

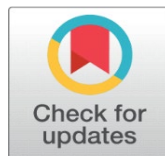


PSYCHOLOGICAL COSTS OF ACADEMIC SUCCESS: EXAMINING THE IMPACT OF SHADOW EDUCATION ON CHILDREN'S MENTAL HEALTH

Sachin Kumar ¹ , Poonam Pandita ¹ , Dr. Kiran Singh ² 

¹ Research Scholar, School of Education, Department of Educational Studies, Central University of Jammu, Samba (J&K), India

² Associate Professor, School of Education, Department of Educational Studies, Central University of Jammu, Samba (J&K), India



Received 07 July 2025

Accepted 08 August 2025

Published 25 September 2025

Corresponding Author

Poonam Pandita,
poonampandita001@gmail.com

DOI

[10.29121/granthaalayah.v13.i9.2025.6238](https://doi.org/10.29121/granthaalayah.v13.i9.2025.6238)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2025 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.



ABSTRACT

Shadow education, referring to the supplemental, private tutoring provided outside the formal school system, has become a global phenomenon. While it aims to improve academic performance, its impact on children's mental health has raised significant concerns. This paper examines the psychological effects of shadow education on children, exploring issues such as stress, anxiety, pressure to perform, and reduced leisure time. Drawing upon a range of international studies, the paper analyzes the mechanisms through which shadow education contributes to mental health challenges, highlighting the paradox between academic achievement and emotional wellbeing. It also discusses potential interventions to reduce the negative consequences of shadow education, emphasizing the importance of a harmonious blend of learning strategies.

Keywords: Shadow Education, Children, Mental Health, Academic Success, Emotional Wellbeing

1. INTRODUCTION

The emergence of shadow education, which includes private tutoring, supplementary education test preparation services, and various forms of supplemental instruction, have emerged as a significant response to the escalating competitiveness within academic settings. Initially rooted in East Asian nations, shadow education has expanded its influence worldwide, largely due to the belief that it can provide students with a competitive advantage in examinations and higher education admissions [Bray \(2013\)](#), [Entrich \(2021\)](#), [Bray and Zhang \(2023\)](#),

Bray and Hajar (2024). This widespread adoption raises important questions about the implications of supplementary tutorial beyond academic performance. However, there is an increasing recognition of its potential negative effects on children's mental health Zhang (2021), Liu and Bray (2022), Xiang et al. (2023), Kumar et al. (2024), Kumar et al. (2025a). As parents and students alike become more invested in academic success, the pressure associated with shadow education can lead to significant psychological stress. Students may experience heightened levels of anxiety as they juggle multiple forms of academic support and face the relentless demands of their educational environment Zhang (2021), Jokila et al. (2021), Liu and Bray (2022), Kumar et al. (2025e). Moreover, the competitive nature of shadow education can foster a sense of social isolation among students Ørberg (2018), Tan 2020, Bai (2021), Yung 2022, Tan and Liu (2023), Kumar et al. (2024), Kumar et al. (2025a), Kumar et al. (2025b). Engaging in extensive tutoring or preparatory programs may limit opportunities for social interaction, as students often prioritize academic commitments over leisure activities and friendships. This isolation can increase feelings of loneliness and contribute to a decline in mental well-being. The impact of shadow education on stress levels is particularly concerning, as chronic stress can have long-lasting effects on a child's cognitive and emotional development Noh et al. (2020), Zhang (2021), Xiang et al. (2023). Research indicates that high stress and anxiety can impede academic performance rather than enhance it, creating a paradox where the intended benefits of shadow education may not be realized Noh et al. (2020), Liu and Bray (2022), Xiang et al. (2023)' Kumar et al. (2025). Consequently, it is essential to consider not only the academic outcomes associated with shadow education but also the broader psychological implications. This paper aims to explore these psychological ramifications, focusing on the interplay between supplementary education and its effects on stress, anxiety, social isolation, and overall mental health. By examining these dimensions, we can better understand the complexities of private tutoring and its role in shaping students' educational experiences and psychological well-being. Through this investigation, we hope to contribute to the discourse surrounding educational practices and their implications for mental health in today's highly competitive academic landscape.

2. SIGNIFICANCE OF THE STUDY

The significance of this study lies in its timely examination of the psychological implications of shadow education, a phenomenon that is rapidly expanding across the globe. However, as the practice has grown in scale and scope, its unintended consequences, particularly concerning children's mental health, have become increasingly difficult to overlook. This study is significant because it addresses a critical gap in current educational research while shadow education's academic benefits have been widely documented, its psychological toll on children has not received the same level of attention. One of the primary concerns surrounding shadow education is its impact on children's emotional well-being, particularly in relation to stress and anxiety. As more children and families turn to private tutoring as a means of securing academic success, there is a growing pressure on students to perform well not only in the formal educational system but also in the additional lessons that shadow education provides. This pressure can lead to mental health challenges, such as heightened levels of stress and anxiety, which are often increased by the competitive nature of academic environments Zhang (2021), Liu and Bray (2022), Xiang et al. (2023), Kumar et al. (2024), Kumar et al. (2025f). This study is significant because it provides an in-depth exploration of how shadow

education contributes to these psychological issues, offering insight into the mechanisms that link excessive academic pressure to mental health deterioration. Another important aspect of this study is its focus on the paradox between academic achievement and emotional well-being. While the goal of shadow education is to improve academic outcomes, there is evidence suggesting that this improvement often comes at the cost of children's emotional health. The constant academic demands placed on children, both within and outside the classroom, leave them with little time for relaxation, recreation, or socialization essential components of a healthy childhood. This study highlights this contradiction, demonstrating that while children may achieve higher academic results through shadow education, they may simultaneously experience a reduction in their overall quality of life. This paradoxical outcome underscores the necessity of reassessing the role of shadow education in contemporary schooling systems.

The global perspective offered by this study also enhances its significance. Drawing on a wide array of international studies, the research not only highlights the universality of the issues related to shadow education but also acknowledges the cultural and systemic variations that may influence the nature of these issues. By examining shadow education in diverse contexts, the study broadens the understanding of how different educational systems contribute to the pressure on children to engage in supplemental tutoring. Moreover, the international scope allows the study to consider a variety of educational models, making its findings relevant to a wide audience of policymakers, educators, and parents across the world. Furthermore, the study's focus on potential interventions to reduce the negative consequences of shadow education is of great significance. While the issue of mental health challenges in children is pressing, this study does not merely diagnose the problem, it also offers solutions. By exploring strategies to reduce the adverse effects of shadow education, such as promoting a balanced approach to academic achievement and emotional health, this research contributes to the development of a more holistic and child-centered educational system. The paper calls for a harmonious blend of learning strategies, emphasizing the need for educational reforms that take into account the mental health of students. This perspective is crucial in an era where academic success often overshadows the importance of well-being in children's development. Lastly, the significance of this study lies in its potential to influence policy and practice. As shadow education becomes more ingrained in global educational systems, it is vital for policymakers to consider not only the academic outcomes associated with private tutoring but also the broader implications for students' emotional and psychological development. This research offers evidence that could inform policies aimed at regulating or rethinking the role of shadow education in school systems, ensuring that it does not undermine children's mental health. Additionally, the study provides valuable insights for educators and parents, encouraging them to prioritize children's well-being alongside their academic growth. In conclusion, this study is of great significance because it fills an important gap in the literature on shadow education, addressing the psychological costs of this global educational trend. Ultimately, this research advocates for a balanced approach to education, one that considers both the academic and psychological needs of children.

