

# Social Support and Social Adjustment Among Chinese Secondary School Students: The Mediating Roles of Subjective Well-Being and Psychological Resilience

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**Purpose:** Within the scope of secondary education, social adjustment among students signifies their ability to effectively engage in social activities and adapt to shifting social environments. Extensive research across diverse geographical and sociocultural landscapes has demonstrated a positive correlation between social support and social adjustment; nonetheless, the specific mechanisms that facilitate this correlation among secondary school students remain largely unexplored. This study examines the roles of subjective well-being and psychological resilience as potential mediators in the connection between social support and social adjustment.

**Participants and Methods:** To achieve this, a descriptive correlation design was employed with four measures, including Social Support Scale, Social Adjustment Diagnosis Scale, Adolescent Students' Life Satisfaction Scale, and the Chinese version of Mental Toughness Inventory (MTI). A total of 1537 valid responses from secondary school students across Zhejiang province (China) were collected, of which 786 were boys (51.1%) and 751 girls (48.9%), with average age of 16.89 years ( $SD = 0.79$ ).

**Results:** This research demonstrates that social support, along with subjective well-being and psychological resilience, significantly and positively influences social adjustment. It was observed that both subjective well-being and psychological resilience, whether occurring simultaneously or in succession, partially mediate the influence of social support on social adjustment.

**Conclusion:** The implications of this research suggest that enhancing social adjustment among secondary school students can be achieved by increasing their levels of social support, thereby boosting subjective wellbeing and fortifying psychological resilience. Within the environment of secondary schools, augmenting social support leads to improved social adjustment; furthermore, enhancing subjective wellbeing and reinforcing psychological resilience are crucial for supporting students' positive adaptation to dynamic social environments. Teachers and educational policymakers could implement training programmes, provide psychological counselling, and bolster home-school collaboration as strategies to foster better social adjustment among students.

**Keywords:** social support, social adjustment, subjective well-being, psychological resilience, Chinese

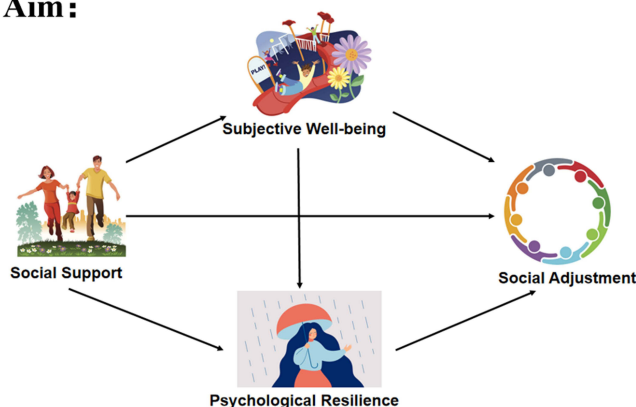
## Introduction

### Social Adjustment

Social adjustment refers to the ability to react effectively and in a positive and healthy manner to situations, realities, and social relations, so that the shifting demands of social life are met in an acceptable way.<sup>1,2</sup> Social adjustment can also be explained as the extent to which a person engages in a social activity and successfully adjusts to current social surroundings.<sup>3,4</sup> Social adjustment of students in school contexts thus necessarily references student adjustments to teachers, subjects, peers, and the school environment. Students' adjustment to their teachers is impacted by teachers' attitudes in dealing with students; students' adjustment to objects in their environment, as a process of self-adjustment, refers to how students adjust to the social expectations of their age, their level of intelligence and needs.

## Graphical Abstract

### Aim:



The roles of subjective well-being and psychological resilience as potential mediators in the connection between social support and social adjustment.

### Methods:

- 1,537 secondary school students
- Four scales were used:
  - Social Support Scale
  - Social Adjustment Diagnosis Scale
  - Adolescent Students' Life Satisfaction Scale
  - the Chinese version of Mental Toughness Inventory (MTI).

### Conclusion

- Social adjustment among Chinese secondary school students with high levels of social support can be increased by boosting subjective wellbeing and strengthening psychological resilience.
- These findings provided implications for improving adjustment among students in the future.



Further, students' adjustment to their peers has been found to be influential in their social development.<sup>2</sup> In terms of these experiences and adjustments being formative, the what to which students make social adjustment in school contexts is found to predict their future capacity for successful social adjustment. Specifically, students who are able to make social adjustments during secondary school are more likely to exhibit better social adjustment competencies in the future, compared to students who do not succeed in making social adjustment well during secondary school.<sup>5</sup>

Theorising the notion of social adjustment into a conceptual model, there are four dimensions of adjustment, including social adjustment, academic adjustment, personal-emotional adjustment, and institutional commitment. Specifically, integral aspects of social adjustment include integration of social life, setting up an environmental network, and managing social freedom in certain contexts.<sup>6</sup> While social adjustment is inexorably tied to individual psycho-cognitive dynamics, sociocultural influences, and normative behavioural expectations, previous studies across a range of contexts have demonstrated that social adjustment is a crucial social praxis for everybody, but especially for students in the formative school context.<sup>2,7,8</sup> Moreover, the adjustment level differs according to different developmental stage of the student,<sup>9,10</sup> or even by gender. In particular, girls have been found to exhibit better adjustment competencies than boys in different secondary schools in Eastern India.<sup>11</sup>

The process of social adjustment is also a longitudinal inevitability. For instance, as secondary students advance to university, the necessity to develop adaptation strategies remains essential, and is integral to their maturity unto responsible members of society.<sup>12</sup> Previous research has found that there are various dynamics influencing social adjustment among university students, including their expectations of what university is, levels of emotional stability, the availability of support from others, gender, personal levels of commitment to university life, and satisfaction with university services.<sup>13</sup> Furthermore, previous research has identified a direct link between social adjustment of students and overall adjustments in university settings, which is corroborated by other research findings that social adjustment is essential for students to be academically adjusted, leading to small but positive effects on study success.<sup>14</sup>

