

The Role of Emotion Regulation and Teacher and School-Based Practices on Teacher-Student Relationships

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Abstract—This study examined teacher and school-based factors that support teacher-student relationships. This study addresses the problems associated with the development of positive teacher-student relationships in the PK-12 school systems, which is particularly important given the significant role that teacher-student relationships play regarding student engagement and success. Through a mixed methods triangulation design-convergence model, the researchers used Multiple Linear Regression (MLR) and open-ended survey questions and interviews. Ninety PK-12 teachers in the United States completed an emotion regulation and teacher-student relationship survey. Associations were explored between teachers' grade level taught, years of teaching experience, age, emotion regulation and perceived relationships with students. Four teachers volunteered to engage in an interview. In the final model, teachers' grade level taught, years of teaching (inverse), emotion regulation expressive suppression, and closeness to students (inverse) accounted for 32.4% variance in their relationship conflict with students. In the final model, teachers' grade level taught (inverse) and emotion regulation expressive suppression (inverse) accounted for 29.5% variance in their relationship closeness with students. Emotion-focused coping strategies are discussed in line with these results. Additionally, open-ended survey responses and interviews revealed the importance of problem-focused coping strategies. Implications for teacher and school-based practices are discussed.

Keywords—teacher-student, relationships, emotion regulation, emotion and problem focused coping strategies

I. INTRODUCTION

The purpose of this current study was to identify factors associated with the development of positive teacher-student relationships by focusing directly on the role of emotion regulation, as well as overall teacher and school-based practices. The quality of teacher-student relationships reflects the cornerstone for other dynamics such as teacher burnout, student readiness, and classroom management [1]. Additionally, positive teacher-student relationships [2–4] and the quality of teachers' interactions with students, including their affective,

prosocial and social emotional support of students [5, 6] have been linked to a broad range of positive student outcomes such as student belonging, engagement, social skills, and academic motivation and achievement.

There are a variety of ways that teachers can support teacher-student relationships such as getting to know their students' interests and aspirations, seeking student ideas to be incorporated into the classroom environment, offering specific and efficient feedback to students, and creating an environment where students feel they can ask questions without judgment [1].

School-based models have been established such as “The Equity-Explicit Establish-Maintain-Restore Program” which has demonstrated positive impact on improving teacher-student relationships [7]. The “establish” phase of the model reflects teachers' proactive attempts to establish student trust by demonstrating respect and providing opportunities for student voice. The “maintain” phase reflects a high level of positive interactions with students through a model of empathy when addressing challenging student behaviors. The “restore” phase reflects four strategies: “letting go, taking ownership, mutual problem-solving, and expressing care” [7].

Given the importance of teachers' relationships with students and their behaviors toward that end, it is critical to understand and address the processes necessary to help teachers develop positive relationships with students [8]. Emotion regulation reflects an established construct that impacts relational dynamics [9] and, as such, it warrants further investigation. Emotion regulation has been separated into two constructs: cognitive reappraisal, or antecedent focused, and expressive suppression, or response focused. Cognitive reappraisal reflects proactively changing one's cognitions to turn an emotionally charged experience into a non-emotional experience. Expressive suppression is a modulating response where one suppresses their emotional expression [9, 10].

Teachers' emotion regulation has been the focus of recent research by exploring the connection to teacher burnout [11, 12], the emotional processes, goals and strategies utilized by teachers in the classroom [13–15], and the relationships between teachers' emotion

regulation and corresponding antecedents and consequences [16].

A theoretical model was explored to account for teacher burnout and, in this model, teachers' appraisals, periodic emotions that were unpleasant, coping strategies, and emotion regulation were included. In this study, teachers who suppressed emotions were found to report higher levels of burnout [11]. Similar conclusions were found in a study that explored teachers' emotions from the perspective of their students [13]. Researchers also explored the type of emotion regulation strategies that teachers' used and why those strategies were used. The researchers' findings indicated that the teachers in the study were more likely to use the strategy of suppression for the purpose of decreasing negative emotions [14]. In summary, research points to the adverse effects of the suppression of emotions among teachers, while also finding that teachers are more likely to use suppression to reduce negative emotions in the classroom.

