor, this encourages open communication, interaction, and attentiveness (Sparks et al., 2015). Thus, relatedness might serve as the basis for an open learning environment and provide the means for the fulfillment of autonomy and competence needs. For instance, students that feel connected to their peer-mentor might feel more confident asking questions, thereby increasing perceptions of autonomy (Sparks et al., 2015), or might perceive feedback from the mentor as more favorable, thus increasing competence need satisfaction (Reeve, 2012). Regarding these findings, it can be argued that social congruence stimulates liking through perceptions of similarity, thereby satisfying students' need for relatedness through a sense of connection and feeling cared for. This should facilitate students' motivational resources and lead to more behavioral engagement in the learning process.

Lastly, the proposed mediation pathway might be stronger for some students than for others. Personality-level differences might influence students' orientation towards different psychological needs and motivational circumstances (Reeve, 2012) and lead to different behaviors that satisfy these needs (Bratko et al., 2022). The personality variable agreeableness has been proposed as an important aspect of interpersonal interactions, as it has the potential to shape the social environment through its influence on interpersonal interactions (Nikitin & Freund, 2015; Varela et al., 2015). As one of the Big Five personality traits, agreeableness determines the degree to which someone expresses concern and kindness for others (Goldberg, 1992) and agreeable individuals are often more cooperative and harmony-seeking (Varela et al., 2015). Consequently, agreeable students might be more open to, and

cooperative in social interactions with peer-mentors, leading to a more stimulating learning environment. Moreover, agreeableness should serve the need to belong (Nikitin & Freund, 2015), which hints at its connection to the basic need of relatedness. In fact, agreeableness has been found to correlate with a need for relatedness and agreeable individuals might invest more time and effort into social relationships, thereby satisfying their need for relatedness to a greater extend (Bratko et al., 2022). Agreeableness might therefore function as an amplifier of the social congruence-liking link, whereby agreeable students are more receptive to positive social stimuli, such as similarity and supportive behaviors, and also more proactive in pursuing their relatedness need satisfaction. In effect, social congruence should exert its influence on liking more strongly for highly agreeable students.

To summarize, in the peer-mentoring context, a model is predicted in which students' liking for their peer-mentor mediates the relationship between perceived peer-mentor social congruence and student in-class engagement, and that this mediation pathway is moderated by students' level of agreeableness (see Figure 1).

Figure 1

Proposed moderated-mediation model
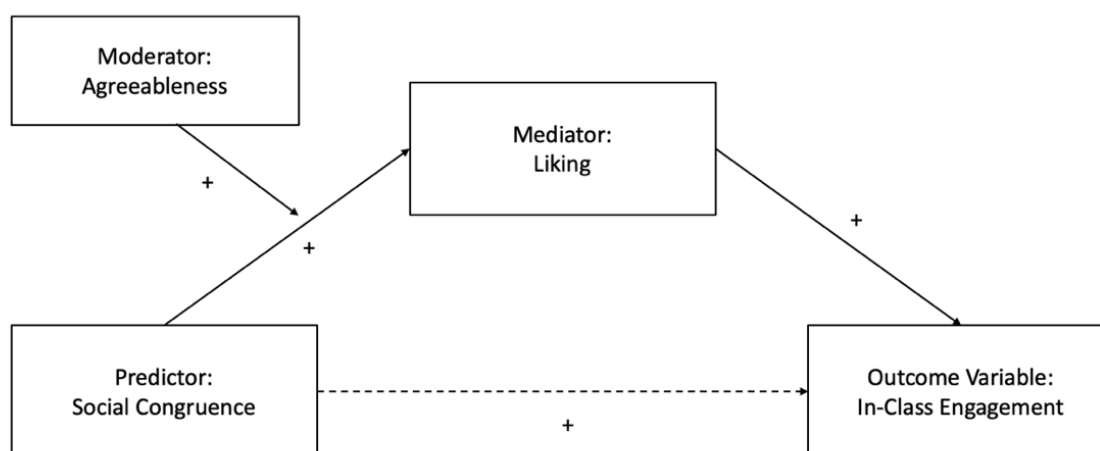
Methods

