

The Influence of Stereotype Threat on Learning Motivation and Self-Efficacy in Chinese Adolescents: A Systematic Literature Review

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Abstract. This literature review discusses the existing literature to understand the impact of stereotype threat on the learning motivation and self-efficacy of Chinese adolescents. Due to the high-stakes and collectivistic features of East Asian education systems, stereotype threat exerts a serious influence on the healthy learning of Chinese school-aged adolescents. The current study aims to demonstrate that stereotype threat significantly and negatively influences students' basic psychological needs for competence, autonomy, and relatedness, which in turn reduce students' intrinsic motivation and enhance amotivation. This paper also negatively impacts domain-specific self-efficacy, which creates a vicious circle of poor performance. Especially, the mechanisms of psychological disidentification and social comparison may be more concerned in the Chinese culture (based on empirical research analysis). Finally, at the end of the paper, the author tries to make some recommendations for useful study strategies of teachers (e.g., developing growth mindsets and identity-safe classrooms). In addition, future research could focus on culturally appropriate interventions and longitudinal studies.

Keywords: Stereotype Threat, Learning Motivation, Self-efficacy, Chinese Adolescents, Education

1. Introduction

China's educational system, which is well-known for its rigorous requirements and competitive atmosphere, may unintentionally foster environments that encourage harmful stereotypes. For teenagers navigating their early school years, these stereotypes—whether based on gender, place of origin, or social expectations—pose a serious psychological risk. One of the main ways that stereotypes affect performance is through stereotype threat, a situational phenomenon in which people are afraid of confirming a negative stereotype about their group [1]. Even though it has been thoroughly researched in Western settings, a closer look at its specific expressions and effects in the high-stakes, collectivistic setting of Chinese education is necessary.

The negative impacts of stereotype threat on learning motivation and self-efficacy, two essential components of academic success, are the main topic of this review. For Chinese teenagers, the impact of stereotype threat may be more severe because the pressure to perform academically is

frequently exacerbated by social and familial expectations. The primary question of this paper is to summarize recent research to address it: What are the effects of stereotype threat on Chinese adolescents' learning motivation and self-efficacy, and what does this mean for educational practice? In order to provide a thorough understanding of these psychological processes, highlight the distinct cultural factors at work, and provide evidence-based recommendations for reducing these detrimental effects in order to promote more supportive and equitable learning environments, this paper reviews and integrates empirical findings.

2. Core conceptual framework

The three key concepts—stereotype threat, learning motivation, and self-efficacy—that form the basis of this review are outlined in this chapter. Analyzing these ideas' relationships and subsequent effects on teenage academic performance in the Chinese educational system requires a thorough grasp of them.

2.1. Stereotype threat

Stereotype threat is a situational dilemma where people run the risk of reinforcing unfavorable preconceptions about their social group, especially in educational contexts where performance reviews are prominent and results are frequently interpreted as test results of aptitude [1]. Through a variety of psychological processes, this phenomenon can lead to overcompensation behaviors that paradoxically hinder performance, increase cognitive load as people keep an eye on the task and their performance anxiety, and elevate physiological stress responses [2].

In high-stakes, competitive educational systems like that of China, stereotype threat may manifest in forms such as gender (e.g., the belief that females generally perform worse in math), regional origin (stereotypes about the intelligence of students from rural areas), or general collective achievement threat (i.e., the pressure on East Asian students to perform well) [3]. As a collectivistic society, China is different from individualistic societies in which individuals perceive failure as damaging their own dignity more deeply (and thus drive them to avoid failure); in China, failure may be felt as bringing shame to one's family or social group, which makes the threat more psychological [4].