A phenomenological self-study was conducted to explore those precursors to when a teacher experienced emotions, as well as the responses to those influences and possible options besides regulating emotions [15]. A practicing teacher recorded daily in the moment reflections of their emotional experiences through a 14-week period. The researchers conclude that the triggers associated with negative teacher emotions should be considered more important than the act of regulating them. Reflections upon these triggers led to meaningful and personal insights within the teacher experiencing them, as well as alternative approaches toward addressing the emotions.

Most recently, a meta-analysis was conducted to assess relationships between teacher's emotion regulation with seven factors as follows: "1) work-role interaction expectations, 2) school context such as emotional support, collegial trust, 3) the classroom context such as student-teacher relationships, 4) personal characteristics such as personality and self-efficacy, 5) motivation such as intrinsic and extrinsic, and turnover intentions, 6) well being such as burnout and physical health, and 7) teaching effectiveness such as instructional strategies and quality" [16]. The results of this meta-analysis revealed positive relationships between work-role interaction expectations such as emotional display rules and antecedent and response-focused emotion regulation strategies. Further, teachers' perceptions of a more supportive school context were positively related to antecedent-focused strategies and negatively related to response-focused strategies. Additionally, pre-cursors that related to the use of antecedent-focused emotion regulation strategies were teachers with more engaged students and less disruptive classrooms, as well as teachers who possessed specific personal characteristics such as positive emotionality, psychological resilience, and self-efficacy. Utilizing more response-focused emotion regulation strategies trended toward less effective teaching, and more antecedent-focused strategies related to greater well-being [16].

II. THE CURRENT STUDY

These recent findings exemplify the important role of understanding teachers' emotion regulation strategies in the classroom in areas such as job satisfaction, teacher burnout, expressions of emotions in the classroom, and the connection to a broad range of school and personal contexts. This current study further explores teachers' emotion regulation in the specific context of teacher-student relationships, while also gaining teachers' perspectives regarding the school and teacher-based practices necessary to develop those positive relationships.

A. Hypothesis and Research Questions

This study was guided by the hypothesis "There will be no significant relationships between PK-12 school teachers' years of teaching experience, age, grade levels taught, emotion regulation, and teachers' perceived relationships with their students". The research question that guided the qualitative component of the study was "What teacher and school-based practices do PK-12 school teachers describe that would support teachers' ability to establish positive relationships with students?"

B. Methodology

The current study utilized a mixed methods triangulation design-convergence model with quantitative and qualitative data collected to comprehensively address the purpose of the study regarding improving positive teacher-student relationships. To explore the hypothesis, Multiple Linear Regression (MLR) was utilized to determine the strongest predictors of teacher-student relationship conflict and closeness among the following variables: teacher age, years of teaching experience, grade level taught, emotion regulation cognitive appraisal, emotion regulation expressive suppression. To explore the research question, open-ended survey items were included as follows: a) If you believe that "developing a positive relationship with each of your students is important", what are some things that you do that further support your ability to do so? and b) If you believe that "developing a positive relationship with each of your students" is important, what are some models of practice that do and/or could happen at the school level that further supports your ability to do so?". Follow up interviews focused on the context of developing positive relationships with students whose behaviors they found challenging. Participant responses were entered into Nvivo and coded to determine thematic patterns by both researchers independently. Once the themes were compared, those that overlapped between the researchers were included and labels for the themes identified. Direct anecdotes from all of the open-ended responses in the survey, as well as the interview responses were then aligned to each theme.

For this study, teachers' emotion regulation was defined and measured using the concept of an individual's approach toward regulating their emotions through cognitive reappraisal and expressive suppression [17, 18]. In a study conducted in three general communities in Australia, the authors reported that

“confirmatory factor analyses in each sample demonstrated that the traditional 2-factor model (comprised of cognitive reappraisal and expressive suppression factors) was replicable and an excellent fit to the data. In all samples, ERQ cognitive reappraisal ($\alpha = 0.89-0.90$) and expressive suppression ($\alpha = 0.76-0.80$) scores had acceptable to excellent levels of internal consistency reliability” [19].