3. THE RISE OF SHADOW EDUCATION

Shadow education, phenomenon is driven largely by the desire to secure a competitive advantage for their children, particularly in high-stakes entrance examinations for prestigious schools and universities [Mawer \(2015\)](#), [Yung \(2019\)](#),

Bray (2021), Bae and Choi (2024), Kumar et al. (2024), Kumar et al. (2025a), Kumar et al. (2025f). These tests are seen as gateways to better career opportunities and social standing, making academic achievement a critical priority for families. The trend is not confined to East Asia. Shadow education has seen significant growth in other parts of the world, including Europe and North America. In these regions, the expansion of private tutoring reflects increasing concerns about standardized testing, school performance rankings, and the ability of formal educational systems to meet diverse student needs Zwiier et al. (2021), Wang (2022), Bae and Choi (2024), Kumar et al. (2024), Kumar et al. (2025a). As education systems across the globe place greater emphasis on measurable outcomes, such as test scores, parents and students alike feel compelled to turn to private tutoring as a means of enhancing academic performance. One of the primary reasons for the proliferation of shadow education lies in the perceived inadequacies of formal schooling systems Li (2020), Bray and Hajar (2024), Kumar et al. (2024). Schools often struggle to address the individual learning needs of every student, resulting in gaps in knowledge and skills. These gaps are particularly pronounced in contexts where classroom sizes are large, teacher-student ratios are high, or curriculum delivery is uniform rather than tailored. In such situations, private tutoring becomes an appealing solution for parents who want to ensure that their children do not fall behind academically Baker et al. (2001), Ørberg (2018), Tan (2020), Yung (2022), Kumar et al. (2024), Kumar et al. (2025c). In highly competitive education systems, the stakes are even higher. Students are under relentless pressure to excel in exams that significantly influence their academic and professional trajectories, such as university entrance tests or national-level standardized assessments Noh et al. (2020), Bai (2021), Liang et al. (2022), Kumar et al. (2025d). The fear of falling behind one's peers often drives families to seek out additional academic support outside of the formal school environment. Shadow education, in this context, is viewed as an essential tool for keeping pace with peers and meeting the demands of rigorous academic standards. Furthermore, cultural factors also play a role in the growth of shadow education.

In many East Asian societies, there is a strong emphasis on diligence, perseverance, and academic excellence Bray (2013), Bray (2021), Bray and Hajar (2024), Kumar et al. (2024), Kumar et al. (2025b). These cultural values contribute to the normalization of private tutoring as a standard part of a student's academic journey. The societal expectation to succeed academically creates a competitive atmosphere where participation in shadow education becomes almost mandatory. Interestingly, shadow education has also been influenced by economic factors. In countries where educational inequality is pronounced, wealthier families are more likely to afford private tutoring, thereby widening the gap between socio-economic groups Agrawal et al. (2024). This raises concerns about equity and access within education systems. As shadow education grows, it risks creating a dual-track system in which students with greater financial resources gain disproportionate advantages over their less privileged peers. Despite its benefits in addressing individual learning gaps, shadow education has also been critiqued for perpetuating stress and burnout among students. The additional academic load from private tutoring, combined with regular schoolwork, often leaves little room for leisure or extracurricular activities Chingtham (2015), Mikkelsen and Gravesen (2021), Liang et al. (2022). This can lead to negative consequences for students' mental health and overall well-being. In summary, shadow education is a complex and multifaceted global phenomenon that reflects both the strengths and shortcomings of formal education systems. While it provides opportunities for academic enhancement, it also underscores the need for systemic reforms to ensure that schools can better cater to the diverse needs of students. Addressing these challenges may help reduce

the reliance on private tutoring and create more equitable and holistic educational experiences for all learners.

4. IMPACT OF SHADOW EDUCATION ON CHILDREN'S MENTAL HEALTH

4.1. THE PRESSURE TO PERFORM: ACADEMIC STRESS AND ANXIETY

Shadow education, while often touted as a means to enhance academic performance, has significant implications for student well-being, particularly in terms of increased stress and anxiety. This phenomenon stems from the inherently competitive nature of supplementary tutoring, where students are pushed to excel not only for personal achievement but also to outshine their peers. Such environments foster a culture of chronic academic pressure, as students feel compelled to meet exceptionally high expectations set by their parents, tutors, and societal norms. Several studies underscore this issue, revealing a strong correlation between intensive tutoring and heightened levels of stress, anxiety, and burnout among students [Kuon \(2019\)](#), [Noh et al. \(2020\)](#), [Zhang \(2021\)](#), [Zhang et al. \(2022\)](#), [Xiang et al. \(2023\)](#), [Kumar et al. \(2024\)](#). This problem is particularly acute in countries where education systems are heavily exam-driven, and high-stakes assessments are perceived as pivotal determinants of future success [Bray \(2013\)](#), [Entrich \(2021\)](#), [Bae and Choi \(2024\)](#), [McCoy and Byrne \(2024\)](#), [Kumar et al. \(2024\)](#). In these contexts, shadow education increases the already demanding academic landscape, adding additional layers of pressure for students. Research highlights that children who engage in extensive after-school tutoring often face long study hours, reduced leisure time, and a diminished sense of personal autonomy [Chingtham \(2015\)](#), [Mikkelsen and Gravesen \(2021\)](#), [Liang et al. \(2022\)](#), [Kumar et al. \(2025d\)](#). These factors combine to create a stressful environment that can have far-reaching consequences on students' mental health. For instance, [Zhang \(2021\)](#) observed that students enrolled in rigorous tutoring programs frequently reported experiencing symptoms of burnout, including emotional exhaustion, detachment from academic activities, and a reduced sense of accomplishment. The situation in South Korea exemplifies the detrimental effects of shadow education on student well-being. With one of the highest rates of participation in private tutoring globally, South Korean students face immense pressure to excel in standardized exams, which are seen as gateways to prestigious universities and future career opportunities. This relentless emphasis on academic performance has led to widespread reports of stress, anxiety, and even fear among students, as they navigate the demands of both formal schooling and supplemental tutoring [Jokila et al. \(2021\)](#), [Zhang \(2021\)](#), [Xiang et al. \(2023\)](#), [Kumar et al. \(2025a\)](#), [Kumar et al. \(2025b\)](#). The cultural importance placed on academic success further compounds this pressure, as students are often made to feel that their worth is intrinsically linked to their academic achievements. Such internalized beliefs can have long-term psychological repercussions, fostering feelings of inadequacy and low self-esteem when expectations are not met. Parental expectations also play a significant role in amplifying the stress associated with shadow education [Kumar et al. \(2024\)](#). While well-intentioned, these expectations can inadvertently place an enormous burden on students, who may feel obligated to meet these aspirations at the cost of their own well-being. [Yung \(2019\)](#) argues that this dynamic can lead children to internalize a performance-oriented mindset, where their self-worth becomes closely tied to their ability to achieve high grades and test scores. Over time, this

outlook can erode students' intrinsic motivation for learning, replacing curiosity and enthusiasm with anxiety and fear of failure.

