

The Impact of Classroom Management, Teacher-Student Relationships, and Mental Health on Academic Engagement in China

Shi Yu¹ , Soon Singh Bikar Singh^{2*} 

¹Faculty of Psychology and Education, University Malaysia Sabah, Sabah, Malaysia
Email: psycho_kiki@163.com

²Faculty of Psychology and Education, University Malaysia Sabah, Sabah, Malaysia
Email: soonbs@ums.edu.my

CORRESPONDING

AUTHOR (*):

Soon Singh Bikar Singh
(soonbs@ums.edu.my)

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ABSTRACT

This study explores the intricate connections between classroom management, teacher-student relationships, teachers' mental health, and students' academic engagement in Chinese high schools. As China continues to advance its educational reforms, gaining insight into these interactions is vital for improving educational outcomes. The research utilized a quantitative methodology, collecting data from 379 high school teachers in Shenzhen, China. The findings revealed significant positive correlations between classroom management and teacher-student relationships ($r = .68, p < .01$), classroom management and academic engagement ($r = .63, p < .01$), and teacher-student relationships and academic engagement ($r = .67, p < .01$). Additionally, teachers' mental health was moderately positively correlated with these factors. Through multiple regression analysis, it was found that classroom management, teacher-student relationships, and teachers' mental health together accounted for 57.2% of the variance in students' academic engagement ($R^2 = .572, p < .001$). Among these, teacher-student relationships were identified as the strongest predictor of academic engagement ($\beta = .369, p < .001$), followed by classroom management ($\beta = .297, p < .001$) and teachers' mental health ($\beta = .189, p < .001$). These results underscore the importance of cultivating positive teacher-student relationships and effective classroom management in Chinese high schools. The study enhances the understanding of educational dynamics within the Chinese context and provides valuable insights for policymakers and educators, suggesting that a holistic approach addressing classroom management, teacher-student relationships, and teacher well-being can significantly boost student engagement and academic success in Chinese high schools.

Contribution/Originality: This study is one of very few studies which have investigated the combined roles of classroom management, teacher-student relationships, and teacher well-being in the Chinese context, revealing that relational

factors, alongside teacher mental health, critically enhance student engagement and offering an innovative, holistic approach for educational policy and practice nationwide.

1. Introduction

The Chinese educational landscape has undergone significant transformations in recent decades, with a growing emphasis on student-centered learning and holistic development (Zhao, 2018). Within this context, academic engagement has emerged as a critical factor in student success and overall educational effectiveness (Lei et al., 2018). However, the complex interplay of factors influencing academic engagement in Chinese high schools remains understudied, particularly concerning the roles of classroom management, teacher-student relationships, and teachers' mental health.

Classroom management, defined as the set of instructional behaviors used by teachers to create a conducive learning atmosphere and guide students' learning process (Sprick et al., 2021), forms the foundation of effective teaching. In the Chinese context, where traditionally large class sizes and a focus on academic achievement have been prevalent, effective classroom management takes on heightened importance (Zhou et al., 2022).

Teacher-student relationships, characterized by the emotional connection between educators and learners (Newberry & Davis, 2018), have been recognized globally as a significant factor in student engagement and achievement (Roorda et al., 2011). However, the nature and impact of these relationships in the Chinese cultural context, with its unique emphasis on respect for authority and collective harmony, warrant further investigation.

The mental health of teachers, while often overlooked, plays a crucial role in the educational ecosystem. As Li et al. (2022) note, teachers' psychological well-being can significantly influence their instructional effectiveness and, by extension, student outcomes. In the high-pressure environment of Chinese high schools, understanding the relationship between teachers' mental health and student engagement becomes particularly pertinent.

This study aims to address these gaps by examining the relationships between classroom management, teacher-student relationships, teachers' mental health, and students' academic engagement in Chinese high schools. Specifically, we seek to answer the following research questions:

- i. What are the relationships between classroom management, teacher-student relationships, teachers' mental health, and students' academic engagement in Chinese high schools?
- ii. To what extent do classroom management, teacher-student relationships, and teachers' mental health collectively predict students' academic engagement?
- iii. Which of these factors (classroom management, teacher-student relationships, or teachers' mental health) has the strongest impact on students' academic engagement?

By addressing these questions, this study aims to contribute to a more nuanced understanding of the factors influencing academic engagement in Chinese high schools and provide evidence-based insights for educational policy and practice.

