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## A SYSTEMATIC REVIEW OF MENTAL HEALTH EDUCATION CHALLENGES AND STRATEGIES IN CHINA'S HIGHER VOCATIONAL COLLEGES

Xu Jijia<sup>1,2</sup>, & \*Mazni Mustapha<sup>1</sup>, Razima Hanim Osman<sup>1</sup>

<sup>1</sup>Faculty of Psychology and social work, Universiti Malaysia Sabah

<sup>2</sup>Nanchong Vocational and Technical College, Sichuan Province, China

\*Corresponding e-mail: masni@ums.edu.my

**Abstract:** Despite increasing government attention, research specifically targeting mental health education in China's higher vocational colleges remains fragmented. This systematic review examines the current mental health status of vocational students, identifies educational deficiencies, and proposes improvement strategies. Findings reveal that students face significant psychological challenges, while existing educational models are constrained by reactive approaches, staff shortages, and a disconnect between theory and practice. To address these issues, this paper proposes four strategies: (1) shifting to a preventive paradigm based on positive psychology; (2) optimizing faculty structures; (3) reforming curricula to emphasize practical implementation; and (4) leveraging digital transformation for precision intervention. These findings provide a theoretical basis and actionable recommendations for policymakers to enhance mental health support systems in vocational institutions.

**Keywords:** Vocational College Students, Mental Health Education, Positive Psychology, Curriculum Reform, Digital Transformation

### 1. INTRODUCTION

Mental health challenges among university students are a pervasive global concern. Evidence indicates significant prevalence rates of depression, anxiety, and self-injury among college populations worldwide (Eisenberg et al., 2013). In China, this issue has intensified due to rapid socio-economic transitions and the lingering impacts of the COVID-19 pandemic (MOE of China, 2023). Recent studies highlight an upward trend in psychological distress (Lei et al., 2016; Wang et al., 2022), with a meta-analysis revealing a 26% detection rate for depressive symptoms among Chinese university students (Luo et al., 2021). Poor mental health not only undermines academic engagement and retention (Kalkbrenner et al., 2021) but also impedes students' long-term well-being, social adaptation, and career trajectory (Gao et al., 2020).

While general university students have received extensive scholarly attention, research specifically targeting higher vocational college students remains fragmented and relatively recent (Xin et al., 2018). In China's higher education hierarchy, vocational students typically face systemic disadvantages. They often enter with weaker academic foundations compared to undergraduates (Liu & Yuan, 2021) and come predominantly from lower socioeconomic backgrounds (Hansen & Woronov, 2013; Tadesse et al., 2022). Furthermore, vocational education is culturally stigmatized as "technical" rather than "academic," and graduates are awarded diplomas instead of degrees, placing them at a structural disadvantage in the labor market (Xiong, 2011; Chen & Pastore, 2024). This confluence of marginalization, academic pressure, and uncertain employment prospects renders this group particularly vulnerable to psychological distress.

Despite these vulnerabilities, vocational students are frequently subsumed under broad higher education studies, obscuring their unique characteristics and needs (Bian, 2023; Liu et al., 2023). Given this context, targeted mental health education is critical. However, systematic exploration of educational strategies tailored specifically for vocational settings is lacking. Existing models often fail to address the specific predicaments of these students.

To bridge this gap, this study aims to examine the mental health status of vocational students, identify deficiencies in current educational models, and propose actionable strategies through a comprehensive literature review. The research is guided by three core questions: What are the status and characteristics of mental health among vocational college students in China? What are the deficiencies in current mental health education models within these institutions? What strategies can be proposed to optimize mental health education in higher vocational colleges?

Through a thorough analysis of the literature, this study will reveal the current state of mental health among vocational college students and identify the shortcomings of existing education models, while offering practical strategies pertinent for improvement. This will not only enrich the theoretical foundation of the role and position of mental health education, but also provide tangible evidence for education administrators and policymakers, for the development of mental health education in vocational colleges.

## **2. METHODOLOGY**

This article employed a systematic literature review, following four steps (Kreiterling, 2023). The search approach has been created to reduce the likelihood of missing any significant research for mental health education in China's higher vocational colleges while increasing the probability of finding all pertinent studies.

