International Journal of Science and Engineering Applications
Volume 15-Issue 08, 19 – 23, 2026, ISSN:- 2319 - 7560
DOI: 10.7753/IJSEA1508.1005

# Analysis and Implementation Path of Comprehensive Intervention for Anxiety and Academic Stress Among Vocational College Students

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**Abstract**: As a vital group within the higher education system, vocational college students suffer from dual disturbances of academic stress and anxiety, whose mental health has attracted growing academic and social attention. Against the backdrop of the new media era, this paper systematically sorts out the current characteristics and contributing factors of anxiety and academic stress among vocational college students, and further explores the interaction mechanisms between academic stress, psychological resilience, self-efficacy, sleep quality and anxiety. The research reveals that academic stress of vocational college students mainly stems from curriculum learning, skill assessments, employment competition and miscellaneous daily stressors. There exists a significantly positive correlation between anxiety and academic stress, with psychological resilience acting as a critical moderator, while self-efficacy and sleep quality serve as key mediating variables. On this basis, this study constructs a comprehensive intervention strategy system from four dimensions: individual cognitive restructuring, institutional systematic support, collaborative social education and new media empowerment, and proposes a three-level implementation framework of "Prevention–Early Warning–Intervention". It intends to provide theoretical references and practical guidance for mental health education of vocational college students in the new era.

**Keywords**: vocational college students; anxiety; academic stress; comprehensive intervention; implementation path

## 1.Introduction

Higher vocational education, as a key platform for cultivating technical and skilled talents, undertakes the mission of serving economic and social development. Nevertheless, with the popularization of higher education and intensifying social competition, vocational college students are confronted with mounting pressures in academic development, skill improvement and career selection, accompanied by a rising incidence of mental problems such as anxiety and depression. The Special Action Plan for Comprehensively Strengthening and Improving Mental Health Work for Students in the New Era (2023–2025), issued by the Ministry of Education and sixteen other government departments, clearly advocates the educational philosophy of prioritizing health, and aims to comprehensively improve students' mental health literacy to lay a solid foundation for their healthy growth and lifelong development[6].

Most vocational college students belong to the post-2000 generation, who grow up amid rapid development of new media and demonstrate distinct generational traits in cognition, emotional expression and social interaction[1]. Therefore, in-depth exploration of the internal correlation between anxiety and academic stress, as well as construction of scientific and effective comprehensive intervention systems, bears great practical significance for promoting the all-round development of vocational college students and improving the quality of vocational education.

## 2.Current Situation and Root Causes of Anxiety and Academic Stress Among Vocational College Students

### 2.1Primary Sources of Academic Stress

Academic stress of vocational college students features multi-dimensionality and complexity. According to Zhou Min, daily stressors of vocational students cover academic tasks, practical training, interpersonal relationships, financial burden and future career development, among which academic-related pressure dominates[3]. Peng Yihan further finds that vocational students commonly suffer from ambiguous learning goals, improper learning methods and insufficient self-management, resulting in low learning self-efficacy and forming a vicious cycle: learning difficulties → increased stress → aggravated anxiety[5].

Furthermore, higher vocational education prioritizes practical skills and professional literacy training. Students must cope with both theoretical examinations and numerous practical training assignments plus vocational skill certification tests, and the dual assessment criteria impose heavier academic burdens.

### 2.2 Manifestations and Influencing Factors of Anxiety

Anxiety among vocational students is characterized by concealment and generalization. Shen et al. verify that psychological resilience is significantly negatively correlated with anxiety and depression; students with lower psychological resilience tend to report higher anxiety levels[2]. Liu Fei confirms a prominent positive correlation between academic stress and anxiety, and psychological resilience plays a partial mediating role: academic stress not only

directly triggers anxiety, but also indirectly exacerbates it by eroding psychological resilience[7].

From the perspective of the new media environment, Liu et al. find that social media usage intensity and sleep quality exert remarkable impacts on vocational students' anxiety, with self-efficacy as a mediating variable. Excessive social media use impairs sleep quality, reduces self-efficacy, and ultimately induces or worsens anxiety[4].

## 2.3Superimposed Effects of the New Media Environment

Instant information transmission and borderless social comparison under new media exert profound impacts on vocational students' mental health. As native digital residents, post-2000 vocational students rely heavily on new media platforms for information acquisition, social interaction and self-identity construction. However, uneven quality of online information, substitution effects of virtual socialization and amplified online public opinion easily trigger cognitive biases and emotional distress, which magnify anxious experiences caused by academic pressure[1].