Participants

One hundred seventy-one psychology students from the University of Groningen, who were enrolled in their first study year participated in this study and 114 participants completed the questionnaire. Participants were excluded if they were not enrolled in the course Academic Skills, did not consent to participate, or did not answer all items. The final sample consisted of 101 participants (female = 75, male = 24, other = 2). Participants were mostly internationals aged 18-34 ($M = 20.7$, $SD = 2.7$). Recruitment of participants relied on convenience sampling. Students were asked to fill out the digital questionnaire, which was hosted on the Qualtrics website, during lessons, or were approached on campus. Furthermore, the questionnaire was distributed through social media channels targeted at first-year students, such as WhatsApp- and Facebook-groups. The participants were not compensated.

Measures

Social Congruence

Social congruence was measured using a subscale originally developed by Schmidt and Moust (1995) and later adapted by Rotgans and Schmidt (2011). This subscale included the items "The peer-mentor showed that he/she liked informal contact with us", "I was not afraid to tell the peer-mentor when I did not understand something", "The peer-mentor appreciated our efforts", and "The peer-mentor showed interest in our personal lives". All items of the social congruence subscale were scored on a 5-point Likert scale (1 = *not true at all*, 5 = *very true for me).* In a previous study (Rotgans & Schmidt, 2011), Hancock's coefficient H for the social congruence subscale was H = .75. In the current sample, Cronbach's alpha was α = .62 and McDonald's omega was Ω = .61.

Agreeableness

Agreeableness was measured with a short version of the Big Five Inventory (BFI-S; Brust et al., 2016). Specifically, the agreeableness subscale included the items "I see myself as someone who… (1) is sometimes rude to others" (reverse scored), (2) "has a forgiving nature", and (3) "is considerate and kind to everyone". These items were also scored on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). In previous research (Brust et al., 2016), Cronbach's alpha for this subscale was $\alpha = .45$, which might, however, not reflect the true reliability of such a short scale (Brust et al., 2016). In the current sample, Cronbach's alpha was $\alpha = .52$ and McDonald's omega was $\Omega = .65$.

Liking

Liking was assessed with a subscale of the Affective Learning Scale (Cayanus & Martin, 2008), used to measure affect for the teacher ($\alpha = .74$). This subscale consisted of four seven-point bipolar items (*good/bad, positive/negative, worthless/ valuable, fair/unfair*), all of which were related to the item "My peer-mentor for this course was…". In the current sample, Cronbach's alpha was $\alpha = .85$ and McDonald's omega was $\Omega = .85$.

In-Class Engagement

Finally, the dependent variable in-class engagement was measured with the participation subscale of the Student Course Engagement Scale (Handelsman et al., 2005). This scale consisted of six items such as "Raising my hand in class", or "Asking questions when I don't understand the instructor". Participants responded on a 5-point Likert scale (1 = *not at all characteristic of me*, 5 = *very characteristic of me*). In previous research, Cronbach's alpha for this scale was $\alpha = .79$ (Handelsman et al., 2005). In the current sample, Cronbach's alpha was $\alpha = .63$ and McDonald's omega was $\Omega = .63$.

Procedure

A proposal of this study was reviewed and approved by the Ethical Committee of Psychology at the University of Groningen. A questionnaire was created and hosted on the

online platform Qualtrics. As part of a larger study, the questionnaire was extensive and consisted of several scales investigating variables, beyond the scope of this paper. In a short pilot study, participants were asked to fill out the questionnaire, look for any mistakes or problems, and give feedback, in order to ensure that the questionnaire runs smoothly. There were no data recorded for the participants of the pilot study. In the questionnaire, participants were informed about the purpose of the study and asked to give their informed consent. After filling in their demographic information, participants were asked to fill out the questionnaire individually and on their own computers or phones. The questionnaire was designed to take less than 20 minutes to fill out. Afterwards, the data were automatically collected through the Qualtrics website.