### **2.1 Identification**

Identification was the first phase in this systematic review process. Guided by the three review questions, a comprehensive literature search was conducted through three databases: Scopus, ScienceDirect, and the Peking University Core Journals, along with an AI-based database, SciSpace. Scopus was selected because it is regarded by the academic community as the largest and most comprehensive database for peer-reviewed abstract and citation literature (Baas et al., 2020). ScienceDirect offers access to more than 2,500 journals and 11,000 books (Harnegie, 2013). Given the focus on Chinese vocational students, high-quality literature was selected from the Peking University Core Journals. As a widely recognized authoritative and scientific index in China (Liu, 2018). SciSpace is an AI tool designed to accelerate research by simplifying the interpretation of complex academic papers (Jain, Sibbu & Kuri, 2023). Through precise keyword filtering, it curates relevant literature from extensive databases, significantly improving the efficiency and accuracy of the literature review process.

The search terms used were: "mental health" or "mental health education," and "higher vocational colleges" or "vocational college students," and "China" or "Chinese." Boolean operators (AND/OR) were employed to combine keywords and adjust the search scope. The search cutoff was set to October 8, 2024. The initial search results included 647 articles from the three primary databases and 150 articles from SciSpace, resulting in a total of 797 articles.

### **2.2 Screening**

Screening, the second phase in the systematic literature review, involved selecting articles for inclusion or exclusion based on predefined criteria (Dew et al., 2021). The first criterion was the publication timeline. To align with the significant policy reforms initiated by the Ministry of Education in 2018 (MOE of China, 2018), only studies published between 2018 and 2024 were included. A seven-year window ensures comprehensive coverage without overwhelming the review with an excessive number of studies, thereby keeping the focus of the content intact. This ensured the analysis reflected the current educational landscape. Consequently, 580 articles predating this period were excluded.

The second criterion focused on the target population. The study strictly focused on students in China’s vocational institutions. Research involving non-vocational students or international populations was excluded, resulting in the removal of a further 86 articles from the databases and 45 from SciSpace.

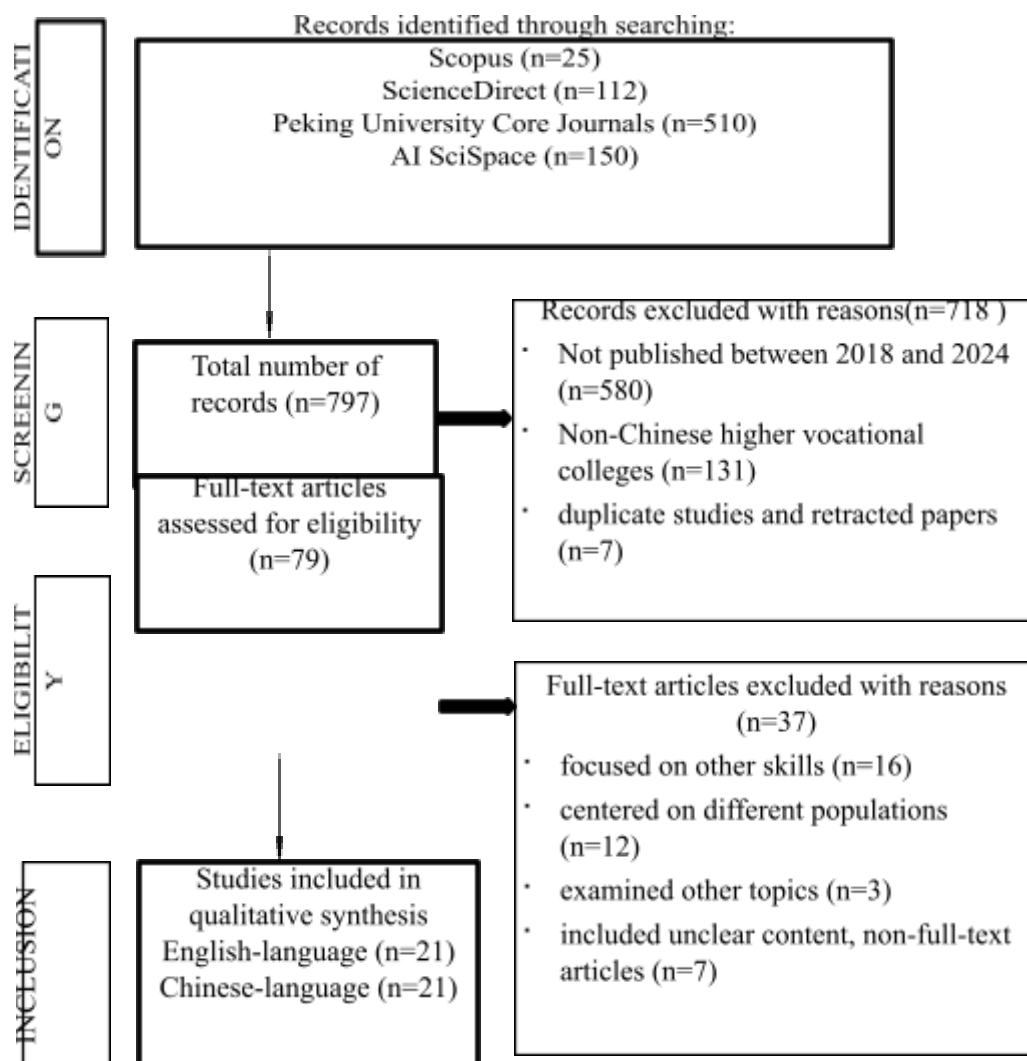
Finally, duplicate studies and retracted papers were removed by cross-referencing the databases. This led to the exclusion of 4 duplicate papers and 3 retracted papers, leaving 80 articles: 52 from English-language journals and 28 from China’s-language journals.

