



**INVESTIGATE PERSONALITY TRAITS AND SENSE OF HOPE
IN STRESS COPING STRATEGIES**



CAI QIN

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION AND SOCIETY
INSTITUTE OF SCIENCE INNOVATION AND CULTURE
RAJAMANGALA UNIVERSITY OF TECHNOLOGY KRUNGTHEP
ACADEMIC YEAR 2024
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ABSTRACT

This study aimed to investigate the influence of personality traits and a sense of hope on stress-coping strategies among college students and explore the role of demographic variables in this relationship. The present study measured personality characteristics, hope feelings, and stress coping strategies using a scale and collected relevant demographic information. The data were analyzed using correlation and regression analyses to verify the study hypotheses. This study is expected to find a significant positive relationship between personality traits and a sense of hope and the stress-coping strategies adopted. At the same time, demographic variables may mediate this relationship. The results of this study can provide insight into their psychological characteristics and help them cope with stress. It can also provide theoretical support and practical guidance for their mental health education and psychological interventions.

Keywords: Personality Traits, Sense of Hope, and Stress Coping Strategie

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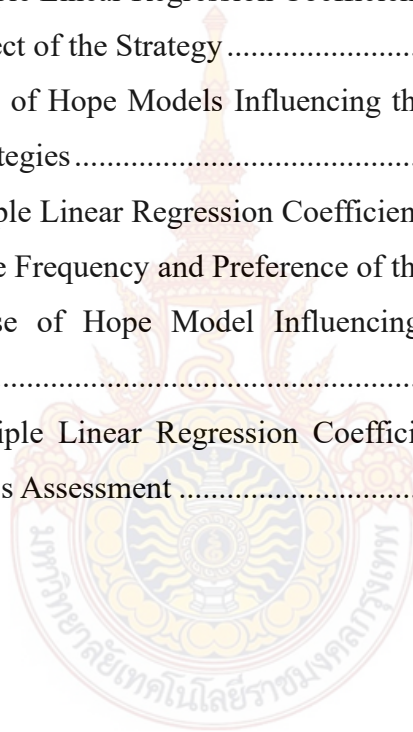
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CHAPTER I

INTRODUCTION

1.1 Background and the Rationale

With the continuous development of society and the rapid growth of the economy, the scale of college students is also expanding, and the pressure is also increasing. College students face pressure from studying, life, interpersonal relationships, and other aspects during their growth as a special group. Research shows that college students have widespread psychological stress problems, including study stress, employment stress, and interpersonal stress, which may hurt their physical and mental health. Therefore, coping effectively with pressure has become an essential challenge for college students.

Despite the increasing pressure on college students, there are diversity and individual differences in their stress-coping strategies. Some college students may adopt positive and effective coping strategies, such as seeking social support, positive thinking, and psychological adjustment. In contrast, some college students may adopt damaging and ineffective coping strategies, such as evasion, denial, and indulging in bad habits. These coping styles may affect their personal development and mental well-being. Therefore, it is necessary to deeply explore their coping strategies for stress and their influencing factors to provide a scientific basis and practical guidance for their mental health.

Specific Types of Stress: College students encounter various types of stress during their academic journey. These include academic stress related to the demands of studies, including completing assignments, preparing for exams, maintaining grades, and meeting academic expectations. **Interpersonal Stress:** This type arises from relationships with peers, roommates, family members, and instructors. Challenges in communication, conflicts, and social integration are familiar sources. **Financial Stress:** Many college students face the burden of tuition fees, living expenses, and potential student loans, which can cause significant financial strain. **Time Management Stress:** Balancing academic responsibilities, extracurricular activities, part-time jobs, and personal life can lead to stress related to managing time effectively. **Future/Employment**

Stress: Concerns about job prospects, internships, career planning, and future financial stability often weigh heavily on students' minds. Health-Related Stress: The pressure to maintain physical health, manage illnesses, or deal with mental health issues can also contribute to overall stress levels.

Previous studies have focused on stressors and mental health issues in college students, with relatively few studies on stress coping strategies and their influencing factors (Smith & Johnson, 2015; Williams et al., 2018). Existing research has focused on individual psychological quality, social support, and coping strategies (Jones, 2016; Brown & Thompson, 2019). However, few studies have examined the influence of undergraduate personality traits and the sense of hope on stress-coping strategies (Taylor, 2017). Therefore, it is necessary to explore the mechanisms of personality traits profoundly and hope to establish their stress coping strategies to fill the gaps in relevant research (Lee & Chen, 2020).

Studies before the 20th century mainly focused on stressors and mental health problems among college students, with relatively few studies on stress coping strategies and their influencing factors. Studies after the 20th century have focused on individual psychological quality, social support, and coping strategies. However, the influence of personality traits and a sense of hope on stress-coping strategies is still insufficient. Therefore, it is necessary to deeply explore the mechanisms of personality traits and a sense of hope in stress-coping strategies to fill gaps in relevant research areas.

This study aims to fill this research gap by comprehensively analyzing the relationship between personality traits, hopes, and stress-coping strategies and providing more comprehensive and in-depth guidance for mental health education and counseling. At the same time, this study's results can also help promote theoretical research and practical application in related fields and provide strong support for improving the mental health level of college students.

The development of this study has important theoretical and practical implications. First, studying the influence of personality traits and hope on stress-coping strategies can further expand the scope of stress and coping (Taylor, 2017; Lee & Chen, 2020). Secondly, it provides a scientific basis and practical guidance for college students' mental health education and psychological intervention and promotes

their physical and mental health development (Johnson & Johnson, 2015; Williams et al., 2018). Finally, further exploration of the psychological characteristics and stress-coping strategies of college students can also help to improve the social attention to their mental health problems and promote the joint participation and support of all sectors of society (Brown & Thompson, 2019; Jones, 2016).

1.2 Research Questions

In contemporary society, college students face increasing pressures, such as academic pressure, interpersonal relationship pressure, and other social stressors. Effectively dealing with these stresses has become a significant concern. This study aims to investigate the influence of personality traits and hope on the stress-coping strategies of college students. Additionally, it seeks to explore the role of demographic variables in these relationships, as demographic variables should mention the kind of stress experienced by the students. This will provide theoretical support and practical guidance for the mental health of college students.

Research Question 1 (RQ1): Is there a significant correlation between demographic variables (e.g., gender, grade, school, performance) and specific stress-coping strategies?

Research Question 2 (RQ2): How do the personality characteristics of college students influence their choice of stress-coping strategies? What personality traits are associated with different trends in stress-coping strategies?

Research Question 3 (RQ3): Does the sense of hope significantly impact their stress-coping strategies? Under what circumstances do perceived expectations have a more significant impact on specific stress-coping strategies?

1.3 Research Hypothesis

The development of the research hypothesis is a key aspect of this study. It provides a structured framework for systematically testing the relationships between variables. These hypotheses aim to clarify clear expectations about the impact of undergraduate personality traits and feelings of hope on stress-coping strategies.

College students face challenges and pressures today, which may come

from their studies, interpersonal relationships, future employment, and other aspects. Coping with these stresses is crucial to college students' physical and mental health. Therefore, it is essential to study the stress-coping strategies of college students and the factors influencing their choice of these strategies. This study investigated the influence of demographic variables, personality traits, and a sense of hope on their stress-coping strategies.

Li (2020) believes that college students' individual characteristics and environmental backgrounds are essential in choosing stress-coping strategies. He noted that demographic variables, such as gender, grade, and university, may impact stress-coping strategies for college students. For example, college students of different genders may prefer different coping styles; girls may be more inclined to seek social support, while boys may be more inclined to self-regulation. The study by Wang (2018) shows that the personality characteristics of college students are closely related to their stress-coping strategies. She found that college students with positive, open, extroverted, and other positive personality traits tended to adopt positive coping strategies, such as positive thinking and problem-solving, and those with negative, closed, neurotic personality traits were more inclined to adopt negative strategies, such as avoidance and negation. The study by Zhang (2019) points out that the sense of hope, as a positive emotional experience, is significant to individuals' psychological adaptation and coping with stress. He believes that the degree of a sense of hope is closely related to the coping strategies adopted by individuals and that college students with a higher sense of hope are more inclined to adopt positive coping strategies because they believe that a better future will bring positive results.

$$Y = \alpha + \beta_1 X + \varepsilon$$

Y is the stress coping strategy, and X is the demographic variable of college students, which is the error term of the pattern. ε

$$H10: \mu_i = \mu_j$$

Null hypothesis: There is no difference in stress-coping strategies among college students in different demographic groups.

$$H1a: \mu_i \neq \mu_j$$

Alternative hypothesis: The stress-coping strategies of college students differ significantly between different demographic groups.

In conclusion, demographic variables may influence the stress-coping strategies of college students. Based on this speculation, we propose the following hypothesis:

H1: Demographic variables were significantly associated with stress-coping strategies.

College students face various challenges and pressures in today's society, which may come from academic study, interpersonal relationships, future employment, and other aspects. Coping with these stresses is crucial to college students' physical and mental health. Therefore, it is essential to study the stress-coping strategies of college students and the factors influencing the choice of these strategies.

Zhang (2017) pointed out that the personality characteristics of college students play an essential role in coping with stress. He found that college students with positive, optimistic, and cheerful personality traits tended to adopt positive coping strategies, such as seeking ways to solve problems and actively adjusting their mentality. In contrast, college students with negative emotions and depression tendencies were more likely to adopt negative coping strategies, such as avoidance and indulging in negative emotions. Research by Wang (2019) shows that their personality traits are closely linked to the way they cope with stress. She found that extroverted and stable college students are more inclined to face stress and adopt positive problem-solving strategies actively.

In contrast, introverted and nervous college students are more inclined to adopt negative coping strategies, such as withdrawal and avoidance. The research results of Li (2020) show that the personality characteristics of college students have a significant impact on their coping effects with stress. He pointed out that college students with self-control, self-discipline, and optimistic personalities can cope with stress more effectively and avoid adverse emotional effects on life and study.

$Y = \alpha + \beta_1 X_1 + \varepsilon$ is a strategy for stress. ε is the personal characteristic of the pattern of error terms.

H10: $\mu_i = \mu_j$

Null hypothesis: There are no differences in coping with stress strategies.

H1a: $\mu_i \neq \mu_j$

Alternative hypothesis: College students behave significantly differently in

coping with stress.

Based on the above scholars, we speculate that the personality traits of college students may impact their stress-coping strategies. Based on this speculation, we propose the following hypothesis:

H2: The personality characteristics of college students have a significant positive impact on stress-coping strategies.

In today's society, college students face various challenges and pressures, which may come from their studies, interpersonal relationships, future employment, and other aspects. Coping with these stresses is crucial to college students' physical and mental health.

Zhang (2017) pointed out that the sense of hope, as a positive emotional experience, is significant to individual psychological adjustment and coping with stress. He believes that college students with a higher sense of hope are more able to face difficulties and challenges, actively deal with pressure, and adopt effective strategies to solve problems. In contrast, college students without hope are more likely to feel frustrated and helpless. The study by Li (2020) shows that the sense of hope of college students is closely related to their ability to cope with stress. He found that college students with a higher sense of hope were more inclined to adopt positive coping strategies, such as positive thinking and problem-solving.

In contrast, college students without a sense of hope were more inclined to adopt negative coping strategies, such as avoidance and negative thinking. The results of Wang (2019) show that a sense of hope has an essential impact on college students' mental health and coping with stress. She believes that raising their sense of hope can help improve their ability to cope with stress and thus enhance their mental health.

$$Y = \alpha + \beta_1 X_2 + \varepsilon$$

Y is a strategy for stress. ε It is the feeling of hope for the error terms of the patterns.

$$H10: \mu_i = \mu_j$$

Null hypothesis: There is no difference in stress coping strategies between different hope experiences among college students.

$$H1a: \mu_i \neq \mu_j$$

Alternative hypothesis: Stress coping strategies differ significantly across

desire experiences among college students.