2. Literature Review

2.1. Classroom Management in Chinese Context

Classroom management in Chinese high schools has undergone significant evolution in recent years, reflecting broader shifts in educational philosophy and practice. Traditionally, Chinese classrooms were characterized by teacher-centered instruction, large class sizes, and an emphasis on discipline and compliance (Zhou et al., 2022). However, recent reforms have begun to challenge these norms, advocating for more student-centered approaches and interactive learning environments (Zhao, 2018).

In the Chinese context, effective classroom management is particularly crucial due to the typically large class sizes, which can exceed 50 students in some urban areas (Wang et al., 2020). This necessitates highly structured and efficient management strategies to maintain order and facilitate learning. Chen et al. (2021) note that Chinese teachers often employ a combination of traditional and modern management techniques, balancing authoritative control with more collaborative approaches.

Recent studies have highlighted the importance of culturally responsive classroom management in Chinese schools. For instance, Gu et al. (2019) found that successful classroom managers in China tend to incorporate Confucian values of harmony and respect into their practices, while also adapting to the changing expectations of a more globally-oriented student body.

2.2. Teacher-student Relationships and Their Importance

The significance of teacher-student relationships in educational outcomes is well-established in international literature (Roorda et al., 2011). However, these relationships take on unique characteristics in the Chinese cultural context. Traditionally, Chinese education has been marked by a hierarchical teacher-student dynamic, rooted in Confucian principles of respect for authority (Wentzel, 2016).

Recent research, however, suggests a shift towards more reciprocal and emotionally supportive teacher-student relationships in Chinese schools. Li et al. (2022) found that positive teacher-student relationships in Chinese high schools were associated with increased student motivation and academic performance. Similarly, Zhang and Gu (2021) observed that warmth and emotional support from teachers significantly predicted students' school engagement and psychological well-being.

The importance of these relationships is magnified in the high-pressure environment of Chinese high schools, where academic success is highly valued. Qin and Qi (2020) argue that supportive teacher-student relationships can serve as a buffer against academic stress, promoting resilience and emotional well-being among students.

2.3. Mental Health Concerns in Chinese High Schools

Mental health has emerged as a critical concern in Chinese high schools, reflecting broader societal recognition of psychological well-being. The intense academic pressure, coupled with rapid social changes, has contributed to increasing reports of stress, anxiety, and depression among Chinese high school students (Liu et al., 2019).

A nationwide survey by [Yang et al. \(2020\)](#) found that approximately 24% of Chinese high school students reported symptoms of depression, with academic stress identified as a primary contributing factor. Moreover, [Huang and Zhao \(2021\)](#) observed that mental health issues were often exacerbated by the competitive nature of the Chinese education system, particularly in relation to the high-stakes college entrance examination (Gaokao).

Teachers' mental health has also gained attention in recent years. [Wu et al. \(2023\)](#) reported that Chinese high school teachers experienced higher levels of burnout and emotional exhaustion compared to their counterparts in other educational levels, attributing this to heavy workloads and pressure to produce high-achieving students.

2.4. Academic Engagement: Definitions And Significance

Academic engagement is a multidimensional construct that encompasses behavioral, emotional, and cognitive aspects of students' involvement in learning ([Fredricks et al., 2004](#)). In the Chinese context, academic engagement has traditionally been associated with diligence and persistence in studying, reflecting cultural values of hard work and academic achievement ([Lei et al., 2018](#)).

Recent research has expanded this understanding, recognizing the importance of emotional and cognitive engagement alongside behavioral indicators. For instance, [Guo et al. \(2022\)](#) found that emotional engagement, characterized by students' interest and enjoyment in learning, was a stronger predictor of academic achievement in Chinese high schools than mere time spent studying.

The significance of academic engagement in Chinese education is underscored by its strong association with academic outcomes. A meta-analysis by [Lei et al. \(2018\)](#) revealed that engagement was positively correlated with academic achievement across various subjects and grade levels in Chinese schools. Moreover, [Zhang et al. \(2021\)](#) observed that high levels of engagement were associated with reduced dropout rates and improved mental health outcomes among Chinese high school students.

2.5. Gaps In Current Research

Despite a growing body of literature on classroom management, teacher-student relationships, mental health, and academic engagement in Chinese high schools, several gaps persist. A major deficiency is that there is no integrated framework which addresses these factors in a simultaneous fashion, especially in the Chinese context. Cultural considerations are more and more recognized and there is an urgent need to explore how Chinese values and societal norms are uniquely Chinese and how they shape classroom environments. More focus be given to teachers' experience and perspective from their own mental wellbeing and how it impacts classroom dynamics and student outcomes.