Despite the clear empirical evidence demonstrating its importance, the concept of student social adjustment can be interpreted in different ways and thus assessed by focusing on different perspectives, including school achievements and

satisfaction, truancy, and self-esteem.<sup>15</sup> Research evidence has indicated that social aspects of physical activity and multicultural friendship are conducive for cultivating social adjustment competencies among international university students in the United States,<sup>12</sup> whereby university students with higher levels of self-efficacy are more likely to exhibit higher levels of social adjustment in the Pakistani context.<sup>4</sup> Conversely, social adjustment can be seen as a persistent difficulty for students when entering into a new environment, with the scale of the necessary adjustment determining student efficacy in successfully adapting; a pertinent example of this issue of scale is found among international students studying abroad, out of their home country, whilst simultaneously transitioning from secondary school to higher education.<sup>16</sup>

Social adjustment is thus a lifelong necessity but is especially pertinent during formative years. Empirical studies generally support the notion that one of the most difficult development tasks of adolescence is related to social adjustment.<sup>5</sup> Adolescents have to adapt to different environments, as well as shifting expectations of their behaviour in order to achieve the goals of expected adult socialisation patterns; concomitantly, many new adjustments have to be made in social settings.<sup>5</sup> In this context, previous research has found that Chinese adolescents with siblings are less likely to exhibit low social adjustment competencies when compared to Chinese adolescents without siblings.<sup>17</sup> Furthermore, some scholars have suggested that, among first-year university students in Turkey, academic-related social adjustment is negatively affected by association with faculty and teaching quality, whereas students' social adjustment is negatively affected by variables such as friendship-based relationships, participation in recreational activities, and leisure-time management.<sup>18</sup> The empirical data is thus inconsistent, insofar that findings related to social adjustment differ between age groups and sociocultural contexts. Further empirical data is needed to illuminate this area.

## Social Support and Social Adjustment

Related to the concept of social adjustment, yet distinct in its manifestation, the concept of "social support" has long been considered by scholars to be in relation to social adjustment practices. Social support refers to the provision and availability of a range of different resources provided by a social network to aid others, typically helping them cope with physical and psychological stressors. Social support such as this will likely manifest in the form of interpersonal relationships, involving family members, friends, neighbours, and community members. Previous research has presented evidence that people in individualistic cultures are more likely to utilise social support as coping strategy, whereas for people in collectivist cultures are more likely to seek social support without disclosing their struggles.<sup>12</sup> These findings yield the curiosity of understanding in social support as well as the relationship between social support and social adjustment, particularly in the context of China.

Social support is thus closely related to social adjustment. Empirical studies have demonstrated that interpersonal relationships have a tangible influence upon students' ability to positively adjust with other students, impacting their overall adjustment at university.<sup>19,20</sup> Higher levels of social support from teachers have also been found to yield significant stress-buffering and problem-solving effects for students,<sup>21</sup> as well as higher levels of perceived support from teachers lead to a significantly lower likelihood of students being bullies or victims.<sup>22</sup> Furthermore, empirical evidence demonstrates that there is a positive correlation between social support and social adjustment among undergraduate students, whereas interestingly, a negative correlation has been found between interpersonal relations and social adjustment.<sup>23</sup> Thus, not only are there manifold influential variables impacting social adjustment among students but also different findings seem to emerge from different sociocultural settings and students age groups.

Nonetheless, across all social, cultural, and age contexts, empirical evidence has confirmed the important role of social support from teachers in mediating student's adjustment to school contexts,<sup>15,24</sup> including academic adjustment.<sup>21,25</sup> In particular, teacher-derived emotional support has been found to significantly and positively influence personal adjustment of girls and boys in lower secondary school; as a further indication of the contextual complexity of social adjustment, it has been found that emotional and appraisal support are more important for girls than for boys, suggesting gender-based differences in students' early adjustment processes vis-à-vis particular types of teacher support.<sup>24,26</sup> Findings also suggest that social adjustment may be influenced by subject discipline; for instance, among nursing students, Kwag<sup>27</sup> found that self-esteem is the most influential factor influencing school adjustment. By contrast,

previous investigations into university students have revealed that there is only a moderate relationship between students' adjustment and social support.<sup>6</sup>

Levels of perceived peer support have also been found to encourage students in long-term goals and providing emotional support, as well as being established as a necessarily protective factor for mental health and well-being of university students.<sup>4,28</sup> Previous scholars have indicated that peers generate a significant effect on the development of university students in social and emotional aspects.<sup>29</sup> In addition, social support is found to play a significant role in relieving depression, loneliness, and anxiety among students.<sup>30</sup>

Apart from the influence of teachers on social adjustment processes, a growing body of empirical studies have indicated that there is a significant relationship between social support of parents and social adjustment capabilities of children. In particular, recent research demonstrates that higher levels of perceived social support from parents are associated with higher levels of children's psychological adjustment.<sup>31</sup> Moreover, evidence has demonstrated that parental support is a unique and highly influential predictor of social adjustment during early adolescence, in both girls and boys, with support from peers (such as classmates) being a supplementary predictor for boys in particular.<sup>25</sup> As a result, the current body of academic literature demonstrates significant empirical evidence to suggest that the multi-faceted concept of social support is likely to be highly influential in influencing social adjustment processes among secondary school students. Understanding the relationship between social support and social adjustment is thus important, given that this is likely to support students in adjusting to a new environment from different perspectives. However, to date, there is an insufficient amount of empirical research which focuses on the relationship between social support and social adjustment within the nuanced and idiosyncratic Chinese context of secondary school students. In responding to this research gap, this study will focus on investigating social adjustment within the Chinese secondary school context.

