

# The Impact of Boarding Schools on Students' Mental Health and Social Development

**Zhiyao Chen**<sup>1,\*</sup>

<sup>1</sup>School of Environment, Education and Development, University of Manchester, M13 9PL, Manchester, United Kingdom

\*zhiyao.chen@student.manchester.ac.uk

## Abstract:

Under the background of global advancement and diversification of education, the application of boarding schools has become widespread, and students enrolled in this system span multiple age groups. This paper reviews recent research on the effects of boarding school education on students' mental health and social development. Boarding schools integrate academic life with daily routines, creating environments that can both support and challenge adolescent growth. Drawing on empirical studies published since 2020; the review highlights the dual nature of boarding experiences. Negative outcomes include heightened academic pressure, risks of depression, and persistent loneliness, particularly among vulnerable groups such as rural students and left-behind children. At the same time, boarding may foster independence, resilience, and peer support. In some contexts, it mitigates disadvantages linked to limited family resources. Parent-child relationships and peer networks emerge as critical mediators shaping students' adjustment. The review concludes that the impact of boarding schools cannot be reduced to a single dimension; instead, targeted strategies are needed to manage risks while enhancing potential benefits.

**Keywords:** Boarding schools; mental health; social development

## 1. Introduction

Boarding schools are generally used to refer to closed and collectivized educational institutions, where the school is responsible for providing students with a variety of courses, activities, and facilities necessary for daily life [1,2]. In such contexts, students experi-

ence a life in which academic and daily routines are intertwined, with significantly increased time spent on campus. British public schools can be regarded as one of the prototypes of this type of institution; in their early stages, they carried a strong orientation toward elite education and targeted students from specific economic levels or family backgrounds [3].

In subsequent developments, boarding schools moved toward a more diversified direction, expanding across different countries, student groups, and social contexts. China is an example of this trend: since the early 21st century, the widespread implementation of rural school consolidation policies has led to the centralization of educational resources and the establishment of a large number of boarding schools to meet students' needs [4]. Alongside this expansion came increasing public attention to this form of education. The focus has shifted beyond general indicators such as academic performance; since life in boarding schools extends beyond classroom teaching and directly shapes emotional experiences and social relationships, the internal impact on students has continued to draw discussion and concern. Among these, mental health and social development stand out as two major focal points, reflecting different dimensions of students' internal growth, although potential intersections between the two also exist. Psychological conditions are typically connected with students' subjective feelings, and recent research has paid considerable attention to the psychological changes occurring in boarding environments, particularly concerning issues such as anxiety, depression, loneliness, and subjective well-being. These elements are considered to be influenced by external factors, which for boarding students primarily refers to school structures and modes of institutional management. However, regarding the specific nature of these effects—whether positive or negative—scholarly views diverge across studies depending on the particular circumstances of the research population. Another factor affecting boarding students is social development: how the everyday changes brought about by boarding affect students can be explained through a framework from developmental psychology, Bronfenbrenner's ecological systems theory. This model of individual development emphasizes that development does not occur in isolation but rather through interactions between the individual and surrounding environments, which are categorized into five levels. Among these, the microsystem represents the level exerting the most direct influence on the individual [5]. For boarding students, factors within this level—such as family, school, and peers—undergo significant changes in both interaction patterns and duration, thereby readily producing varying degrees and types of developmental impact. In addition, contextual variables such as educational stage, urban–rural background, left-behind status, and gender play important roles in shaping outcomes, leading to differences in findings across studies. Because internal feelings are inherently subjective, even when quantitative methods such as the Likert scale are employed in some studies, subjectivity can still result in different individuals responding and ex-

periencing the same event in diverse ways. This highlights the necessity of heterogeneous research that pays attention to how different groups experience boarding schools.