Most of the studies so far extrapolate the current results from cross sectional data ignoring the natural growth of the variables and their long-term effects on academic success of the students. Longitudinal research is required to follow changes over time and to describe deeper interrelationships between classroom management, teacher student relationships and mental health. Equally important is the relative lack of intervention studies that assess the effectiveness of targeted programs aimed at promoting positive teacher-student interactions, improving classroom management practices, and supporting mental health. Filling these gaps would not only deepen our theoretical

knowledge of academic engagement but it would also serve as an input in designing evidence-based strategies to bolster academic engagement in Chinese high schools.

3. Methodology

3.1. Research Design

This study employed a quantitative, cross-sectional research design to investigate the relationships between classroom management, teacher-student relationships, teachers' mental health, and students' academic engagement in Chinese high schools. This approach aligns with similar studies in educational research (e.g., Wang et al., 2020; Zhang et al., 2021) and allows for the examination of multiple variables simultaneously. The cross-sectional design, while limiting causal inferences, provides a snapshot of current educational dynamics in Chinese high schools (Levin, 2006).

3.2. Participants and Sampling

The study targeted high school teachers in Shenzhen, China, a city known for its educational innovation and reform efforts (Zhao, 2018). A total of 379 teachers from eight high schools participated in the study. The sample size was determined using Krejcie and Morgan's (1970) table, with a 5% margin of error and 95% confidence level.

Stratified random sampling was employed to ensure proportional representation across different school types and teacher demographics. This method enhances the generalizability of findings within the Shenzhen context (Stratton, 2021). The final sample included 179 male and 200 female teachers, with a mean age of 38.5 years (SD = 8.2) and an average teaching experience of 12.3 years (SD = 7.5).

3.3. Instruments and Measures

Four standardized instruments were used to measure the key variables in this study. The first step was that the Classroom Management Scale (CMS) developed by Sprick et al. (2021) was adapted for the Chinese context. The scale includes 25 items measuring five dimensions, namely, routine management, atmosphere creation, teaching activities, student learning, and parent-teacher communication. It was shown that the adapted CMS displayed excellent internal consistency (Cronbach's $\alpha = .94$).

Second, teacher—student relationships were measured through the Student—Teacher Relationship Scale (STRS) (Pianta, 2001). The measure contains 28 items, and measures closeness, conflict and dependency. A validated Chinese version (Li et al., 2022) proved to have robust reliability (Cronbach's $\alpha = .89$), and was considered appropriate for use in this context.

Third, to assess teachers' mental health, the General Health Questionnaire 12 (GHQ 12) was administered (Goldberg & Williams, 1988). The internal consistency for this widely used instrument was found to be strong in the current research (Cronbach's $\alpha = .88$) and it has been validated among Chinese populations (Chen et al., 2019).

Then, an adapted version of the Student Engagement Instrument (SEI) (Appleton et al., 2006) was utilized to check teachers' perceptions on student engagement. The adapted

SEI contained 35 items addressing both cognitive and psychological engagement and showed high reliability (Cronbach's $\alpha = .92$).

According to Brislin (1970) recommendations, all instruments were subject to back translation process and pilot testing with 30 teachers. The purpose of this process was to assure that the measures would culturally and linguistically be suitable for the Chinese high school environment.

3.4. Data Collection Procedures

Data collection occurred over a two-month period in the spring semester of 2023. After obtaining approval from the university ethics committee and school administrators, the researchers distributed online surveys to participating teachers. Informed consent was obtained from all participants, emphasizing the voluntary and confidential nature of participation.

The survey was administered using a secure online platform, allowing teachers to complete it at their convenience. This method has been shown to increase response rates and data quality in educational research (Dillman et al., 2014). A response rate of 86% was achieved, which is considered excellent for online surveys (Baruch & Holtom, 2008).

This comprehensive analytical approach allows for a thorough examination of the research questions while addressing potential statistical issues, enhancing the robustness of the findings (Field, 2013).

4. Result

4.1. Descriptive Statistics

The descriptive statistics for the main variables in this study are presented in Table 1. All variables were measured on a 5-point Likert scale, with higher scores indicating higher levels of the construct.

Table 1: Descriptive Statistics for Main Variables (N = 379)

Variable	M	SD	Skewness	Kurtosis
Classroom Management	3.78	0.68	-0.214	0.300
Teacher-Student Relationships	3.81	0.69	-0.198	0.310
Teachers' Mental Health	3.72	0.71	-0.190	0.315
Academic Engagement	3.76	0.70	-0.210	0.305

The mean scores for all variables were above the midpoint of the scale, suggesting generally positive perceptions among the participants. Skewness and kurtosis values for

all variables fell within the acceptable range of ± 2 , indicating normal distribution (George & Mallery, 2010).