## Social Support, Social Adjustment, and Subjective Wellbeing

Subjective wellbeing refers to an individual's subjective experience of happiness and life satisfaction, which by its nature, is informed by multiple internal and external dynamics, from personality and cognition, to external environment, life options, and perceptions. For example, research has indicated that individuals in a happy mood are more likely to incur greater social rewards, better working outcomes, and greater coping abilities relative to individuals in an unhappy mood.<sup>32</sup> Subjective wellbeing has been linked to variety of positive outcomes, and concomitantly, it is important to understand the factors that are associated with student wellbeing.

Subjective wellbeing has also been articulated as a condition in which individuals are able to positively evaluate their life experiences and life satisfaction, both cognitively and affectively.<sup>33</sup> Subjective wellbeing comprises two important components: the cognitive components of satisfaction with life as a whole and the affective component, including the presence of positive emotions (eg, joy and love) and the absence of negative emotions (eg, loneliness and anxiety).<sup>34,35</sup> More recent research investigating adults in western cultures has corroborated the notion that different facets of subjective wellbeing include life satisfaction, positive affect, and negative affect.<sup>36,37</sup>

The importance of subjective wellbeing has been empirically demonstrated and thus relevant to this present research. A meta-analysis study synthesizing a total of 32,948 samples demonstrates that there is a significantly positive correlation between social support and subjective wellbeing, providing empirical support that higher levels of social support predict better subjective wellbeing.<sup>38</sup> A growing body of literature over the past 20 years has even suggested that social support is crucial for subjective wellbeing,<sup>39</sup> especially for university students.<sup>40</sup> Higher levels of social support therefore predict higher levels of wellbeing.<sup>41,42</sup>

Unpacking the nuances of social support, it is found that previous research focusing on secondary school students has accessed the concept of social support from four perspectives, namely emotional support, esteem support, instrumental support, and informational support; the findings indicate that the more social support students receive overall, the better the learning atmosphere and the feelings they experience are more positive, dynamics which then enable them to experience higher level of subjective wellbeing.<sup>43</sup> It has also been demonstrated that there is a strong and positive relationship between better social support and higher life satisfaction.<sup>44</sup> Moreover, among a research sample of elderly individuals, a positive association has been identified between emotional support and decision support from families, as well as overall living satisfaction. However, a non-significant relationship between support of daily living and living

satisfaction was found, suggesting the existence of different, idiosyncratic pathways by which living satisfaction is enhanced, ie, through different types of family support among elderly individuals in China.<sup>45</sup>

Among undergraduate students in the Spanish context, research findings tend to indicate a relatively clear pattern of low but positive influence between subjective wellbeing and social adjustment,<sup>46</sup> supporting other research asserting that greater level of subjective wellbeing is linked to better levels of adjustment among secondary school students,<sup>47</sup> as well as among university students.<sup>48</sup> However, some scholars have demonstrated an inverse relationship between levels of subjective wellbeing and social adjustment among university students, in which students with high levels of subjective wellbeing scored low in adjustment.<sup>49</sup> Nonetheless, given that the evidence is relatively consistent, the higher level of social support in students, the more likely their subjective wellbeing can be enhanced, and the highly likelihood students' social adjustment will strengthen (or weaken). Hence, the relationship between social support and social adjustment is likely to be mediated by subjective wellbeing.

## Social Support, Social Adjustment, and Psychological Resilience

The relationship between social support and social adjustment may also be mediated by an individual's psychological resilience, which refers to the ability of an individual to overcome adversity and to adapt to challenging or stressful life events.<sup>50</sup> Psychological resilience also emerges as a product of the interaction between risky experiences and positive psychological experiences, meaning that an individual's level of psychological resilience is influenced by the individual experiences (and the individual's processing of those experiences); accordingly, it is a highly variable and idiosyncratic factor.<sup>51</sup> Previous studies into psychological resilience of Chinese postgraduate students have indicated that approximately 24% exhibit high psychological resilience tendencies, whereas 15% of them exhibit how low psychological resilience; gender difference has also been found to play a significant effect on the levels of psychological resilience among postgraduate students.<sup>52</sup>

Social adjustment and social support are positively related to psychological resilience. Academic research has found that social support is effective in reducing the impact of stressful life events for secondary school students in Turkey.<sup>53</sup> Similarly, social support from family and friends has been found to have a positive impact on psychological resilience in the Canadian context.<sup>54</sup> More recent empirical evidence indicates that there is a significantly positive relationship between social support and psychological resilience among university students.<sup>55,56</sup> Thus, associations between social support, social adjustment, and psychological resilience have been demonstrated in previous studies, but little is known about the relations in the Chinese context, and relatively little research has been conducted within secondary school contexts.

It has also been found in previous studies that psychological resilience is positively related to students' adjustment in university.<sup>57</sup> Findings from a cross-sectional study have revealed that positive social adjustment is directly influenced by the resilience of students developed during lower secondary school, indicating the longitudinal and time-lag nature of social adjustment competencies. Additionally, in the Chinese context, resilience was found to mediate the negative effects of life events on students' positive social adjustment.<sup>58</sup>

Psychological resilience has also been found to play a mediating role in undergraduate students' prosocial behaviours and subjective wellbeing, suggesting the importance of improving resilience among children as a means to buffer negative adjustment among unsocial young children.<sup>59</sup> Furthermore, it was found that among young children with a mean age of 5.1 years who demonstrate higher levels of resilience (as reported by their mothers), their unsociability is not related to social adjustment difficulties (as reported by teachers in kindergartens), further highlighting the importance of improving resilience to buffer the negative adjustment effects among children.<sup>60</sup>

Previous studies have also suggested that resilience partially mediates the relationship between distress tolerance and social adjustment, meaning that the promotion of resilience may contribute to increasing levels of social adjustment among adults.<sup>61</sup> These findings prompt a reconsideration regarding the association between resilience and social adjustment of individuals across different ages. Concordantly, this present study is likely to provide valuable insights into the relations between social support, social adjustment, and psychological resilience



of individuals in secondary-school settings in Chinese context. Hence, the present study hypothesises that the relationship between social support and social adjustment is mediated by psychological resilience.