### 2.3 Eligibility

In contrast to the automated filtering in previous phases, this stage involved manual verification of titles and abstracts to ensure content relevance (Shaffril et al., 2020). Eligibility was restricted to empirical studies employing quantitative, qualitative, or mixed methodologies.

Consequently, a further 38 articles were excluded due to: (a) thematic misalignment (e.g., focus on vocational skills, political education, or alcohol consumption, n=16); (b) population mismatch (e.g., secondary vocational students, n=12); (c) unrelated institutional topics (n=3); or (d) full-text unavailability or unclear content (n=7). This process yielded a final sample of 42 articles (21 English and 21 Chinese). The complete screening framework is illustrated in Figure 1.

Figure 1. Structural Flowchart for Selection of Literature



## 2.4 Data Extraction and Analysis

Following the steps outlined above, a total of 42 relevant articles were identified. Given that the purpose of this study is to gain a comprehensive understanding of the mental health challenges faced by students in China's higher vocational colleges and to evaluate the mental health education initiatives and their shortcomings, a thematic analysis was conducted. Thematic reading and analysis were performed based on the three core research questions established earlier, and their findings are presented accordingly in the next section.

## 3. RESEARCH FINDINGS AND DISCUSSION

Based on the three research questions, the 42 articles identified as key research documents were thematically analyzed and their findings are consolidated and presented within their respective sections as accordingly.

### 3.1 Status and Characteristics of Student Mental Health

The systematic literature review reveals that China's vocational college students commonly exhibit pronounced feelings of inferiority, anxiety, and depression, alongside insufficient psychological resilience and a weak ability to cope with adversity. Firstly, the sense of inferiority among vocational college students is significantly stronger than that of undergraduate students (Xiong, 2019; Zhou, 2023; Xu et al., 2024; Huang, 2019; Zhang & Zhao, 2019; Liu & Yuan, 2021). In China, due to the stigma and low societal recognition of vocational education, higher vocational colleges remain a secondary choice among parents and students (Xiong, 2011). Most vocational college students enroll in these institutions simply because of their lower exam scores that do not meet the entrance requirements to academic universities (Xu et al., 2024). Furthermore, many vocational college students are from economically disadvantaged families (Wang & Guo, 2020), and their academic performance is generally poor (Zhang & Liu, 2023; Fan & Liu, 2024), further intensifying their sense of inferiority despite higher vocational institutions being part of the higher education system of China.

Secondly, vocational college students experience more stress than undergraduate students, with depression and anxiety being prevalent among them. Studies indicate that vocational college students face immense pressure when they enter school (Fan & Liu, 2024), due to a prolonged lack of academic success and frequent criticism from family members and teachers, their self-worth is often diminished (Jie, 2018). Combined with the lower societal recognition of vocational education (Ling et al., 2023; Xiong, 2011) and bleaker employment outlook (Xiong, 2011; Chen & Pastore, 2024), this makes them more susceptible to negative emotions.