Statistical Analysis

Statistical analysis was performed in SPSS (Version 27.0.1.0). To investigate the moderated-mediation model, Andrew Hayes' PROCESS macro for SPSS (Hayes, 2013) was used. This approach allowed for a bootstrap analysis of the moderated-mediation model with bootstrap re-samples of 5000. This method is robust against samples with non-normal distribution of variables, but not against other assumption violations, such as multicollinearity, heteroscedasticity, non-linearity (Agresti, 2018; Hayes, 2013). For this reason, assumption checks were performed, before analyzing the data. The entire moderated-mediation was tested simultaneously using model 7 (Hayes, 2013), with social congruence as the predictor, agreeableness as the moderator, liking as the mediator, and in-class engagement as the outcome variable.

<p align="center">Results</p>

Assumption checks

Investigation of the normal Q-Q-plots (see Figures A1-A4, Appendix A), revealed that the independent variables were non-normally distributed. Other assumption tests (Agresti,

Table 1

Descriptive statistics and nonparametric correlations

	Social Congruence	Agreeableness	Liking	In-Class Engagement
Social congruence	-	.13	.46**	.29**
Agreeableness		-	.19	.21*
Liking			-	.14
In-Class Engagement				-
Mean	16.5	12.6	25.2	18.0
Standard Deviation	2.2	1.8	2.8	2.9

Note. Spearman's rho correlations

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

2018) revealed no notable collinearity between the variables (social congruence: $VIF = 1.33$; agreeableness: $VIF = 1.08$; liking: $VIF = 1.38$), no heteroscedasticity (see Figure B1, Appendix B), and no non-linearity of the relationships between variables (see Figure C1, Appendix C). Consequently, the assumptions important for the bootstrapping analysis were not violated (Hayes, 2013).

Descriptive and correlation analysis

Descriptive statistics and non-parametric correlations are presented in Table 1. Because of the non-normal distribution of the independent variables, a non-parametric correlation analysis was performed. The correlation analyses revealed direct relationships between social congruence and liking ($r_s = .46$, $p < .001$), social congruence and in-class engagement ($r_s = .29$, $p = .003$) and agreeableness and in-class engagement ($r_s = .21$, $p = .03$).

Moderated-mediation analysis

Inconsistent with the general prediction, that the relationship between social congruence and in-class engagement is mediated by liking and moderated by agreeableness,

the index of the moderated mediation of model 7 (i.e., the slope reflecting the relationship between the moderation effect and the indirect effect) was nonsignificant (B = -.01, SE = .02, 95% CI [-0.06, 0.04]). Liking did not mediate the relationship between social congruence and in-class engagement across different levels of agreeableness. Further examination revealed a significant interaction, such that the conditional indirect effects of social congruence on liking revealed significant differences at low (- 1SD; B = .85, SE = .14, 95% CI [0.56, 1.13]) and moderate (Mean; B = .57, SE = .11, 95% CI [0.35, 0.79]), but not at high levels of agreeableness (+ 1SD; B = .29, SE = .16, 95% CI [-0.02, 0.6]). Thus, agreeableness moderated the relationship between social congruence and liking at low and moderate levels of social congruence.

Moderation analysis

Subsequent to the model 7 analysis, to retest the interaction that was found in the moderated-mediation analysis, a model 1 analysis was performed. This analysis yielded