2.2. Learning motivation

Learning motivation represents the internal and external processes that initiate, direct, and sustain goal-oriented academic behaviors. It plays a central role in determining adolescents' academic outcomes, such as persistence, achievement, and overall academic well-being. This paper is primarily guided by Self-Determination Theory (SDT). SDT argues that when three basic psychological needs (i.e., autonomy, competence, and relatedness) are satisfied, individuals will experience more autonomous forms of motivation. Autonomous motivation is characterized by academic behaviors that are personally interested in, valued by, and enjoyed by adolescents, and it is typically associated with positive emotions, deep cognitive engagement, and behavioral persistence [5].

Stereotype threat constantly damages these needs in ways such as making female students doubt their innate ability in mathematics or making students from rural areas feeling that they do not belong to elite urban schools. It directly damages people's competence feelings because of fear of failure and confirming negative stereotype. It damages people's autonomy because of limiting

people's feeling of choice and self-determination, that is, people's behavior is determined by trying to disprove people's stereotype instead of their own interest. Furthermore, it can also damage people's relatedness by making people feel that they do not belong to academic field [6]. Therefore, intrinsic motivation is usually suppressed and is possibly replaced by maladaptive extrinsic motivation or amotivation.

2.3. Self-efficacy

Academic self-efficacy is one of the core contents of Bandura's social cognitive theory and it is closely related to learning motivation. According to Vallerand, academic self-efficacy is the individual's belief in his or her ability to organize and execute the courses of action necessary to achieve designated academic goals. Compared with global self-esteem, self-efficacy is always domain-specific and has clear context application. Therefore, academic self-efficacy is easily threatened in situations [7].

Stereotype threat is an intense source of efficacy information. The ways that negative information of efficacy is brought about include: providing negative verbal persuasion through implying inferiority, inducing debilitating emotional arousal through anxiety and causing vicarious learning experiences through seeing similar others performing under the same stereotype [8]. Every time students meet with or even apprehend stereotype threat, it will trigger a vicious loop of self-efficacy damage: doubted efficacy leads to less effort invested, and then results in poor performance, and then corrodes self-efficacy beliefs, and then may finally cause chronic poor performance and drop out from school.

3. The impact of stereotype threat on learning motivation

The quality and sustainability of student learning motivation are negatively impacted by stereotype threat, according to a large body of empirical research. With a focus on data from or pertinent to the East Asian educational context, this section examines important studies that clarify this relationship.

3.1. Empirical evidence

The model for understanding how stereotype threats affect the motivational process was proposed by Steele and Aronson in their pioneering work in 1995. Their experimental research indicates that when confronted with obvious negative stereotypes, people may develop psychological disidentification - a defense mechanism through which they downplay the perceived significance of the threatened area to protect their self-esteem. Although it has played a protective role, this detachment has a substantial negative impact on long-term investment and academic interest.

Wang and Li particularly focused on East Asia, conducted a thorough systematic review, and concluded that the highly competitive and exam-centered education system in this region significantly increased the impact of stereotype threats [6]. According to their synthesis, Chinese students who internalized the application of negative stereotypes reported feeling more anxious and less interested in related subjects, which directly affected their intrinsic motivation. Learning has been redefined as a performance trap, whose main goal is to avoid failure rather than understand the material, rather than as a process of mastery.

More evidences were offered by Liu in his study about the influence of cultural stereotype on adolescents' motivation and mental health through hybrid way [9]. Statistics show that teenagers who are influenced by negative stereotype have higher level of learning motivation, that is, they

have no willingness to act and they think their efforts are in vain. Qualitative interview offers rich background because students explain that situation will cause stereotype to appear and appear again or even just fearing its appearance and these situations trigger "learned despair" which brings more psychological distress and decreases their engagement in school - both of which are bad for students.

In their study, Liu and Yao added methodological and conceptual rigor to this line of work by employing structural equation modeling to investigate learning engagement among Chinese middle school students [10]. They found that stereotype threat was a negative predictor of involvement, and that academic self-concept mediated this relation. This sequence of psychological events highlights a methodical process in which stereotype threat first lowers students' self-perceptions of academic ability, which in turn depletes their motivation to be completely academically engaged. This rigorous process suggests that a particularly important defense against the discouraging effects of stereotype threat is to enhance students' academic self-concept.