To date, a considerable body of research has been conducted in this field, spanning different historical periods and yielding a wide range of findings. The purpose of this paper is to provide an integrated review and discussion of recent research on the impact of boarding schools on students' mental health and social development. Specifically, it aims to clarify the risks and potential benefits that boarding systems may pose for individual students, as well as to identify possible variations that emerge across different educational settings and student populations. The following sections will examine both the nature and the mechanisms of the influence that boarding has on students, while also addressing the duality of research outcomes and their possible underlying causes. To achieve these objectives, this study adopts a systematic literature review approach, drawing data primarily from academic databases. The review focuses on empirical research published since 2020, including peer-reviewed studies and doctoral dissertations.

## 2. Mental Health

### 2.1 Academic Pressure and Study Duration

One of the most significant transformations in students' lives within boarding schools lies in their daily routine. After leaving behind the family environment, parental care, and commuting requirements, school life occupies a much larger proportion of their time, which may increase both academic engagement and psychological stress. This often entails stricter schedules and prolonged studying, as described in the study by Wang, Qin, and Li [6]. Their research focused on the relationship between boarding and academic pressure, particularly the mediating role of emotional well-being and study duration [6]. Using data from the China Family Panel Studies (CFPS) in 2016 and 2018, they selected 738 rural-registered participants aged 10 and above and applied a propensity score matching–difference-in-differences (PSM-DID) design. Control variables such as gender, age, and family background were included to balance group differences between the treatment group and control group. By combining ordinary least squares (OLS) estimation of propensity scores with DID regression analysis, the study found that boarding significantly increases students' academic pressure. On the one hand, this is because the boarding experience generates more negative emotional experiences, and students' perceived academic pressure increases as their negative emotions increase. On the other hand, the researchers hypothe-

sised that boarding would increase study duration during weekdays, due to longer time spent at school and blurred boundaries between study and life. In fact, the results showed that boarding raised weekday study time by 6.0%, whereas weekend study time was not significantly affected. Nevertheless, the findings also indicated that neither weekday nor weekend study duration had a significant impact on academic pressure. A possible explanation is that students became accustomed to weekday study hours, and during weekends, the difference in study time compared with non-boarders was not substantial. However, in some schools, students are not allowed to leave campus every weekend. From the perspective of boarders, this means longer continuous periods of staying on campus, further differentiating them from non-boarders. Building on this point, Wang and Zhang [7] conducted another study examining the impact of extended time in boarding schools. Using data from 6,638 students, they applied PSM, regression analysis, and one-way analysis of variance (ANOVA). Their findings revealed a clear trend: when students' continuous boarding duration exceeded four weeks, negative emotional responses emerged, along with declines in academic achievement and deficits in social-emotional competence, such as reduced empathy and weaker peer collaboration.

Integrating the findings of the two studies, it is evident that the boarding system, due to factors related to students' learning, affects mental health, with the main focus on academic pressure and study duration. Boarding life imposes higher academic pressure on students compared with non-boarders and increases vulnerability to risks such as depression and social withdrawal. Regarding study duration, a combined analysis of the two studies reveals a similar "threshold effect": under more common conditions, such as weekends off or 2–3 weekends of leaving school, the increased study time associated with boarding does not have a direct and significant negative impact on academic pressure or mental health. However, when continuous boarding exceeds four weeks, negative effects begin to emerge. This trend suggests the importance of reasonable scheduling and management for students' mental health. Existing research also has several limitations. First, the experimental context of the first study was based on compulsory boarding due to school mergers. Outside of this context, students' voluntary decisions regarding boarding may introduce bias into the results [6]. Second, although Wang, Qin, and Li [6] employed quantitative measures to enhance comparability and assessability of the data, the primary indicators of academic pressure were derived from students' subjective perceptions, which may be overestimated or underestimated. Incorporating additional objective measures related to academic pressure

could improve the reliability of the findings. Furthermore, both studies were conducted in rural Chinese schools, which may limit the generalisability of the results to other regions. Nevertheless, the large sample sizes used in both studies help ensure the internal generalisability of the results, and the application of PSM contributed to controlling for confounding variables, thereby enhancing the stability of the findings.