## Social Support, Social Adjustment, Subjective Wellbeing, and Psychological Resilience

Having critically evaluated the extant body of academic literature, this study proposes that the relationship between social support and social adjustment is mediated by subjective wellbeing and psychological resilience. From the empirical findings explored above, higher levels of social support are likely to lead to improved subjective wellbeing, increasing psychological resilience, and thus predict greater social adjustment. Direct and indirect empirical evidence supports the relationships between these four variables. Based on the research findings explored above, it is clear that psychological resilience is related to higher levels of psychological resilience,<sup>54</sup> which also is positively associated with satisfaction of life as an important component of subjective wellbeing.<sup>62</sup> These findings in the literature tend to be consistent across diverse cultural contexts, meaning that the relationship is empirically demonstrated in both collectivist and individualist cultures. Meanwhile, greater subjective wellbeing is linked to better social adjustment.<sup>48</sup> Therefore, the relationship between social support and social adjustment may be sequentially mediated by subjective wellbeing and psychological resilience.

## Hypotheses

Building on the corpus of empirical studies evaluated above, and with the aim of filling an important research gap (ie, secondary school students in the Chinese context) and in order to develop and test a theoretical framework to contextualise these complex relationships, the present study aims to explore the mechanisms underlying the relationship between social support and social adjustment with mediation of subjective wellbeing and psychological resilience. The following hypotheses shall be tested:

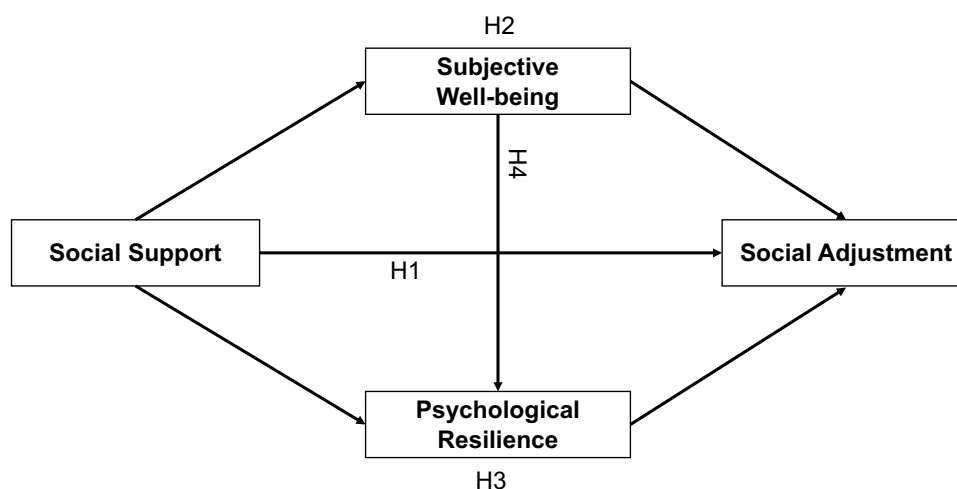
**H1:** Social adjustment among secondary school students is positively predicted by social support.

**H2:** The relationship between social support and social adjustment is mediated by subjective wellbeing.

**H3:** The relationship between social support and social adjustment is mediated by psychological resilience.

**H4:** The relationship between social support and social adjustment is sequentially mediated by subjective wellbeing and psychological resilience.

The theoretical model derived from these hypotheses is shown in [Figure 1](#).



**Figure 1** The theoretical model.

## Methods

### Procedures and Participants

This research, being focused on understanding secondary school students (aged between 13 and 18) was approved by the Ethics Committee of Zhejiang Normal University, as well as conducted in accordance with the Declaration of Helsinki and the American Psychological Association's ethical standards.

A stratified sampling technique was employed to recruit student-participants, randomly selected from different grades and different types of schools (including both public and private schools) in developed and undeveloped regions of Zhejiang Province.

Links to the online questionnaires were sent to all the participants via an online platform (Credamo), which was also used for gathering all the feedback and for the storing of respondent data. Informed consent was provided to, and confirmed by, all participants and their parents. Moreover, participants were fully made aware of their right to withdraw from the study at any time and without having to give a reason, which was detailed in the information sheet. Moreover, with retrospect, the researcher can affirm that no psychological harm was caused due to the procedure. Anonymity and confidentiality of respondents were also ensured during the whole process.

This survey was conducted over a period of 2 months, from October to December 2022. The calculated minimum sample size required was 352, determined by a moderate effect size of 0.15, a significance level of 0.05, and a power of 0.95, utilising G\*Power for calculations. In total, 1700 participants completed and returned questionnaires; after eliminating all invalid questionnaires, a final total of 1537 of participants were collected (with a response rate of 90.41%). These valid questionnaires were then used for data analysis. A total of 786 male participants (51.1%) and 751 female participants (48.9%) were included in the final sample. Participants derived from three different grades: 532 of participants (34.6%) were in grade 10, 510 of participants (33.2%) were in grade 11, 495 of participants (32.2%) were in grade 12. Participants had an average age of 16.89 years ( $SD = 0.79$ ).

### Measures

#### Social Support

Social support was measured using the Social Support Scale compiled by Ye et al.<sup>63</sup> It is a self-report scale including 17 items in three dimensions. This scale was designed based on social support theory proposed by Xiao,<sup>64</sup> and has achieved wide acceptance among academic researchers and practitioners. All items are scored on a five-point Likert scale, with responses to each item ranging from 1 (disagree) to 5 (agree). In this present study, Cronbach's alpha for the scale of secondary school students was 0.97.

#### Social Adjustment

Social adjustment was measured using Social Adjustment Diagnosis Scale, developed by Zheng.<sup>65</sup> This scale consists of 20 items, with response options ranging from 1 (Yes) to 3 (No). Higher scores represent a higher level of social adjustment. The Cronbach's alpha coefficient for the scale was 0.77.