Based on the views of these scholars, we speculate that the sense of hope may positively affect the stress-coping strategies of college students. Based on this speculation, we propose the following hypothesis:

H3: The sense of hope has a significant positive impact on stress-coping strategies.

1.4 Research Objectives

(1) This study investigated whether there was a significant correlation between demographic variables (e.g., gender, grade, school, academic performance) and stress-coping strategies among college students. Through in-depth analysis of the relationship between these variables and stress coping styles, we can better understand college students' behavior patterns and differences when facing stress and thus provide targeted advice to relevant educational institutions to help them cope more effectively.

(2) This study aimed to explore how college students' personality traits influence their choice of coping strategies and to identify personality traits associated with the tendency to use specific coping strategies. By understanding the interaction between personality traits and dealing with stress, we can provide more personalized guidance for college students and help them choose appropriate coping methods according to their characteristics to improve their ability to cope with stress.

(3) The purpose of this study was to test whether the sense of hope had a significant positive impact on the stress-coping strategies of college students and to explore further in which circumstances the effect of hope feeling on stress-coping strategy was more important.

By revealing the role of hope in stress coping and its influencing factors, we can provide psychological support for college students and help them develop a positive sense of hope to cope with stress and challenges in life more effectively. By achieving the above research objectives, we will deeply understand the situation of college students when facing stress and provide a scientific basis and practical guidance for promoting their mental health and personal development.

1.5 Scope and Limitations of the Study

1.5.1 Content

This study was conducted in a public undergraduate university in Henan Province to explore the influence of personality traits and a sense of hope on stress-coping strategies. The independent variables in this study included demographic variables (gender, grade, university, performance), the independent variable was personality characteristics and hopes of college students, and the dependent variable, stress coping strategies.

1.5.2 Research Areas

This study was conducted at a public undergraduate university in Hobe Province, focusing on stress strategies for college students.

1.5.3 Population and Sample Size

The research population comprises undergraduates from a public university in Henan Province. The scope of the research is limited to this university. Currently, the university has 3,000 full-time undergraduates (data source: Overview of a university in Henan Province). The sample size was determined through random sampling and included students from different grades, ages, and genders. A total of 600 samples were drawn to represent the college.

1.5.4 Sampling Method

This study used a stratified random sampling method. The total sample number was 3,000 full-time undergraduates from a university in Henan Province, and the stratified sampling ratio was 20%.

1.5.5 Duration

The study began in March 2024 and continued until June 2024. This time frame was used for data collection, analysis, and comprehensive study findings, ensuring a thorough investigation.

1.6 Research Framework

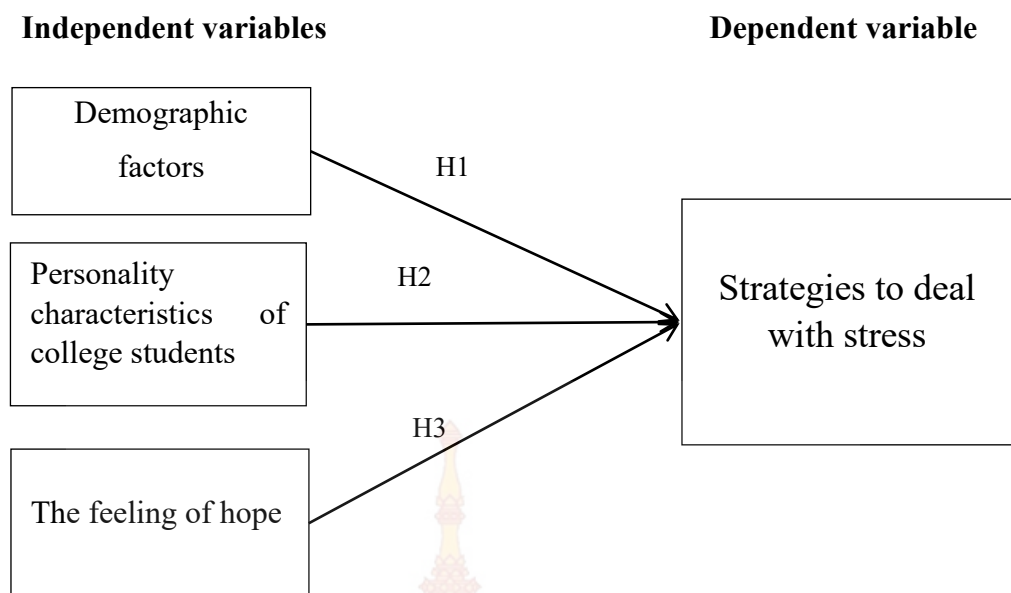


Figure 1.1 Study Framework

1.7 Definition of the Key Terms

1.7.1 Population Factors

Usually, it refers to the various variables and statistics associated with the population. These factors are essential in multiple fields, particularly sociology, economics, marketing, and public health. In this study, demographic factors could include gender, age, family structure, level of education, occupation distribution, income level, and geographical distribution. For example, in terms of marketing, understanding the demographic factors of the target market can help companies more accurately locate their products and services and develop more effective marketing strategies. In public health, studying demographic factors can help predict disease epidemic trends and develop prevention and control measures.

Demographic variables refer to the basic information used in studies to describe and analyze demographic characteristics and usually include data on gender, grade, university, and performance (Fricker & Schonlau, 2002). In this study, demographic variables were used to describe the essential characteristics of college students, including gender (male and female), grade (freshman, sophomore, junior, senior, senior year), college (art, engineering, medical school), and achievement

performance (academic achievement, social activities) (Heerwegh, 2009). Analysis of these demographic variables will help understand the differences and characteristics of stress-coping strategies between different populations.

1.7.2 Personal Characteristics

Personality traits refer to a person's long-term, relatively stable traits that are not easy to change. These characteristics constitute a person's unique temperament and personality that distinguishes them from others. Personality traits maintain consistent behavior patterns at different times and circumstances as a fundamental component of personality composition (Costa & McCrae, 1992; John & Srivastava, 1999). They cover multiple aspects of behavioral patterns, emotional expression, thought patterns, attitudes, and values, affecting how individuals respond to stimuli.

In addition, personality traits include cognitive, behavioral, and emotional traits. Cognitive characteristics refer to a person's cognition, thinking, and judgment style, while emotional traits refer to a person's emotions (Goldberg, 1993; Digman, 1990). On the other hand, behavioral characteristics refer to individual behaviors and behavioral patterns (Mischel, 1973). Personality traits are influenced by innate genetic and physiological changes and acquired growth, development, and environmental factors. It is the basis of human nature and character achievement, formed through individual innate characteristics and acquired experience. Therefore, understanding a person's personality characteristics can help to more accurately grasp their personality characteristics and behavior patterns and, thus, better understand and predict their responses and behaviors in different situations.

Personality characteristics are individuals' relatively stable behavioral tendencies and psychological characteristics, which usually reflect individuals' behavioral patterns and psychological responses in different situations (Soto & John, 2017). Personality traits include extraversion, neuroticism, openness, affinity, and conscientiousness. This study used personality traits to describe the psychological characteristics of college students and explore their coping strategies for stress. By analyzing the personality traits of college students, we can understand the tendencies and preferences of different individuals in coping with stress.

1.7.3 Feeling of Hope

A sense of hope refers to people's positive expectations and desire for the

future. It is based on reasonable expectations of mutual relationships. It reflects an individual sense of ability, psychological and spiritual satisfaction, and a sense of purpose and meaning in life. This is not only a goal or desire but also a strategy to achieve it and a strong motivation to implement it. People with a sense of hope often have clear goals and believe they can find ways to reach them, but they also have a strong incentive to take action (Snyder, 2002).

The core of a sense of hope is the "agent". In this agent, individuals feel that the future will be better and that they are essential in achieving a better future (Snyder et al., 1991). It can help people to progress, improve, and have a positive relationship with positive life gains. People with a strong sense of hope often have a higher IQ, more divergent thinking, more responsibility, higher self-esteem, enthusiasm for goals, and a higher tolerance for suffering. Generally speaking, a sense of hope is a positive attitude that encourages people to be optimistic in facing difficulties and strive to achieve their goals and aspirations.

A sense of hope refers to an individual's expectations and beliefs about positive future outcomes, i.e., a positive emotional experience and psychological state (Youssef & Luthans, 2007). People with a high sense of hope tend to actively face challenges and difficulties and remain optimistic about themselves and the future. This study used a sense of hope to describe the confidence and expectations of college students in the future and to explore their influence on stress-coping strategies (Snyder & Lopez, 2009). By analyzing the sense of hope of college students, we can understand the psychological state and emotional experience of individuals in the face of stress.

1.7.4 Pressure Response Strategies

Stress coping strategies refer to specific psychological and behavioral efforts an individual takes to control, endure, and mitigate the effects of stressful stimuli. These strategies help individuals cope effectively with stress, reduce anxiety, and promote personal adaptation and recovery (Foxman & Lazarus, 1984). Stress coping strategies can include multiple ways, such as active coping, support seeking, cognitive adjustment, and relaxation training (Lazarus & Folkman, 1984). Depending on different personal characteristics, environmental resources, and subjective interpretations of stressful events, individuals may adopt various strategies when dealing with other stressors. By adopting effective stress coping strategies, individuals can better manage

stress, maintain mental health, and promote individual growth and development.

Stress coping strategies refer to an individual's behavioral and psychological adjustment in the face of stress and challenges (Folkman & Moskowitz, 2004). Everyday stress coping strategies include problem-solving, active coping, seeking social support, avoidance, and denial. This study used stress-coping strategies to describe how college students cope with various stresses (Sherwood, 2003). By analyzing stress coping strategies, we can understand their coping tendencies and strategy choices when facing challenges.



CHAPTER II

LITERATURE REVIEW

In exploring individual responses to stressful events, we first focused on the Big Five personality theory, revealing how personality traits such as openness, conscientiousness, extraversion, agreeableness, and neuroticism influence an individual's stress-coping strategies. Subsequently, we introduce the "Hope Theory", highlighting the key role of goal setting, path thinking, and dynamic thinking in shaping individuals to respond to stress actively. Finally, we analyzed the stress and stress pair models to help us understand the interrelationships between stressors, coping strategies, and outcomes and guide us to develop effective interventions. By entering the field, we consulted for related studies on personality traits, stress, and feelings of hope. Personality trait studies reveal the role of different characteristics in influencing individuals' coping with stress, providing us with essential clues for predicting individual stress responses. Stress studies detail the type of stressors, the stress response mechanism, and how to assess individual stress levels. Finally, the study of hope highlights the positive role of fostering a sense of hope in enhancing individual resilience and coping with stress. These studies provide a rich theoretical and practical basis for understanding individual stress-coping strategies.

2.1 Related Theories

2.1.1 The Big Five Personality Theory

The personality theory (five personality theory) is a vital theory widely used in psychology, also known as the theory of five personality characteristics. This theory was developed by two psychologists, Costa and McRae, in the early 1980s, based on their analysis of many personality traits and finding that they can be summarized into five fundamental dimensions. These dimensions include extraversion, neuroticism, openness, affinity, and conscientiousness. Their theory suggests that these dimensions are universal and stable in describing individual behavior and emotional responses. The theory is based on many psychological empirical psychology studies, such as

state (Ashton & Lee, 2018). By analyzing the different personality traits of college students, we can have a deeper understanding of their coping tendencies and strategy choices in the face of stress. For example, college students with high conscientiousness and extraversion tend to adopt positive problem-solving coping strategies.