# 3.Interaction Mechanisms Between Anxiety and Academic Stress

## 3.1 Transmission Path of "Stress–Cognition–Emotion"

The impact of academic stress on anxiety is not a simple linear relation but proceeds through complex cognitive and emotional processing. When students face academic tasks exceeding their coping capacity, they first conduct cognitive evaluation of task difficulty and personal competence. If they judge themselves incapable of handling the tasks, the stress response system will be activated, triggering tension, worry and other negative emotions.

Peng Yihan's research indicates that vocational students lacking effective psychological adjustment strategies tend to develop negative self-perception when encountering academic setbacks, attributing temporary failures to insufficient personal ability and falling into a state of learned helplessness[5].

## 3.2 Moderating and Mediating Roles of Psychological Resilience

Psychological resilience refers to individuals' positive adaptive capacity when facing adversities, and it occupies a pivotal position between academic stress and anxiety. Shen et al. point out that vocational students with high psychological resilience can better cope with academic and life stressors and display lower anxiety and depression levels[2]. Liu Fei further reveals the mediating mechanism of psychological resilience: academic stress consumes psychological resources, weakens coping competence, lowers psychological resilience, and consequently generates and sustains anxiety[7]. Accordingly, enhancing vocational students' psychological resilience serves as a core entry point to block the transformation from stress to anxiety.

## 3.3 Chain Mediation of Self-Efficacy and Sleep Quality

Liu et al. construct a more complex chain mediation model: social media usage affects sleep quality, which in turn influences self-efficacy and ultimately acts on anxiety[4]. This finding provides crucial insights into the origins of vocational students' anxiety. Under the new media context, unhealthy media habits not only occupy study time and create information overload pressure, but also indirectly aggravate academic anxiety by disrupting sleep rhythms and diminishing self-efficacy.

Self-efficacy refers to individuals' belief in their ability to complete specific tasks successfully, and it directly shapes emotional responses and behavioral choices under academic stress. Students with high self-efficacy tend to perceive pressure as challenges rather than threats, adopting positive coping strategies and maintaining lower anxiety levels.

## 3.4 Multi-Factor Interactive Model

Synthesizing existing studies, a multi-factor interactive model of vocational students' anxiety and academic stress can be established: as an external stimulus, academic stress is processed via cognitive evaluation systems (self-efficacy) and emotional regulation systems (psychological resilience) and eventually transformed into anxious emotional experiences. Lifestyle factors such as new media usage and sleep quality function as moderators that adjust the intensity and direction of the above transmission process. This model lays a theoretical foundation for formulating comprehensive intervention strategies.

# 4. Construction of Comprehensive Intervention Strategies

Based on the above analysis, comprehensive interventions targeting vocational students' anxiety and academic stress should adhere to the principles of systematic governance, targeted policy implementation and coordinated linkage, forming a multi-level and all-round intervention system covering individual, institutional, social and technological dimensions.

## 4.1 Individual Level: Cognitive Restructuring and Competence Improvement

### 4.1.1 Cognitive Behavioral Intervention

Targeting prevalent negative cognitive patterns among vocational students, Cognitive Behavioral Therapy (CBT) techniques shall be introduced to help students identify and correct cognitive biases such as all-or-nothing thinking and overgeneralization, so as to establish rational academic perceptions and reasonable self-expectations. Through cognitive restructuring, irrational beliefs like "I must perfectly finish all tasks" are transformed into flexible mindsets such as "I will try my best and allow myself to make mistakes", thus reducing pressure at the cognitive level.

### 4.1.2 Cultivation of Psychological Resilience

Drawing on positive psychology theories, systematic training on psychological resilience shall be carried out through strength identification, goal setting and problem-solving exercises. Specific measures include growth mindset training to help students regard academic setbacks as opportunities for growth rather than negations of personal competence; building personal achievement archives to accumulate successful experiences and boost self-efficacy; teaching emotional regulation skills such as mindfulness meditation and relaxation training to strengthen emotional management capacity[2,7].

### 4.1.3 Media Literacy and Sleep Management

Given the adverse impacts of new media usage on sleep quality and anxiety, media literacy education and sleep hygiene guidance shall be integrated into mental health curricula. Students shall be guided to develop healthy media habits, reasonably limit social media time and avoid using electronic devices before bedtime. Popularizing sleep hygiene knowledge helps students form regular daily routines and eliminates physiological foundations of anxiety from the perspective of lifestyle[4].