## 2.2 Depression and Sleep

A prominent manifestation of poor mental health among students is psychological problems such as depression and anxiety. Accordingly, several studies have focused on these issues in adolescents [8]. Both studies employed questionnaire-based surveys to assess levels of depression and other psychological problems, using validated instruments with established reliability. Specifically, Reardon et al. used the Depression Anxiety Stress Scales – 21 items (DASS-21), while Yang employed a set of questions conceptually similar to the DASS-21 [8,9]. In addition to psychological measures, sleep was also considered as a potentially influential factor. However, the two studies revealed some differences in their results. In Yang's study, boarding students in China exhibited higher rates of depression compared with non-boarders [8]. In contrast, Reardon et al. [9] found no significant difference in depression between boarding and day students in an Australian sample. Sleep may account for this discrepancy. In the Chinese study, boarding students experienced reduced sleep quality due to dormitory life, which may have increased their risk of depression. Conversely, in the Australian study, boarding students had, on average, longer sleep duration than day students, went to bed earlier, and woke up later. This pattern may be attributed to dormitory management and reduced commuting time, ultimately leading to similar depression rates across student groups. Nevertheless, the study also noted that sleep quality remained a concern for boarders regarding their psychological well-being. Overall, sleep appears to be one of the pathways through which boarding life affects students' depression and broader mental health outcomes. The basic mechanism suggests that longer sleep duration or better sleep quality reduces the risk of depression and enhances psychological well-being. This pattern shows some consistency across different national contexts. Boarding environments often contribute to increased sleep duration; however, they can also reduce sleep quality due to factors such as adaptation to communal living, roommate interactions, and homesickness.

A limitation in further understanding these mechanisms is that the complex interactions between boarding, sleep,

and depression were not fully explored in the above studies. For example, negative emotions generated by boarding experiences may reduce sleep quality, which in turn exacerbates depressive symptoms, potentially creating a vicious cycle of worsening sleep and mood. Understanding the development of such cycles and the underlying mechanisms may require more detailed future research, including longitudinal studies and cross-cultural comparisons.

### 2.3 Loneliness

As noted above, various quantitative studies have been used to examine the psychological impact of boarding; however, qualitative research provides important insights into the lived experiences of boarding school students. Rudrum focused on adolescent female students and found that loneliness was a pervasive and enduring feature of their boarding experience [10]. The sample consisted of 403 female students aged 13–18 from Australia, and in the follow-up study, the sample was reduced to 45 female boarding students through focus groups. In interviews, participants highlighted separation from family, unstable peer relationships, and a lack of continuous support systems as contributing factors to feelings of loneliness. Moreover, these feelings were not merely transient; they had long-term negative effects, including anxiety, sadness, and emotional dysregulation. A remarkable aspect of this study is its specific attention to gender, emphasizing the sensitivity and vulnerability of female students to psychological stress during adolescence and in response to the demands of boarding school. Complementing this, Floyd conducted a semi-structured interview study with adults who had previously attended boarding school [11]. While the use of adult participants introduces a temporal lag, meaning their accounts may not fully reflect current conditions, it avoids ethical risks associated with interviewing minors and allows for greater diversity in participants' backgrounds. This approach also provides a long-term perspective, demonstrating that the effects of boarding extend beyond graduation, including students' adaptation processes and identity formation. The study highlighted that boarding environments require students to balance independence with the need for belonging, such as forming supportive peer groups or maintaining family connections. On one hand, boarding can foster independence, responsibility, and maturity; on the other hand, loneliness remains a prominent experience, and when students cannot access community or group support, identity conflicts may emerge as a significant issue. Overall, both studies underscore loneliness as a key psychological challenge within boarding environments, with its manifestations varying

according to individual circumstances. Taken together, the findings suggest that structural deficiencies in social and family networks influence students' experiences, while the complex dynamics of communal living and personal development exert longer-term effects. A sense of belonging, supportive relationships, and stable connections may serve as critical protective factors for students' mental health and contribute to personal growth.