Reports indicate that the detection rate of anxiety among vocational college students is 9.22%, while the rate of poor sleep quality is 52.81% (Li, 2020). The depression rate is 18.10% (Cao & Zheng, 2023), which aligns with findings from studies on technical vocational institutions in Brazil (Fernandes et al., 2022). During the COVID-19 pandemic, psychological distress among vocational college students significantly increased (Wu & Liu, 2024) and was more severe than that experienced by undergraduate and graduate students (Zhu et al., 2022). One study found that the prevalence of stress, anxiety, and depressive symptoms among vocational college students was 55.7%, 33.2%, and 53.5%, respectively, far exceeding the average levels for undergraduate students (23%, 29%, and 37%) (Liu et al., 2024). Results from the SCL-90 survey indicate that the detection rate of mental health issues among vocational college students in China is typically above 20%, higher than the national average for young people, and shows an upward trend (Huang, 2019).

Thirdly, vocational college students generally lack coping skills and exhibit low psychological resilience, particularly when facing adversity (Cai, 2019). High academic expectations from parents lead students to prioritize academics over essential skills, resulting in poor coping strategies and increased vulnerability to mental health issues (Sun et al., 2013; Yoon et al., 2017). Studies show that academic pressure is the primary source of stress for vocational college students, due to a lack of coping mechanisms, they tend to resort to internet addiction as a way to divert their attention (Qi & Tang, 2024). For instance, the smartphone addiction rate among vocational college students is 27.6% (He, Li, & Fu, 2019).

### **3.2 Current Situation and Limitations of Mental Health Education**

Since the 1990s, many higher vocational colleges in China have established mental health education centers and made progress in mental health education and counseling. However, there remains significant deficiencies and limitations. Firstly, a significant limitation lies in the orientation and implementation of mental health education. Although these institutions have established mental health education centers, many continue to use traditional reactive intervention models, addressing problems only after they arise (Du, 2018). This crisis-focused approach often neglects the preventive function of mental health education and fails to effectively address the potential risks associated with student mental health issues (Chen, 2020; Liu & Huang, 2021). This reactive mindset limits the effectiveness of mental health education. Furthermore, many vocational institutions view mental health education primarily as a tool for managing "problematic students," thereby overlooking the mental health needs of "non-problematic students," and failing to achieve comprehensive coverage of mental health education (Pan, 2022; Chen, 2018; Jie, 2018).

Secondly, the advancement and efficacy of mental health education are constrained by a shortage of qualified personnel and limited professional expertise. Due to the relatively recent establishment of many vocational institutions and the late start, the development of a qualified counseling workforce has lagged (Yang & Zhang, 2021; Chen, 2020). The number of full-time mental health educators is limited and cannot meet the mental health needs of students (Qi & Pan, 2022; Chen, 2020; Yang & Zhang, 2021; Cai et al., 2024; Liu & Huang, 2021; Zheng, 2023). For example, compared to international standards such as the 1:476 ratio of counselors to students in U.S. universities, China's vocational institutions often struggle to meet the Ministry of Education's requirement of a 1:4000 ratio (Du, 2018; Qi & Pan, 2022). The reliance on part-time teachers and non-specialists further diminishes the professionalism and standardization of mental health education (Du, 2018; Qin & Pan, 2022; Wang, 2020). Additionally, the professional development mechanisms for current educators need improvement. Although some teachers have a background in psychology, they often lack ongoing training and professional growth opportunities, limiting their ability to address complex issues and impacting the continuous improvement of educational quality (Wang, 2020).

Furthermore, the development of mental health education courses presents multiple issues (Wang, 2018), including course content, teaching methods, and evaluation. Regarding course content, there is an overemphasis on theoretical knowledge and a lack of practical skills training, which fails in the sense of the actual needs of practicality (Liu, 2021; Qin & Pan, 2022; Liu et al., 2022; Qi & Tang, 2024; Cai et al., 2024). For example, practical skills such as emotion regulation, interpersonal communication, career guidance, and resilience are insufficiently emphasized and trained (Liu & Huang, 2021).