Figure 2

Simple slopes of the moderation
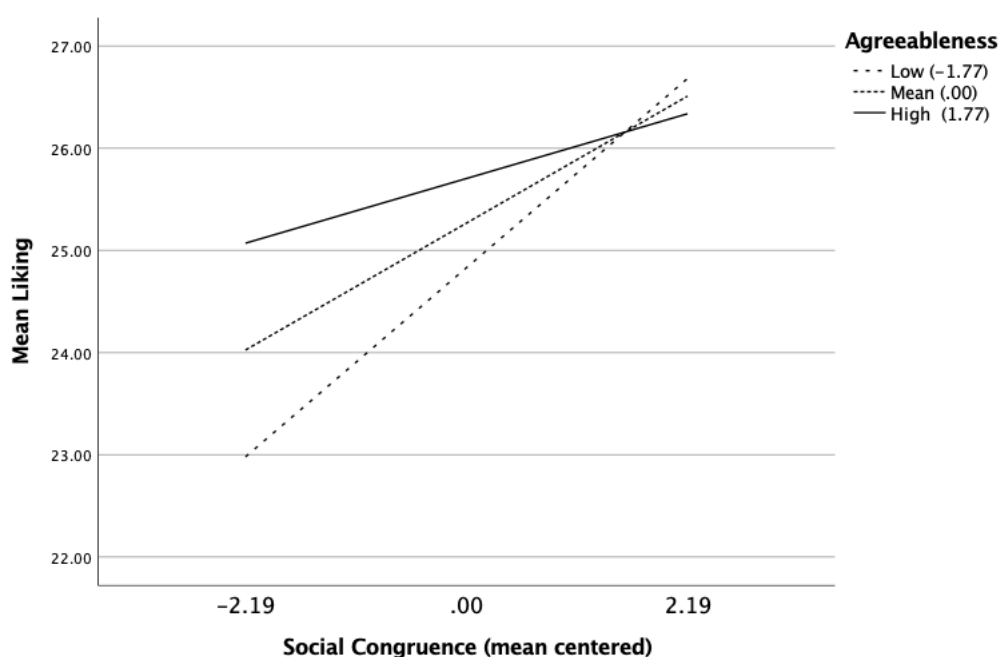
significant results for the interaction effect ($t(100) = -2.72$, $p = .008$, 95% CI [-0.27, -0.04]), lending further support to the prediction that agreeableness moderates the association between social congruence and liking. The interaction effect is displayed in Figure 2.

Mediation analysis

Lastly, mediation effects were investigated post hoc using model 4. The direct effects of social congruence on in-class engagement were significant ($B = .3$, $SE = .15$, 95% CI [0.01, 0.59]). The mediation analysis of the indirect effects of social congruence on in-class engagement through liking were nonsignificant ($B = .05$, $SE = .08$, 95% CI [-0.12, 0.2]), thereby refuting the prediction that liking mediates the relationship between social congruence and in-class engagement. The significant and nonsignificant pathways of the moderated-mediation analysis are displayed in Figure 3.

Figure 3

Significant and nonsignificant pathways
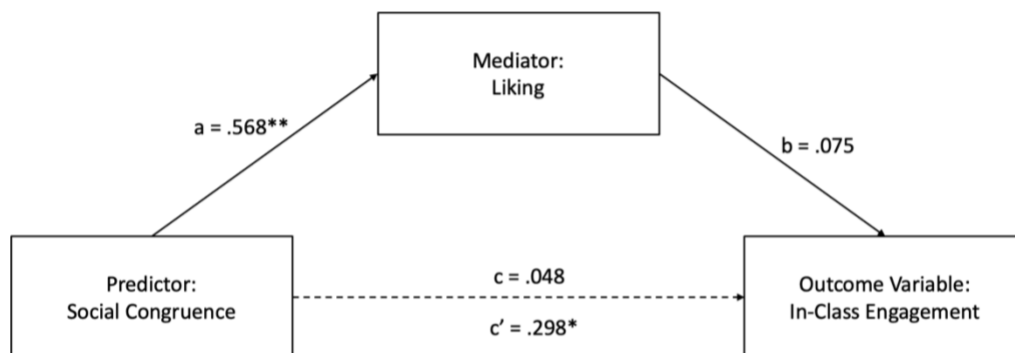
Note. Values are the simple slopes of the effects.

**. Pathway is significant at the 0.01 level (2-tailed)

*. Pathway is significant at the 0.05 level (2-tailed)

Discussion

It was predicted in a psychology classroom environment that a peer-mentors social congruence would lead to more student in-class engagement through liking. Furthermore, it was hypothesized that this mediation pathway would be moderated by agreeableness, such that students high in agreeableness would experience more liking the more socially congruent their peer-mentors are. The data did not support the overall moderated-mediation model. Several possible reasons, either on their own, or working together, could explain the non-significance of the model.