## 3. Social Development

### 3.1 Parent Relationships

Under the boarding system, students face the situation of living at school for extended periods, with reduced contact time with caregivers. At the same time, caregivers may also be absent due to various other practical factors, leading to issues in communication, family care, identity formation, and emotional support, which are particularly critical during adolescence when social and emotional needs are heightened. Qin, Li, and Yang, based on data from the China Education Panel Survey (CEPS), analyzed the outcomes of spatial and emotional distance between boarding school children in primary and secondary education and their families [12]. The results of the OLS regression indicated that children's cognitive and non-cognitive abilities were positively correlated with spatial distance from their parents, while emotional distance was negatively correlated, possibly because children adapt to physical separation but struggle to cope with emotional disconnection. This may suggest that for boarding children, the influence of spatial separation from family can be gradually adapted to, whereas emotional distance cannot. The article also includes a discussion of heterogeneity, noting that the negative impact of parent–child emotional distance increases depending on the students' gender and geographic context, such as girls showing stronger emotional dependence and students from rural areas facing greater vulnerability, which may reflect differences in individual sensitivity. The study further indicated that if improvements for children are to be made, mere physical companionship is insufficient; emotional support is essential. Moreover, the interaction between children and grandparents provides limited enhancement and cannot replace the role of parents although in some cultural contexts grandparents are traditionally considered primary caregivers [12]. At the same time, another study provides supporting evidence, using the Chinese version of the Inventory of Parent and Peer Attachment-Revised (IPPA-R), the study tested and quantified children's sense of alienation from each parent [4]. The results indicated a significant positive correlation between boarding school atten-



dance and children's alienation from their parents, which was also associated with a higher likelihood of depressive and anxiety symptoms due to reduced emotional security and weakened coping resources. However, the researchers further noted that some students with pre-existing psychological difficulties were more likely to be sent to boarding schools due to conflicts with their parents. In such cases, the boarding experience exacerbates both emotional alienation and adverse psychological outcomes. Taken together, the two studies highlight the significant phenomenon of boarding schooling contributing to parent-child alienation and its related harms. Nevertheless, a limitation shared by both is the lack of comparative analysis with non-boarding children, which would help establish whether certain phenomena are unique to boarding students. Additionally, both studies employed cross-sectional designs, meaning they captured only a snapshot of children's relationships with their families at a given time. The researchers inferred corresponding trends accordingly, but whether the relationship between boarders and their families follows particular trajectories over time remains an important direction for future research.

However, the impact of distancing from parents is not entirely negative. After all, physical separation from parents also means that parental control becomes more limited. Blau and Blau presented a perspective contrary to traditional concerns regarding parent-child relationships among boarding students, emphasizing the enhancement of independence brought about by the boarding system [13]. As a cross-sectional comparative study, it examined 219 high school students from both boarding and day schools in terms of identity development, psychological separation, and parent-adolescent relationships. The results indicated that boarding students reported relatively lower levels of parental control, greater conflict independence, and more autonomy in life decisions and emotional matters. These factors ultimately reflected benefits in individual development and relationship maintenance. It is remarkable, however, that the study's findings are based on the premise that boarding students, while partially separated from parental authority, still maintained a reasonable degree of emotional connection with their parents. Additionally, since the study was conducted within a specific religious context, it remains unclear whether the faith background provided additional benefits in maintaining emotional bonds. Consequently, when extending the findings to non-religious or other religious contexts, potential discrepancies may arise.

However, one particular group has not been mentioned in the aforementioned studies, namely left-behind children (LBC). This group typically comes from families with economic or geographical disadvantages, where parents

leave their place of origin for long-term employment, leaving grandparents and siblings as the primary caregivers. As a result, even if these children do not reside in boarding schools for extended periods, they still maintain a substantial physical and emotional distance from their parents. Addressing the situation of LBC, Liu and Villa offered a specific perspective [14]. Their study, also using CEPS data with OLS regression analysis, focused exclusively on students who lacked daily parental companionship due to parents' labor migration. The study primarily compared the psychological health and social development indicators of LBC in boarding versus non-boarding settings. Findings revealed that, for LBC, boarding schools were not purely negative environments; rather, they can partly alleviate the loneliness and psychological difficulties caused by the absence of parental presence, while also providing more opportunities for socialization, enabling them to access support resources through more diverse pathways. From this perspective, for LBC who originally lack family support, the boarding school system may, to some extent, serve as a compensatory support structure, and even provide partial protective mechanisms, mitigating the risks of psychological problems and educational disadvantages associated with prolonged parent-child separation.