In contrast, college students with high neuroticism and low affinity tend to adopt negative coping strategies. Finally, the five-factor personality theory also provides a theoretical basis for studying the influence of college students' hope on stress-coping strategy. As a positive emotional experience, a sense of hope is closely related to personality traits (Khamitov et al., 2019; Rodriguez & Borges, 2020).

2.1.2 Hope Theory

Hope theory, also known as hope theory, was developed by psychologist C.R. Snyder and proposed as a psychological framework for explaining human motivation and behavior (Snyder, 1994; Der et al., 2002). Central to this theory is how individuals pursue their goals through a positive mindset and behavior, depending on their belief in their ability to achieve them. The following sections will explore the initiator of the hope theory, its timeline, core concepts, and its guiding significance in exploring the relationship between personality traits and feelings of hope and stress coping strategies.

Hope theory mainly consists of two essential components: goal orientation and path thinking. Goal orientation involves individual aspirations and pursuing future beneficial outcomes, which consists of setting different goals and working to achieve these goals. On the other hand, pathway thinking involves individuals designing and executing strategies and plans to achieve their goals. Snyder defines hope as "a positive mindset that includes the belief that one can influence the future and find ways to achieve the desired goals" (Snyder, 1994).

According to the hope theory, the personal sense of hope can be measured by the following three elements:

Goal setting (goal) refers to an individual's specific, challenging, and quantifiable goal. People who want to be ambitious tend to set more ambitious goals and believe they can achieve them (Snyder, 2002).

Path thinking (path) refers to the strategies and plans formulated and implemented by individuals to achieve their goals. People with high hopes tend to

develop different action plans and find multiple ways to achieve their goals (Snyder et al., 2002).

Persistence (agency) refers to individual perseverance, willingness, and ability to overcome difficulties. People with high hopes can maintain a positive attitude and consistently face setbacks and difficulties (Snyder, 2002).

Hope theory is essential for studying the influence of personality traits and a sense of hope on stress-coping strategies. First, hope theory emphasizes individual expectations and the pursuit of positive future outcomes, which is closely related to personal goal setting and path thinking. In research, college students' level of hope can be assessed by measuring goal setting, path thinking, and persistence and then exploring their relationship with personality traits (Snyder et al., 1991).

Second, the hope theory provides a psychological mechanism to explain how individuals address challenges and difficulties. College students with a higher sense of hope can face stress more actively and adopt effective coping strategies (Ruthers & Yusuf, 2004). Therefore, researchers can predict college students' coping ability and effectiveness by examining their hope level.

Finally, hope theory emphasizes individuals' mobility and initiative, which impacts their positive attitudes and behavioral responses to challenges (Snyder et al., 1996). Therefore, researchers can learn from the perspective of hope theory and explore how college students deal with pressure through positive attitude and behavior, put forward corresponding intervention measures and suggestions, and improve their mental health and coping ability (Ledikwe et al., 2019; Setiawan & Sayuti, 2017).

2.1.3 Pressure and Coping Mode

The stress-adaptation model is a theoretical framework widely used in psychology to explain individuals' psychological and behavioral responses to stress. The model focuses on how individuals perceive and assess stress and coping strategies to deal with stress. The following introduces the proposer, the time, the key points, and the guidance of the research stress coping strategies. Richard Razbow and Susan Fox first presented the stress adaptation model in 1984 in their book *Stress, Stress, and Adaptation (Stress, Evaluation, and Coping)*.

According to the stress-adaptation model, individuals experience two main cognitive processes in the face of stress: assessment and coping. The evaluation phase

includes subjective cognition and evaluation of stressful events, including assessing the significance, controllability, and predictability. In contrast, the coping phase consists of the coping strategies and behaviors adopted by individuals to cope with the adverse effects of stress. During the evaluation phase, individuals assess two types of stress events: primary and secondary assessments (Lazarus & Folkman, 1984). Context assessment refers to an individual's cognition and understanding of a stressful event, determining whether the event is perceived as a threat, challenge, or irrelevant while coping resource assessment refers to an individual assessing whether he has sufficient resources and ability to cope with a stressful event (Sherwood, 2003). According to their assessment results, individuals choose different coping strategies to cope with stress during the coping phase. Coping strategies can be divided into coping categories in the problem set and coping categories in the emotional set (Folkman, S., & Moskowitz, 2004). Problem-oriented coping strategies focus on problem-solving and seeking solutions, whereas emotion-oriented coping strategies focus on regulating emotions and coping with negative emotions (Carver & Connor-Smith, 2010).

The stress-adaptation model provides an essential theoretical framework and guidance for studying the effects of personality traits and the sense of hope on stress-coping strategies (Lazarus, 1999). First, the model emphasizes the individual subjective evaluation and the choice of coping strategies in the face of stress. Researchers can use the model to explore the assessment process of college students in the face of stress, including how they identify and interpret stressful events and evaluate their coping resources and abilities (Luthar & Cicchetti, 2000). Second, the stress-adaptation model provides different coping strategies, including problem- and emotion-oriented categories. Researchers can explore the relationship between personality traits and the sense of hope by investigating the various coping strategies college students adopt (Edge et al., 2013). For example, college students with positive personality traits and high-hope feelings may be more inclined to adopt problem-oriented coping strategies. In contrast, college students with negative emotional traits and low-hope feelings may be more inclined to embrace the emotional orientation.

2.2 Related Studies

2.2.1 Studies Related to Personality Traits

1. Character

Personality (personality) comes from Latin personality and was initially used to represent the mask (mask) of ancient Greek actors to symbolize the social image played by individuals (Li & Chen, 2016). Personality, also known as personality, can be defined as derived from individual intrinsic consistent behavior patterns and internal processes (intellectual, 2012). namely, personality can distinguish individual differences between people who are "split (unique)" across time, and different life situations show "lasting" (lasting) consistency (Light Leaf, 2017). Personality is a psychological trait that leads individuals to form feelings, thinking, and behavior patterns. Personality theory has developed a variety of orientations, which can be divided into six orientations, including psychological analysis, trait orientation, biological orientation, a humanistic orientation, behavioral/social learning orientation, and cognitive orientation, with different orientation focus and interpretation perspectives, their theories and essential concepts are as follows:

The psychoanalysis orientation of individual mental activities is divided into three parts: consciousness, preconsciousness, and subconscious consciousness, according to the degree of perception. It sometimes operates with consciousness and sometimes with the subconscious level. At the same time, the personality structure consists of the id, hyper ego, and self, emphasizing that the interpretation of behavior results from the interaction between motivation and driver (Flويد, 1939). This orientation also attaches great importance to the development process of individuals, and it is believed that early childhood experiences will have a long-term impact on the development of personality (Erikson, 1968).

Trait orientation holds that personality traits are consistent patterns of individuals' behavior, feelings, and thinking, and individuals tend to act in this behavior pattern, called tendency. It emphasizes the effects of individual traits and related behaviors and uses personality to explain the regularity of individual psychological operations in different situations and time points (Allport, 1961).

Biological orientation links physiology and personality, believing that personality originates from individual differences on the physiological basis called

temperament. It explains the development and differences in personality through evolution, environment, and society (Eysenck, 1977). Biological orientation emphasizes the influence of genetic and physiological mechanisms on personality development.

Humanistic orientation thinking is the trend of personal growth, called self-realization. Its character structure, with the self as the core, is divided into actual I and ideal I orientation. It emphasizes personal subjective experience, free will, and the consistency of self and subjective experience. Individual responsibility and self-acceptance are the main factors of personality differences (Maslow, 1968).

In behavioral/social learning orientation, personality is the accumulation of individual learned behavior patterns rather than individual feelings and thoughts to explain their behavior, emphasizing the influence of determinism and the environment of personality development. In contrast, personality differences show differences in individuals' adaptation to different behaviors and social influences. Through the interaction between self and society, individuals gradually form and develop their personalities through learning (Bandura, 1977).

Cognitive orientation holds that personality is a concept or concept individuals use to explain and construct the world, called a construct. It emphasizes people's understanding or interpretation of the environment and events and uses its structure to predict the development of events (Kelly, 1955).

In general, the six personality theories, including psychoanalysis, characteristics, biology, human nature, behavior, and cognition, all have unique characteristics that reveal the complexity and diversity of personality from different perspectives (Costa & McCrae, 1992; Pervin & John, 2001). Psychoanalytical orientation explores the effects of subconscious and childhood experiences on personality (Freud, 1923); Trait orientation understands and predicts behavior by identifying and categorizing different personality traits (Allport, 1961); Biological orientation emphasizes the critical role of genetic and physiological mechanisms in personality formation (Eisench, 1977); Humanistic orientation focuses on individual self-realization and subjective experience (Maslow, 1968); Behavioral orientation emphasizes the influence of environmental shaping and learning on the development of personality (Bandura, 1977); The cognitive orientation focuses on the individual's

mental structure and information processing process (Kelly, 1955).

Although each direction has its unique interpretation framework, it also has limitations. For example, psychoanalysis may place a strong emphasis on intrinsic motivation while ignoring the influence of external factors (Carver, 1991); trait orientation can simplify the complexity and dynamics of personality (Mischel, 1973); and biological orientation may ignore the role of socio-cultural factors (Harris, 1995). Therefore, in practical application, we must choose the appropriate theoretical framework according to the specific research purpose and situation. We may need to integrate and synthesize different directions for a more comprehensive understanding (McCrae & Costa, 1997).

Future studies should further explore the interactions and associations between these orientations to more deeply reveal the nature and developmental mechanisms of personality. At the same time, with the progress of science and technology and the development of interdisciplinary research, we can expect to reveal the mystery of personality from a more diverse perspective and provide more practical guidance for individual self-development and mental health (Caspi & Moffitt, 2006).

2. Five-factor model

In the past few decades, studying college students' personality characteristics has attracted extensive attention. This review will focus on the latest findings on five-factor models regarding personality traits, creativity, self-control, social anxiety, compassion, stability and variability related to these traits, self-perception, and external behavioral performance.

First, the five-factor (Big Five) personality model is one of personality research's most widely accepted theories. The model includes five basic dimensions: openness, conscientiousness, extraversion, affinity, and emotional stability. Recent research suggests that the stability and variability of these personality traits vary among college students, which may be influenced by factors such as age, culture, and environment (Roberts et al., 2007).

Secondly, as an important personality trait, creativity plays a key role in their academic achievement, innovation ability, and career development. Recent studies have found that creativity is closely associated with personality traits such as openness and is influenced by internal motivation and the external environment (Carver &

Scheier, 1998).

Self-control is the ability to regulate one's emotions and behaviors. Studies have found that college students with higher levels of self-control responded more effectively to stress and had better academic performance and mental health (Norem & Cantor, 1986).

Social anxiety is one of the common psychological problems of college students, which is manifested as feeling nervous, anxious, and uneasy in social situations. The latest study explored the relationship between social anxiety and extraversion, self-esteem, and social support and the effects of different intervention approaches on social anxiety.

Finally, compassion is the level of attention and understanding of the feelings and needs of others. The study found that college students with higher compassion levels were likelier to participate in social welfare activities and show more positive social behaviors (Caprara & Steca, 2005).

In recent decades, research on the personality characteristics of college students has received increasing attention. These studies focus on personality characteristics under the five factors models of creativity, self-control, social anxiety, and compassion and influence these characteristics on the stability and variability of college students. The five-factor model revealed five core dimensions of personality traits, namely, differences in stability and variability among college students, and was influenced by multiple factors. Creativity, self-control, social anxiety, and compassion are essential in their academic, psychological, and social development. In the future, the factors and mechanisms contributing to personality traits should be further studied better to promote college students' personal growth and adaptability.