#### Subjective Wellbeing

Subjective wellbeing was measured using the Adolescent Students' Life Satisfaction scale, developed by Zhang et al.<sup>66</sup> This scale was constructed based on the Adolescent Life Satisfaction questionnaire by Huebner.<sup>67</sup> This scale is relatively easy to read for target sampling, but there may be cultural variability in the data collection, given that subjective wellbeing is mediated by sociocultural normativity. Despite this, this tool consists of 36 items (eg, "All my friends like me"; "I like to live with my parents") with two hierarchies and six dimensions. All items were scored on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The Cronbach's alpha coefficient is 0.95 for the scale used in this study.

#### Psychological Resilience

Psychological resilience was measured using the Chinese version of Mental Toughness Inventory (MTI), as revised by Cao et al.<sup>68</sup> The MTI is a self-report survey containing 8 items which aim to evaluate a person's tendency to cope with

the demands of different stressors. Participant responses were scored on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). A total score is calculated by summing all the items; the higher the total score, the stronger the respondent's psychological resilience. The Chinese version of MTI exhibits good structural validity,<sup>69</sup> and has been adapted to the sociocultural context of China. Cronbach's alpha coefficient for the scale was 0.94.

## Data Analysis

Following the collection and collation of data from the respective data collection instruments (explained above), data analyses were performed using SPSS 26.0 and the PROCESS macro.<sup>70</sup> First, descriptive statistics as well as correlation analyses were conducted on the main variables. Second, the PROCESS macro in SPSS (model 4) was utilised to investigate the mediating effects of subjective wellbeing and psychological resilience. Third, Model 6 of the PROCESS macro was used to test the sequential mediating effects of subjective wellbeing and psychological resilience on the relationship between social support and social adjustment. Further, based on 5000 bootstrap samples, the bootstrapping method was employed in order to ascertain whether the mediating effects of subjective wellbeing and psychological resilience were significant at 95%. Moreover, the HTMT ratios for the four scales were computed using SPSS, indicating discriminant validity as all values were below 0.853.

## Results

### Common Method Bias Test

Given that all survey data were derived from self-reports, potential common method bias was a concern. The Harman single-factor test was employed to evaluate this bias. The findings confirmed that the eigenvalues for all factors exceeded 1, and the explanatory power of the foremost factor did not surpass 40% of the threshold value, recorded at 34.26%. Thus, common method bias was deemed not to have skewed the findings.

### Preliminary Analysis

The descriptive statistics and correlations among the main variables are presented in Table 1. It can be seen that a positive correlation emerges between social support and social adjustment. Social support is also positively correlated to subjective wellbeing and psychological resilience. Similarly, a positive correlation between subjective wellbeing and psychological resilience has been identified, as well as between subjective wellbeing and social adjustment. A positive correlation between psychological resilience and social adjustment has also been identified. These findings demonstrate the significance of social support networks for secondary school students in enhancing their adaptation to evolving social environments; this seems to be particularly pertinent within the Chinese context. Moreover, this research explores the intricate relationship among the variables and provides empirical evidence to inform policy development and implementation, aligning with the Chinese government's ongoing priorities and strategic plans for student mental health.

**Table 1** Means, and Standard Deviations, Bivariate Correlations Among Variables

Variables	M	SD	1	2	3	4
SS	63.62	12.79	–			
SW	168.68	34.17	0.66***	–		
PR	29.65	6.42	0.64***	0.65***	–	
SA	41.93	12.78	0.41***	0.40***	0.46***	–

Note: \*\*\* $p < 0.001$ .

Abbreviations: SS, social support; SA, social adjustment; SW, subjective wellbeing; PR, psychological resilience; M, mean; SD, Standard deviation.



## The Mediating Role of Subjective Wellbeing

Model 4 of SPSS PROCESS macro (version 21) has been applied in the present study in order to comprehensively test Hypothesis 2 and investigate whether (and if yes, to what extent) subjective wellbeing mediates the correlation between social support and social adjustment. The findings generated herein indicate that social support significantly and positively affects subjective wellbeing ( $b = 1.76, p < 0.001$ ), and further, subjective wellbeing is also significantly and positively affected by social adjustment ( $b = 0.08, p < 0.001$ ). The residual direct effect is also found to be significant ( $b = 0.27, p < 0.001$ ). These results provide empirical evidence demonstrating that the relationship between social support and social adjustment is partially mediated by subjective wellbeing (indirect effect = 0.15,  $SE = 0.02$ , 95% CI = 0.11 to 0.19), thus supporting Hypothesis 2. To strengthen students' social adjustment within secondary schools, educational leaders might establish a psychological counselling unit and offer structured counselling services to students as a strategy to boost social support. Additionally, incorporating courses aimed at elevating subjective wellbeing into the daily academic schedule could further improve social adjustment. This results of the mediating role of subjective wellbeing are presented in Table 2.

## The Mediating Role of Psychological Resilience

Hypothesis 3 has been tested in order to ascertain whether the correlation between social support and social adjustment is mediated by psychological resilience. The findings reveal that social support yields a significantly positive affect on psychological resilience ( $b = 0.32, p < 0.001$ ), and which in turn, significantly and positively affects social adjustment ( $b = 0.66, p < 0.001$ ). The residual direct effect is also found to be significant ( $b = 0.20, p < 0.001$ ), the implication being that the relationship between social support and social adjustment is partially mediated by psychological resilience (indirect effect = 0.21,  $SE = 0.02$ , 95% CI = 0.18 to 0.25), thereby supporting Hypothesis 3. These findings suggest that implementing training programmes in psychological resilience and positive psychology for teachers could enable them to assist students in building robust social support networks. This support, in turn, strengthens students' psychological resilience, thus enhancing their capacity to integrate into their social milieu. The findings regarding the mediating role of psychological resilience are presented in Table 3.