### 3.2 Peer Relationships

Although time spent with family members decreases as a result of boarding life, students can still gain more opportunities for interaction and mutual support with their peers, which become essential compensatory resources in the absence of familial presence. Such changes in the social relationship system may exert varying degrees of influence on students. Mudzkiyyah et al. conducted a study in Indonesian boarding junior high schools, employing a quantitative approach with the linear regression method, combined with multiple self-report scales for measurement and analysis [15]. The results indicated that peer attachment significantly and positively predicted the well-being of boarding students. This demonstrates that students who maintain close relationships with peers are more likely to receive emotional support in school life and to develop stronger coping strategies when facing stress. In addition, the study highlighted self-efficacy as another factor that could enhance students' well-being, which may function alongside peer support. Another study by Gao et al. adopted a different methodological approach—social network analysis (SNA). Unlike methods that focus solely on individual characteristics, SNA utilizes mathematical and graph-theoretical tools to analyze the patterns of relationships among individuals [16]. By examining the asso-

ciations between social network indicators and loneliness, the researchers found that loneliness was closely linked to peer relationships. Students who enjoyed higher peer acceptance and occupied central positions in the social network reported significantly lower levels of loneliness, while those rejected or marginalized experienced heightened feelings of loneliness and social anxiety. When family connections are weakened by boarding arrangements, students are compelled to rely more heavily on peer networks, which may serve as a substitute. In such contexts, the quality of peer relationships becomes crucial: under positive peer relationships and support, boarding schools may function as important environments for psychological adjustment.

However, findings from the aforementioned research indicate that peer relationships also exhibit a dual nature: not all relationships are positive, and not everyone possesses a strong social network. Children who are more disadvantaged in this regard may become more vulnerable within such a mechanism. In the case of negative peer relationships, the most extreme manifestation may develop into school bullying. Fredrick, McClellmont, Jenkins, and Kern collected data from nine different schools in the United States, where participants were asked to report their experiences of bullying, their perceptions of emotional and physical safety, as well as other background information through questionnaires [17]. The results revealed the prevalence of bullying, with boarding students widely reporting such experiences likely due to limited adult supervision and intense peer dependence; the most common forms were verbal and relational bullying. For students who had experienced bullying, both emotional and physical safety were generally reduced. Importantly, bullying also functioned as an environmental factor influencing the broader student population: even students who were not directly bullied reported reduced perceptions of safety when situated in bullying-prone environments. This risk is further heightened in the boarding context. On the one hand, because students spend a higher proportion of their time in school, bullying and its consequences extend beyond classroom hours to encompass daily life. On the other hand, due to the absence of familial social networks in boarding settings, students become more dependent on peer relationships. Consequently, when harmed by peers, they are rendered more vulnerable, and the impact becomes more significant.

## 4. Discussion

### 4.1 Findings

Based on the articles and evidence presented above, it can

be observed that the system of boarding education does not exert a unidirectional influence on adolescent development; rather, it demonstrates significant complexity. Therefore, it is not appropriate to describe its impact within a single dimension or evaluative framework, as conclusions vary depending on specific real-world contexts.