3. Personality trait measures

Zhang (2021) proposed a measure of personality traits based on observer reports, aiming to address the differences between individual subjective self-evaluation and others' evaluation. The method demonstrates reliability and validity through empirical studies of multiple samples and provides a new approach to personality trait measurement. Li (2020) studied the measurement method of personality traits based on psychometric theory and proposed a measurement model based on item response theory. Simulation experiments and empirical studies show that the proposed method can

effectively evaluate individual scores on different personality trait dimensions with high measurement accuracy and reliability. Wang (2022) explored the process of measuring personality characteristics based on big data analysis. He uses machine learning and data mining techniques to analyze individuals' words and deeds on social media platforms to get information about their personality traits. The results show that personality trait measures based on big data have high accuracy and predictive power.

Liu (2021) studied the measurement method of personality traits based on psychological experiments and proposed a measurement model based on reaction time. In a laboratory setting, through a cognitive task and individual emotional induction, combined with reaction time data. The results show that the proposed method can effectively capture individual personality traits. Zhang (2020) explored the measurement method of personality characteristics based on biological indicators in her study. He used physiology, neuroscience, and genetics to analyze the relationships between individual biological data and personality traits. The results show that some biological indicators can be used as effective measures of personality traits and provide a new perspective on personality research. Li (2021) proposed a personality trait measurement method based on virtual reality technology. By designing virtual situations and tasks, individual behaviors and responses in the virtual environment are observed to obtain individual personality trait information. The results show that VR techniques can effectively simulate real situations and provide a new method for measuring personality traits. Wang (2022) studied a measurement method of personality characteristics based on psychological assessment tools and proposed a measurement model based on computer tests. A multidimensional test item was designed to evaluate individual scores on different personality trait dimensions to obtain individual personality trait information. The measurement results show that the method has high measurement accuracy and reliability.

Zhang (2020) explored the measurement method of personality traits based on social network analysis. She uses individual communication and interaction data on social network platforms to analyze individuals' behavior patterns and relationships on social networks and obtain their personality trait information. The results show that social network analysis can effectively reveal individual personality traits. Wang (2021) studied personality trait measurement based on ecological methods and proposed a

measurement model based on environmental adaptability. Individual scores for different personality trait dimensions were assessed by observing other individuals' behavior and adaptive performance under various environmental conditions. The results show that ecological methods can more genuinely reflect individual personality characteristics. Li (2022) proposed measuring personality characteristics based on psychological experiments and statistical analysis. He designed a series of behavioral tasks and psychological tests, collected individual behavioral and self-report data, and used statistical models to measure and analyze their personality traits. Results show that the method can accurately assess individual scores on different personality trait dimensions.

2.2.2 Pressure-related Studies

1. Stress

Pressure is tension in the face of a changing external environment (Zhang, 1989), which may cause unpleasant or painful emotional feelings (Lin & Huang, 2008). Stress comes from the "war or escape" (fighting or flight) response proposed by artillery (1932), which refers to the original response of fighting or escape when facing pressure, that is, activating a series of reactions to help the individual adapt to the environment (Shiyuan & Lin, 2007). In earlier studies, response (response) was seen as a defensive mechanism and a subconscious process. Still, recent studies showed that responses to external or adverse events are often associated with individual conscious strategies or style (Hung, 2017). Lazarus and Folkman (1984) define the cause (coping) as an individual constantly assessing specific internal or external needs for personal resources beyond stress or burden through the process of adjusting cognitive or behavioral changes (RaoCelon, 2012) and an individual adapting to stressful events by adjusting cognitive or behavior after assessing stress.

According to the stress assessment-response theory of Lazarus and Forkman (1984), it is believed that stress is the dynamic process of individual assessment events. When faced with stressful events, individuals choose appropriate stress response strategies through cognitive assessment (cognitive evaluation) (Peng & Wu, 2020). The cognitive assessment consists of two courses: primary assessment (primary assessment) and secondary assessment (secondary assessment). First, when individuals face stressful events, they will assess the importance of stressful situations

and the degree of threat to themselves. This is the primary assessment and personal perception of stressful events (Zhu, 2001). Individuals will assess the event as a positive, neutral/unrelated, or negative/stressful event and further evaluate the threat posed to the event and the challenges created by the event. Secondary evaluation refers to an individual judging whether he has enough resources and capabilities (Xu, 2020). If the existing resources and capabilities exist to cope with stress events, the threat of stress to the individual will be relatively reduced.

On the other hand, due to the increasing stress, the whole process will affect the individual's emotional and behavioral responses. After assessing stressful events, individuals will adopt appropriate cognitive and action strategies. Lazarus and Folkman (1984) separate problem-focused (problem-focused coping) and emotional-focused (emotional-focused coping).

Problem focus response (problem focus response) Problem focus response should refer to individual stressors by changing the environment and trying to deal with the problem, such as establishing plans and actions to change engagement or seeking ways to address the stressor (RaoCelono, 2012), exploring strategies of managing external stressors (external aspects of managing stressors), seeking social support, accepting problem responsibility (accepting responsibility), and problem-solving plans (planning problem resolution).

Emotional concentration (emotional concentration coping) Emotional concentration refers to the individual managing or changing stress to relieve negative emotions, for example, talking about problems, using alcohol and drugs, or relaxing, meditation (Zhu, 2001), distance, self-control, avoidance (escape-avoidance) and forward reassessment (positive reassessment) (Franks & Roesch, 2006). However, both reaction strategies are not exclusive, and individuals may be used simultaneously during stress reactions, which may facilitate or hinder the reaction process (Franks & Roesch, 2006). Muyan-Y ı lik and Demir (2020), the effectiveness of the specific strategy depends on the particular person, events, environment, and stress, so the plan should be adjusted, such as if the stressful event is not willing to change or control, the emotional focus may be more appropriate, problem solving, because may lead to chronic stress and counterproductive, and produce more stress and anxiety.

2. Measurement Method of the Pressure During Response

The Problem Resolution Scale (Problem-Solving Scale, PSI) was developed by Heppner and Peterson in 1982 to assess individuals' ability to perceive their problems. There were 35 questions, including three factors: confidence in solving problems, avoidance style, and self-control, and *I scored 6 points*.

This scale (coping direction for problem experience, COPE) was developed by Carver, Schell, and Winterlaub in 1989 to assess individual stress responses. Based on Lazarus and Forkman's theories, less used reaction strategy factors were added. The scale has 60 questions divided into three factors: problem focus, emotional focus, and beneficial response, and a four-point scale.

The Brief Response Scale (Brief COPE) was prepared by Carver in 1997. Carver et al. found that participants' tolerance decreased after completing the response scale, possibly due to excessive questions and time-consuming (Hong, 2017), so the short response scale BriefCOPE was developed. The scale had 12 questions, including 14 response strategies with 2 questions each, and scored 5 points.

The measurement of stress-coping strategies is an important area of psychological research. Problem-focus responses and affective-focus responses are the two main coping strategies. Changing context, behavior, and thinking reflects a positive response attitude that focuses on managing or changing stress to reduce pain, possibly including avoidance behavior.

Regarding measurement methods, the Problem Resolution Scale (PSI) and the Experience Scale for Coping with Orientation Questions (COPE) are standard tools. The PSI evaluates individuals' ability to perceive their problems, while COPE, based on Lazarus and Forkman's theory, evaluates individual stress responses and adds more useful coping strategies.

However, traditional scales may cause subject fatigue due to excessive problems, affecting the accuracy of the results. Thus, a simplified coping strategies scale (Brief COPE) emerges, which contains fewer questions and allows for a comprehensive assessment of individual coping strategies. In conclusion, selecting appropriate stress coping strategy scales is key to accurately assessing individual coping styles. Future studies could further explore the impact of different coping strategies on personal mental health and optimize measurement tools to serve practical

applications better.

2.2.3 Studies of Hope

1. Feel hopeful

Hope is a complex and multi-directional life energy, providing people with optimistic expectations and confidence in the future and real life (Dufaurt & Mattochio, 1985). Snyder et al. (1991) proposed that hope is defined as the path and efficacy to achieve a successful goal, that is, the positive motivational state and cognitive process caused by the interaction between the path (path) and efficacy (agent). It refers to the ability to perceive itself, the solution to the goal, and the motivation to implement these methods (Chen & Ji, 2012). According to the above definition, the sense of hope can be divided into three concepts: goal, path, efficacy, and the accompanying emotions.

Goals (Goals) First of all, hope theory holds that individual behavior is goal-oriented (goal-oriented) and that individuals actively think and define goals and how to achieve the desired goals from the current state (Luo & Guo, 2011). Goals can be short-term or long-term, and Snyder can be divided into positive / method (positive / method) and negative/negative (adverse) objective outcomes (target results). Positive goal outcomes are beneficial, such as achieving the first goal, maintaining the current goal, and improving the already stated goal. Adverse target outcomes are present, such as preventing events or hindering and delaying the appearance of undesired outcomes (Snyder, 2002). The more transparent, more important, and more feasible the goals are, the higher the personal sense of hope is, and the more challenging the goals they set are than in the past. Previous studies have shown that goal thinking contributes to individual time planning and difficult decisions and further measures their progress (He et al., 2014; Tang, 2010).

Path thinking, also known as action (path power), refers to the individual pursuing a goal, targeting a reasonable route, method, and strategy through the ability to achieve the goal (He, 2014). In path thinking, individuals can find one or more effective pipelines to achieve goals; when the goal encounters obstacles or difficulties, one must find other methods to achieve the established goals. Therefore, path thinking can help individuals flexibly adjust different paths and strategies to achieve their goals in the face of difficulties (Snyder, 2002). Individuals from the current position (A) point according to the original path; when the target (point B) is found inappropriate or

difficult to achieve, they can choose the alternative path and reset the target (repositioning) rather than adhere to the original path. Snyder et al. (2002) noted that the process suggests the following steps: (1) stop pursuing the original goal, (2) abandon all matters related to this goal, and (3) redefine the new goal. It is best to reset the target, especially when its broad target hopes are high but the hope for a particular target or sub-target is low.

2. Factors of the stress response

Personal confidence in their abilities is at the heart of path thinking (Snyder et al., 2006). Snyder (2002) noted that future events are influenced by experience and current ideas and that individuals evaluate future events through expertise or imagination. At this point, the path thinking in the process of achieving the goal will appear, and this process is called reciprocal temporary thinking (retime thinking). In reaching the goal, the more correct and effective the path method individuals choose, the less unnecessary waste of cognitive resources, and the higher the sense of hope. In addition, the more diverse and flexible the path of thinking, the more resilience to crises and difficulties, and the more motivation and efficiency to achieve goals (Guo & Luo, 2013; Yingjuan & Wu, 2013; Jing, 2010).

(1) Efficiency thinking (proxy thinking) Efficiency thinking, also known as willpower thinking (willpower), refers to the ability of individuals to achieve goals for the chosen path and strategy. Snyder (2002) believes that efficient thinking is a belief in pursuing goals that can promote individual progress, just like continuous mental energy and self-commitment, which can be regarded as the motivation and motivation to pursue the goal. When a person sets a goal, decides, and promises to do something, performance thinking can guide them to achieve their primary and secondary goals and reduce their motivation to overcome frustration, setbacks, and disappointments (Jing, 2010; Snyder, 1994).