4.2. SOCIAL ISOLATION AND REDUCED LEISURE TIME

One of the most profound yet often overlooked consequences of shadow education is its impact on children's social lives and free time. The rigorous schedules imposed by supplementary tutoring frequently leave students with little to no time for rest, recreation, or meaningful social interaction. This phenomenon is particularly pronounced in high-pressure academic cultures, where the race for better grades and future opportunities dominates family and individual priorities [Baker et al. \(2001\)](#), [Chingtham \(2015\)](#), [Tan \(2020\)](#), [Mikkelsen and Gravesen \(2021\)](#), [Bai \(2021\)](#). For instance, in countries like China, many students dedicate their weekends and evenings to attending tutoring sessions, often at the expense of spending quality time with friends or family [Zhang and Bray \(2020\)](#), [Tan \(2020\)](#), [Yung \(2022\)](#). While this commitment to academic improvement might appear productive on the surface, it significantly reduces children's opportunities for leisure and personal connections, elements that are crucial for a balanced childhood. The reduction in leisure time due to shadow education has far-reaching implications for children's emotional and social development. Childhood is a critical period for the cultivation of social skills, emotional regulation, and resilience, and much of this growth occurs during unstructured play and social interactions [Tan \(2020\)](#), [Liang et al. \(2022\)](#), [Yung et al. \(2023\)](#), [McCoy and Byrne \(2024\)](#). Play is not merely a pastime, it is a fundamental component of development, providing children with opportunities to navigate social dynamics, practice problem-solving, and express creativity. When children are deprived of such experiences because of the demands of shadow education, the consequences extend beyond their immediate enjoyment, affecting their overall well-being and capacity to cope with challenges in later life. Children who spend long hours in tutoring centers often find themselves detached from their peers who may not share similar schedules [Kuon \(2019\)](#), [Tan \(2020\)](#), [Chen and Kuan \(2021\)](#), [Yung \(2022\)](#), [McCoy and Byrne \(2024\)](#). This isolation can lead to feelings of loneliness and alienation, creating a sense of "otherness" that may persist into adulthood. In addition, the lack of regular social interactions prevents students from developing vital interpersonal skills, such as teamwork, empathy, and communication. These skills, although not traditionally measured in academic assessments, are indispensable for personal and professional success. Research has shown that the absence of such interactions can result in diminished emotional intelligence, lower self-esteem, and increased vulnerability to mental health issues [Noh et al. \(2020\)](#), [Liu and Bray \(2022\)](#), [Zhang et al. \(2022\)](#), [Xiang et al. \(2023\)](#). The mental health implications of shadow education are another pressing concern. The relentless focus on academic performance can lead to chronic stress, anxiety, and even depression among students. This is particularly true when the expectations set by parents and tutors become overwhelming. The absence of downtime increases these issues, as students are denied the opportunity to relax and recharge. Furthermore, the competitive nature of shadow education can foster unhealthy comparisons among peers, intensifying feelings of inadequacy and self-doubt. Over time, these pressures can have a cumulative effect, shaping a generation that views success narrowly through the lens of academic achievement, often at the expense of holistic well-being. Family dynamics also suffer as a result of the time demands imposed by shadow education. Parents who prioritize tutoring over family bonding may inadvertently contribute to emotional distance between themselves and their children. Family meals, conversations, and shared experiences, moments that foster

a sense of belonging and security are often sacrificed in favor of extra classes and study sessions [Tan \(2020\)](#), [Yung 2022](#), [McCoy and Byrne \(2024\)](#). This shift not only affects children but also disrupts the familial support system that is essential for navigating the challenges of adolescence. In conclusion, while shadow education is often pursued with the noble intent of enhancing academic success, its impact on children's social lives and mental health cannot be ignored. The excessive focus on tutoring diminishes opportunities for essential aspects of childhood development, including play, socialization, and emotional growth. Policymakers, educators, and parents must recognize the importance of striking a balance between academic aspirations and the holistic development of children [Pandita et al. \(2025a\)](#), [Pandita et al. \(2025b\)](#). By fostering environments that value free time and social interaction alongside education, society can ensure that children grow into well-rounded individuals equipped for both personal and professional success.

4.3. THE PARADOX OF ACHIEVEMENT

Success at the Cost of Wellbeing: Shadow education, often perceived as a pathway to improved academic outcomes, presents a paradox by simultaneously fostering academic success and undermining children's emotional wellbeing. The intensive tutoring that defines shadow education can yield tangible benefits, such as higher test scores and enhanced competitiveness in securing admission to elite schools and universities. However, this academic advantage often comes at a significant emotional cost. Research from Japan highlights the dual impact of shadow education. Studies have shown that students engaged in extensive tutoring programs tend to outperform their peers academically, achieving notably higher test scores [Ozaki \(2015\)](#), [Mawer \(2016\)](#), [Bai \(2021\)](#), [Liang et al. \(2022\)](#), [Xiang et al. \(2023\)](#), [Kato and Kobakhidze \(2024\)](#).

. Yet, these same students report alarmingly high levels of anxiety and depression, painting a complex picture of the relationship between academic achievement and mental health. This phenomenon reflects a growing concern among educators, parents, and policymakers: the pursuit of academic excellence through shadow education often increases stress, emotional exhaustion, and burnout among students. The pressure to perform and meet the expectations associated with these programs creates a high-stakes environment that can be detrimental to students' psychological health [Li \(2020\)](#), [Jokila et al. \(2021\)](#), [Bae and Choi \(2024\)](#). For instance, the relentless focus on academic success, reinforced by rigorous schedules and competitive atmospheres, can erode children's self-esteem and lead to feelings of inadequacy. This emotional toll raises questions about the sustainability of shadow education as a long-term strategy for academic achievement. The competitive edge provided by shadow education cannot be denied. Students who participate in these programs are often better equipped to tackle standardized tests, entrance exams, and other academic challenges [Byun et al. \(2023\)](#), [Bae and Choi \(2024\)](#). This advantage can open doors to prestigious institutions, scholarships, and career opportunities, aligning with the aspirations of many families. For example, studies from South Korea and Hong Kong have demonstrated that shadow education significantly boosts students' chances of entering top-tier universities, thereby validating its role as a tool for social mobility [Yung \(2019\)](#), [Bae and Choi \(2024\)](#). However, the emphasis on results often overshadows the holistic development of children. The adverse effects of shadow education extend beyond individual students, influencing family dynamics and societal structures. Families invest substantial financial resources and time in these programs, often prioritizing academic success over leisure, extracurricular

activities, and family bonding. This singular focus can strain relationships and limit opportunities for children to develop social skills, creativity, and emotional resilience. Additionally, the normalization of shadow education perpetuates inequalities, as access to high-quality tutoring remains out of reach for many low-income families [Li \(2020\)](#), [Agrawal et al. \(2024\)](#). This disparity not only widens the educational gap but also perpetuates cycles of stress and anxiety among those striving to compete in an increasingly demanding academic landscape. The mental health implications of shadow education cannot be overlooked. The stress associated with these programs often begins at a young age and can have long-term consequences for students' emotional and psychological wellbeing. The constant pressure to excel academically can lead to sleep deprivation, reduced physical activity, and a lack of time for hobbies and relaxation. Over time, these factors contribute to emotional exhaustion, which can manifest as burnout, a state characterized by chronic fatigue, disillusionment, and a diminished sense of accomplishment. This burnout, ironically, undermines the very goals of shadow education by reducing students' ability to perform effectively in both academic and non-academic settings [Yung et al. \(2023\)](#), [Bae and Choi \(2024\)](#). By fostering supportive learning spaces and promoting alternative educational strategies, it may be possible to mitigate the adverse effects of shadow education while preserving its benefits. This shift is essential for nurturing resilient, well-rounded individuals who can thrive both academically and emotionally in an increasingly competitive world.