In terms of teaching methods, the teaching models are outdated. Traditional lecture-based and discussion-based approaches remain the primary teaching modes, which often result in a

passive learning experience that fails to engage students actively and retrospectively (Chen, 2020; Yang & Zhang, 2021; Liu & Huang, 2021). Additionally, there is inadequate integration of internet-based tools with teaching content, which limits the use of modern information technology to enhance both teaching and diagnostic effectiveness (Chen, 2020; Yang & Zhang, 2021).

Regarding evaluation, course assessments largely relied on quantitative exams (Zhang & Zhao, 2019; Wang, 2018), neglecting comprehensive evaluation of students' psychological qualities and personal development. Such singularity obviously has its inherent weakness, in particular, reflecting the actual effectiveness of the course and its assessment, and the quality of the training process.

### **3.3 Strategies for Improvement**

To effectively address the identified predicaments in China's higher vocational colleges, four primary strategies are proposed based on the synthesis of existing literature. These strategies are detailed in the following sections.

#### **3.3.1 Application of Positive Psychology**

To address current educational deviations, Scholars advocate for a paradigm shift from crisis intervention to prevention, drawing on the traditional wisdom of 'treating illness before it occurs.' This perspective is congruent with Western's Positive Psychology (Du, 2018), a field devoted to optimizing individual functioning and mitigating psychological risks (Sheldon & King, 2001). Therefore, positive psychology should serve as the cornerstone for mental health education reform in higher vocational institutions (Jie, 2018; Xiong, 2019; Huang, 2019; Liu & Huang, 2021).

The theoretical framework of positive psychology comprises three core pillars: positive emotions, positive personality traits, and positive social systems (Kim et al., 2012). Empirical research indicates that positive emotions can broaden individuals' cognitive and behavioral repertoires, thereby facilitating the accumulation of long-term developmental resources (Fredrickson, 2001). In practice, it is recommended to integrate horticultural therapy into the educational curriculum. Engaging in horticultural activities has been proven to effectively cultivate positive emotions among students (Jie, 2018; Chen et al., 2024; Yu, 2023).

According to Cao and Zheng (2023), positive personality traits are instrumental in coping with stress and mitigating the risk of depression. Psychological resilience and self-esteem play critical mediating roles in buffering against negative outcomes (Hao & Xu, 2024). Additionally, He et al. (2019) found that high levels of self-control and self-esteem are negatively correlated with smartphone addiction tendencies. Therefore, higher vocational colleges should focus on fostering these positive traits through interventions such as attribution training, outward bound programs, and the cultivation of a supportive pedagogical atmosphere (Xiong, 2019).

Finally, establishing a supportive ecosystem is paramount for student mental health. Integrating campus culture development with mental health education can foster a positive institutional environment. Effective measures include organizing psychology knowledge competitions, psychodramas, and psychological salons (Gao, 2020; Yu, 2023). Beyond the campus, family support remains indispensable. It is crucial for families to provide encouragement and for educators and parents to maintain regular communication, ensuring a synergistic and positive home-school environment (Zhou, 2023; Bian, 2023).

#### **3.3.2 Faculty Development and Professional Competence**

Given the constraints imposed by the shortage of qualified personnel, optimizing the workforce structure is a prerequisite for improving educational outcomes. The efficacy of mental health education is inextricably linked to the competency and capacity of the counseling staff (Chen, 2020; Yang & Zhang, 2021). The following are key areas for optimizing the faculty responsible.

First, improving both the quantity and quality of the teaching staff. Higher vocational colleges should ensure an adequate number of mental health educators by establishing a team that combines full-time and part-time teachers, to guarantee both comprehensive coverage and professional expertise (Wang, 2020; Chen et al., 2024; Qin & Pan, 2022). Full-time educators must meet qualification standards, while part-time teachers with a background in psychology should also actively participate to enhance the team's flexibility and professionalism (Wang, 2020; Yu, 2023).

Secondly, strengthening professional training. Institutions should develop systematic training programs for mental health educators in accordance with national guidelines. Full-time teachers should receive at least 40 hours of training annually. Meanwhile, part-time educators should also engage in professional training to continuously enhance their teaching skills and expertise (Yang & Zhang, 2021; Liu & Huang, 2021; Wang, 2020; Yu, 2023).