Firstly, the moderator variable agreeableness was not directly related to the mediator variable liking. This is perhaps, because of the low validity of the agreeableness scale. More items might have captured the concept of agreeableness more accurately and might have led to a significant relationship between liking and agreeableness, as would be predicted from previous findings (Bratko et al., 2022; Nikitin & Freund, 2015; Varela et al., 2015). Moreover, liking was not directly related to the outcome variable in-class engagement. In contrast to the expectations from the Self-Determination Theory framework (Reeve, 2012; Ryan & Deci, 2002), liking did not predict behavioral engagement in the classroom context. Liking might be important in the social domain, but not so much in the academic domain. More concretely, students might like their peer-mentor, but they may not like the topic of the course, or the tasks assigned to them. A sub-theory of SDT, Cognitive Evaluation Theory, posits, that external events (e.g., rewards) might inhibit or facilitate autonomy or competence need fulfillment (Reeve, 2012). In this case, the task at hand might not be perceived as rewarding, thereby hindering intrinsic motivation. So, mentor-liking might arguably fulfill the need for relatedness, but not the needs for competence and autonomy, which are essential predecessors of autonomous motivation and proactive behavioral engagement (Ryan & Deci, 2002). Relatedness needs may thus serve as the basis for a healthy and open learning

environment, but may not be sufficient to lead to behavioral engagement. Future research should explore social congruence in interaction with its related concepts, cognitive congruence and expertise (Loda, Erschens, Nikendei, Giel, et al., 2020; Loda, Erschens, Nikendei, Zipfel, et al., 2020; Loda et al., 2019; Schmidt & Moust, 1995), as these concepts may supplement social congruence and complete the requirements for effective behavioral student engagement.

Furthermore, the focus on peer-mentors left group level processes out of consideration, and there is likely more to the learning environment than just the peer-mentor. Although students may like their teacher, they may not like their fellow students, which might have an inhibitory effect on their engagement, and thus, on their learning processes. Peers, like peer-mentors, have been shown to have an influence on engagement in the classroom context (Noe, 1986). However, little research has investigated how social congruence exerts its influence on the group level. This offers fruitful opportunities for research in the future, that could examine student-mentor relationships in the grander scheme of the entire classroom. Finally, the Affective Learning Scale (Cayanus & Martin, 2008) that was used to measure liking might not have accurately captured the concept, and thus may not sufficiently predict the fulfillment of the need for relatedness, lending a possible explanation to the missing link between liking and in-class engagement.

Arguably the most important result of the analysis is the moderation effect. With highly socially congruent peer-mentors, students high in agreeableness did not experience more liking than students low in agreeableness. When social congruence was high, liking was generally high, regardless of the students' level of agreeableness. This finding reemphasizes the previously hypothesized general relationship between social congruence and interpersonal attraction (Byrne, 1997). However, at low and moderate levels of peer-mentors social congruence, differences in agreeableness were related to different degrees of liking, with low-

agreeableness students liking their peer-mentors less. Highly agreeable students are arguably more receptive to perceptions of similarity and liking (Bratko et al., 2022; Sparks et al., 2016), and might thus have their relatedness needs fulfilled more easily, even at low levels of perceived social congruence. Students with lower levels of agreeableness, on the other hand, might require more perceived social congruence to like their peer-mentor in a similar manner. This result revealed insights into the role of social congruence as an important component of the social environment in classrooms. Social congruence appears to influence the learning environment in such a way that it could compensate for students' personality differences. Students who would normally not engage and cooperate with their peer-mentors as much, will reach a similar level of social engagement as other students who have more agreeable dispositions. In this case, students low in agreeableness were able to profit from having socially congruent peer-mentors.

This finding is important in several ways. Firstly, it raises the question of what other personality differences might interact with social congruence. For instance, student trait anxiety might be compensated for by social congruence. Students who are more prone to feeling anxious in the academic context might be more at ease with a socially congruent peer-mentor (Lockspeiser et al., 2008). That way, peer-mentors could alleviate the students' worries and concerns and facilitate self-efficacy, motivation and engagement through their socially congruent behavior. Further research should thus explore other personality variables that could interact with social congruence in a similar way as agreeableness. Secondly, this finding reemphasizes the importance of social congruence and offers practical implications for teaching curricula. Peer-mentors should actively try to incorporate socially congruent behaviors into their teaching style in order to create an optimal learning environment for all students. Varela et al. (2015) argue that impression management can be an effective tool to shape the learning environment. Impression management that is characterized by social

congruence might include behaviors such as open and informal communication, showing interest for students' concerns and interests, and self-disclosure. It is important, however, that teachers do not sacrifice their authenticity. Socially congruent impression management may work for peer-mentors, because they share similar social roles with their students, but not for faculty mentors, who may be more distant to their students interpersonally (Pomeroy, 1999). Applied research could possibly develop techniques of impression management that are targeted at increasing social congruence.