4.4. THE ROLE OF SOCIETAL COMPETITION

The competitive nature of modern education systems significantly intensifies the pressure on children participating in shadow education programs. In many countries, particularly in East Asia, such as South Korea and China, the stakes for academic success are extraordinarily high due to the rigorous entrance exams required for admission to prestigious schools and universities. These examinations are seen as the ultimate gateway to future success, making them fiercely competitive. Students are expected to secure top scores, as even minor differences in grades can determine admission to elite institutions [Kuon \(2019\)](#), [Tan \(2020\)](#), [Bai \(2021\)](#), [Yung \(2022\)](#), [Bae and Choi \(2024\)](#). This heightened competition fosters a pervasive culture of academic success at any cost, where academic excellence is pursued relentlessly. This culture is deeply ingrained in societal values, emphasizing academic achievements as a critical measure of an individual's worth and potential. Students are often pushed to their limits, both physically and mentally, to meet these expectations. In such an environment, academic performance becomes synonymous with personal success and social status. The societal narrative equating success in entrance exams with a bright future reinforces this pressure, creating an atmosphere where students feel they must constantly compete against their peers to prove their capabilities [Zhang \(2021\)](#), [Xiang et al. \(2023\)](#), [Byun et al. \(2023\)](#). The fear of underperforming and the stigma attached to failure further amplify this stress. For many students, the competitive educational landscape creates a sense of inadequacy and insecurity. The constant comparison with peers fosters a mindset where self-worth is tied to academic performance. Failure, even if minor, is often perceived not just as a temporary setback but as a profound reflection of one's overall ability to succeed in life. This perception places an immense psychological burden on students, who may come to view themselves as inadequate or incapable if they fail to meet societal expectations. Such a mindset can erode self-confidence and make students feel trapped in a cycle of relentless academic pressure. The emotional toll of these pressures cannot be overstated. The intense focus on

academic achievement often leads to feelings of anxiety and stress among students [Kuon \(2019\)](#), [Tan 2020](#), [Bai \(2021\)](#), [Liang et al. \(2022\)](#), [Tan and Liu \(2023\)](#). The need to excel and outperform others becomes an overwhelming priority, overshadowing other aspects of personal development. Prolonged exposure to this pressure can manifest in various mental health issues, including chronic stress, burnout, and depression. For some students, the fear of failure becomes so overwhelming that it affects their overall well-being, resulting in difficulties with sleep, concentration, and emotional stability [Wang \(2022\)](#), [Yung et al. \(2023\)](#), [Kato and Kobakhidze \(2024\)](#). However, these programs may inadvertently increase the problem. While they aim to provide students with additional support to excel academically, they also reinforce the high-pressure culture of academic competition. The widespread reliance on shadow education creates a situation where students feel compelled to participate, fearing that opting out might place them at a disadvantage relative to their peers. This creates a cycle where the pressure to succeed fuels the demand for shadow education, which in turn amplifies the stress on students. Moreover, the pressure to consistently outperform peers can lead to a narrowing of students' focus, prioritizing academic achievements over personal interests, hobbies, and social relationships. This imbalance can stifle creativity, critical thinking, and emotional growth, which are crucial for holistic development. The singular focus on academics can also strain relationships within families, as parents, driven by societal expectations, often place additional pressure on their children to succeed [Pandita et al. \(2025a\)](#). While parents may intend to support their children, their high expectations can inadvertently contribute to the stress and anxiety that student's experience. In conclusion, the highly competitive nature of modern education systems places enormous pressure on students, particularly those involved in shadow education. The societal emphasis on academic success creates an environment where students feel they must constantly strive for excellence, often at the expense of their mental health and overall well-being. The interplay of societal expectations, peer competition, and the culture of academic achievement perpetuates a cycle of stress and anxiety, leaving many students feeling overwhelmed and inadequately prepared for the broader challenges of life [Bai \(2021\)](#), [Wang \(2022\)](#), [Tan and Liu \(2023\)](#). Addressing these issues requires a holistic approach that balances academic pursuits with the emotional and psychological well-being of students.

4.5. PARENTAL EXPECTATIONS AND MENTAL HEALTH

Parental pressure is a significant factor contributing to the mental health challenges faced by students participating in shadow education. Across many cultures, academic achievement is often equated with social and economic success. Parents frequently view education as the most reliable route to upward social mobility and, therefore, invest substantial time, money, and effort into supplementary tutoring services to ensure their children's academic success [Bray and Lykins \(2012\)](#), [Kumar et al. \(2024\)](#). While this investment is driven by good intentions, it often places immense pressure on children, as they are expected to excel academically to meet their parents' aspirations. These expectations can sometimes become unrealistic, creating an overwhelming sense of responsibility for children, who feel obligated to fulfill the hopes and ambitions their parents have pinned on them. This can significantly heighten feelings of anxiety, stress, and self-doubt among young learners [Ozaki \(2015\)](#), [Zhang \(2021\)](#), [Liu and Bray \(2022\)](#), [Xiang et al. \(2023\)](#), [McCoy and Byrne \(2024\)](#). When children perceive their parents as overly controlling or demanding, the impact on their psychological well-being

becomes even more pronounced. Research has consistently shown a strong correlation between high parental expectations and elevated levels of psychological distress in children. For instance, studies by [Bai \(2021\)](#) and [Yung et al. \(2023\)](#) indicate that children subjected to excessive parental pressure are more likely to experience mental health challenges, such as anxiety, depression, and low self-esteem. This distress is often increased by a lack of open communication between parents and children, as the former may focus more on results than on the emotional needs of their children. Over time, this can lead to a breakdown in familial relationships and further isolation for the child, compounding the stress they already face. The societal context within which shadow education operates amplifies the problem. Parents, influenced by societal norms and peer comparisons, may feel compelled to push their children harder, believing that this is the only way to secure a brighter future for them [Li \(2020\)](#), [Agrawal et al. \(2024\)](#), [Kumar et al. \(2024\)](#). As a result, children are often enrolled in multiple tutoring programs and subjected to intense schedules that leave little room for leisure, creativity, or rest. This relentless pursuit of excellence can create a toxic environment where the joy of learning is replaced by a fear of failure. Over time, this can lead to burnout, as students find themselves caught in an endless cycle of preparation, assessment, and evaluation, with little respite. The long-term effects of these pressures can be profound. Children exposed to such high levels of stress during their formative years may carry the psychological burden into adulthood, potentially affecting their self-esteem, interpersonal relationships, and overall mental health [Chingtham \(2015\)](#), [Ørberg \(2018\)](#), [Tan 2020](#), [Yung \(2022\)](#). Persistent stress and anxiety can also impact their physical health, leading to issues such as sleep disorders, weakened immune systems, and chronic fatigue. Moreover, the focus on academic achievement often comes at the expense of holistic development, as children have limited opportunities to explore other interests or develop essential life skills [Baker et al. \(2001\)](#), [Yung \(2019\)](#), [Wang \(2022\)](#), [Tan and Liu \(2023\)](#), [Bae and Choi \(2024\)](#). In conclusion, while parental involvement and support are crucial for a child's academic journey, excessive parental pressure within the framework of shadow education can create a highly stressful environment. This combination of parental expectations, societal pressures, and the competitive nature of shadow education underscores the urgent need for a balanced approach. Parents, educators, and policymakers must prioritize the mental well-being of students by fostering environments that value emotional health and holistic development alongside academic achievement. Addressing this issue is essential to ensure that children not only succeed academically but also thrive emotionally and psychologically.