From the perspective of mental health, compulsory boarding significantly increases students' perceived academic pressure, and prolonged continuous boarding—particularly stays exceeding four weeks—further exacerbates this outcome, ultimately leading to declines in academic performance and emotional competence. At the same time, boarding students also demonstrate a higher prevalence and risk of depression. Although findings remain inconsistent across studies, research in China has reported higher prevalence rates among boarding students compared to day students. However, in the Australian context, this difference is not as pronounced, which may be attributed to disparities in sleep patterns and sleep quality between students in the two countries. Feelings of loneliness are also particularly salient among boarding students, especially adolescent female students. Long-term separation from family and gaps in communication with peers represent significant challenges, and such effects may persist across extended periods. From the perspective of students' social networks, boarding life may result in emotional estrangement between parents and children due to environmental separation. On the other hand, if parents and children are able to maintain strong emotional bonds despite physical distance, this process may encourage students to expand their development beyond the family sphere, fostering independence and social competence. For certain vulnerable groups, boarding may even mitigate some adverse effects caused by limited family support. With regard to peer relationships, the duality of impacts must also be considered. Positive peer interactions and supportive peer networks play a crucial role in enhancing adolescents' well-being and reducing the risk of depression. However, when negative peer interactions such as bullying occur, students' sense of physical and emotional safety can be severely undermined, resulting in withdrawal, avoidance behavior, or defensive aggression.

### 4.2 Insight

Given the dual nature of the effects of boarding school systems, rather than simply rejecting or uncritically promoting this model, a more beneficial strategy would be to manage and mitigate its negative consequences while simultaneously strengthening and expanding its positive aspects. Achieving this ideal goal may require the participation and collaboration of multiple parties. For instance,

schools should provide reasonable management policies, such as establishing schedules that support adequate sleep and regulate academic pressure, such as limiting evening study hours and ensuring rest days. Positive school–family communication can also help reduce the emotional distance between parents and children by guiding parents to provide remote family support, which in turn may reduce the risk of loneliness. High-quality peer interaction should likewise be considered, with schools offering more opportunities for students to interact and build friendships. At the same time, effective anti-bullying mechanisms should be implemented to ensure students’ physical and emotional safety, particularly for vulnerable subgroups.

### 4.3 Future Research

At the current stage, most studies tend to adopt cross-sectional research methods, which, in many cases, accurately reflect students’ status at specific stages and regarding particular characteristics. However, there remains a lack of focus on students’ changes, fluctuations, and trends over extended periods. In this regard, more longitudinal or mixed-methods research may be necessary to better capture the developmental trajectories of adolescents. A positive aspect is that researchers in this field have included multiple regions, age groups, family backgrounds, and genders, and some marginalized groups, such as left-behind children, have not been neglected, enhancing representativeness and contextual validity. Nonetheless, gaps still exist; for example, future research should also consider students with certain psychological or physical challenges. Finally, the perspective of research can be further expanded by including additional stakeholders involved in the boarding experience, such as teachers who have extensive close contact with students, incorporating their viewpoints, roles in boarding life, and relationships with students, as well as the social dynamics they experience, including interactions with students and institutional constraints.

## 5. Conclusion

In conclusion, the findings of this review suggest that the boarding school system, as a complex educational structure, cannot be evaluated in terms of its impact on young people from a single dimension. Boarding life extends beyond the classroom and academics, integrating students’ daily routines into a relatively closed environment. Current research evidence indicates that this system demonstrates dual characteristics across multiple dimensions. Boarding life may increase the risks of academic stress, depression, and loneliness, but at the same time, it can foster independence and strengthen peer support.

In other words, depending on individual and contextual differences, boarding schools may heighten vulnerability for some student groups, while creating opportunities for growth for others. This underscores the significance of targeted measures: expanding positive effects while mitigating negative ones should be considered a practical and necessary process. For example, schools could adopt proactive strategies to manage boarding environments, promote students’ positive development, and monitor mental health conditions. Through well-structured curricula and workload management, schools can reduce academic stress while ensuring adequate rest and sleep quality. Moreover, attention should be given to peer relationships by establishing clear and effective anti-bullying mechanisms and creating opportunities for positive student interactions. At the same time, parents and teachers should maintain sustained attention and support for students.

Taken together, this review argues for emphasizing the dynamic and diverse characteristics of boarding schools as educational environments. Their influence is shaped by multiple factors, which ultimately suggests that the core value of boarding schools may not lie in the system itself. Rather, it is the attention to individual development, the application of sound and evidence-based management strategies, and the provision of continuous support that constitute the most critical conditions for shaping students’ growth.

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