Lastly, although the mediation pathway was nonsignificant, social congruence was directly related to in-class engagement. This is in line with previous research (Chng et al., 2011; Loda, Erschens, Nikendei, Giel, et al., 2020; Schmidt & Moust, 1995), and reinforces the importance of social congruence in the university classroom context. Whereas previous research focused on peer-mentoring in the medical context (Chng et al., 2011; Herrmann-Werner et al., 2017; Lockspeiser et al., 2008; Loda et al., 2019; Schmidt & Moust, 1995), this study extended the findings on social congruence to a sample from the psychology classroom. The data lent support to the importance of social congruence in university classrooms, especially in peer-mentoring curricula and across academic disciplines. Even though liking was not identified as a mediator, the concept may still be an important element of the learning environment. Social needs are fundamental to autonomous motivation (Reeve, 2012; Ryan & Deci, 2002; Sparks et al., 2015, 2016), and social congruence seems to serve these needs. Investigating other possible mediators of the link between social congruence and in-class engagement, for instance, respect, trust, or openness of communication, might shed light on the exact nature of the relationship.

The findings that were discussed hitherto, should be taken with careful consideration of several limitations. Firstly, despite relying on convenience sampling, the sample size was rather small, which diminishes the conclusiveness of the results. Replications with larger

samples should be conducted in the future, to increase the validity of the findings. Secondly, due to the extensiveness of the questionnaire, participants might have experienced fatigue or lost interest while answering the items. After eliminating these participants, the sample size decreased substantially. Moreover, scales had to be kept as short as possible, to limit the duration of the questionnaire, which led to losses in validity. For instance, the agreeableness scale consisted of only three items and might have offered more explanatory power, had it been more extensive. Similarly, this applies to the Affective Learning Scale (Cayanus & Martin, 2008). Furthermore, there might have been ceiling effects as a result of social desirability for the measurements of agreeableness, liking, and in-class engagement. Participants may have answered in a manner that portraits themselves as agreeable, sociable, and conscientious, thus skewing the results. Lastly, the cross-sectional design of this study allows only for limited inferences about the exact nature of the findings. Longitudinal or experimental designs that investigate social congruence in the peer-mentoring context might reinforce the validity of the findings.

In conclusion, social congruence was found to be directly related to in-class engagement, suggesting that it is an important concept in university curricula. This finding supported previous research and extended the evidence to the psychology context. Although social congruence was directly related to liking, liking did not mediate the pathway to in-class engagement, but is nonetheless considered an essential element of the learning environment. Agreeableness moderated the social congruence-liking link and social congruence can compensate for engagement deficits resulting from personality differences. Peer-mentors can incorporate socially congruent behaviors into their teaching styles to create an open and stimulating learning environment.

