

Research on Early Warning and Group Intervention of College Students' Academic Emotion Crisis from the Perspective of Social and Emotional Learning

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Abstract. Under the background of the popularization of higher education, college students' emotional crises such as academic anxiety, burnout and weariness of learning continue to occur frequently. Traditional interventions have problems such as delayed response, fragmentation and insufficient accuracy. Based on the five core competencies of Social and Emotional Learning (SEL), this study constructs an early identification and graded early warning mechanism for academic emotion crisis. Using mixed research methods, this study conducts an empirical analysis of 603 students in Y University, an application-oriented undergraduate college in Guangdong Province, and implements 8-week structured group intervention. The results show that the recognition accuracy of the SEL early warning model reaches 89.7%; after the intervention, negative academic emotions decrease by 28.3%, emotional regulation ability and academic adaptation level increase by 31.5% and 26.7% respectively, and the effect is stable for a long time. The study forms an integrated mode of "early warning-screening-intervention-tracking", which can provide a practical path for the pre-prevention and control of academic emotion crisis and the standardization of mental health education in colleges and universities.

Keywords: social and emotional learning, academic emotion crisis, early warning, group intervention, college students

1. Introduction

Under the background of the popularization of higher education, the multiple superposition of further education competition, employment pressure and academic load has made college students' academic emotion problems increasingly prominent. A large-scale national survey shows that 46.6% of college students in China have different degrees of academic emotion distress, among which 13.9% are high-risk groups such as severe anxiety, academic burnout and weariness of learning. Emotional crisis caused by academic pressure has become a prominent problem affecting the healthy growth of college students [1]. Academic emotion crisis not only affects academic development and growth quality, but also easily induces secondary risks such as depression, interpersonal conflict and even extreme behaviors [2]. At present, the prevention and control of academic emotion crisis in colleges and universities is mainly post-event disposal and passive

response, lacking a forward-looking and systematic early warning and intervention system [3]. At the early warning level, most rely on a single emotion scale, failing to integrate social emotional ability, academic adaptation, interpersonal support and other dimensions, resulting in limited recognition accuracy; at the intervention level, scattered counseling is the main method, and standardized and replicable group intervention is insufficient, so it is difficult to fundamentally improve students' emotion regulation and stress coping ability [4].

Social and Emotional Learning (SEL for short) refers to the process in which individuals gradually learn and master the knowledge, attitudes and skills of recognizing and managing emotions, setting positive goals, empathizing with others, establishing good interpersonal relationships and rationally solving problems in five core dimensions: self-awareness, self-management, social awareness, interpersonal skills and responsible decision-making. It is an important learning content and educational paradigm to promote individual mental health, social adaptation and lifelong development [5]. Based on this, this study uses cluster sampling method to select college students from Y University, an application-oriented undergraduate college in Guangdong Province, as the survey objects. The questionnaire is compiled around five dimensions: core competencies of social and emotional learning (SEL), academic emotion state, academic adaptation level, interpersonal support system and crisis behavior performance, covering 21 specific observation indicators such as self-awareness, emotion regulation, self-management, social awareness, interpersonal communication, responsible decision-making, academic anxiety, academic burnout, learning engagement, campus adaptation and support sources, realizing multi-dimensional and three-dimensional evaluation of college students' academic emotion crisis. A total of 628 questionnaires were sent out, and 603 valid samples were recovered, with an effective recovery rate of 96.0%. All valid samples were sophomore students, majoring in education, psychology, management, engineering, art and other disciplines. According to the risk level, 31.2% were level 3 early warning (general risk), 12.8% level 2 early warning (moderate risk) and 5.3% level 1 early warning (severe risk), showing the realistic characteristics of wide coverage and urgent prevention and control needs.

The results show that the recognition accuracy of the SEL early warning model for academic emotion crisis reaches 89.7%, which is 22.4% higher than the traditional method. This accuracy is based on the comprehensive judgment results of the college mental health center. The consistency between the judgment results of the SEL early warning model and the professional evaluation results is compared, and the proportion of people with consistent judgments in the total sample is calculated, which fully reflects the model's accurate recognition ability of academic emotion crisis objects.