Effectiveness thinking is based on the past understanding of the goals and the motivation to achieve the goals constantly. It can be improved by recalling the successful experience of the past through the environment conducive to the realization of the goals and the development of positive goal-oriented forces (Jing, 2010). In addition, Tang (2010) pointed out that when individuals face difficulties, a sense of hope can help them gain the necessary motivation, find alternative methods, and change

their strategies. Efficiency, therefore, realizing the goal of an open and continuous role, can prompt individuals to choose the most appropriate plan and path; if individual goals can maintain a strong determination and motivation, hope in the process of achieving the goal, path thinking and efficiency thinking cannot, and through the relationship between the two complement each other, can promote individual continue to achieve goals. This relationship is not independent; in the process of the pursuit of goals, will influence each other; path thinking can improve the efficiency of thinking, thus producing more path thinking, for example, when the individual can think of a more effective execution strategy or method, will improve the target motivation and confidence, practical thinking, when the pursuit of target motivation, will promote individual development more feasible strategy, for mutual flow, interactive goal-oriented cognitive process, guide the parties to achieve the goal.

(2) Emotions (emotions) In the process of pursuing goals, emotions will be accompanied by the causal thinking of goal pursuit, which is a by-product of goal-oriented thinking and can be regarded as thinking and moving emotions (Qian, 2006). Jing (2010) points out that in addition to cognitive orientation and behavioral orientation, the sense of hope also has the following aspects: emotional, time, and contextual factors related to the external world. Korner (1970) believes that the feeling of hope makes expectations for the future, can reduce personal discomfort in the face of stress, combat frustration or unhappiness in stress, and help individuals face and deal with their own goals. The hope theory is that positive emotions, accompanied by successful perception, allow people to effectively overcome problems and obstacles to achieve goals (Qian, 2006); instead, negative emotions are the product of unsuccessful (unsuccessful) pursuits, resulting from limited paths and effectiveness thinking, or limited ability to overcome threatening situations (Snyder, 2002). Thus, goal-seeking cognition triggers emotions; successful experiences bring positive emotions, and unsuccessful experiences produce negative emotions.

3. Research on the measurement method of hope sense theory

Zhang (2021) proposed a tool for measuring hope sense based on a questionnaire survey and verified its reliability and validity. This study divided the sense of hope into three dimensions: goal setting, path thinking, and persistence. The reliability and validity of the survey tool were confirmed by analyzing extensive sample

survey data. Li (2020) conducted a cross-cultural measurement study of hope sense and compared individual hope sense performance and influencing factors in different cultural backgrounds. The results show that individuals in various cultural backgrounds differ in the level and composition of hope, providing an essential reference for studying cross-cultural psychology. In his research, Wang (2022) proposed a measure of hope sense based on the combination of qualitative interviews and quantitative questionnaires and deeply explored the formation mechanism and influencing factors of college students' hope sense. It was found that factors such as family environment, educational background, and social support significantly influenced their level of hope.

Zhang (2021) discussed the development and change law of the sense of hope through the longitudinal follow-up study of college students. The results showed that their academic hopes vary with academic stress and life experience and varied significantly among individuals at different stages. Liu (2020) explores the relationship between the sense of hope and mental health. By analyzing survey data from a large sample, the study found a significant negative correlation between feelings of hope and mental health problems such as depression and anxiety, which provides essential significance for mental health intervention. Chen (2021) conducted a survey of hope sense based on the experimental design to explore the influence of hope sense on individual behavior and decision-making. The results show that individuals with a high sense of hope tend to actively tackle challenges and pursue goals, which affect individual behavioral decisions and quality of life. Liu (2020) compared the performance and change of hope at different ages through a cross-sectional study of individuals of various ages. It is found that with the growth of age, the level of personal hope shows different development trends, which provides important clues for the development law of hope sense.

Wang (2022) explores the relationship between a sense of hope and academic achievement. Through the follow-up survey of college students, the study found that students with high hopes have better academic performance, which provides an essential reference for improving students' academic performance. Li (2021) used the online questionnaire to explore the level of hope and the influencing factors of different social groups. The results show that other social groups differ significantly in their hope level, providing an essential reference for developing social policies. Zhang

(2020) explored the relationship between the sense of hope and individual happiness in her study. Through the analysis of extensive sample survey data, the study found that the sense of hope positively correlates with individual happiness, which provides important enlightenment for improving individual happiness.

Path thinking is an important psychological mechanism for individuals to pursue their goals, involving the planning and implementing the paths, methods, and strategies needed to achieve them. It requires individuals to be flexible in adapting strategies and finding alternative pathways to achieve their stated goals. This flexibility and adaptability are a core feature of pathway thinking, which successfully helps individuals achieve their goals in complex and changeable environments. Individual confidence in their abilities is a key factor in pathway thinking. Experience and current thoughts can affect the individual's assessment of future events, affecting the process of pathway thinking. Through path thinking, individuals can build a strategic framework from experience and imagination to achieve their goals and continuously optimize and improve them in practice.

To sum up, path thinking is an important psychological process for individuals to achieve their goals. It requires flexibility, adaptability, and strategies for adapting to different situations to find the optimal path. At the same time, an individual's confidence in their ability is also an essential factor in the success of path thinking. Future research could further explore the application of pathway thinking in different fields and its influencing factors and provide more targeted guidance for individuals to achieve their goals.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Study Design

This study aimed to explore the effects of personality traits and hope on stress coping strategies to maximize their impact.

The study used a questionnaire to collect data on personality traits, feelings of hope, stress-coping strategies, and demographic variables. First, mature scales were prepared or selected to ensure measurement accuracy and validity. Subsequently, random sampling from university students with different grades was conducted to ensure the generalizability and representativeness of the study.

After the data collection, the data analysis was performed using statistical software. The goal was to explore the relationship between demographic variables and stress-coping strategies through correlation analysis and regression analysis, revealing the influence of personality traits on stress-coping strategies and determining which personality traits were significantly associated with specific coping strategies. Finally, the impact of hope on stress coping strategies was explored by analysis of variance or regression analysis, and conditions with significant effects were identified.

This study aims to comprehensively and systematically explore the influencing factors of their stress-coping strategies and provide theoretical support and practical guidance for their mental health.

3.1.1 Study Variables

This study mainly focuses on the following aspects:

(1) Demographic variables, including the characteristics of college students 'gender, grade, university, and achievement performance, are used to analyze the differences in students' learning attitude performance among different demographic groups.

(2) Personality characteristics of college students: This study includes the five-factor model's personality characteristics: creativity, self-control, social anxiety, compassion, stability and variability of personality characteristics, the relationship between personality characteristics and self-cognition, and the relationship between

personality characteristics and external behavior performance.

(3) Sense of hope: including the overall level of hope; the dimension of the sense of hope; the influence of individual characteristics on the sense of hope; the influence of life events and experiences on the sense of hope; the relationship between mental health and happiness and the sense of hope; the relationship between coping strategies and the sense of hope.

(4) Stress coping strategies: including the type of coping strategies, their frequency and preference, their effectiveness evaluation, the relationship between coping strategies and stressors, the influence of individual characteristics on corresponding strategies, and their change and development.

This study collected data. College students were invited to participate in the survey through an online platform, but they felt uncomfortable. Respondents were asked to answer questions about college students' demographic variables, personality traits, desire rigidity, and stress coping strategies and to respond truthfully to their situation. Finally, the findings were statistically analyzed for relevant conclusions and recommendations.

3.1.2 Measurement Tools

1. Personality trait measurement tool

Five major personality traits: Five personality traits, including the NEO Personality Scale or the simplified NEO-FFI (NEO Five-Factor Scale), measure individuals, including extraversion, neuroticism, openness, affinity, and conscientiousness.

Five personality traits, namely Five personality traits, is a personality measurement tool widely used in psychology. It includes five dimensions: extroversion, neuroticism, openness, affinity, and responsibility. For ease of operation and application, it is usually measured using the NEO Personality Questionnaire (NEO Personality Scale) or its simplified version of the NEO-FFI (NEO Five-Factor Scale). Here is a step-by-step description of the measurements performed with these tools:

Step 1: Select the appropriate measuring tool

The appropriate version of the questionnaire was selected according to the measurement requirements. A simplified version of the NEO-FFI can be selected for rapid screening or initial evaluation for conducting extensive studies or requiring more

detailed data.

Step 2: Understand the structure of the questionnaire

Read the questionnaire instructions carefully to understand the overall structure of the questionnaire, answer methods, and matters that need attention. Each dimension of the five major personality traits often contains multiple related questions to assess the subjects' performance on that dimension.

Step by Step: Fill in the questionnaire

Subjects answered each question according to their actual situation and feelings. The answer should genuinely reflect a person's personality and behavior rather than being based on the ideal state or expectations of others.

Step 4: Collect and organize the data

After the questionnaires were completed, all questionnaires were collected, and the data were collated and analyzed. The score for each dimension is usually obtained by calculating the mean score or the total score of the relevant problem.

Step 5: Read the analysis results

Subject performance on each personality trait was determined based on the score in each dimension. At the same time, the overall personality characteristics and behavioral tendencies were analyzed using scores of different dimensions. It should be noted that the measurement of the Big Five personality traits is not an overnight process, which involves the subjects' self-perception and authentic expression of the subjects. Therefore, when using these tools, we should ensure that the subjects can fully understand and answer these questions and accept them in a comfortable, stress-free environment.

Moreover, although the Big Five personality trait model has been widely used and recognized in psychology, it is not a perfect measurement tool. In practical application, combining other methods and means to evaluate and understand the subject's characteristics is necessary. The Miles-Briggs Type Index (MBTI) measures an individual's cognitive, emotional, and behavioral preferences to provide a more detailed description of personality types.

2. Hope sense measurement tool

Hope Scale: For example, the Snyder Hope Scale or the Hesless Index assesses the extent of an individual's expectations and beliefs about future positive

outcomes.

3. The staff measured stress response strategies

The COPE Scale: This measurement tool is widely used for stress coping strategies, including problem-oriented coping strategies (e.g., active coping, seeking social support) and emotion-oriented coping strategies (e.g., denial, avoidance).

The age, gender, and discipline of the sample need to be considered to ensure the tool's applicability and validity. Furthermore, the selected tools must be validated and reliability tested in the relevant population to ensure the credibility of the findings.

3.1.3 Study Methods

To deeply investigate the impact of personality traits and hope on stress coping strategies and to maximize the impact of these factors on stress management, we designed the following approach:

First, it is crucial to identify a representative sample to ensure age, gender, and subject diversity to improve the generalizability of our findings.

Subsequently, a comprehensive approach using standardized and validated measuring instruments was used to collect the data. Specifically, the following measurement tools were used:

Personality trait measurement tool:

The Big Five Personality Characteristics Scale: This involved using the NEO Personality Scale or its abbreviated version, NEO-FFI, to assess the individual's level of extraversion, neuroticism, experiential openness, affinity, and conscientiousness. These characteristics are widely recognized and researched dimensions in personality psychology and are closely related to individual stress-coping styles.

The Miles-Briggs Type Index (MBTI): This tool measures an individual's cognitive, emotional, and behavioral preferences, providing a more nuanced understanding of personality type. MBTI can help elucidate differences in stress-coping mechanisms between personality types.

Hope measuring instrument:

Hope Scale: Similar to the Snyder Hope Scale or the Hurless Index, this scale assesses the level of expectations and beliefs about future positive outcomes. As

a positive psychological resource, hope has an important impact on individual stress-coping strategies.

Measurement tool for stress response strategies:

The COPE Scale: A measurement tool widely used to assess stress coping strategies, including problem-focused coping strategies (e.g., active coping, seeking social support) and emotion-focused coping strategies (e.g., denial, avoidance). By assessing the use of these strategies, we can gain insight into individual coping patterns in the face of stress.

During data collection, it is essential to ensure that all measuring instruments are validated and reliability tested in the relevant population, thus providing the accuracy and credibility of our study results.

In addition, the researcher used descriptive statistics, correlation analysis, and regression analysis to explore the relationship between personality traits, hope, and stress-coping strategies. Comparing the differences in coping strategies between different personality traits and levels of hope provides more insight into how these factors influence individual stress coping processes.