4.6. MENTAL HEALTH CONSEQUENCES (DEPRESSION AND BURNOUT)

The combined effects of stress, anxiety, and social isolation have the potential to cause serious mental health issues, including depression and burnout. Burnout, characterized as a state of emotional, physical, and mental exhaustion triggered by prolonged stress, is becoming alarmingly prevalent among students participating in intensive shadow education programs. According to [Göktürk and Tülübaş \(2020\)](#), the demanding nature of such programs often pushes students to their limits, creating an environment ripe for mental and emotional fatigue. In regions like Hong Kong, research underscores the troubling connection between extended hours of tutoring and adverse mental health outcomes. Studies indicate that students heavily engaged in shadow education frequently display symptoms of depression and burnout. These symptoms manifest despite the increased efforts students invest in

their academics, paradoxically leading to diminished academic performance rather than improvement [Bray \(2013\)](#), [Zhang et al. \(2022\)](#), [Bray and Zhang \(2023\)](#), [Bray and Hajar \(2024\)](#). This pattern reveals a vicious cycle where the very interventions intended to enhance academic outcomes instead contribute to deterioration in both performance and well-being. Burnout among students is particularly troubling because its effects extend far beyond academics. It undermines a child's motivation to learn and erodes their overall quality of life. Burned-out students often exhibit signs of disengagement, where their interest in and commitment to their studies decline significantly. This disengagement not only hampers their academic progress but also contributes to a sense of disconnection from their educational goals and aspirations. Over time, this disengagement can have a cascading impact, influencing students' personal growth and future prospects. Another significant consequence of burnout is its effect on self-esteem. Students experiencing prolonged academic stress often internalize feelings of inadequacy, believing they are incapable of meeting the expectations placed upon them [Li \(2020\)](#), [Agrawal et al. \(2024\)](#). This erosion of self-esteem can lead to a negative self-concept, making students feel unworthy or incapable of success. Low self-esteem is also associated with a host of other mental health challenges, such as anxiety and chronic stress, further increasing the student's condition [Noh et al. \(2020\)](#), [Jokila et al. \(2021\)](#), [Xiang et al. \(2023\)](#). Moreover, the mental strain induced by burnout contributes to a bleak outlook on life. Students overwhelmed by academic pressures may begin to view their futures with pessimism and uncertainty [Göktürk and Tülübaş \(2020\)](#), [Bai \(2021\)](#), [Byun et al. \(2023\)](#), [Bae and Choi \(2024\)](#). This negative perspective not only affects their immediate academic performance but also diminishes their ability to plan, dream, and aspire for a better future. The emotional toll of such a mindset can linger well into adulthood, shaping their professional and personal lives in unfavorable ways. The interplay of these factors highlights a significant challenge in the education sector: the need to balance academic rigor with mental well-being. This stress is compounded by the competitive educational environments in which many students operate, where high expectations and relentless pressure to excel dominate. Such conditions leave little room for students to relax or engage in activities that promote emotional and psychological well-being. To address these issues, it is crucial to reassess the role and structure of shadow education programs. Educational systems must adopt a more holistic approach, considering not only the academic but also the mental and emotional health of students. Providing students with opportunities to de-stress, offering counseling services, and fostering a supportive academic environment are essential steps in reducing the adverse effects of burnout ([Liang et al. \(2022\)](#), [Byun et al. \(2023\)](#), [Yung et al. \(2023\)](#), [Bae and Choi \(2024\)](#)). Furthermore, educators and parents must collaborate to identify early signs of stress and burnout in students. Interventions such as open communication, mindfulness practices, and balanced workloads can play a significant role in preventing mental health challenges. Encouraging students to pursue hobbies, engage in social activities, and maintain a healthy work-life balance can also contribute to their overall well-being. Addressing this challenge requires a concerted effort from educators, parents, and policymakers to create an educational environment that prioritizes both academic success and mental health.

Figure 1

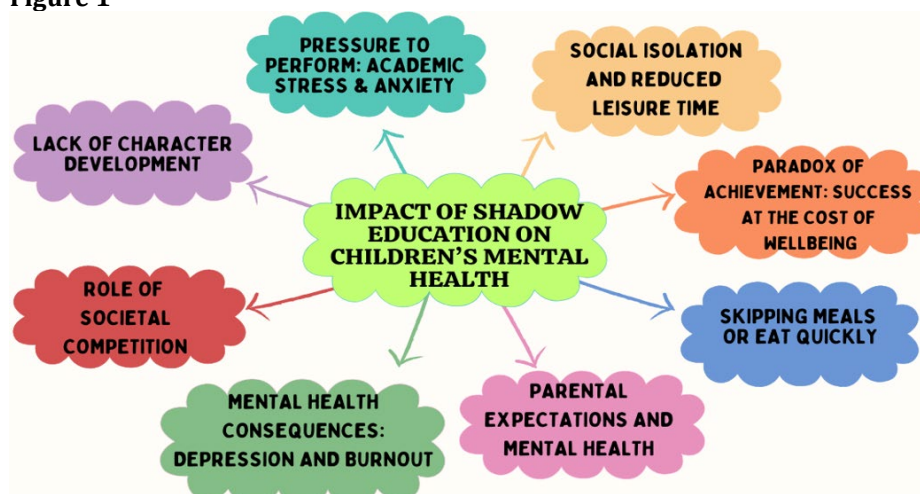


Figure 1 Impact of Shadow Education on Children's Mental Health

5. REDUCING THE NEGATIVE IMPACT: INTERVENTIONS AND SOLUTIONS

The pervasive nature of shadow education and its potential detrimental impact on children's mental health necessitate the development of effective interventions aimed at reducing these negative consequences. Shadow education, which includes supplementary tutoring and after-school programs designed to improve academic performance, has been linked to rising levels of stress, anxiety, and burnout among students [Liang et al. \(2022\)](#), [Byun et al. \(2023\)](#), [Yung et al. \(2023\)](#), [Bae and Choi \(2024\)](#). Given its widespread adoption and the increasing academic pressure, it places on children, it becomes essential to explore strategies that foster a healthier and more balanced approach to education. One promising solution is to prioritize students' overall well-being alongside academic achievement. This holistic approach to education can ensure that emotional and psychological development is not overshadowed by the singular focus on academic performance. Schools and policymakers are in a crucial position to promote this balanced model of learning. They can lead efforts to integrate social-emotional learning (SEL), creativity, and life skills training into the curriculum. By doing so, schools would not only prepare students for academic success but also equip them with the tools needed for emotional resilience, social competence, and a healthy relationship with learning. This can help alleviate the pressures imposed by shadow education, enabling students to thrive both academically and personally. Furthermore, policies should encourage the reduction of excessive academic workloads that often come with shadow education, advocating instead for learning experiences that foster joy and curiosity. Parents, too, play a pivotal role in addressing the negative effects of shadow education on their children's well-being [Kumar et al. \(2024\)](#). While academic success is important, it should not come at the expense of mental and emotional health. Parents can help by setting realistic expectations for their children's academic performance and providing an environment that values effort and progress over mere results. By fostering open communication, parents can create a safe space where children feel comfortable expressing their academic anxieties and seeking help when necessary [Kuon \(2019\)](#), [Tan 2020](#), [Bai \(2021\)](#), [Wang \(2022\)](#), [Xiang et al. \(2023\)](#), [Bae and Choi \(2024\)](#). This can reduce the pressure

to excel at all costs and help children manage the stresses associated with school and extra-curricular demands.