4.2. Correlations Between Variables

Pearson correlation analyses were conducted to examine the relationships between the main variables. The results are presented in Table 2.

Table 2: Correlations Between Main Variables

Variable	1	2	3	4
1. Classroom Management	-			
2. Teacher-Student Relationships	.68**	-		
3. Teachers' Mental Health	.56**	.52**	-	
4. Academic Engagement	.63**	.67**	.54**	-

Note: ** $p < .01$

All correlations were positive and statistically significant ($p < .01$). The strongest correlation was observed between teacher-student relationships and academic engagement ($r = .67$), followed closely by the correlation between classroom management and teacher-student relationships ($r = .68$). Teachers' mental health showed moderate correlations with all other variables.

4.3. Multiple Regression Analysis Results

A multiple regression analysis was conducted to examine the collective and individual effects of classroom management, teacher-student relationships, and teachers' mental health on academic engagement. The results are presented in Table 3.

Table 3: Multiple Regression Analysis Predicting Academic Engagement

Predictor	B	SEB	β	t	p
(Constant)	0.247	0.161		1.534	.126
Classroom Management	0.308	0.046	.297	6.696	<.001
Teacher-Student Relationships	0.372	0.044	.369	8.455	<.001
Teachers' Mental Health	0.185	0.042	.189	4.405	<.001

Note: $R^2 = .572$, Adjusted $R^2 = .568$, $F(3, 375) = 166.891$, $p < .001$

The regression model was statistically significant, $F(3, 375) = 166.891, p < .001$, explaining 57.2% of the variance in academic engagement ($R^2 = .572$). All three predictors made significant unique contributions to the model. Teacher-student relationships emerged as the strongest predictor ($\beta = .369, p < .001$), followed by classroom management ($\beta = .297, p < .001$) and teachers' mental health ($\beta = .189, p < .001$).

The analysis of the data yielded several key findings that directly address the research questions of this study. Regarding the relationships between variables, strong positive correlations were found between classroom management, teacher-student relationships, and academic engagement, with correlation coefficients ranging from .63 to .68. These robust associations indicate a significant interplay between these factors in the Chinese high school context. Teachers' mental health, while still significantly correlated, showed moderate positive relationships with all other variables, with correlation coefficients ranging from .52 to .56. This suggests that while teachers' mental health is an important factor, its relationship with other variables is not as strong as the associations between classroom management, teacher-student relationships, and academic engagement.

In terms of the collective prediction of academic engagement, the results were particularly noteworthy. Classroom management, teacher-student relationships, and teachers' mental health together explained 57.2% of the variance in academic engagement. This substantial proportion underscores the crucial role these factors play in predicting student engagement in Chinese high schools. The high explanatory power of the model suggests that these variables capture key elements of the educational environment that contribute to student engagement.

The analysis of the relative importance of predictors revealed a hierarchical structure in their influence on academic engagement. Teacher-student relationships emerged as the strongest predictor ($\beta = .369$), aligning with previous research that emphasizes the importance of relational aspects in education (Roorda et al., 2011). This finding is particularly interesting in the Chinese context, where traditional educational approaches have often prioritized academic rigor over relational aspects. Classroom management was found to be the second strongest predictor ($\beta = .297$), highlighting its significant role in fostering student engagement. This result reinforces the importance of structured and well-managed learning environments in promoting student involvement and participation. Teachers' mental health, while still a significant predictor, had a comparatively smaller effect ($\beta = .189$) on academic engagement. This finding suggests that while teacher well-being is important, its impact on student engagement may be more indirect, possibly mediated through its effects on classroom management and teacher-student relationships.

5. Discussion

The results of this study provide significant insights into the dynamics of classroom management, teacher-student relationships, teachers' mental health, and academic engagement in Chinese high schools. The strong positive correlations between these variables underscore their interconnected nature in the educational environment. The emergence of teacher-student relationships as the strongest predictor of academic engagement highlights the critical importance of relational aspects in Chinese education. This finding suggests that the quality of interactions between teachers and students plays a pivotal role in fostering student engagement, even in a cultural context traditionally characterized by hierarchical teacher-student dynamics.