Finally, based on the findings, specific recommendations and interventions are proposed to improve individual stress coping and promote mental health. These recommendations may include guidance on individualized coping strategies for individuals with different personality traits and hope levels, psychological interventions, and training designed to enhance individual coping abilities.

3.2 Study Population and Samples

3.2.1 Population

The subjects of this study were 600 people from a public undergraduate institution in Henan Province. In the total sample, demographic data, including demographic variables (student gender, grade, university, performance), were collected to verify hypothesis significant differences in H1.

3.2.2 Samples

Table 3.1 Number of Samples

Student	Total Population	Hierarchical Sampling Ratio	Stratified Sample Size
College student in a comprehensive university	3000	20%	600

Six hundred eleven (611) participants were randomly selected from the population sample.

3.2.3 Sampling Method

Sample collection for this study was carried out within the scope of a university in Henan Province. Random sampling was performed according to the specific characteristics or conditions. Therefore, 600 participants were drawn from the stratified sampling in Henan Province. Specifically, 20% of the total sample was selected, resulting in 600 participants among the students.

The sample collection method and procedure for this study were designed precisely to ensure the representativeness and reliability of the data. Sampling was conducted within a university in Henan Province to make students the primary population of interest.

First, stratified sampling was used to ensure diversity between the different ranks. Stratified sampling is the division of populations into different subgroups or strata based on specific characteristics or conditions. In this case, hierarchy is defined by a grade, as it assumes that students' stress-coping strategies may differ according to their academic stage.

The participants were selected using a random sampling technique at each hierarchical level. Random sampling ensures that every individual in the stratum has the same chance of being included in the sample, thus minimizing bias and improving the generalizability of the findings.

A statistical formula from previous studies was used to calculate the required number of participants to determine the sample size. Given the scope of the research and the available resources, we decided to select 20% of the total population as the sample size. This percentage was chosen to ensure sufficient participants while

also being manageable regarding data collection and analysis.

Therefore, 600 participants were selected from the student population in Henan Province using stratified random sampling. This sample size comprehensively represents the target population, including students from different grades and backgrounds.

The sampling process was carefully planned and performed to ensure that a representative sample was selected. The investigators worked with the university administration to identify eligible populations and facilitate sampling. The sampling protocol was strictly followed to ensure the completeness of data and the validity of the study results.

In conclusion, this study's sample collection method used stratified random sampling to select a representative sample of 600 students of different grades from a university in Henan Province. This approach ensures the reliability and generalizability of the data collected, enabling meaningful insights into the relationships between personality traits, hope, and stress-coping strategies.

3.3 Data Collection

The data collection process for this study involved using a structured questionnaire for student participants at a university in Henan Province. These questionnaires were designed to collect information on demographic variables, undergraduate personality traits, wish feelings, and stress coping strategies. The survey tool was carefully developed to accommodate the factors and variables identified in the study framework.

Each section of the questionnaire used different questions to capture various aspects of the participants' perceptions and perspectives. This included utilizing checklist items, Likert scale responses, and open-ended questions to understand the study structure comprehensively.

3.3.1 Design of the Questionnaire

Based on the research hypotheses and questions, a structured questionnaire was designed. The questionnaire consists of four main components: demographic variables, personality characteristics of college students, and feelings of hope, which

are used to assess stress-coping strategies.

3.3.2 Sample Determination

The sample of this study was from a college student from Henan Province using stratified sampling. Furthermore, given that participants of different ages, genders, and grades may have different perspectives on personality traits, hope, and stress-coping strategies, we sought to ensure diversity in the sample selection process.

3.3.3 Distribution of the Questionnaires

The questionnaire is distributed through two online platforms (WeChat questionnaires). And physical locations (such as classrooms, teachers' offices, libraries). To ensure the validity and reliability of the questionnaire, screening questions were included to identify eligible participants. The investigators contacted the school unit and provided the subject recruitment information. The study questionnaire was provided in both electronic and paper form.

3.3.4 Data Analysis

After searching the questionnaires, the data were cleaned and organized, and the invalid and outlier responses were removed. Subsequently, statistical analysis was performed using software such as SPSS, including descriptive statistics and multivariate regression techniques.

3.4 Research Instruments

This study targeted domestic college students to explore the influence of personality traits and hope on stress-coping strategies at a public undergraduate university in Henan Province. To test the research hypotheses H1 to H3, various research tools were used to obtain relevant data and information.

3.4.1 Questionnaire Survey

1. Questionnaire construction: The researcher designed a structured questionnaire with questions related to the research hypothesis. The questionnaire also included questions on demographic variables and personality traits, feelings of hope, and stress-coping strategies.

A questionnaire survey is a standard method of data collection and usually collects information by asking a series of questions to respondents. Using

questionnaires in research is essential because it can help researchers collect large amounts of quantitative data to gain insight into the perspectives, attitudes, behaviors, and experiences of subjects and subjects. The questionnaire could help researchers collect relevant data on personality traits, feelings of hope, and stress-coping strategies in this study. By designing questions for these variables, researchers can obtain a wealth of information about individual personality trait tendencies, expectations for the future, and dealing with stress. The questionnaire survey has the following advantages:

(1) Efficient: It can collect large amounts of data simultaneously, saving time and cost.

(2) Anonymity: Respondents can provide information anonymously and are more willing to answer questions honestly.

(3) Quantitative data: Quantitative data can be generated to facilitate the statistical analysis and interpretation of the results.

(4) Comparability: The relationships and trends between variables can be observed by comparing them at different time points or between different groups.

Through the questionnaire survey, this paper can collect objective data on personality traits, hopes, and stress-coping strategies to provide important information and support for this study.

2. Sample recruitment: To ensure the sample is representative, randomly selected students from a university in Henan province as the survey participants.

During the questionnaire survey, the study subject was college students, so the sample was a group of college students. Given that grade, gender, and discipline may influence personality traits, desire feelings, and stress coping strategies, these factors could be stratified by the sample or controlled for during the analysis. Universities of different types, regions, and sizes were selected to ensure the sample was representative and diverse.

Random sampling is mainly used to draw samples from college students to ensure their representativeness and credibility. Combine online and offline surveys, using online survey platforms, such as Questionnaire Star, to collect sample data conveniently and quickly. Set up survey websites on campus to invite students to participate in the survey or collect data through class surveys.

When conducting sample collection, research ethics were followed to

protect the respondents' privacy and interests. Furthermore, adequate sample size and representativeness for statistical analysis and outcome inference should be ensured.

3.4.2 Data Analysis Tools

SPSS (Statistical Package for Social Sciences): This software analyzed questionnaire data, including descriptive statistics and regression analyses, helping to test the study hypothesis for H1 to H3.

3.5 Validity and Reliability of the Content

3.5.1 Content Effectiveness

The validity of the questionnaire was tested by the IOC (item-objective consistency), a quantitative measure of what the content experts call the suitability between the test item and the specification table. Content validity was checked by 3 experts, including (1) professional university teachers and (2) education teachers. The content and measurement of the questions were assessed to cover and complete the study. The effluent requires experts to evaluate the questionnaire as follows.

+ 1 The problem is consistent with the content of the measurement objective.

0 It is uncertain whether the problem is consistent with the content of the measurement target.

-1 The problem is not consistent with the content of the measurement target.

The results of all expert evaluations were calculated using the formula of Rovenelli and Hambleton (1977) as follows:

The IOC = $\Sigma R / N$

ΣR = total score from all experts for each question

N= Number of experts

If the calculated IOC index was more significant than or equal to 0.5, the questions were measured against the study objectives. Therefore, these questions were selected. If any problem does not reach the value of 0.5 and it is necessary to use the problem, the issue is revised again upon expert advice.

Verifying the validity of a research question is essential in ensuring that research has practical implications, the ability to answer important scientific or practical questions, and that research methods are appropriate important steps. Here is a

validation of the validity of these three research questions:

RQ 1 Verification:

Studying the relationships between demographic variables (e.g., gender, grade, school, academic performance) and stress coping strategies helps to understand the different ways students of various backgrounds cope with stress and provide practical guidance for mental health education in universities. This issue is based on existing research and can reveal new correlations and patterns to offer empirical support for theoretical development. Through questionnaires, data analysis, and other methods, relevant data can be systematically collected and analyzed to test the correlation between demographic variables and stress-coping strategies.

RQ 2 Verification:

Understanding how undergraduate personality traits influence their coping strategies helps to provide personalized psychological support and interventions to improve their ability to cope with stress. This issue focuses on the intrinsic connection between personality traits and stress-coping strategies, which helps deepen the theoretical understanding of personality psychology and stress coping. Assessment of personality traits using psychometric tools and assessing coping stress strategies can reveal the relationship between personality traits and coping strategies through statistical analysis methods.

RQ 3 Verification:

It is of great practical significance to explore the influence of hope on the psychological elasticity of college students and to improve their pressure and workability. Based on a positive psychological perspective, this question explores the role of hope, a positive psychological resource in coping with stress. It helps to enrich the theoretical system of stress coping. By measuring the sense of hope and coping ability to use a stress strategy, combined with regression analysis, we can analyze the influence of the sense of hope on stress strategy and further explore its impact conditions.

In conclusion, these three research questions have high validity. They are practical and based on scientific theory, which appropriate research methods can verify. In the specific implementation process of the study, attention should also be paid to the representativeness of the sample, the reliability of the measurement tools, and the rigor

of the data analysis to ensure the accuracy and credibility of the research results.

3.5.2 Reliability

Before the formal distribution of the questionnaire, we tested its reliability in 30 participants to assess its consistency and stability. The scale's internal consistency was assessed by calculating the Cronbach alpha coefficient. Hair et al. (2010) state that a Cronbach alpha value above 0.70 indicates acceptable reliability.

We used pretest data from 30 participants to assess the reliability of the questionnaire. The calculated alpha coefficient of Krenbach is as follows:

1. Personality characteristics scale

Extroversion: alpha = 0.85

Neuroticism: Klenbach's alpha = 0.82

The Cronbach alpha coefficient for both personality trait scales exceeded the threshold of 0.70, indicating acceptable internal consistency for these scales.

2. Pressure strategy scale

Overall stress response strategy: Krenbach's alpha = 0.78

The Krenbach alpha coefficient of the overall stress strategy scale also exceeded 0.70, showing good internal consistency.

3. Hope the perception scale

Hope: Cronbach's alpha = 0.75

The Cronbach alpha coefficient of the Hope sense scale also meets the reliability requirements.

From the above calculations, the questionnaire used in this study showed good internal consistency in three main aspects: personality traits, stress-coping strategies, and a sense of hope. The alpha coefficients all exceeded the threshold of 0.70, meeting the reliability criteria proposed by Hair et al. (2010). Therefore, these questionnaires exhibit acceptable reliability in the prediction test, providing a solid foundation for subsequent formal data collection and analysis.

3.6 Data Analysis

This study's data analysis was based on the proposed research hypothesis, aiming to reveal the relationship between their personality traits and their sense of hope

for stress-coping strategies. The following are the data analysis methods and procedures that were used.

3.6.1 Descriptive Statistics

This study investigated the relationship between personality traits, feelings of hope, demographic variables, and stress-coping strategies. A series of descriptive statistical analysis methods were used in this study to perform a comprehensive analysis of the data collected.

Frequency distribution and percentage: to describe the distribution of each variable, such as gender, grade, and other demographic variables. The frequency distribution can represent the number of samples in each category. In contrast, the percentage can represent the proportion of each category in the sample, thus intuitively understanding the distribution of the samples.

The mean (arithmetic mean) and standard deviation describe the central trend and dispersion of the sample. The mean value can reflect the concentration of the sample. In contrast, the standard deviation can reflect the dispersion of the data, thus giving an intuitive view of the degree of variation of each variable.