A teacher’s relationship with students was defined and measured using the author approved modified short form of a student-teacher relationship scale measuring teachers’ closeness and conflict with students [20]. Due to the modified scale, existing reliability and validity measures are not applicable.

C. The Study Site and Data Collection

The study was conducted in a West Coast United States school district. Upon meeting with the district leadership team to provide specifics about the study, including the survey and the interviews, a coordinator in the district sent an email to all 342 of the PK-12 district teachers with a Uniform Resource Locator (URL) to the informed consent and the survey. There were 90 voluntary teachers (26% response rate) who agreed through the informed consent and were then prompted to complete the survey. There were 23 missing data due to teachers starting the survey but missing the deadline to complete the survey. Upon completing the survey, the teachers were asked through a prompt in the survey, if they wished to participate in an interview. Four teachers volunteered and were prompted to select predetermined dates and times, with the phone number to call included. Survey and phone interview respondents remained anonymous.

D. Sample Demographics

The teachers in the study were 80% female and 20% male, and include the following demographics: 1% Asian, 1% Black or African American, 70% Caucasian, 12% Hispanic or Latino and 16% declined to state. Regarding grade level taught, 34% were high school teachers, 26% were middle school teachers, 37% were elementary school teachers, and 0.03% were teachers on assignment. Years of teaching ranged from 1 to 37 with an average of 17.31 years (SD = 8.44). Regarding teacher ages, 4% were between twenty to twenty-nine, 23% were between thirty to thirty-nine, 30% were between forty to forty-nine, 36% were between fifty to fifty-nine, and 7% were between sixty and beyond. Due to anonymity, no further demographic information is known about the teachers who were interviewed over the phone.

III. RESULTS

A. Teachers’ Emotion-Regulation and Teacher-Student Relationship Descriptive Results

On a scale of 1–7 from “strongly disagree” to “strongly agree”, the descriptive results of the teachers’ emotion regulation yielded more variation in the mean scores associated with emotion regulation expressive suppression than with cognitive reappraisal. Subitems “I

keep my emotions to myself” ($\bar{x} = 4.3$) and “When I am feeling negative emotions, I make sure not to express them” ($\bar{x} = 3.9$) had the highest mean scores associated with expressive suppression. Cognitive reappraisal items ranged from ($\bar{x} = 5.4$ to 5.8).

On a scale of 1–5 from “definitely does not apply” to “definitely applies”, the descriptive results of student-teacher relationships yielded more variation in the mean scores associated with relationship conflict than with closeness. Subitems “Dealing with my students drains my energy” ($\bar{x} = 2.9$) and “When my students are in a bad mood, it affects my mood” ($\bar{x} = 2.6$) had the highest mean scores associated with relationship conflict. Relationship closeness items ranged from ($\bar{x} = 4.3$ to 4.6).

B. Best Predictors of Teacher-Student Relationship Results

To determine the best predictors of teachers’ perceptions of their relationship conflict with students, in the final MLR model, grade level taught, years teaching (inverse), their emotion regulation expressive suppression, and their closeness to students (inverse) significantly predicted relationship conflict scores, $\beta = 21.96$, $t(85) = 3.9$, $p < 0.001$ (Table I). These variables also accounted for 32.4% of the variance in their relationship conflict with students, $R^2 = 0.324$, $F(1, 85) = 10.19$, $p < 0.05$. Shapiro Wilk p -value > 0.05 , therefore it is assumed that, regarding residual errors, the data is normally distributed. There is no multi-collinearity as all of the Variance Inflation Factor (VIF) values are smaller than 2.5. Finally, the power is strong at 0.84.

TABLE I. RELATIONSHIP CONFLICT MULTIPLE LINEAR REGRESSION

	Coeff	SE	t-stat	Lower 10.025 (85)	Upper 10.975 (85)	Stand Coeff	p-value
B	21.955	5.629	3.901	10.764	33.147	0.000	0.000
Grade Level	1.303	0.560	2.327	0.190	2.417	0.248	0.022
Years Taught	-0.111	0.055	-2.028	-0.221	-0.002	-0.195	0.046
ER Exp Supp	0.192	0.096	1.998	0.000	0.3832	0.193	0.049
Rel CI	-0.277	0.133	-2.082	-0.542	-0.012	-0.222	0.040

Note: ER Exp Supp = Emotion Regulation Expressive Suppression; Rel CI = Relationship Closeness.