## 4.2 Institutional Level: Systematic Support and Targeted Services

### 4.2.1 Curriculum and Teaching Reform

To tackle the root of academic stress, curriculum systems and teaching methods shall be optimized. The difficulty of courses and frequency of assessments shall be reasonably controlled, and formative evaluation shall be weighted higher to reduce pressure from summative examinations. The integrated education model of "Curriculum, Post, Competition and Certification" shall be promoted to clarify learning objectives and career paths, alleviating confusion and anxiety caused by ambiguous goals[3,5]. Mental health elements shall be embedded into disciplinary teaching to integrate knowledge instruction with psychological education.

### 4.2.2 Innovative Mental Health Education

In accordance with the cognitive characteristics and acceptance preferences of post-2000 vocational students, the forms and contents of mental health education shall be innovated. Hai Qingling suggests fully leveraging new media platforms for mental health education, developing micro-courses, short videos, interactive H5 pages and other student-friendly educational products to enhance attractiveness and effectiveness[1]. A combined curriculum system of compulsory and elective mental health courses shall be established to balance universal coverage and personalized demands.

### 4.2.3 Counseling Services and Crisis Early Warning

The campus psychological counseling center shall be strengthened with professional counselors to provide diversified services including individual consultation, group counseling and psychological assessment. Permanent mental health files shall be created for all students. Big data technology shall be adopted to analyze multi-source data such as academic performance, attendance, consumption records and online behaviors, constructing an early warning model for academic stress and anxiety to realize the shift from passive intervention to active prevention[6].

## 4.3 Social Level: Collaborative Education and Environmental Optimization

### 4.3.1 Collaborative Mechanism of School–Family–Community

A three-in-one mental health support network uniting schools, families and society shall be constructed. Schools shall strengthen communication with parents, popularize mental health knowledge via parent schools and online platforms, and guide parents to adopt scientific educational concepts to avoid transmitting excessive academic and employment pressure to students. Schools shall actively cooperate with communities, enterprises and medical institutions to provide students with internships, career experience and professional counseling services[6].

### 4.3.2 Employment Support and Career Development Guidance

To mitigate employment anxiety widespread among vocational students, career education and employment guidance services shall be reinforced. Long-term school-enterprise cooperation mechanisms shall be established to expand high-quality job openings and boost students' employment confidence. Vocational skill training and innovation and entrepreneurship education shall be delivered to improve students' professional competitiveness and adaptability. Students shall be guided to form rational career outlooks of "secure employment first, job-hopping second, entrepreneurship later" to ease anxiety stemming from employment uncertainty[3].

### 4.3.3 Guidance of Public Opinion

A social atmosphere respecting skilled labor and vocational talents shall be fostered to eliminate prejudice and discrimination against vocational education, enhancing vocational students' social identity and professional sense of honor. Propagating growth stories of outstanding skilled talents helps students build positive professional identity and convert academic pressure into developmental motivation.

## 4.4 Technological Level: New Media Empowerment and Smart Intervention

### 4.4.1 Smart Mental Health Service Platform

Leveraging artificial intelligence and big data, an intelligent mental health service platform shall be developed with functions including psychological assessment, online consultation, emotional monitoring and targeted resource push, realizing intelligent, convenient and personalized mental health services. Natural language processing technology shall be applied to analyze text expressions of students on social media and learning platforms, identify potential anxiety signals and timely push intervention resources[1].

### 4.4.2 Digital Intervention Tools

Mobile terminal-based psychological intervention applications shall be developed, integrating modules of mindfulness training, cognitive restructuring, emotional diaries and social support. Digital mental health interventions feature wide coverage, low cost and strong anonymity, making them particularly suitable for students who hesitate to seek offline counseling.

### 4.4.3 Application of Virtual Reality Technology

Virtual Reality (VR) technology shall be explored for exposure therapy and relaxation training targeting anxiety. Virtual academic stress scenarios can be constructed to help students adapt and desensitize in a safe environment; immersive relaxation training via VR scenes improves the interest and effectiveness of interventions.

## 5. Design of Implementation Paths

Effective delivery of comprehensive intervention strategies relies on scientific implementation frameworks. Based on the three-tier model of "Prevention–Early Warning–Intervention", this paper proposes the following implementation paths:

## 5.1 Level-One Prevention: Universal Education and Environmental Optimization

The core objective of primary prevention is to reduce the prevalence of academic stress and students' susceptibility to anxiety, targeting all enrolled students.

Full coverage of mental health education. Mental health education shall be incorporated into talent training programs with compulsory courses offered, ensuring all students receive systematic training covering stress management, emotion regulation, interpersonal communication, time management and career planning, integrated with professional education and ideological and political education[6].

Improved academic support systems. Assistance mechanisms for academically challenged students shall be established with academic tutors and peer tutors providing one-on-one tutoring. Teaching resources and practical training facilities shall be optimized to reduce academic pressure arising from insufficient resources. Flexible academic systems and credit banks shall be introduced to offer diversified learning pathways[5].