In addition to academic expectations, parents need to recognize and emphasize the importance of non-academic activities in their children's development. Adequate leisure time, play, and social interactions are essential for children's mental health and well-being. Encouraging a balance between study and relaxation allows children to recharge and engage in activities that nurture their creativity, interpersonal skills, and emotional intelligence. A balanced lifestyle that includes physical activity, artistic expression, and social interaction can significantly reduce the negative impact of shadow education. Furthermore, by encouraging children to engage in extracurricular activities, parents can help them develop a well-rounded sense of self and reduce the risks of burnout that often accompany excessive academic pressure. Mental health support services are another essential component in addressing the negative effects of shadow education. Many students, especially those struggling to cope with academic stress, would benefit from counseling and professional mental health services. Schools should work with mental health professionals to ensure that resources are readily available to students who may be struggling with the emotional demands of shadow education. Workshops focusing on stress management, mindfulness, and effective coping strategies can be instrumental in helping students deal with academic pressure in a healthy way [Mawer \(2016\)](#), [Ørberg \(2018\)](#), [Jokila et al. \(2021\)](#), [Bai \(2021\)](#), [Chen and Kuan \(2021\)](#), [Yung \(2022\)](#), [Benckwitz et al., 2022](#)). Schools can also integrate these strategies into the curriculum to provide students with tools they can use both inside and outside the classroom. To further support students, parents can create a nurturing and supportive home environment that prioritizes emotional well-being. By encouraging children to focus on effort rather than achievement, parents can foster a growth mindset that values learning as a process rather than a competition. Moreover, fostering a supportive relationship with children through open communication is key in managing their stress levels. When children feel heard and understood, they are more likely to express their worries and seek guidance, which can alleviate their stress and anxiety [Jokila et al. \(2021\)](#), [Bai \(2021\)](#), [Chen and Kuan \(2021\)](#), [Zhang \(2021\)](#), [Benckwitz et al., 2022](#)). Through this supportive framework, parents can help their children navigate the challenges posed by shadow education and ensure that their mental health is not compromised in the pursuit of academic success. In conclusion, addressing the mental health challenges associated with shadow education requires a concerted effort from schools, parents, and policymakers. A balanced approach that emphasizes emotional well-being, creativity, and social skills alongside academic achievement can help mitigate the pressures of shadow education. Schools must take the lead by integrating holistic educational practices and mental health support into their programs, while parents can alleviate stress by setting realistic expectations and fostering a supportive home environment. Ultimately, by prioritizing well-being and promoting a more balanced lifestyle, we can ensure that students are not only successful academically but also resilient and healthy individuals.

Picture 1

Picture 1 An Illustration That Depicts the Impact of Shadow Education on Children Mental Health
Source AI Generative Picture

6. POLICY IMPLICATIONS AND RECOMMENDATIONS

6.1. REGULATING SHADOW EDUCATION

The expansion of shadow education has intensified academic pressure on students, often leading to stress, anxiety, and burnout. Governments worldwide are recognizing the need for policy interventions to regulate this industry and alleviate its adverse effects. For instance, South Korea has implemented stringent measures to control the prevalence of private tutoring. These include limiting the hours students can spend in private tutoring centers, restricting advertising practices, and capping fees charged by tutoring institutions [Bray \(2021\)](#), [Byun et al. \(2023\)](#), [Kato and Kobakhidze \(2024\)](#), [Bray and Hajar \(2024\)](#). These policies aim to reduce the undue burden on students while promoting fairness and equity in education. Adopting similar regulatory frameworks in other countries could mitigate the pressures associated with shadow education. For example, governments could establish clear guidelines on operational hours for private tutoring centers to ensure that children have adequate time for rest and extracurricular activities. Additionally, restrictions on aggressive marketing strategies and exorbitant tuition fees could make education more accessible, leveling the playing field for students from diverse socioeconomic backgrounds. Effective enforcement of these policies would require collaboration among education authorities, legal entities, and community stakeholders to ensure compliance and prevent exploitation.

6.2. INTEGRATING MENTAL HEALTH SUPPORT IN SCHOOLS

Schools serve as crucial environments where students' academic, social, and emotional development occurs. Recognizing the mental health challenges linked to shadow education, schools can adopt proactive measures to support students' well-being. Integrating mental health services into the school system is a critical step toward addressing stress, anxiety, and other psychological issues arising from academic pressures [Tan 2020](#), [Zhang \(2021\)](#), [Enrich \(2021\)](#), [Benckwitz et al., 2022](#), [Xiang et al. \(2023\)](#), [Kumar et al. \(2025b\)](#). This integration could include hiring trained mental health professionals, such as counselors and psychologists, who are equipped to provide individual and group support. Schools can also implement regular mental health screenings to identify students at risk and offer timely interventions. Furthermore, incorporating mental health education into the

curriculum can empower students with tools to manage their emotions and cope with challenges effectively. Another vital aspect is reducing the stigma associated with seeking help. Schools can foster a culture of openness and acceptance by organizing awareness campaigns, workshops, and peer-support programs. When students feel comfortable discussing their mental health, they are more likely to seek assistance when needed. Parents and teachers also play a crucial role in this process by reinforcing positive attitudes toward mental health care and promoting supportive communication.

6.3. PROMOTING BALANCED LEARNING APPROACHES

A key strategy to counteract the pressures of shadow education is promoting balanced learning approaches that prioritize students' holistic development. This involves shifting the focus from purely academic achievements to fostering well-being, social-emotional skills, and resilience. Schools can achieve this by integrating social-emotional learning (SEL) into the curriculum, which helps students develop self-awareness, empathy, and effective communication skills [Chingtham \(2015\)](#), [Yung \(2019\)](#), [Li \(2020\)](#), [Bai \(2021\)](#), [Bae and Choi \(2024\)](#), [Agrawal et al. \(2024\)](#), [Kumar et al. \(2025b\)](#). Mindfulness practices and stress management techniques, such as meditation and breathing exercises, can also be incorporated into daily school routines to enhance students' emotional regulation and concentration [Bai \(2021\)](#), [Xiang et al. \(2023\)](#), [Kumar et al. \(2025b\)](#). These activities not only improve mental health but also equip students with skills to handle academic and personal challenges. Moreover, schools can emphasize the importance of extracurricular activities, such as sports, arts, and community service, which allow students to explore their interests and build confidence outside the academic realm. Policymakers and educators must work together to design and implement education systems that value well-being as much as academic success. By fostering a balanced approach to learning, students can thrive in an environment that nurtures their mental health and prepares them for future challenges. In conclusion, addressing the negative impacts of shadow education requires a multifaceted approach. Regulating the industry, integrating mental health support in schools, and promoting balanced learning are essential steps toward creating a more equitable and supportive educational landscape. These efforts will not only alleviate the pressures faced by students but also contribute to their overall well-being and success.