**Table 2** Results of Mediation Analysis of Subjective Wellbeing

	M: SW			Y: SA		
	$\beta$	SE	95% CI	$\beta$	SE	95% CI
<b>X: SS</b>	1.76***	0.05	1.66–1.86	0.27***	0.03	0.21–0.32
<b>M: SW</b>	–	–	–	0.08***	0.01	0.06–0.11

**Note:** \*\*\* $p < 0.001$ .

**Abbreviations:** SS, social support; SA, social adjustment; SW, subjective wellbeing;  $\beta$ , beta level; SE, standard error; CI, confidence interval.

**Table 3** Results of Mediation Analysis of Psychological Resilience

	M: PR			Y: SA		
	$\beta$	SE	95% CI	$\beta$	SE	95% CI
<b>X: SS</b>	0.32***	0.01	0.30–0.34	0.20***	0.03	0.14–0.26
<b>M: PR</b>	–	–	–	0.66***	0.06	0.55–0.77

**Note:** \*\*\* $p < 0.001$ .

**Abbreviations:** SS, social support; SA, social adjustment; PR, psychological resilience;  $\beta$ , beta level; SE, standard error; CI, confidence interval.

**Table 4** Testing the Pathways of the Multiple Mediation Model

Effect	b	SE	95% CI (Lower-Upper)	
Direct effects				
Social support → subjective wellbeing	1.76***	0.05	1.66	1.86
Social support → psychological resilience	0.19***	0.01	0.17	0.21
Subjective wellbeing → psychological resilience	0.08***	0.00	0.07	0.08
Social support → social adjustment	0.16***	0.03	0.09	0.22
Subjective wellbeing → social adjustment	0.04***	0.01	0.02	0.06
Psychological resilience → social adjustment	0.58***	0.06	0.46	0.70
Indirect effects				
Social support → subjective wellbeing → social adjustment	0.07***	0.02	0.03	0.11
Social support → psychological resilience → social adjustment	0.11***	0.02	0.08	0.14
Social support → subjective wellbeing → psychological resilience → social adjustment	0.08***	0.01	0.06	0.10

Note: \*\*\* $p < 0.001$ .

Abbreviations: SS, social support; SA, social adjustment; PR, psychological resilience;  $\beta$ , beta level; SE, standard error; CI, confidence interval.

## The Multiple Mediation Models

Model 6 of SPSS PROCESS macro was utilised in order to test the multiple mediation model, in which the mediation effect of subjective wellbeing and psychological resilience vis-à-vis between social support and social adjustment can be ascertained. The results reveal that the pathways for “social support → subjective wellbeing → social adjustment” (indirect effect = 0.07,  $SE = 0.02$ , 95% CI = 0.03 to 0.11) and “social support → psychological resilience → social adjustment” (indirect effect = 0.11,  $SE = 0.02$ , 95% CL = 0.08 to 0.14) are all significant. This finding demonstrates that subjective wellbeing and psychological resilience mediates the relationship between social support and social adjustment (respectively).

Moreover, the sequential pathway for “social support → subjective wellbeing → psychological resilience → social adjustment” is found to be significant (indirect effect = 0.08,  $SE = 0.01$ , 95% CL = 0.06 to 0.10), suggesting that more social support results in substantially higher levels of subjective wellbeing ( $b = 1.76$ ,  $p < 0.001$ ), as well as higher levels of psychological resilience ( $b = 0.19$ ,  $p < 0.001$ ), and greater capacity for successful social adjustment ( $b = 0.16$ ,  $p < 0.001$ ). The residual direct pathway for “social support → social adjustment” is also found to be statistically significant ( $b = 0.41$ ,  $p < 0.001$ ). Thus, from these findings, it can be firmly argued that subjective wellbeing and psychological resilience mediate the relationship between social support and social adjustment, both concurrently and sequentially. This multiple mediation model accounts for significant variance in social adjustment of Chinese secondary school students ( $R^2 = 0.24$ ). The outcomes of the multiple mediation model give us an empirical basis to assert that educators and policymakers should not only ensure that secondary school students receive ample social support but also foster their subjective wellbeing and psychological resilience. Integrating courses that focus on these aspects is crucial in secondary schools and leads to significant improvements in social adjustment. The results of the mediation analyses are presented in Table 4.

## Discussion

The empirical finding generated in this thesis ultimately support the hypothetical conceptual framework proposed herein, whereby subjective wellbeing, followed by psychological resilience, is established to serially mediate the relationship between social support and social adjustment. As hypothesised, social support predicted social adjustment, a relationship which is explained by the serial indirect effect of subjective wellbeing and psychological resilience (a finding which corroborates prior literature in this field). Specifically, higher levels of subjective wellbeing are found to be correlated with increased subjective wellbeing, which is related to higher levels of psychological resilience and greater capacity for social adjustment among Chinese secondary school students. Subjective wellbeing and psychological resilience independently account for part of the association between social support and social adjustment. One interesting nuance to these findings is that considering the indirect effect, psychological resilience has much more impact upon social

adjustment. Concordantly, future student support strategies may build upon this evidential basis to formulate policies which aim to cultivate psychological resilience among students and young people.

Subjective wellbeing and psychological resilience have accounted for part of the association between social support and social adjustment, respectively. These findings provide much-needed empirical evidence to illuminate the importance of subjective wellbeing and psychological resilience as influential factors in explaining the relationship between social support and social adjustment among Chinese secondary school students. To date, no prior literature has been able to empirically determine these relationships. As mentioned in the study objectives in the introduction chapter, this study seeks to explore the potential influential mechanisms underpinning social adjustment of secondary school students, and thus generate novel insights and theoretical inductive and empirically-derived modelling for the development of related student support initiatives. Concomitantly, this research paper asserts that, based on the empirical findings, subjective wellbeing can be utilised as a protective factor to enhance students' social adjustment via mediating the association between social support and social adjustment. Moreover, it is necessary to provide comprehensive support to improve students' psychological resilience, as this is found to be the most influential factor when seeking to increase students' capacity for successful social adjustment.