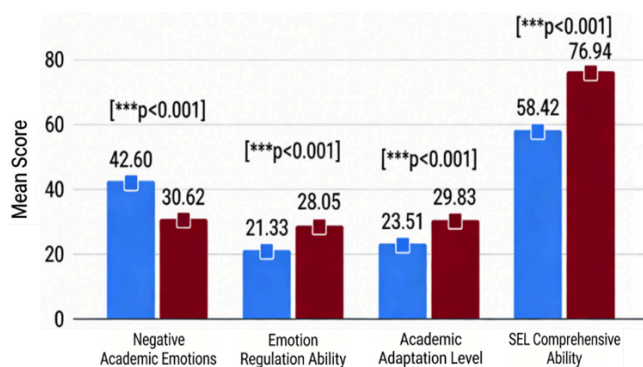


Figure 1. Comparison of scores of each index before and after intervention in the intervention group

The subjects were selected by cluster sampling. A pre-test questionnaire was conducted uniformly before the intervention. The evaluation contents included negative academic emotions, emotional regulation ability, academic adaptation level and comprehensive SEL ability. According to the evaluation results, the risk screening and early warning grade judgment of academic emotion crisis were completed, and the intervention group and the control group were divided accordingly. Y University has an applied psychology major and a psychological counseling center. This study links with the professional team, so that the control group does not receive any structured intervention, only participates in routine mental health education activities; the intervention group receives standardized SEL group intervention for 8 weeks, once a week, 90 minutes each time. The intervention process strictly follows the core framework of social and emotional learning and is implemented in stages and progressively: weeks 1-2 focus on self-awareness awakening, guiding students to perceive their own academic emotional state and stress sources; weeks 3-4 carry out training on emotion regulation and self-management, helping students master stress coping, emotion relaxation and rational thinking strategies; weeks 5-6 take social awareness and interpersonal communication as the theme to improve students' interpersonal communication, help-seeking and support acquisition ability; weeks 7-8 focus on responsible decision-making and academic adaptation, strengthening learning planning, problem-solving and academic resilience training.

As shown in Figure 1, after the intervention, negative academic emotions in the intervention group decreased significantly by 28.3%, and emotional regulation, academic adaptation and comprehensive SEL ability were greatly improved, with extremely significant differences ($***p<0.001$), indicating that SEL group intervention can effectively alleviate negative academic emotions and systematically improve social emotional and academic adaptation levels.

2. In-depth mechanism of early warning for college students' academic emotion crisis

College students' academic emotion crisis is not only caused by academic pressure, but also the result of the joint effect of insufficient individual social emotional ability and weak external prevention and control system.

Through pre-test and post-test, this study finds that at the individual level, the insufficient development of the five core competencies of Social and Emotional Learning (SEL) is the key internal inducement of academic emotion crisis. Some students lack clear awareness and rational cognition of their own emotional state, stress sources and internal needs, and fail to master effective strategies for emotion regulation, stress management and frustration coping; they lack empathy, communication skills and awareness of seeking support in interpersonal communication, so it is difficult to establish a stable and effective social support system; when facing academic challenges, development choices and practical dilemmas, they also lack the ability of careful analysis, rational judgment and responsible decision-making. The joint effect of the above ability shortcomings makes negative academic emotions easy to accumulate and solidify in the learning process, and finally evolve into crisis states such as academic anxiety, academic burnout and even weariness of learning. The empirical results of this study show that college students' negative academic emotions are significantly negatively correlated with their core SEL abilities. The lower the level of social emotional ability, the higher the risk of academic emotion crisis, which further confirms the core role of SEL ability defect in the occurrence and development of academic emotion crisis.

At the level of internal operation mechanism, the current academic emotion crisis prevention and control system in colleges and universities still has structural shortcomings. The traditional early warning mode mostly relies on single and static emotional evaluation indicators, failing to realize the dynamic tracking of students' social emotional ability, academic adaptation state, daily behavior

performance and environmental support system. The monitoring link is lagging and the identification dimension is thin, so it is difficult to truly realize risk prediction and forward movement, and cannot block the accumulation and deterioration of negative academic emotions from the source. At the level of intervention implementation, the existing work is still dominated by passive disposal and scattered case counseling after problems occur, lacking forward-looking and developmental intervention design based on students' development needs. A structured group intervention paradigm with hierarchical classification, standardization, replicability and popularization has not yet been formed, which is difficult to meet the growth support needs of large-scale students. At the same time, the multi-party collaborative linkage mechanism between schools, departments, families and students is not perfect, and professional forces, management forces and support forces fail to form an effective joint force, resulting in the lack of continuity, stability and systematicness of emotional support for students. The joint effect of the above multiple factors makes it difficult for academic emotion crisis prevention and control to realize the transformation from "emergency disposal" to "long-term cultivation". The intervention effect is often short-lived and easy to rebound, and cannot fundamentally improve students' psychological resilience and social emotional literacy [6].