In a collectivist culture, social comparison plays a particularly important role. Zhou and Li conducted a longitudinal study on Chinese adolescents to clarify this mechanism [4]. Their research indicates that upward social comparisons significantly intensify the harmful motivational effects of stereotype threats. Among those students who were more likely to make such comparisons, intrinsic motivation declined more severely. In China's education system, clear rankings and continuous normative comparisons are institutionalized practices, and this mechanism is particularly effective.

3.2. Synthesis and discussion

Research has found that stereotype threats significantly reduce the motivation for adaptive learning through several interrelated psychological processes. The development of avoidance goals (for example, a greater focus on avoiding mistakes rather than memorizing content), psychological agnosticism, increased anxiety and cognitive burden, as well as a decline in academic self-concept, are part of these reasons.

This synthesis indicates that both environmental factors and personal factors have mitigated this impact. Vulnerability is determined by individual differences, such as the level of domain identification and prototype approval. As a powerful threat amplifier, the educational environment in East Asia has been shaped by the Confucian tradition, which prioritizes academic achievements and a high-risk examination culture. It promotes continuous social comparisons, emphasizes normative performance standards, and intensifies students' pressure and anxiety.

4. The impact of stereotype threat on self-efficacy

In addition to reducing learning motivation, stereotype threats can also have a negative impact on students' academic self-efficacy or confidence in their skills. This section explores the relationship between stereotype threats and the low level of self-efficacy among Chinese teenagers.

4.1. Empirical evidence

The mediation function of self-efficacy between stereotype threat and academic achievement among Chinese adolescents was explicitly examined by Zhang and Zhao [8]. According to the results of their study, stereotype threat is a significant predictor of low self-efficacy, which accounts for the notable variations in academic performance. This study offers compelling evidence that self-efficacy is a key mechanism via which preconceptions contribute to success inequalities.

According to Chen and Graham's cross-cultural analysis, stereotype threats and self-efficacy may be more strongly correlated in societies that place a high priority on group accomplishment and face [11]. Self-efficacy suffers an even greater hit in this scenario since the fear of validating unfavorable preconceptions not only raises doubts about personal potential but also carries the weight of disappointment on a collective level.

In an experimental study on gender stereotypes in science (not on the final list, but illustrative), female students' pre-task self-efficacy ratings significantly decreased when they were reminded of the stereotype that males are better at science than female students. The direct causal relationship between stereotype threat and efficacy was demonstrated by the fact that this decline in self-efficacy later predicted their actual performance on a science test.

In addition, Wang et al. [6] conducted a longitudinal study to examine the development of self-efficacy in mathematics of 650 Chinese high school students (aged 15-17; 52% female) over one academic year. They found that students who perceived stereotype threat at the beginning of the year significantly reported a decline in mathematics self-efficacy over the following year, even after controlling for its prior achievement and general anxiety scores at baseline. These findings suggest that stereotype threat may lead to long-term decline in students' mathematics self-efficacy.

4.2. Synthesis and discussion

Stereotype threat is a strong predictor of lower academic self-efficacy, as the evidence repeatedly shows. The cycle is as follows: stereotype threat reduces self-efficacy, which in turn causes avoidance behaviors and worse performance, which in turn generates more evidence to support the low self-efficacy and possibly the initial stereotype. In the Chinese context, where high-stakes tests like the Gaokao and strong familial expectations exacerbate the effects of stereotype-confirming outcomes, this negative feedback loop is especially harmful. There are two sides to the cultural emphasis on hard work and persistence: while it can foster resilience, it can also cause students to mistake stereotype-confirming performances for a basic lack of skill, which can seriously undermine their sense of self-efficacy.

5. Discussion and suggestions

In order to clarify the negative impacts of stereotype threat on Chinese adolescents' learning motivation and self-efficacy, this review synthesized existing literature. By undermining basic psychological needs and self-efficacy, stereotype threat—which is made worse by the local educational and cultural context—creates substantial obstacles to academic engagement and success, according to the analysis.