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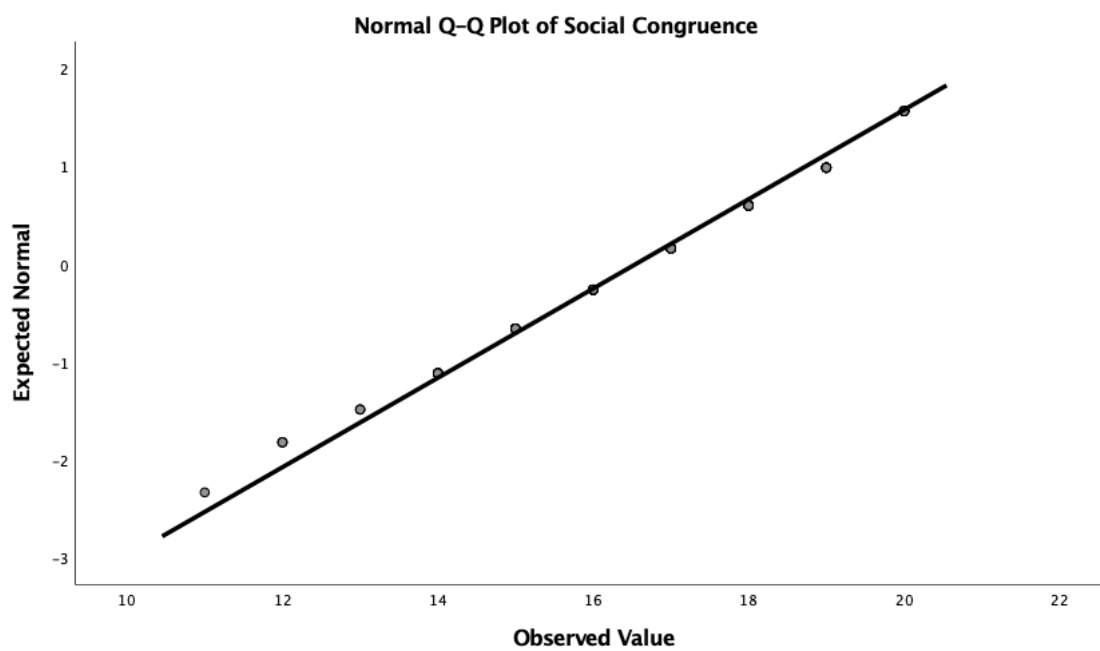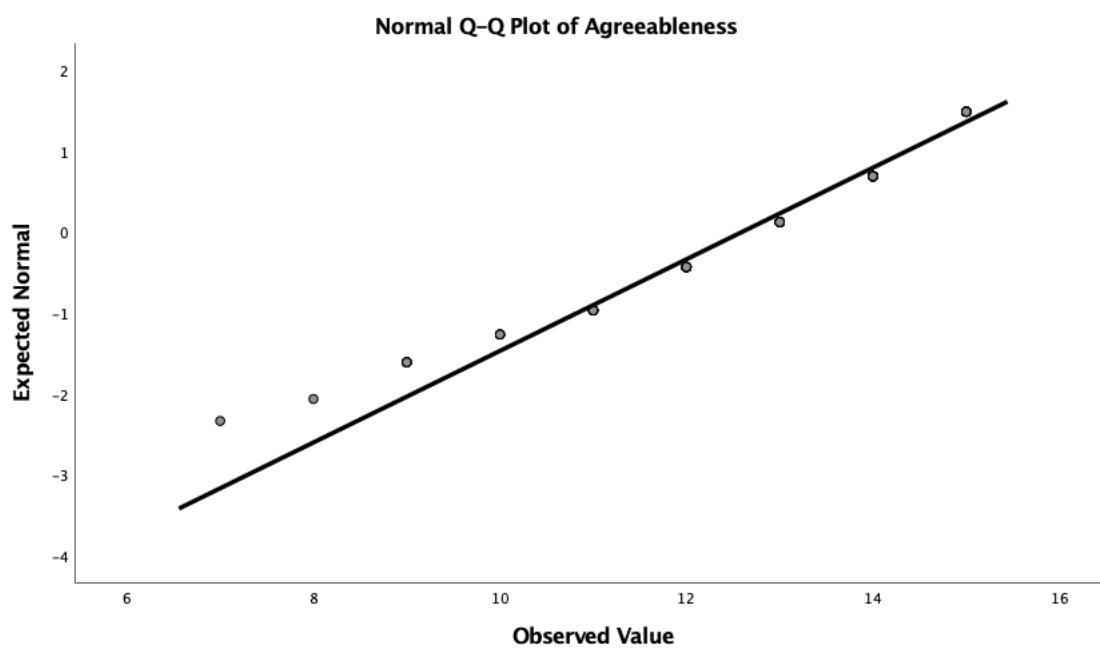
Appendix A

Figure A1

Normal Q–Q Plot of Social Congruence

Figure A2

Normal Q–Q Plot of Agreeableness

Figure A3

Normal Q–Q Plot of Liking

Figure A4

Normal Q–Q Plot of In-Class Engagement

Appendix B

Figure B1

Scatterplot
Dependent Variable: In-Class Engagement

Appendix C

Figure C1