Finally, improving the incentive mechanism. Performance in title evaluations and promotions should be associated with work achievements, to ensure high-quality team formations and operations. Additionally, institutions should provide safeguards to ensure appropriate compensation and career development opportunities for mental health educators, thereby increasing the stability and motivation of the team (Wang, 2020).

### **3.3.3 Reform Curriculum: From Theory to Practice**

As a systematic pathway for imparting psychological knowledge and skills, the curriculum is the cornerstone of mental health education. However, to mitigate the identified disconnection between theoretical instruction and practical application, a paradigm shift is required in content, pedagogy, and assessment.

In terms of teaching content, the curriculum should align with students' needs (Liu & Huang, 2021). Drawing upon positive psychology, the curriculum should integrate classroom instruction with extracurricular activities to cultivate psychological resilience (Gao, 2020; Xiong, 2019; Liu & Huang, 2021). The limitations of traditional "teacher-centered" lecture modes necessitate immediate pedagogical reform. The goal is to restore student agency and facilitate the internalization of knowledge into behavioral skills. To achieve this, Wang (2018) introduced a "role-reversal interactive" model rooted in the flipped classroom concept, this model effectively shifts the locus of control to the student, thereby stimulating learning initiative. Furthermore, to bridge the gap between cognition and behavior, Yang et al. (2022) validated a blended teaching model that integrates online and offline resources. Following the sequence of "cognition—experience—reflection—action," this approach prioritizes emotional experience and self-efficacy, encouraging students to actively apply psychological in real-world scenarios.

Finally, the evaluation mechanism must evolve to reflect this shift towards practicality. Moving beyond the singularity of quantitative exams, a comprehensive evaluation system should be established to assess the process of psychological growth and personality development, ensuring the assessment aligns with the multifaceted goals of the curriculum (Liu & Huang, 2021).

### **3.3.4 Optimizing Mental Health Education through Digital Transformation**

Higher vocational colleges should fully leverage the opportunities presented by internet technologies to enhance the efficacy of mental health education (Chen, 2020). A foundational step involves establishing a student psychological database grounded in big data, which facilitates the reform of traditional teaching models while strictly adhering to data privacy protocols (Zhang & Jia, 2021). Building on this infrastructure, scholars have successfully applied data mining techniques and decision tree algorithms to support mental health initiatives (Sun, 2022). Furthermore, Zhang and Weng (2024) proposed a comprehensive framework utilizing Artificial Intelligence to optimize the entire educational workflow, ranging from data collection and feature extraction to personalized intervention, real-time feedback, and effectiveness evaluation. These digital strategies aim to provide precise and effective psychological support, enabling vocational students to better cope with academic and personal challenges.

## **4. CONCLUSION**

This systematic literature review addressed three core objectives: assessing the mental health status of vocational students, evaluating current educational practices, and proposing targeted improvement strategies. The synthesis underscores that current mental health education is predominantly reactive, necessitating a paradigm shift toward prevention and resilience building through positive psychology. Structurally, addressing the shortage of qualified personnel requires a hybrid workforce model that synergizes full-time counselors with professional part-time staff. Pedagogically, the curriculum must pivot from overly theoretical approaches to experiential models, such as flipped classrooms and blended learning, to enhance practical skill acquisition. Technologically, digital transformation serves as a critical enabler, leveraging big data and AI to facilitate data-driven analysis and personalized interventions, thereby significantly enhancing the precision of support systems.

This study synthesized insights from 42 articles but has two primary limitations. First, the data sources were restricted to three databases and one AI platform; future research should expand this scope to include gray literature and recent theses. Second, as a literature review, this study lacks primary field data. Consequently, it cannot empirically verify the long-term impact of the discussed educational models.

These findings provide actionable insights for policymakers and educators to build a more holistic educational ecosystem. Future inquiry should prioritize empirical studies to validate these strategies, employing longitudinal designs to examine intervention effectiveness over time. Additionally, as technologies evolve, research exploring the practical applications and ethical implications of AI in mental health contexts, particularly through interdisciplinary approaches combining psychology, pedagogy, and data science, is strongly warranted.

### **Informed Consent Statement**

None.

### **Conflict of Interest**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### **Ethics Statement**

None.

### **Author Contributions**

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### **Data Availability Statement**

None.

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