Picture 2



Picture 2 Another Illustration That Depicts the Impact of Shadow Education on Children Mental Health

Source AI Generative Picture

7. CONCLUSION

Shadow education serves as a double-edged sword in the academic landscape. On one hand, it provides students with valuable opportunities to bolster their academic performance, but on the other hand, it can impose substantial psychological burdens. The pressure to excel, amplified by lofty parental expectations, often results in heightened levels of stress, anxiety, and social isolation among students. These intense demands can lead to significant mental health challenges, including burnout and depression, which can adversely affect their overall wellbeing. As the phenomenon of shadow education continues to gain traction worldwide, it becomes increasingly important to confront these challenges head-on. Advocating for a more balanced educational approach that prioritizes children's mental health is essential. This involves collaborative interventions from schools, parents, and policymakers aimed at ensuring that the pursuit of academic success does not undermine emotional and psychological wellbeing. By creating an educational environment that values both achievement and mental health, we can help foster resilience in students, equipping them with the skills they need to navigate academic challenges while maintaining their emotional balance and social connections. Ultimately, a comprehensive approach is necessary to ensure that educational practices promote holistic development rather than solely focusing on academic outcomes.

8. FURTHER RESEARCH

Further research should explore the multifaceted relationship between shadow education and children's mental health, specifically investigating the long-term psychological effects on different age groups and academic levels. Comparative studies across cultural and socio-economic contexts could provide deeper insights into how varying factors, such as parental expectations and educational pressures, influence mental health outcomes. Additionally, future research could explore the role of technology in modern shadow education, examining whether online tutoring reduces or raises stress and anxiety in children. Longitudinal studies tracking the cumulative effects of shadow education on emotional well-being and academic performance would be particularly valuable. Investigating effective policy interventions, including regulatory frameworks or support systems, could offer ways to alleviate negative impacts, promoting a healthier balance between academic achievement and mental health.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

- Agrawal, A., Gupta, P., & Mondal, D. (2024). Determinants of Private Tutoring Demand in Rural India. *The Journal of Development Studies*, 60(1), 83–107. <https://doi.org/10.1080/00220388.2023.2273798>

- Bae, S. H., & Choi, K. H. (2023). The Cause of Institutionalized Private Tutoring in Korea: Defective Public Schooling or a Universal Desire for Family Reproduction? *ECNU Review of Education*, 7(1), 12–41. <https://doi.org/10.1177/20965311231182722>
- Bai, M. (2021). Shadow Education and Social Reproduction. *Advances in Social Science, Education and Humanities Research*, 637, 260. <https://doi.org/10.2991/assehr.k.220131.047>
- Baker, D. P., Akiba, M., LeTendre, G. K., & Wiseman, A. W. (2001). Worldwide Shadow Education: Outside-School Learning, Institutional Quality of Schooling, and Cross-National Mathematics Achievement. *Educational Evaluation and Policy Analysis*, 23(1), 1–17. <https://doi.org/10.3102/01623737023001001>
- Benckwitz, L., Guill, K., Roloff, J., Ömeroğulları, M., & Köller, O. (2022). Investigating the Relationship Between Private Tutoring, Tutors' Use of an Individual Frame of Reference, Reasons for Private Tutoring, and Students' Motivational-Affective Outcomes. *Learning and Individual Differences*, 95, 102137. <https://doi.org/10.1016/j.lindif.2022.102137>
- Bray, M. (2013). Shadow Education: Comparative Perspectives on the Expansion and Implications of Private Supplementary Tutoring. *Procedia – Social and Behavioral Sciences*, 77, 412–420. <https://doi.org/10.1016/j.sbspro.2013.03.096>
- Bray, M. (2021). Shadow Education in Europe: Growing Prevalence, Underlying Forces, and Policy Implications. *ECNU Review of Education*, 4(3), 442–475. <https://doi.org/10.1177/2096531119890142>
- Bray, M., & Hajar, A. (2022). Complexity of the Contexts: Features of Private Tutoring and Units for Comparison in the GCC Countries of the Middle East. *ECNU Review of Education*, 7(1), 42–65. <https://doi.org/10.1177/20965311221113350>
- Bray, M., & Zhang, W. (2022). Cross-Border Shadow Education: Private Supplementary Tutoring in the Global Education industry. *Revista Española de Educación Comparada*, 42, 28–43. <https://doi.org/10.5944/reec.42.2023.34275>
- Byun, S., Jung, J., & Shin, T. S. (2023). Does Shadow Education Discourage or Encourage Creative Thinking? Evidence from South Korea. *Infancia y Aprendizaje*, 46(4), 581–604. <https://doi.org/10.1080/02103702.2023.2245227>
- Chen, I., & Kuan, P. (2021). The Heterogeneous Effects of Participation in Shadow Education on Mental Health of High School Students in Taiwan. *International Journal of Environmental Research and Public Health*, 18(3), 1222. <https://doi.org/10.3390/ijerph18031222>
- Entrich, S. R. (2020). Worldwide Shadow Education and Social Inequality: Explaining Differences in the Socioeconomic Gap in access to Shadow Education Across 63 Societies. *International Journal of Comparative Sociology*, 61(6), 441–475. <https://doi.org/10.1177/0020715220987861>
- Göktürk, Ş., & Tülübaş, T. (2020). Survival of the Fittest: Women's Academic Experiences of Navigating Neoliberal Expectations in Turkish Universities. *Gender and Education*, 33(3), 267–284. <https://doi.org/10.1080/09540253.2020.1735311>
- Jokila, S., Haltia, N., & Kosunen, S. (2020). Market-Making Practices of Private Tutoring in Finland: Commercialization of Exam Preparation for Admission to Higher Education. *ECNU Review of Education*, 4(3), 590–614. <https://doi.org/10.1177/2096531120956666>