To determine the best predictors of teachers’ perceptions of their relationship closeness with students, in the final MLR model, grade level taught (inverse) and their emotion regulation expressive suppression (inverse) significantly predicted relationship closeness scores, $\beta = 37.96$, $t(87) = 29.79$, $p < 0.001$ (Table II). These previously named variables also accounted for 29.5% of the variance in their relationship closeness with students, $R^2 = 0.295$, $F(1, 87) = 18.24$, $p < 0.05$. Shapiro Wilk p -value < 0.05 , therefore it is assumed that, regarding residual errors, the data is not normally distributed which will be discussed further in the limitations section. There is no multi-collinearity as all of the VIF values are smaller than 2.5. Finally, the power is strong at 0.91.

TABLE II. RELATIONSHIP CLOSENESS MULTIPLE LINEAR REGRESSION

	Coeff	SE	t-stat	Lower 10.025 (85)	Upper 10.975 (85)	Stand Coeff	p-value
B	37.961	1.274	29.793	35.428	40.493	0.000	0.000
Grade Level	-1.949	0.379	-5.141	-2.702	-1.195	-0.463	0.000
ER Exp Supp	-0.211	0.072	-2.940	-0.354	-0.068	-0.265	0.004

Note: ER Exp Supp = Emotion Regulation Expressive Suppression.

C. Triangulation Design-Convergence Model Results

Quantitative and qualitative data were explored together as a means of interpreting results and providing a comprehensive approach toward school- and teacher-based recommendations to improve teacher-student relationships. Emotion- and problem-focused constructs emerged from the quantitative and qualitative data and framed the interpretation and implications of the results.

1) Emotion-focused coping strategies

“Emotion-focused coping aims to reduce unpleasant emotions through dealing with the emotion itself, such as crying out loud or expressing emotions to someone” [11]. This coping strategy is important considering the finding that Emotion Regulation Expressive Suppression significantly correlated with relationship conflict and inversely to relationship closeness. Further analysis of Expressive Suppression subitems revealed that teachers in this study scored highest on suppressing negative emotions and keeping their emotions to themselves. As a teacher in the study indicated “I try to make sure my negative emotions do not show to the students (if I am frustrated or angry) but calmly state what students need to do and what I expect. I rarely, (unless it is an emergency situation), say things like “Stop” or “No” or “Don’t do that”. These statements do not teach students what they are supposed to do. I also feel it reduces the number of negatives that students “hear” when a reprimand is phrased in such a way that you tell students what is expected of them.”

2) Problem-focused coping strategies

“Problem-focused coping aims to deal with the problem rather than the emotions, such as talking to the person who made one angry or resolving the issues that made one upset” [11]. The following problem-focused coping themes emerged from the qualitative data in response to teacher- and school-based practices that promote positive teacher-student relationships.

Theme one is “getting to know students proactively” with sub themes of “letting students get to know the teacher through honesty, authenticity, approachability, and mutual respect” and “looking for positives in and specific details about students”. Some anecdotes from teachers reflect this theme such as “each Friday I end class about 10 minutes early so that we can have a chance to share with each other the plans for the weekend and anything exciting that took place during the week. I greet each student at the door on almost a daily basis. Sometimes I’ll take a student outside just to have some one on one time with them and a brief conversation to let them know what I’ve been seeing in class and give them

some positive words” and “It is all about making the time. I stand at the door each class period and welcome them into the classroom or say good morning. Individual validation each class period is a simple way to make each student feel like they matter. In the classroom, I try to remember specific details about their lives that they have shared with me: How did the track meet go? How did the first day of your new job go? How do you think you did on that Chem test? Checking back in after they have shared shows them that I am not only listening to what they say, but also making individual students feel special”.