Construction of positive campus culture. Rich campus activities shall be held to build an inclusive and supportive campus atmosphere. Students shall be encouraged to participate in clubs, volunteer services and skill competitions to enhance self-efficacy and psychological resilience through practical experience. Dormitory culture construction shall be prioritized to exert positive peer support effects[3].

## 5.2 Level-Two Early Warning: Dynamic Monitoring and Early Identification

Secondary warning aims to promptly identify students at high risk of anxiety and realize early detection and timely intervention.

Multi-dimensional psychological assessment. Regular universal mental health surveys shall be conducted each semester to evaluate indicators including academic stress, anxiety and depression, psychological resilience and sleep quality. Professional scales such as GAD-7 (Generalized Anxiety Disorder Scale), PSS (Perceived Stress Scale) and CD-RISC (Connor-Davidson Resilience Scale) shall be adopted to guarantee assessment professionalism and accuracy[2,7].

Big data early warning system. Multi-source data from academic administration, student affairs, campus card and library systems shall be integrated to build an early warning model for academic stress and mental health. Warning threshold indicators including consecutive absences, sharp performance declines, abnormal consumption and irregular schedules shall be set for automatic identification of high-risk students and alert information push[6].

Four-tier early warning network. A four-level reporting network covering school, faculty, class and dormitory shall be established, giving full play to frontline observers including counselors, head teachers, class cadres and dormitory supervisors. Regular training for class psychological committee members and dormitory psychological informants shall be carried out to improve their capacity to detect mental crisis signals and ensure smooth information reporting channels.

## 5.3 Level-Three Intervention: Targeted Measures and Continuous Follow-Up

Tertiary intervention provides professional and personalized support for students with diagnosed anxiety symptoms.

Hierarchical and classified intervention. Differentiated interventions shall be implemented according to anxiety severity: students with mild anxiety shall receive psychological education and self-help interventions, recommended digital psychological tools and group counseling activities; moderately anxious students shall be offered professional psychological counseling combined with academic and life support; severely anxious students shall be timely referred to specialized medical institutions, with a school-medical collaborative intervention mechanism established[4].

Case management and follow-up. A case management system for high-risk students shall be formulated, with individual tracking files recording intervention processes, effect evaluations and follow-up plans. Specialized staff shall conduct regular return visits to continuously monitor students' academic adaptation and emotional status and prevent symptom recurrence[6].

Intervention effect evaluation. An evaluation mechanism shall be built with pre-post test comparisons and longitudinal tracking to scientifically assess intervention effectiveness. Intervention schemes shall be adjusted timely based on evaluation results to form a closed-loop management system of "assessment–feedback–improvement".

## 5.4 Supporting Mechanisms

Organizational support. A leading group for student mental health work led by university leaders shall be set up, integrating student affairs, academic administration, youth league committee, logistics and campus medical departments to coordinate the overall implementation of comprehensive interventions. Clear division of responsibilities and regular joint meetings shall be established to guarantee coordinated linkage[6].

Talent team support. The mental health education faculty shall be strengthened by recruiting full-time counselors in accordance with teacher-student ratio standards. Mandatory training on mental health literacy shall be provided for counselors and head teachers. Peer psychological support teams shall be cultivated to leverage the advantages of peer companionship[1].

Institutional support. Institutional documents including mental health education regulations, psychological crisis intervention plans and medical referral systems shall be formulated to provide institutional foundations for comprehensive interventions. A performance appraisal mechanism shall be built, incorporating mental health work into assessment indicators for faculties and individual staff.

Financial support. Special funds for mental health education shall be allocated to cover faculty training, platform construction, activity organization and research projects, ensuring sustainable development of comprehensive intervention work.

## 6. Conclusion

Anxiety and academic stress among vocational college students result from interactions of multiple factors, and relevant intervention constitutes a systematic project requiring coordinated efforts from individuals, schools, society and technological sectors. Based on existing research findings, this paper constructs a comprehensive intervention strategy system covering cognitive restructuring, competence promotion, institutional support, environmental optimization and technological empowerment, alongside a three-tier implementation path of "Prevention–Early Warning–Intervention".

It should be noted that vocational colleges in different regions and of different types vary in student characteristics and resource endowments. Each institution shall adapt and innovate the framework proposed in this paper according to local realities. Future research may further explore quantitative evaluation methods for comprehensive intervention effects and in-depth applications of artificial intelligence and other new technologies in mental health interventions, so as to offer more solid theoretical and practical support for mental health education of vocational college students.

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