- Kato, M., & Kobakhidze, M. N. (2024). Transnational Juku: Japanese Shadow Education Institutions in Hong Kong, Beijing, and Shanghai. *Asia Pacific Education Review*. <https://doi.org/10.1007/s12564-024-09946-5>
- Kuan, P. (2018). Effects of Cram Schooling on Academic Achievement and Mental Health of Junior High Students in Taiwan. *Chinese Sociological Review*, 50(4), 391–422. <https://doi.org/10.1080/21620555.2018.1526069>
- Kumar, S., Pandita, P., & Singh, K. (2024). “To be on the Seventh Sky”: Exploring the Nature and Push of Key Factors in Indian Parents’ Choice for Shadow Education. *Education* 3-13, 1–17. <https://doi.org/10.1080/03004279.2024.2412993>
- Kumar, S., Pandita, P., & Singh, K. (2025a). Confronting the challenges faced by the beneficiaries of shadow education during COVID-19: An Anecdotal Analysis. *MIER Journal of Educational Studies, Trends & Practices*, 15(1), 240–259. <https://doi.org/10.52634/mier/2025/v15/i1/2836>
- Kumar, S., Pandita, P., & Singh, K. (2025b). How National Education Policy (NEP) 2020 Can Restrain Shadow Education: An Evaluation of Policy Provisions. In *Power of Differentiation: Tailoring learning for every student* (pp. 199–218). Redshine Publication eBooks. <https://doi.org/10.25215/9141001575.21>
- Kumar, S., Pandita, P., & Singh, K. (2025c). Reimagining Indian Education for Viksit Bharat @2047: Addressing the Challenges of Shadow Education and Inequity. *Research Review International Journal of Multidisciplinary*, 10(6), 72–81. <https://doi.org/10.31305/rrijm.2025.v10.n6.009>
- Kumar, S., Pandita, P., & Singh, K. (2025d). Transforming schools with total quality management: A Strategy to Address Shadow Education. *International Journal of Management and Development Studies*, 14(6), 10–18. <https://doi.org/10.53983/ijmds.v14n6.002>
- Kumar, S., Pandita, P., & Singh, K. (2025e). Integrating Indian Knowledge System (IKS) Based Pedagogy Into Formal Education to Address the Challenges of Shadow Education: A Review. In *Interdisciplinary Advances: Emerging Trends and Innovations* (pp. 129–145). Redshine Publication eBooks. <https://doi.org/10.25215/9358793546.10>
- Kumar, S., Pandita, P., & Singh, K. (2025f). The Rising Demand For Private Tutoring: Exploring the Factors Behind Shadow Education Growth. *Education\@ETMA*, 4(2), 6–20.
- Li, J. (2020). Substitution or Complementation: The Relationship Between School Education and Shadow Education. *Best Evidence of Chinese Education*, 4(1), 411–424. <https://doi.org/10.15354/bece.20.ar015>
- Liang, H., Wang, Z., & Wu, W. (2022). The Effect of Shadow Education on Hong Kong Student Wellbeing: Evidence from PISA 2018. *Frontiers in Psychology*, 13, 860179. <https://doi.org/10.3389/fpsyg.2022.860179>
- Liu, J., & Bray, M. (2022). Responsibilised Parents and Shadow Education: Managing the Precarious Environment in China. *British Journal of Sociology of Education*, 43(6), 878–897. <https://doi.org/10.1080/01425692.2022.2072810>
- Mawer, K. (2015). Casting new Light on Shadow Education: Snapshots of Juku Variety. *Contemporary Japan*, 27(2), 131–148. <https://doi.org/10.1515/cj-2015-0008>
- McCoy, S., & Byrne, D. (2024). Shadow Education Uptake in Ireland: Inequalities and Wellbeing in a High-Stakes Context. *British Journal of Educational Studies*, 72(6), 693–719. <https://doi.org/10.1080/00071005.2024.2331476>

- Mikkelsen, S. H., & Gravesen, D. T. (2021). Shadow Education in Denmark: In the Light of the Danish History of Pedagogy and the Skepticism Toward Competition. *ECNU Review of Education*, 4(3), 546–565. <https://doi.org/10.1177/2096531120983335>
- Noh, J., Kim, J., Cheon, J., Lee, Y., & Kwon, Y. D. (2020). Relationships Between Extra-School Tutoring Time, Somatic Symptoms, and Sleep Duration of Adolescent Students: A Panel Analysis Using Data from the Korean Children and Youth Panel Survey. *International Journal of Environmental Research and Public Health*, 17(21), 8037. <https://doi.org/10.3390/ijerph17218037>
- Ørberg, J. W. (2018). Uncomfortable Encounters Between Elite and “Shadow Education” in India: Indian Institutes of Technology and the Joint Entrance Examination coaching industry. *Higher Education*, 76(1), 129–144. <https://doi.org/10.1007/s10734-017-0202-5>
- Ozaki, M. (2015). A Juku Childhood: Children’s Experiences in Juku Attendance and its Relation to Their Well-Being in Japan \ Doctoral dissertation, University of Bath.
- Pandita, P., Kumar, S., & Aman. (2025b). Impact of Foundational Literacy and Numeracy (FLN) Skills on Lifelong Learning. Redshine Publication eBooks. <https://doi.org/10.25215/9141001575.14>
- Pandita, P., Kumar, S., & Bhardwaj, A. (2025a). “Mirage of Professional Duties”: The Dilemma Every Teacher Encounters in Meeting the Goal of Foundational Literacy and Numeracy in India. *Education 3-13*, 1–15. <https://doi.org/10.1080/03004279.2025.2456012>
- Tan, C., & Yang, J. (2019). Path-Dependency or Path-Shaping? An Analysis of the Policy to Target Exam-Oriented in South Korea. *Critical Studies in Education*, 62(2), 195–210. <https://doi.org/10.1080/17508487.2019.1611612>
- Tan, M., & Liu, S. (2023). A Way of Human Capital Accumulation: Heterogeneous Impact of Shadow Education on Students’ Academic Performance in China. *SAGE Open*, 13(4). <https://doi.org/10.1177/21582440231207189>
- Wang, L. (2022). A Comparative Study of Shadow Education Policies in Elementary Education in China, the United States and South Korea. *Advances in Social Science, Education and Humanities Research*, 653, 2264–2270. <https://doi.org/10.2991/assehr.k.220504.461>
- Xiang, K., Liu, J., Chen, X., & Zhang, A. (2023). Research on the Evolution and Improvement of China’s Shadow Education Governance Policy from the Perspective of Multiple Streams Theory. *Frontiers in Psychology*, 14, 1013243. <https://doi.org/10.3389/fpsyg.2023.1013243>
- Yung, K. (2020). Problematising Students’ Preference for Video-Recorded Classes in Shadow Education. *Educational Studies*, 48(5), 719–726. <https://doi.org/10.1080/03055698.2020.1814697>
- Yung, K. W. H. (2019). Investing in English Private Tutoring to Move Socially Upward: A Narrative Inquiry of an Underprivileged Student in Hong Kong. *Journal of Multilingual and Multicultural Development*, 41(10), 872–885. <https://doi.org/10.1080/01434632.2019.1660667>
- Yung, K., Entrich, S. R., & Bautista, A. (2023). Shadow Education: New Areas of Inquiry in Teaching, Learning and Development. *Journal for the Study of Education and Development*, 46(4), 707–727. <https://doi.org/10.1080/02103702.2023.2245227>
- Zhang, M., Wu, Y., Ji, C., & Wu, J. (2022). The Role of Perceived Social Support and Stress in the Relationship Between Hope and Depression Among Chinese Shadow Education Tutors: A Serial Mediation Model. *International Journal*

- of Environmental Research and Public Health, 19(6), 3348.
<https://doi.org/10.3390/ijerph19063348>
- Zhang, W. (2021). Modes and Trajectories of Shadow Education in Denmark and China: Fieldwork Reflections by a Comparativist. *ECNU Review of Education*, 4(3), 615–629. <https://doi.org/10.1177/20965311211042026>
- Zhang, W., & Bray, M. (2020). A Changing Environment of Urban Education: Historical and Spatial Analysis of Private Supplementary Tutoring in China. *Environment and Urbanization*, 33(1), 43–62.
<https://doi.org/10.1177/0956247820981820>
- Zwier, D., Geven, S., & Van de Werfhorst, H. G. (2021). Social Inequality in Shadow Education: The Role of High-Stakes Testing. *International Journal of Comparative Sociology*, 62(6), 412–440.
<https://doi.org/10.1177/0020715220984500>