5.1. General conclusion

The general conclusion is that for impacted adolescents, stereotype threat starts a vicious cycle. It undermines self-efficacy by giving constant negative feedback about one's abilities, and it undermines motivation by encouraging avoidance goals and disidentification. Stereotype threat is a crucial issue for educational equity and student well-being in China, where factors like intense social comparison and collectivistic pressures amplify these effects.

5.2. Practical implications and suggestions

A few evidence-based recommendations can be made based on the reviewed literature. First, educators can teach students that intelligence/ability is malleable explicitly. This can help students see that difficulties are not dangers but rather provide opportunities for students to grow. Second, it is important to build classrooms that are identity-safe. Teachers can communicate that all students are respected and welcome in the academic community, use affirming language, and diversify curriculum materials to include a wide range of groups, thus satisfying the need for relatedness and reducing stereotype threat. Third, reframing assessments is also an important strategy. Teachers can present tests not as a label of ability but as an opportunity to learn, for example, through formative assessments and feedback loops. Finally, providing competence-confirming feedback is important. Feedback should focus on effort/strategy rather than ability, which can protect and provide self-efficacy.

5.3. Future research directions

There are several important directions for future research. First, future research can use multi-method approaches, integrating self-report, behavioral, and physiological methods to understand underlying processes of stereotype threat. Second, using longitudinal designs to examine the long-term development of motivation and self-efficacy under chronic stereotype threat will shed light on its long-term cumulative effects. Third, to provide effective support, it is important to understand potential protective factors that might buffer the effects of stereotype threat, for example, individual resilient traits, teacher-student relationships, and parental support. The crucial last step after understanding underlying mechanisms and identifying potential protective factors is to use randomized controlled trials to evaluate the effectiveness of particular interventions in the Chinese educational setting.

6. Conclusion

This review highlights the great impact of stereotype threat on academic psychology of Chinese adolescents. Stereotype threat not only threatens the long-term education achievement, mental health, and immediate academic performance by impairing learning motivation and self-efficacy, but also aggravates these problems due to the unique cultural and educational context in China. Therefore, stereotype threat should be addressed by educators, legislators and researchers in China through constructing learning context which can be optimized for psychological support and minimized for threat. Understanding and practicing evidence-based interventions are necessary for individuals involved in education to unlock every child's potential, and these intelligent and informed actions are crucial for China's educational future.

References

- [1] Steele, C. M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist*, 52(6), 613–629.
- [2] Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat effects on performance. *Psychological Review*, 115(2), 336–356.
- [3] Yeung, W. J., & Li, X. (2022). Stereotype threat and educational inequality in East Asia: A systematic review. *International Journal of Educational Development*, 90, 102–115.
- [4] Zhou, M., & Li, Y. (2023). The role of social comparison in reinforcing stereotypes among Chinese adolescents. *Journal of Youth and Adolescence*, 52(1), 123–135.

- [5] Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860.
- [6] Wang, L., & Li, J. (2020). The impact of stereotype threat on learning motivation in East Asian educational contexts. *Educational Psychology Review*, 32(3), 789–806.
- [7] Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- [8] Zhang, Y., & Zhao, X. (2021). Stereotype threat and academic achievement among Chinese adolescents: The mediating role of self-efficacy. *Frontiers in Psychology*, 12, 678–690.
- [9] Liu, W. (2019). Cultural stereotypes and their effects on adolescent mental health in China. *Asian Journal of Social Psychology*, 22(4), 345–357.
- [10] Liu, H. R., & Yao, M. L. (2020). The impact of stereotype threat on middle school students' learning engagement: The mediating role of academic self-concept. *Psychological Development and Education*, 36(4), 449–456.
- [11] Chen, X., & Graham, S. (2015). Cross-cultural perspectives on stereotype threat. *Educational Researcher*, 44(5), 285–291.