Theme two is “seeking out support and resources and making support and resources readily available”. One teacher said “I seek advice from fellow teachers, my principal, and the school counselor when I’m struggling to develop a positive relationship. Students that come to me with hurts and fears in place take time for me to create a safe, trusting relationship. Talking with other professionals about how best to reach the child benefits me in my desire to create a positive relationship with him/her”, and another teacher indicated “things that support my ability to connect with all of my students include checking with their previous teachers to get background information so I can better understand my students’ needs; seeking support from parents, administration, and colleagues when problem behaviors arise; and keeping myself emotionally healthy. I continually reflect on and look for ways to improve my classroom management and my classroom atmosphere by reading, talking with colleagues, and viewing relevant professional development video programs”.

Theme three is “understanding student intentions behind their behaviors”. A teacher stated that “a possible problem that might arise from students unfamiliar with classroom practice, social-emotional expectations, might test the limits of a situation to determine if the environment is, in fact safe. Testing the water is a natural function of development and personal acclamation to life, therefore, create teachable moments in class by a social review of expectations, show social stories, videos or have talks that directly address those areas of concern. Directly have situations that require a solution developed by the students”.

IV. DISCUSSION

The purpose of this study was to learn more about the processes necessary for teachers to develop positive relationships with their students looking at such factors as teachers’ emotion regulation and teacher and school-based practices. Teachers’ grade level taught, years of teaching experience (inverse relationship), emotion regulation expressive suppression and relationship closeness (inverse relationship) significantly predicted teachers’ relationship conflict. Grade level taught and emotion regulation expressive suppression are inversely related to relationship closeness.

In this study, expressive suppression is positively related to relationship conflict and inversely related to closeness. Scores were highest in expressive suppression subitems “I keep my emotions to myself” and “When I

am feeling negative emotions, I make sure not to express them". Teachers are faced with situations that evoke negative emotions regularly. Without the ability to express those emotions constructively, they might be more vulnerable to further conflict with students. Furthermore, awareness of these emotional experiences is critical because one challenging experience alone could be draining [11]. Emotion focused coping strategies as well as the primary theme of problem focused coping strategies that emerged from the data frames the recommendations below.

A. Recommendations for Practice

Given the adverse role of expressive suppression on teachers' relationships with students identified in this study, teachers need to be given the opportunity to have a constructive space to safely express negative emotions outside of the classroom context, particularly when experiencing student conflict. For teachers to admit they are struggling with specific student behaviors and express their negative emotions that arise, school leadership must proactively create a school climate that presents a safe space for such expression. More specifically, teachers need the opportunity to authentically experience the emotion. Rather than controlling a teacher's emotions, the origins, triggers, and experiences of teacher emotions are critically important for a teacher's personal transformation [15]. Incorporating journal reflections when faced with negative emotions and an opportunity to discuss in a safe space with a coach and/or mentor could be an important step toward understanding their students better and developing positive relationships with students particularly after facing challenging situations.

Teacher coaches/mentors could be available through technological modalities that allow for videoconferencing so that teachers have a safe and constructive place to express negative emotions when they arise. During these video conferences that could be scheduled throughout the day, feedback on problem focused coping strategies, detailed in the next section, could be provided.

Additionally, a specific technological learning management system designed to support journal reflections and interactive feedback between the teacher coaches/mentors and the teacher mentee would facilitate teacher awareness of negative emotions. Implementing journal reflections that focus on teachers' experience of negative emotions would facilitate their awareness of the antecedents associated with their negative emotions, why such events are eliciting negative emotions, and alternative approaches toward experiencing those emotions which was recommended by Taylor and Newberry [15]. The interactive nature of the learning platform would allow for ongoing reflections, feedback, awareness of themes associated with negative emotions surrounding student conflict, and, ultimately, personal, and professional growth. Further, with requisite permissions, videotaped sessions of teachers and students could be reviewed through this technological learning management system and explored with the specific focus on reflecting upon awareness of teachers' negative emotions during times of student conflict.

In addition, teacher preparation programs inclusive of content that addresses teachers' emotion regulation and the impact of suppressing emotions on teacher-student relationships should be considered. Similarly, professional development opportunities designed to support teacher practitioners around this issue are suggested.