Classroom management's significant contribution to academic engagement reinforces its continued relevance in Chinese high schools. This finding indicates that structured, well-organized learning environments remain crucial for promoting student engagement, aligning with both traditional Chinese educational values and contemporary pedagogical approaches. The significant, albeit smaller, effect of teachers' mental health on academic engagement underscores the often-overlooked connection between teacher well-being and student outcomes. This result suggests that supporting teachers' mental health could have cascading positive effects on classroom dynamics and student engagement.

The strong correlation between teacher-student relationships and academic engagement aligns with international research findings. However, the strength of this relationship in the Chinese context is particularly noteworthy, given the traditionally more formal and hierarchical nature of teacher-student interactions in Chinese schools. This result suggests a potential shift in Chinese educational dynamics, with relational aspects gaining prominence alongside academic rigor.

The significant impact of classroom management on engagement corroborates findings from Western contexts and extends them to the Chinese high school setting. This consistency across cultural contexts underscores the universal importance of effective classroom management in fostering student engagement. The connection between teachers' mental health and student engagement, while less studied, aligns with emerging research on teacher well-being and its impact on educational outcomes. The present study contributes to this growing body of literature by quantifying this relationship in the Chinese high school context.

These findings have several important implications for educational practice in Chinese high schools. Given the strong predictive power of teacher-student relationships on academic engagement, schools should prioritize initiatives that foster positive, supportive interactions between teachers and students. This could include professional development programs focused on relational pedagogy and creating opportunities for meaningful teacher-student interactions outside of formal instructional time.

The significant impact of classroom management on engagement suggests that continued emphasis on developing teachers' classroom management skills is warranted. Professional development programs should focus on culturally responsive management strategies that balance structure with student autonomy. The link between teachers' mental health and student engagement highlights the need for comprehensive teacher support programs. Schools should implement strategies to reduce teacher stress, provide mental health resources, and create a supportive work environment for educators.

While this study provides valuable insights, several limitations should be acknowledged. The cross-sectional nature of the study limits causal inferences. Longitudinal research is needed to establish the directionality of relationships between variables. Reliance on self-report measures may introduce common method bias. Future studies could incorporate observational data or student reports to triangulate findings.

The study was conducted in Shenzhen, a highly developed city in China. Results may not generalize to other regions, particularly rural areas with different educational contexts. While teachers' perspectives are valuable, incorporating student views could provide a more comprehensive understanding of academic engagement. Although the study was

conducted in China, it did not explicitly measure cultural variables that might influence the relationships observed.

6. Conclusion

This study investigated the relationships between classroom management, teacher-student relationships, teachers' mental health, and academic engagement in Chinese high schools. Strong positive correlations were found between all variables, with the strongest relationship observed between teacher-student relationships and academic engagement. Classroom management, teacher-student relationships, and teachers' mental health collectively explained a substantial portion of the variance in academic engagement. Teacher-student relationships emerged as the strongest predictor of academic engagement, followed by classroom management and teachers' mental health.

This research contributes significantly to our understanding of educational dynamics in Chinese high schools. It highlights the critical importance of relational aspects in education, challenging traditional notions of Chinese pedagogy that emphasize hierarchy and academic rigor above all. The study also underscores the interconnected nature of classroom management, teacher-student relationships, and teacher well-being in fostering student engagement. By quantifying these relationships in the Chinese context, this study provides valuable evidence to inform educational policy and practice. It suggests that efforts to enhance student engagement should adopt a holistic approach, addressing not only instructional techniques but also relational and well-being factors.

Future research should address the limitations of this study and further explore the dynamics observed. Longitudinal studies should be conducted to establish causal relationships between variables. Incorporating multiple data sources, including student perspectives and observational data, would provide a more comprehensive understanding of the phenomena. Expanding the geographic scope to include diverse regions within China would allow for comparative analyses and enhance generalizability. Exploring the role of cultural factors in mediating or moderating the relationships observed would provide deeper insights into the unique aspects of Chinese educational contexts. Investigating the effectiveness of interventions designed to enhance teacher-student relationships, classroom management skills, and teacher well-being would provide practical guidance for educational improvement. Examining how these factors interact with specific subject areas or teaching contexts within Chinese high schools would further refine our understanding of these dynamics. By building on this study's findings, future research can continue to enhance our understanding of effective educational practices in Chinese high schools and contribute to the ongoing development of China's education system.

Ethics Approval and Consent to Participate

This study was approved by the Research Ethics Committee of the Faculty of Psychology and Education, Universiti Malaysia Sabah. All procedures were conducted in accordance with institutional guidelines and the Declaration of Helsinki, and informed consent was obtained from all participating teachers.

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Conflict of Interest

The authors declare no conflict of Interest.

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