## Relationship Between Social Support and Social Adjustment

Social adjustment is found to be significantly and positively predicted by social support, thus supporting Hypothesis 1. These results are consistent with that of previous findings.<sup>15,23,24,27</sup> The academic literature thus far has tended to highlight that different dimensions of social support facilitate social adjustment in students, particularly in school settings and environments.<sup>71,72</sup> Furthermore, the important role of teachers' social support of students (especially in the context of making general school adjustments) has been established by prior empirical studies, suggesting that increases in teachers' social support promote students' positive development in their social adjustment.<sup>24</sup> From this, it can be asserted that the findings from this present study confirm that social support and social adjustment are closely related among the target population of secondary school students within the Chinese context. This implies the importance of social support to educators as well as to parents, so as to help secondary students better adjust to their fluid school environment. In China, social support is predominantly derived from family, friends, and broader social networks; this represents a distinct difference relative to the Western emphasis on individual autonomy. Our findings indicate that social support is positively associated with social adaptation, subjective well-being, and resilience, underscoring the critical role of social connectivity in fostering mental health. These outcomes align with traditional Chinese values and extend the scholarly discourse by illustrating the synergistic effect of these factors within specific cultural settings. Consequently, practical implications include enhancing dialogue between educators and parents to gain deeper insights into student needs, thereby providing robust social support; educators might also promote peer support and cultivate the skills to navigate the tension between autonomy and connectivity among students, aiming to improve their social adjustment in secondary schools.

## The Mediating Role of Subjective Wellbeing

Demonstrating consistency with the hypothesis 2, the results of this empirical study find that wellbeing plays a partially mediating role in the relationship between social support and social adjustment. More specifically, it is determined that Chinese secondary school students who report benefiting from higher level of social support are more likely to experience higher subjective wellbeing, which in turn, indirectly leads to improved social adjustment outcomes. These results are consistent with previous findings, which assert that social support is significantly and positively related to subjective wellbeing,<sup>36,73</sup> and thus, positively correlated with social adjustment<sup>74</sup> with different age groups and across diverse cultural contexts. Nonetheless, it should be noted that this present study limited its analytical lens to investigate secondary school students in China, thus demonstrating the relationship between social support, social adjustment, and subjective wellbeing in the nuanced context of China.

The results generated herein also reveal that social support significantly and positively relates to subjective wellbeing, a finding which corroborates recent empirical studies which have posited that social support explains a significant amount of variance in satisfaction with life within different age groups,<sup>75,76</sup> as life satisfaction is often recognised as one of the products of subjective wellbeing.<sup>34,77</sup> Furthermore, a growing body of evidence indicates that life satisfaction is determined by social support.<sup>78</sup> The higher the level of social support reported by students, the greater the level of

subjective wellbeing students report experiencing,<sup>79</sup> and concomitantly, students are more likely to be more capable of adjusting to different or shifting social environments.<sup>80</sup>

We can therefore assert that subjective wellbeing plays a mediating role in the relationship between social support and social adjustment, that is, when students perceive their social support to be sufficient, their subjective wellbeing increases in a commensurate fashion, and they are more likely to exhibit higher levels of social adjustment competencies. Hence, the relationship between social support and social adjustment is empirically demonstrated herein to be mediated by subjective wellbeing.

## The Mediating Role of Psychological Resilience

Psychological resilience is found to play a partially mediating role in the relationship between social support and social adjustment, which is consistent with Hypothesis 3. In particular, students who receive sufficient social support are highly likely to exhibit characteristics of stronger psychological resilience, which indirectly leads to more successful social adjustment practices. These findings corroborate prior research, wherein it was found that social support is positively correlated with psychological resilience<sup>81–84</sup> and that psychological resilience is positively associated with social adjustment.<sup>85–87</sup>

Prior research has also found that social support predicts psychological resilience via the compensatory model of psychological resilience. For instance, social support compensates for the negative impact of academic stress on psychological resilience, whereas the effect of social support accumulatively strengthened students' development of psychological resilience, and thus, students are more likely to exhibit better social adjustment behaviours with stronger psychological resilience.<sup>88</sup> Thus, the empirical findings generated in this research, and the findings from prior studies, all point to the importance of providing sufficient levels of social support to secondary school students. It should be emphasized that, among other things, increases in social support help to relieve academic pressure and are consequently beneficial for student's learner gain and summative assessment outcomes. Moreover, the psychological resilience of students could be simultaneously improved, thereby better enabling students to adjust to new realities in secondary schools.

In line with the novel findings generated in this study, other empirical research is concordant in suggesting that people with a high level of psychological resilience exhibit greater probabilities of experiencing stress, as well as expressing more effective coping strategies in terms of social adjustment. Therefore, such students are more likely to be well adjusted while manifesting stronger levels of psychological resilience, and are able to adapt to new and shifting environments, or in other words, they exhibit high levels of successful social adjustment.<sup>89</sup> Consequently, the relationship between social support and social adjustment is found to be mediated by psychological resilience.

## The Sequential Mediating Effect of Subjective Wellbeing and Psychological Resilience

The relationship between social support and social adjustment is clearly mediated by subjective wellbeing and psychological resilience, which operate sequentially. This supports Hypothesis 4. These findings imply that students with high social support are more likely to enjoy a high level of subjective wellbeing, as well as a strengthened psychological resilience profile, thereby enhancing students' social adjustment competencies in school contexts. It thus follows that the multiple mediation model supports two important explanatory mechanisms: higher subjective wellbeing and higher psychological resilience. Among them, social support is confirmed as being intrinsically associated with social adjustment.