This mixed methods study reveals the importance of incorporating emotion-focused coping strategies with problem-focused ones. Teachers were asked to discuss the ways in which they developed positive relationships with students, including students whose behaviors they found particularly challenging, as well as how schools supported or could support positive relationships with students. The results led to three problem focused coping strategy themes that frame the additional recommendations for practice articulated next.

1) Getting to know students proactively

For teachers to understand students' behaviors and intentions, teachers need to get to know students in deeper ways beyond those behaviors presented in academic contexts. The academic classroom context presents many stimuli that might increase students' challenging behaviors that would otherwise not present themselves in non-academic situations. Teachers are more likely to react to students' behaviors in the classroom in a manner that serves to reinforce such behaviors, particularly when they do not have the opportunities to authentically connect with that student outside of the academic context. Such genuine interactions with students can serve to counterbalance those experiences that have potentially reinforced teachers' negative perceptions of students in the classroom. Therefore, it is imperative for teachers to have the space and time to interact with all students one on one in both academic and non-academic situations and settings. Secondary teachers have less time in general to spend with each of their students, reflected in this study where higher-grade levels taught positively correlated with teachers' relationship conflict and negatively correlated with relationship closeness.

In addition to getting to know the whole child, it stands to reason that teachers are more likely to be able to resolve any issues or problems they might directly have with students by having the opportunity to interact with them outside of the academic context. In this study, teachers recommended that "non-academic" and "non-classroom" events be available to create a "shared experience" between the teachers and students that would "build depth to the shared relationships". Further recommendations were to add specific "days just for getting to know one another" and to have opportunities where teachers could spend one on one time with students. For example, a teacher recommended that there be longer breaks in order "to meet with students out around campus". Another teacher said it would be helpful to have "more time with my homeroom class, so that I can get to know them. Less switching of students". Secondary administrators might consider an infrastructure that allows teachers to spend more time with their students,

for example, through co-teaching models across subject areas while using a student cohort approach.

2) *Seeking out support and resources, and making support and resources readily available*

School-based practices were identified by the teachers in this study that either were or should be implemented that would offer the opportunity for teachers to more readily seek out and receive support when experiencing challenges in the classroom. Teachers discussed the need for consistent availability of coaches and that it would be beneficial to have “effective skills modeled by the leadership team, coaching us in real time”, and “in class coaching, to have another adult in the room to coach me through the behavior. Sometimes a different set of eyes”. Teachers also mentioned that videotaping classroom practice and receiving mentoring from other colleagues offering their expertise would afford opportunities to be revitalized. Teachers also mentioned that, oftentimes, lead teachers are offered professional development and what they learn does not always trickle down to all teachers. They indicated they would like to be recharged by being paid for professional development during weekends/summers. Previous research has demonstrated the positive effect on teachers’ emotional support of students when receiving weekly mentoring support as well as training on social emotional curriculum [21]. One proactive policy would be to pair a more experienced teacher who scores low in relationship conflict to coach a less experienced teacher who scores high in relationship conflict, particularly since years of teaching experience inversely related to relationship conflict in this current study.

3) *Understanding student behavior and the intentions behind them*

A better understanding of students’ behaviors and the reasons behind their behavior can impact the way teachers positively relate to their students [11]. In this current study, teacher insights reflected the importance of understanding the intentions behind the behavior and the student beyond the behavior, as one teacher noted the significance of having the “ability to see the whole child and not the behavior”, and another of having “a feeling for where these kids are coming from”. Teachers in this study recommended “special education professional development like behavior monitoring and how to track behavior in terms of antecedents and triggers” and having a “background knowledge and how a special educator has to analyze the behavior that is observed and get to the root of the issue”. The infrastructure of the school day should be established for teachers to spend non-academic time with students to allow relational spaces for teachers to understand their students better, as well as the reasons behind their students’ behaviors. This is particularly important for secondary teachers as they have limited time with each of their students. The learnings from these relational opportunities could also be discussed during the coach/mentor and teacher mentee interactive sessions.