Correlation analysis: to explore the correlation between the variables. By calculating the correlation coefficients between the variables, we can understand whether there is a linear correlation between them and the strength and direction of the correlation. This helps to reveal potential associations between personality traits, feelings of hope, demographic variables, and stress-coping strategies among college students. Through the correlation analysis, we can determine whether a significant relationship exists between personality traits and the sense of hope and stress-coping strategies.

Analysis of variance (ANOVA): By comparing the mean value between multiple groups, we can further explore whether the influence of different factors on student stress-coping strategies is significantly different.

Factor analysis reduces dimensions and identifies the latent structure between variables to help understand the complex relationships between variables. The corresponding study hypothesis is supported if the correlation coefficient is positive and the significance level is low (e.g., $p < 0.05$).

The standard deviation of the questionnaire statistics helps us understand

the degree of variation of each variable in the sample. Generally, a smaller standard deviation indicates more concentrated data; a larger standard deviation indicates more scattered data.

We interpret the mean level by the following criteria for arithmetic means.

1.0-1.5 are very inconsistent,

1.5-2.5 Objection,

2.5-3.5 is neutral,

3.5-4.5 consistent,

4.5-5.0, for a strong agreement.

3.6.2 Index Statistics

To test the first hypothesis (H1), an independent sample t-test and one-way ANOVA were performed. The remaining hypothesis was tested using a multiple linear regression analysis (H2, H3). This study used stress coping strategies as the dependent variable, and personality traits and a sense of hope were used as the independent variables.

Hypothesis 1 (H1): Demographic variables are significantly associated with stress coping strategy
 $H_{10}: \mu_i = \mu_j$

$H_{1a}: \mu_i \neq \mu_j$ The last pair, $I = j$.

Gender was tested by independent sample t-test.

One approach is to perform ANOVA on gender, grade, college, and grade performance. Hypothesis 2 (H2): Personality characteristics of college students have a significant positive impact on stress-coping strategies

$H_{10}: \mu_i = \mu_j$

$H_{1a}: \mu_i \neq \mu_j$ The last pair, $I = j$.

Multiple regression analysis method was used.

Hypothesis 3 (H3): A sense of hope has a significant positive impact on stress-coping strategies.

$H_{30}: \mu_i = \mu_j$

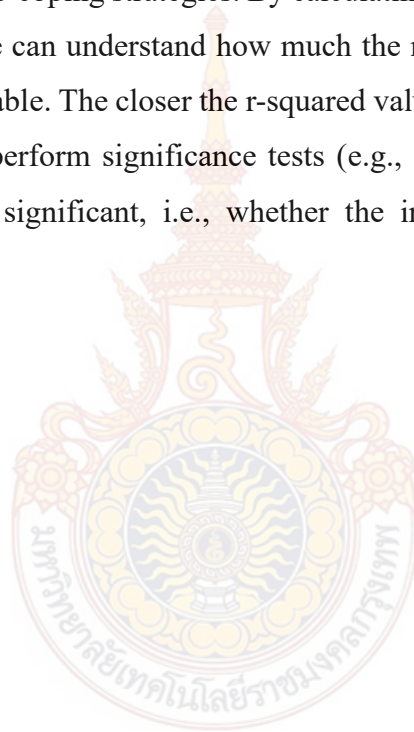
$H_{3a}: \mu_i \neq \mu_j$ is the last pair, and $I = j$.

Multiple regression analysis method was used.

Multiple linear regression analysis was used to explore the influence of personality traits and a sense of hope on stress-coping strategies. This approach allowed

us to consider the influence of multiple independent variables (demographic factors, university personality characteristics, and sense of hope) on the dependent variable (stress coping strategies).

In addition, according to the statistical results of the data, other statistical analyses, such as regression analysis, were flexibly used to obtain the regression coefficients of each variable, explaining the direction and intensity of the influence of the independent variables on the dependent variables. For example, if the main lead regression coefficient is positive and significant, this implies that personality traits positively affect stress-coping strategies. By calculating the R-square value (coefficient of determination), we can understand how much the model accounts for the variation in the dependent variable. The closer the r-squared value is to 1, the better the model fit is. We also need to perform significance tests (e.g., f-test) to determine whether the regression model is significant, i.e., whether the independent variable affects the dependent variable.



CHAPTER IV

ANALYSIS RESULTS

This chapter expounds on the research results and is divided into two parts. The first part presents descriptive statistics of the variables involved in the study, covering multiple dimensions, including demographic characteristics, personality trait practices of college students, and stress-coping strategies. The second part focuses on the hypothesis test of the empirical results, using the independent sample t-test, one-way ANOVA (analysis of variance), and multiple regression analysis.

4.1 Descriptive Statistics

To introduce the statistical analysis results, this study included 600 individuals from a public undergraduate institution in Henan Province. This section covers descriptive statistics for demographic factors and relevant descriptive statistical analyses for all dependent and independent variables.

4.1.1 Population Factors

The demographic factors in the six fields, including gender, grade, college, academic performance, social ability, and participation in extracurricular activities, are shown in Table 4.1.

Table 4.1 Descriptive Analysis of Demographic Variables

Variable	Class	Frequency	Percentage	Effective Percentage	Accumulative Perception
Gender	man	300	50	50	50
	woman	300	50	50	100
	TOTAL	600	100	100	
Grade	freshman	108	18	18	18
	sophomore	270	45	45	63
	Junior	162	27	27	90
	Senior year and above	60	10	10	100
	TOTAL	600	100	100	
College	School of Literature and Humanities	78	13	13	13

Table 4.1 Descriptive Analysis of Demographic Variables (continued)

Variable	Class	Frequency	Percentage	Effective Percentage	Accumulative Perception
	College of Social Sciences	96	16	16	29
	College of Natural Science	132	22	22	51
	College of Engineering and Technology	126	21	21	72
	School of Medical School and Health	60	10	10	82
	The School of Art and Design	72	12	12	94
	The School of Economics and Management	36	6	6	100
	TOTAL	600	100	100	
Types of stress	Academic Stress	54	9	9	9
	Interpersonal Stress	108	18	18	27
	Financial Stress	216	36	36	63
	Time Management Stress	180	30	30	93
	Future / Employment Stress	42	7	7	100
	TOTAL	600	100	100	
Diffuse skills	Few social skills	90	15	15	15
	Weak social skills	240	40	40	55
	Social skills are mediocre	138	23	23	78
	Strong social skills	102	17	17	95
	Social skills are powerful	30	5	5	100
	TOTAL	600	100	100	
Participation in extracurricular activities	Never participate in	108	18	18	18
	Very little participation	228	38	38	56
	Sometimes participate in	162	27	27	83
	Often participate in	60	10	10	93

Table 4.1 Descriptive Analysis of Demographic Variables (continued)

Variable	Class	Frequency	Percentage	Effective Percentage	Accumulative Perception
	Always participate in	42	7	7	100
	TOTAL	600	100	100	

Table 4.1 presents the descriptive analysis of the demographic variables in the study sample. From the gender distribution, the ratio of men and women is balanced, with 50% each, ensuring the representativeness of the study. In terms of grade distribution, sophomore students accounted for the highest proportion (45%), followed by junior students (27%). First- and fourth-year students accounted for 18% and 10%, respectively, reflecting the participation of students of different grades. In terms of college distribution, all schools have students involved, with the School of Natural Sciences having the highest proportion (22%), followed by the School of Social Sciences (16%) and the School of Engineering and Technology (21%), ensuring interdisciplinary diversity. In terms of academic performance, most students were between "average" and "good", accounting for 66%, while "impoverished" and "outstanding" students accounted for 9% and 7%, respectively. Most students have general to strong social skills, accounting for 60%, while fewer students have weak or little social skills, totaling 55%. Regarding participation in extracurricular activities, the % of students who never participated or rarely participated was 56%. In comparison, the % of students who often and always attended was 17%, reflecting the different degrees of students' participation in extracurricular activities.

4.1.2 Descriptive Statistics for the Variables

Table 4.2 Personality Characteristics of College Students, Descriptive Statistics Study

Variables / Categories	Frequency	Percentage	Effective Percentage	Accumulative Perception
Personality Characteristics				
1	18	3	3	3
2	162	27	27	30
3	114	19	19	49
4	150	25	25	74
5	156	26	26	100
TOTAL	600	100	100	
Quality Level				
2	132	22	22	22
3	150	25	25	47
4	108	18	18	65
5	210	35	35	100
TOTAL	600	100	100	
Overview of the personality traits of college students				
1	6	1	1	1
2	138	23	23	24
3	138	23	23	47
4	138	23	23	70
5	180	30	30	100
TOTAL	600	100	100	

Table 4.2 presents the results of descriptive statistics on college students. Regarding personality characteristics, the distribution of students was relatively uniform, with the frequency gradually increasing from category 1 to category 5, with category 5 being the highest (26%) and category 1 being the lowest (3%). It shows that in terms of personality characteristics, most students tend to have higher scores; that is, they may show more positive and adaptive personality characteristics. A relatively uniform distribution was also observed regarding the quality level, with Category 5 having the highest proportion (35%), while Category 2 and Category 4 had 22% and 18%, respectively. It shows that most students also have higher scores at the quality level, reflecting their better coping ability and psychological quality in the face of challenges and pressures.

Table 4.3 Descriptive Statistical Analysis of the Sense of Hope

The Sense of Hope	Frequency	Percentage	Effective Percentage	Accumulative Perception
2	150	25	25	25
3	162	27	27	52
4	174	29	29	81
5	114	19	19	100
TOTAL	600	100	100	

Table 4.3 presents the descriptive statistical analysis of the sense of hope. As can be seen from the data, the distribution of hope is relatively uniform. The frequency of score 4 is the highest, accounting for 29%, followed by those with scores of 3 and 2, accounting for 27% and 25%, respectively, while score 5 is relatively low, accounting for 19%. This result reflects the prevalence of hope among college students, with most students having a high hope level.

Table 4.4 Descriptive Statistical Analysis of Stress Coping Strategies

Variables / Categories	Frequency	Percentage	Effective Percentage	Accumulative Perception
Deal with the Type of Policy				
1	18	3	3	3
2	120	20	20	23
3	138	23	23	46
4	216	36	36	82
5	108	18	18	100
TOTAL	600	100	100	
Coping Strategy Frequency and Preference				
1	12	2	2	2
2	108	18	18	20
3	162	27	27	47
4	204	34	34	81
5	114	19	19	100
TOTAL	600	100	100	
Evaluation of the Effectiveness of the Coping Strategies				
2	90	15	15	15
3	192	32	32	47
4	186	31	31	78
5	132	22	22	100
TOTAL	600	100	100	
Overview of the Stress-coping Strategy				
2	54	9	9	9

Table 4.4 Descriptive Statistical Analysis of Stress Coping Strategies (continued)

Variables / Categories	Frequency	Percentage	Effective Percentage	Accumulative Perception
3	144	24	24	33
4	162	27	27	60
5	187	31.2	31.2	91.2
6	53	8.8	8.8	100
TOTAL	600	100	100	

Table 4.4 presents a descriptive statistical analysis of stress-coping strategies, providing initial insight into how college students cope with stress. Five different coping strategies were adopted from the perspective of the types of coping strategies, among which type 4 had the highest frequency, accounting for 36%, indicating that this strategy is more common among college students. Regarding frequency and preference of coping strategies, students with preference for grades 3 and 4 had the highest, reaching 27% and 34%, respectively, possibly reflecting the effectiveness or popularity of these two strategies in response to stress. Data from the effectiveness assessment of coping strategies showed that grade 3, 4, and 5 strategies were considered more effective, accounting for 32%, 31%, and 22%, respectively, totaling 85%, indicating that most students tend to adopt coping strategies that they considered effective. The stress coping strategy overview shows a gradually increasing trend from lower to higher strategy use, where strategies of grades 5 and 6 combined reached 40%, further emphasizing the importance of diversity and individual differences in coping strategy selection.