Despite the fact that there is only a small body of research on the sequential mediating role of subjective wellbeing and psychological resilience in the relationship between social support and social adjustment, the findings of this literature nonetheless support the findings generated by this present study. The sequential mediation model illuminates how subjective wellbeing is positively correlated with psychological resilience, a finding which is consistent with prior empirical studies.<sup>79,90–92</sup> A potential explanation is that students with greater subjective wellbeing have greater propensity to elicit positive emotions over negative emotions,<sup>93</sup> a dynamic which may lead to enhanced social adjustment competencies (for example, cultivating positive relationships with peers, demonstrating commitment in school work tasks, and so forth).

More specifically, happy students often associate positive affective experience with frequent positive stimuli;<sup>94</sup> those who are predisposed to be more happy and experience positive emotions even in the midst of stressful events.<sup>95</sup> Notably, the innate psycho-cognitive root of such positive sentiment may explain their ability to rebound successfully and cope with negative emotional events, as well as explain processes leading to the strengthening of their psychological resilience in the face of pressures and life difficulties.<sup>96,97</sup> Students with such innate qualities may be more likely to do well in cultivating and maintaining school relationships and thus produce positive study outcomes – however, further research is necessary to more fully understand the potential psycho-cognitive influences. Furthermore, subjective wellbeing is found to promote the enhancement of psychological resilience to a certain extent, thereby improving social adjustment.<sup>86</sup> These findings not only augment the existing theoretical framework but also offer practical insights for developing culturally relevant interventions that could bolster the well-being and psychological resilience of individuals within the Chinese context.

## Limitations and Recommendations

Despite the relatively large sample recruited and the novelty of the findings generated in this investigation, the study is nonetheless impeded by several limitations. Firstly, the data gathered herein derives from descriptive correlational questionnaire designs, without experimental manipulation or random assignment, which can be critiqued in terms of a lack of causality. Future research would therefore be encouraged to utilise longitudinal or experimental studies to determine the causal relationship between these variables. Secondly, the data for this study were obtained through self-report methods, which might introduce social desirability bias, potentially impacting the reliability of the results. Future research should consider integrating open-ended questions to acquire more comprehensive insights from participants and conducting longitudinal studies to enhance test–retest reliability. Lastly, the representativeness of the sample may limit the generalisability of the results generated herein, as recruited participants were limited to secondary school students in China, from grade 10 to grade 12. Further, the socio-economic status of Zhejiang province is relatively high compared to other provinces in the country,<sup>98</sup> thus limiting generalisability (that is, preventing a broad application of these findings to provinces in China with different socioeconomic compositions). Therefore, future studies may wish to explore the proposed model among populations, in order to enhance the applicability of the findings in different regions in China or even different countries.

Despite the limitations explained above, this research has important practical significance. To our knowledge, this study reveals for the first time that subjective wellbeing, followed by psychological resilience, will mediate the relationship between social support and social adjustment on a continuum, as well as the possible interactive mechanisms by which secondary school students' social support perceptions enhance social adjustment. Moreover, most research in this field has tended to focus on early adolescence or university students when investigating the relationship between social support, subjective wellbeing, psychological resilience, and social adjustment. Consequently, there has been a glaring gap in data or research specifically investigating the relationship between four factors on the population of secondary school students in China. This present study fills this gap, and provides insights into practical ways by which educators, policymakers and other education stakeholders can enhance students' social adjustment competencies in secondary school contexts.

The current study therefore makes a contribution to our understanding of social support, subjective wellbeing, psychological resilience, and social adjustment. For instance, enhancing the levels of social support perceived by (and available to) secondary school students is now empirically proven to help them better adjust to fluid or changing school environments, which is an important insight for teachers in order to help create a positive and conducive school atmosphere and educational environment.

This study also makes a novel contribution by demonstrating that the relationship between social support and social adjustment by are partially explained by subjective wellbeing and psychological resilience. Teachers, educators, and policymakers are thus urged to not only pay attention to secondary school students' subjective wellbeing but also their psychological resilience, as these factors clearly influence their adjustment competencies in schools. In particular,



considering this variability would provide school counsellors a more solid evidential basis for developing effective intervention programmes aimed at improving social support for secondary school in students.

## Conclusion

In conclusion, this thesis has not only examined the relationship between students' social support and social adjustment but has also investigated the underlying mechanism of sequential mediation in social support, subjective wellbeing, psychological resilience, and social adjustment. Accordingly, this research provides strong empirical evidence that the relationship between social support and social adjustment is mediated by subjective wellbeing and psychological resilience in a parallel and sequential manner. When these variables operate sequentially, the relationship between social support and social adjustment is partly mediated by subjective wellbeing and psychological resilience.

These novel findings have a number of important implications for social support provision, enhancement in subjective wellbeing and psychological resilience, and improvement in social adjustment in high-school students in Chinese context. To support students in better adjusting to their changing environments, the increased provision of social support becomes essential, as does focusing on increasing their individual subjective wellbeing and psychological resiliencies.

Reflecting upon these findings and the pertinent questions which remain unanswered, future studies should investigate the distinct impacts of various forms of social support (eg, family, peer, school) on social adjustment, as well as scrutinise these dynamics within different cultural milieus, including urban and rural environments. Longitudinal or experimental methodologies are advocated to substantiate the causal connections delineated in this research.

Regarding practical interventions, educational institutions and communities ought to devise programmes that bolster social support networks, encompassing peer support endeavours and mentorship initiatives. Furthermore, the introduction of psychological resilience training and well-being enhancement activities, such as mindfulness exercises and emotional regulation seminars, may prove advantageous. A synergistic approach involving educators, parents, and mental health practitioners is essential in cultivating a nurturing atmosphere that promotes students' social adjustment and overall well-being.

## Data Sharing Statement

The data of the present study supporting the conclusions will be made available on request by the first or corresponding authors.

## Ethics Statement

This study was conducted in accordance with the Declaration of Helsinki. This study was approved by the Ethics Committee of Zhejiang Normal University. Informed consent was obtained from all participants included in this study.

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## Disclosure

All authors declare that they have no conflict of interest.

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