Further, school administration might consider special education professional development opportunities related to the antecedents of and meanings behind student

behavior, as well as co-teaching models with special education teachers. Opportunities for teachers to consult with school counselors to learn about the “world from the child’s perspective” might also prove helpful.

V. CONCLUSION

This study addresses the problem of teachers’ relationship development with students and teachers’ needs toward that end. Previous studies have linked emotion regulation to such constructs as classroom management, classroom dynamics, and teacher burnout, but more studies are needed that explore teachers’ emotion regulation directly with teacher-student relationships. This work is needed given the critical role of teacher-student relationships on student success and engagement. Chang’s research links teachers’ emotion regulation to teacher burnout and underscores the importance of teacher awareness regarding the effect of even a singular emotionally charged experience [11]. Other studies have revealed that teachers tend to use the suppression of negative emotions as a predominate strategy in the classroom [13, 14] and that this suppression is not an effective strategy [14].

This current study builds upon those studies through a mixed methods triangulation design-convergence model which revealed the role of suppressing teachers’ negative emotions directly linked to teachers’ relationships with students, particularly student conflict, like Chang’s findings [11]. This current study also found that teachers tend to engage in the suppression of negative emotions more so than positive emotions like the findings in the study conducted by Taxer and Gross [14]. The results of this mixed methods study point to the need to develop strategies that allow for both the safe expression of negative emotions with the goal of self-reflection and personal growth, while simultaneously offering specific problem focused strategies, suggesting that both approaches should be incorporated in the classroom, school, professional development, and teacher education.

A. *Limitations and Trustworthiness*

The limitations of this study are that the sample may not reflect the target population within the district because teachers volunteered to participate in the study. Further, teacher fatigue when completing the survey was evident by the lack of completion of 23 surveys. Also, teachers’ relationships with students were measured in a manner that reflects teachers’ self-reported beliefs about their relationships with their students collectively. As such, the study does not capture teacher relationships with individual students, students’ perspectives and experiences, and observing teacher-student interactions in the classroom. Also, the residual errors of the multiple linear regression were not normally distributed for relationship closeness. The sample scored relatively high in relationship closeness with a little variance which could be attributed to the fact that teachers volunteered to participate in this study, which might reflect predisposed beliefs about the importance of teacher student relationships. It is recommended that for future studies,

the survey be distributed as part of a professional development day and all teachers are asked to respond so that responses are representative of the population. Despite the volunteer sample, relationship conflict, and expressive suppression responses were varied and yielded important results.

To address the trustworthiness of the qualitative data, the interviews and open-ended survey results on teacher and school-based practices that promote positive teacher-student relationships were analyzed independently by each researcher, and only overlapping trends among all data were identified and coded. Emerging themes of teacher and school-based practices based on the open-ended survey and interview data paralleled one another which led to the establishment of three distinct problem-based coping strategy themes.

B. Suggestions for Future Research

The authors suggest the incorporation of interventions to support teachers' constructive expressions of negative emotions along with the implementation of problem-focused coping school-based practices described in the recommendations and conclusion section. These interventions should be evaluated for effectiveness using an experimental or quasi-experimental design with teachers' relationships with students as the primary measurement for impact and measured in multiple ways using triangulation.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Each author contributed equally to the conceptualization of the study idea. Schnorr located the research site and established the collaborative process at that site. Each author contributed equally to writing the literature review. Schnorr and Franklin-Guy analyzed the qualitative data independently. All authors approved the final article submission.

REFERENCES

[1] A. Owusu-Ansah and L. Kyei-Blankson, "Going back to the basics: Demonstrating care, connectedness, and a pedagogy of relationship in education," *World Journal of Education*, vol. 6, no. 3, pp. 1–9, March 2016.

[2] D. Quinn, "Longitudinal and contextual associations between teacher-student relationships and student engagement: A systematic review," *Review of Educational Research*, vol. 87, no. 2, pp. 345–387, 2017.

[3] C. Valiente, J. H. Parker, J. Swanson, *et al.*, "Early elementary student-teacher relationship trajectories predict girls' math and boys' reading achievement," *Early Childhood Research Quarterly*, vol. 49, pp. 109–121, 2019.