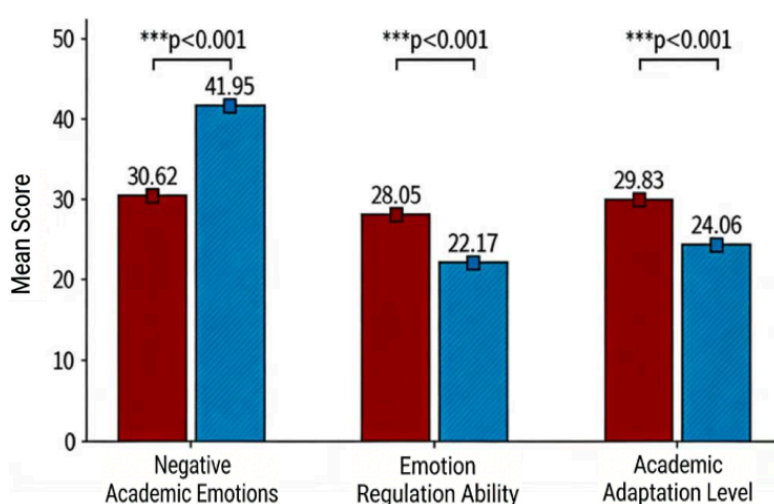


Figure 2. Comparison of scores of each index between the intervention group and the control group after intervention

As shown in Figure 2, after the intervention, the score comparison of core indicators between the intervention group and the control group forms a clustered bar chart. There was no significant difference in the baseline level of each index between the two groups before the intervention, showing good homogeneity between groups. The intervention group received 8-week SEL structured group intervention, while the control group only participated in the routine mental health education activities of the school.

The results show that the score of negative academic emotions in the intervention group is 30.62, significantly lower than 41.95 in the control group. This shows that compared with students who do not receive systematic intervention, students who receive SEL group counseling have more obvious relief in negative emotions such as academic anxiety, academic burnout and weariness of learning, and their learning mood is more stable and positive. In terms of emotional regulation ability, the score of the intervention group is 28.05, much higher than 22.17 of the control group, indicating that the intervention effectively improves students' ability to perceive, express and regulate emotions,

enabling them to have more mature coping strategies and stronger psychological resilience when facing academic pressure. In terms of academic adaptation level, the intervention group (29.83) is also significantly higher than the control group (24.06), reflecting that the intervention has produced real and observable positive effects in improving learning habits, enhancing learning engagement, and improving campus and curriculum adaptation.

The differences in all indicators between the two groups reach an extremely significant level ($***p<0.001$), which fully proves that the improvement of college students' academic emotions is not caused by natural maturity or time effect, but a real, stable and replicable practical effect brought by SEL group intervention. It provides solid data support and practical basis for colleges and universities to carry out accurate and systematic academic emotion crisis intervention.

3. Group intervention strategies for college students' academic emotion crisis from the perspective of Social And Emotional Learning

Based on SEL theory and empirical results, an integrated prevention and control system with early warning, precise intervention and long-term guarantee should be built to promote the transformation of mental health education to source governance and systematic empowerment.

3.1 Build an SEL-oriented three-level early warning system for accurate identification and support

Supported by the five core abilities of SEL, this study integrates multi-dimensional key indicators such as students' emotional state, social emotional development, academic behavior performance and external support environment, and constructs a warm, full-coverage and implementable early identification system for academic emotion crisis. According to the risk level, hierarchical and classified accurate identification and support are implemented: For general risk students, carry out inclusive mental health education to build a solid bottom line of emotional protection in daily life; For moderate risk students, provide targeted group counseling to relieve pressure and strengthen adaptability in time; For severe risk students, start the comprehensive support mechanism of "group empowerment + case company + home-school collaboration" to keep the bottom line of safety with systematic care. Social emotional ability is included in psychological census regularly, and the four-level linkage early warning network of school-college-class-dormitory is continuously improved to truly achieve early identification, early care, early support and early growth [7].

3.2 Implement 8-week structured SEL group intervention to improve intervention effectiveness

Carry out group counseling in stages around SEL abilities: Weeks 1-2: Focus on self-awareness awakening; Weeks 3-4: Strengthen emotion regulation and self-management; Weeks 5-6: Improve interpersonal communication and social awareness; Weeks 7-8: Train rational decision-making and academic adaptation. The results show that this model can significantly reduce negative academic emotions, improve emotional regulation and adaptation, and remain stable in the follow-up period.

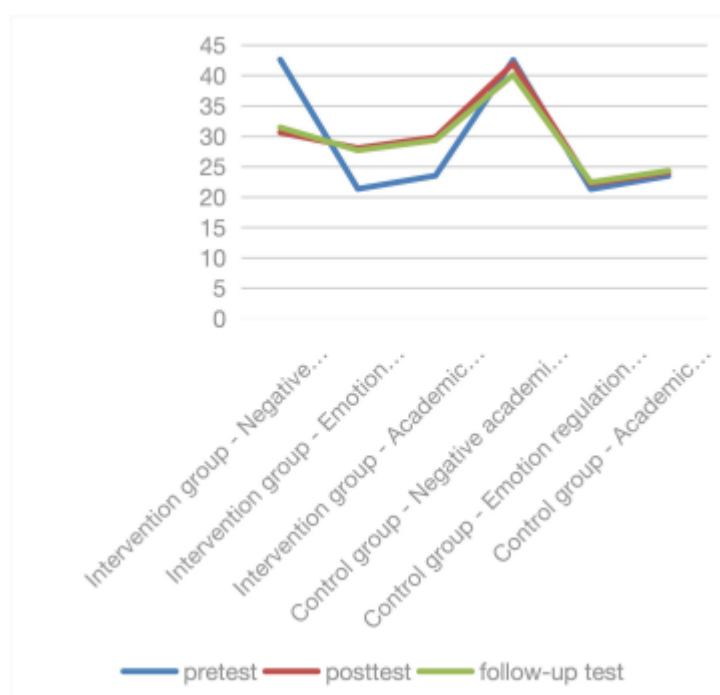


Figure 3. Change trend of academic emotion and adaptation level of the two groups in each stage

As shown in Figure 3, the change trend of academic emotion and adaptation level of the intervention group and the control group at three time points (pre-test, post-test and follow-up test) is presented as a line chart. There is no significant difference in the baseline level between the two groups before intervention, which ensures the balance and comparability of the research starting point. The intervention group received 8-week SEL structured group intervention, while the control group only received routine school mental health education without special group counseling. From the change trend, all indicators of the intervention group are at a relatively low level in the pre-test stage, which is basically consistent with the control group; at the post-test node, all indicators of the intervention group show a sharp rise and significant improvement, negative academic emotions decrease significantly, and emotional regulation and academic adaptation level increase greatly, indicating that SEL group intervention has an immediate and significant positive effect. In the follow-up test stage, all indicators of the intervention group do not drop significantly and still maintain a good level in the post-test, reflecting the sustainability and stability of the intervention effect. In contrast, the control group shows no obvious improvement trend at the three time points, and the overall level is relatively stable.

The data of the three time nodes and the comparison results between groups reach an extremely significant level ($***p<0.001$), which fully shows that the SEL group intervention model constructed in this study can not only effectively improve college students' academic emotion state, social emotional ability and academic adaptation level in the short term, but also have long-term, stable and sustainable educational effects. It truly realizes the transformation from "short-term emotional counseling" to "long-term ability empowerment", and provides a replicable and popular practical paradigm for the long-term prevention and control of academic emotion crisis in colleges and universities.

3.3 Improve the collaborative long-term mechanism to promote the normalization of prevention and control

Organically integrate the core content of SEL into mental health and academic guidance courses, so that emotional support and growth empowerment can penetrate into every detail of daily teaching, and truly achieve full-coverage and silent educational effects. Focus on the professional growth of counselors and psychological teachers, carry out localized SEL special training, and build an on-campus support team that understands students, has feelings and is good at empowerment. Condense the four forces of school, family, department and students, build a collaborative support network with mutual echo and warm connection, so that students can have someone to rely on when confused and have a way to follow when moving forward. Rely on big data and intelligent technology to build a dynamic early warning platform, replace cold labeled judgment with accurate data insight, promote the upgrading of psychological prevention and control to digital and refined, and build a safe barrier paying equal attention to technology and humanities for the healthy growth of every student.

4. Conclusion

College students' academic emotion crisis is significantly related to social emotional ability. The early warning and group intervention model built with SEL as the core can effectively improve identification accuracy and intervention effectiveness, significantly reduce negative academic emotions, and enhance emotional regulation and academic adaptation level. The integrated mode of "early warning-screening-intervention-tracking" formed in this study breaks through the limitations of traditional post-event intervention, provides an operable and replicable practical path for the pre-prevention and control of academic emotion crisis in colleges and universities, and also provides empirical support for the localized application of SEL theory in college mental health education.

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