[4] M. P. McCormick, E. E. O'Connor, E. Cappella, and S. G. McClowry, "Teacher-child relationships and academic achievement: A multilevel propensity score model approach," *Journal of School Psychology*, vol. 51, no. 5, pp. 611–624, October 2013.

[5] J. LoCasale-Crouch, F. Jamil, R. C. Pianta, *et al.*, "Observed quality and consistency of fifth graders' teacher-student interactions: Associations with feelings, engagement, and performance in school," *Sage Open*, vol. 8, no. 3, pp. 1–11, August 2018.

[6] S. Prewett, D. Bergin, and F. Huang, "Student and teacher perceptions on student-teacher relationship quality: A middle school perspective," *School Psychology International*, vol. 40, no. 1, pp. 66–87, November 2018.

[7] M. T. Duong, L. M. Gaias, E. Brown, *et al.*, "A cluster randomized pilot trial of the equity-explicit establish-maintain-restore program among high school teachers and students," *School Mental Health*, vol. 14, pp. 951–966, 2022.

[8] J. N. Hughes, "Teacher-student relationships and school adjustment: Progress and remaining challenges," *Attachment & Human Development*, vol. 14, no. 3, pp. 319–327, April 2012.

[9] N. Eisenberg, T. Spinrad, and C. L. Smith, "Emotion-related regulation: Its conceptualization, relations to social functioning, and socialization," in *The Regulation of Emotion*, P. Philippot, and R. Feldman, Eds., New York: Psychology Press, 2004, pp. 281–311.

[10] J. J. Gross and O. P. John, "Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being," *Journal of Personality and Social Psychology*, vol. 85, no. 2, pp. 348–362, 2003.

[11] M. L. Chang, "Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehavior: Appraisal, regulation and coping," *Motivation and Emotion*, vol. 37, no. 4, pp. 799–817, January 2013.

[12] S. Lavy and R. Eshet, "Spiral effects of teachers' emotions and emotion regulation strategies: Evidence from a daily diary study," *Teaching and Teacher Education*, vol. 73, pp. 151–161, July 2018.

[13] J. Jiang, M. Vauras, S. Volet, and Y. Wang, "Teachers emotions and emotion regulation strategies: Self- and students' perceptions," *Teaching and Teacher Education*, vol. 54, pp. 22–31, February 2016.

[14] J. L. Taxer and J. J. Gross, "Emotion regulation in teachers: The "why" and "how"," *Teaching and Teacher Education*, vol. 74, pp. 180–189, August 2018.

[15] L. P. Taylor and M. Newberry, "Self-study of a teacher's practices of and experience with emotion regulation: Being and becoming through reflection and engagement," *Studying Teacher Education*, vol. 14, no. 3, pp. 296–307, November 2018.

[16] H. Wang, I. Buric, M. L. Chang, and J. J. Gross, "Teachers' emotion regulation and related environmental, personal, instructional, and well-being factors: A meta-analysis," *Social Psychology of Education*, July 2023.

[17] J. Gross, "Emotion regulation: Affective, cognitive, and social consequences," *Psychophysiology*, vol. 39, no. 3, pp. 281–291, March 2003.

[18] Emotion Regulation Questionnaire (ERQ). [Online]. Available: https://spl.stanford.edu/sites/g/files/sbiybj19321/files/media/file/english_0.pdf

[19] D. Preece, R. Becerra, K. Robinson, and J. Gross, "The emotion regulation questionnaire: Psychometric properties in general community samples," *Journal of Personality Assessment*, vol. 102, no. 3, pp. 348–356, November 2018.

[20] Student-Teacher Relationship Scale. [Online]. Available: <https://education.virginia.edu/documents/ehdstrs-sf-modification-staff-wellness-surveypdf>

[21] C. E. Domitrovich, S. D. Gest, S. Gill, *et al.*, "Fostering high-quality teaching with an enriched curriculum and professional development support: The Head Start REDI Program," *American Educational Research Journal*, vol. 46, no. 2, pp. 567–597, June 2009.

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