4.2 Reference Statistics

In this study, gender was considered as the two-point discrete variable. In contrast, grade, college, academic performance, social ability, and participation in extracurricular activities were considered discrete variables with more than three categories. To test whether there were significant associations between demographic variables (including gender, grade, college, academic performance, social ability, and participation in extracurricular activities) and stress coping strategies, an independent sample t-test and one-way ANOVA were used. These methods aimed to explore whether college students with different demographic characteristics differ significantly

in choosing and using stress-coping strategies.

Multiple linear regression methods were used to examine undergraduate personality traits' significant positive effects (including personality traits and quality levels) and the sense of hope on stress coping strategies.

According to the objectives of this study, the results were divided into two parts.

Part I: Analysis of the demographic factors of the stress coping strategies of college students.

Part two: Analysis of the influence of personality traits and hope on stress coping strategies.

4.2.1 Demographic Factors Influence the Stress Coping Strategies

Hypothesis 1: Demographic variables are significantly associated with stress-coping strategies.

H1a: Gender differences have different effects on stress coping strategies.

Independent sample t-tests were used during the data analysis to determine whether the mean difference was statistically significant at 0.05.

Table 4.5 Gender Factors Influence College Students' Stress Coping Strategies

Stress Coping Strategies	Gender	N	Average Value	Standard Deviations	Price	Free Degree	Sig. (Double Tail)
The type of coping strategy	man	300	2.84	0.947	-1.24	598	0
	woman	300	4.08	0.846			
Frequency and preferences of coping strategies	man	300	2.98	0.861	-1.04	598	0
	woman	300	4.02	0.971			
Evaluation of the effectiveness of the coping strategies	man	300	3	0.801	-1.2	598	0
	woman	300	4.2	0.776			
Summary	man	300	3.42	0.92	-1.297	598	0
	woman	300	4.72	0.916			

Table 4.5 shows the effect of gender factors on the stress-coping strategies of college students. According to the data in the table, college students differ

significantly in the type, frequency, and preference of coping strategies, as well as the assessment of the effectiveness of coping strategies. Female college students had a higher average on the type, frequency, and preference of coping strategies than males and Sig. A (two-tailed) value of 0 indicates that these differences are statistically significant. This finding supports the study hypothesis that H1 demographic variables (here, gender) are significantly associated with stress-coping strategies. Meanwhile, this also provides a basis for further exploring the influence of other demographic variables, personality traits, and sense of hope on stress-coping strategies.

H1b: Grade differences have different effects on stress-coping strategies

One-way ANOvariance was used to test the mean differences between data above 2 groups at a statistical significance level of 0.05.

Table 4.6 Grade Differences Have Different Effects on Stress-coping Strategies

Stress Coping Strategies		Quadratic Sum	Free Degree	Mean Square	F	Conspicuousness
The type of coping strategy	interblock	119.907	3	39.969	40.162	0
	Within the group	593.133	596	0.995		
	TOTAL	713.04	599			
Frequency and preferences of coping strategies	interblock	98.022	3	32.674	34.286	0
	Within the group	567.978	596	0.953		
	TOTAL	666	599			
Evaluation of the effectiveness of the coping strategies	interblock	88.822	3	29.607	35.35	0
	Within the group	499.178	596	0.838		
	TOTAL	588	599			
Summary	interblock	131.93	3	43.977	41.985	0
	Within the group	624.268	596	1.047		
	TOTAL	756.198	599			

The data analysis in Table 4.6 shows that grades significantly impacted stress-coping strategies among college students. Regarding the F value and significance

level, the difference between groups in the type, frequency, and preference and the effectiveness assessment of coping strategies was highly significant (the significance level was 0). The type, frequency, and preference of coping strategies and the F values of effectiveness assessment were 40.162, 34.286, and 35.35, respectively, all well above 1, indicating that the effect of grade on these coping strategies was statistically highly significant.

H1c: College differences have different effects on college students' stress-coping strategies

One-method ANOVA analyzed data to test the mean difference between the two groups at a statistical significance level 0.05.

Table 4.7 The College Influences College Students' Stress-coping Strategies

Stress Coping Strategies		Quadratic Sum	Free Degree	Mean Square	F	Conspicuousness
The type of coping strategy	interblock	256.703	6	42.784	55.597	0
	Within the group	456.337	593	0.77		
	TOTAL	713.04	599			
Frequency and preferences of coping strategies	interblock	230.994	6	38.499	52.482	0
	Within the group	435.006	593	0.734		
	TOTAL	666	599			
Evaluation of the effectiveness of the coping strategies	interblock	195.371	6	32.562	49.179	0
	Within the group	392.629	593	0.662		
	TOTAL	588	599			
Summary	interblock	260.269	6	43.378	51.869	0
	Within the group	495.929	593	0.836		
	TOTAL	756.198	599			

The data analysis results in Table 4.7 show that the college significantly impacted the stress-coping strategies of college students. Regarding the F value and significance level, the difference between groups in the type, frequency, and preference and the effectiveness assessment of coping strategies were highly significant (the

significance level was 0). The type, frequency, and preference of coping strategies and the F values for effectiveness assessment were 55.597, 52.482, and 49.179, respectively, all well above 1, indicating that the academic influence on these coping strategies is statistically highly significant.

H1d: Differences in academic performance affect their stress coping strategies.

One-way ANOvariance was used to test the mean differences between data above 2 groups at a statistical significance level of 0.05.

Table 4.8 Academic Performance Affects College Students' Stress Coping Strategies

Stress Coping Strategies		Quadratic Sum	Free Degree	Mean Square	F	Conspicuousness
The type of coping strategy	interblock	176.502	4	44.125	48.933	0
	Within the group	536.538	595	0.902		
	TOTAL	713.04	599			
Frequency and preferences of coping strategies	interblock	109.562	4	27.39	29.289	0
	Within the group	556.438	595	0.935		
	TOTAL	666	599			
Evaluation of the effectiveness of the coping strategies	interblock	158.048	4	39.512	54.68	0
	Within the group	429.952	595	0.723		
	TOTAL	588	599			
Summary	interblock	156.228	4	39.057	38.733	0
	Within the group	599.971	595	1.008		
	TOTAL	756.198	599			

The data analysis in Table 4.8 shows that academic performance significantly impacted undergraduate stress-coping strategies. Regarding the F value and significance level, the difference between groups in the type, frequency, and preference and the effectiveness assessment of coping strategies was highly significant (the significance level was 0). The type, frequency, and preference of coping strategies

and the F values of effectiveness assessment were 48.933, 29.289, and 54.68, respectively, all well above 1, indicating the statistically significant impact of academic performance on these coping strategies.

H1e: Social ability has different effects on college students' stress coping strategies.

One-way ANOVariance was used to test the mean differences between data above the 2 groups at a statistical significance level 0.05.

Table 4.9 Social Ability Influences Stress Coping Strategies

Stress Coping Strategies		Quadratic Sum	Free Degree	Mean Square	F	Conspicuousness
The type of coping strategy	interblock	176.502	4	44.125	48.933	0
	Within the group	536.538	595	0.902		
	TOTAL	713.04	599			
Frequency and preferences of coping strategies	interblock	109.562	4	27.39	29.289	0
	Within the group	556.438	595	0.935		
	TOTAL	666	599			
Evaluation of the effectiveness of the coping strategies	interblock	158.048	4	39.512	54.68	0
	Within the group	429.952	595	0.723		
	TOTAL	588	599			
Summary	interblock	156.228	4	39.057	38.733	0
	Within the group	599.971	595	1.008		
	TOTAL	756.198	599			

The results of the data analysis in Table 4.9 show that social ability had a significant impact on the stress-coping strategies of college students. Regarding the F value and significance level, the difference between groups in the type, frequency, and preference and the effectiveness assessment of coping strategies were highly significant (the significance level was 0). The type, frequency, preference of coping strategies, and F values of effectiveness assessment were 48.933, 29.289, and 54.68, respectively, much

higher than 1, indicating the statistically significant influence of social competence on these coping strategies.

H1f: Participating in extracurricular activities has a different impact on the stress coping strategies in the catering business.

One-way ANOVariance was used to test the mean differences between data above the 2 groups at a statistical significance level 0.05.

Table 4.10 Participating in Extracurricular Activities Affects the Stress-coping Strategies of College Students

Stress Coping Strategies		Quadratic Sum	Free Degree	Mean Square	F	Conspicuousness
The type of coping strategy	interblock	245.694	4	61.424	78.201	0
	Within the group	467.346	595	0.785		
	TOTAL	713.04	599			
Frequency and preferences of coping strategies	interblock	181.407	4	45.352	55.684	0
	Within the group	484.593	595	0.814		
	TOTAL	666	599			
Evaluation of the effectiveness of the coping strategies	interblock	178.396	4	44.599	64.786	0
	Within the group	409.604	595	0.688		
	TOTAL	588	599			
Summary	interblock	222.442	4	55.611	61.991	0
	Within the group	533.756	595	0.897		
	TOTAL	756.198	599			

The results of the data analysis in Table 4.10 show that participation in extracurricular activities had a significant impact on the stress-coping strategies of college students. Regarding the F value and significance level, the difference between groups in the type, frequency, and preference and the effectiveness assessment of coping strategies were highly significant (the significance level was 0). The type, frequency, and preference of coping strategies, and the F values for effectiveness assessment were 78.201, 55.684 and 64.786, respectively, and these values were much

higher than 1, indicating that the effect of extracurricular participation was highly statistically significant on these coping strategies.

4.2.2 The Personality Characteristics of College Students Influence the Stress Coping Strategies

Hypothesis 2: College students' personality characteristics significantly impact stress-coping strategies.

H2a: The personality characteristics (personality characteristics, quality level) of college students affect the overview of college students' stress-coping strategies

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.11 Personality Trait Models of College Students Influencing an Overview of Stress Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.336a	0.113	0.11	1.06

Predictor variables: (constant), personality traits of college students, personality characteristics of students

As seen from the data in Table 4.11, the model's multiple correlation coefficient (R) is 336, which suggests a moderate correlation between personality traits and stress-coping strategies among college students. At the same time, the R square (i.e., the coefficient of determination) was 0.113, and personality traits explained 11.3% of the variation in stress-coping strategies. The adjusted R square was 0.11, which is close to the R square, indicating that the model fit is good and the model has some explanatory power.

Table 4.12 Multiple Linear Regression Coefficients for the Effects of Personality Characteristics of College Students on an Overview of Stress Coping Strategies

Model		Unstandardized Coefficients		Standardization Coefficient	t	Conspicuousness
		B	Standard error	Beta		
1	(constant)	2.992	0.143		20.942	0
	personality characteristics	0.292	0.099	0.317	2.943	0.003
	Quality level	0.02	0.103	0.021	0.192	0.847

A dependent variable: stress coping strategy

Table 4.12 presents the multiple linear regression coefficients for the influence of undergraduate personality characteristics on stress-coping strategies. The results showed that personality traits significantly positively affected stress coping strategies (Beta = 0.317, $t=2.943$, $p=0.003$), supporting the study hypothesis H2. However, the personality traits of college students had no significant effect on stress-coping strategies (Beta = 0.021, $t=0.192$, $p=0.847$). When exploring the stress-coping strategies of college students, we should focus on the role of personality characteristics, which are not the main influencing factors.

H2b: The personality characteristics of college students, including personality characteristics and quality level, affect the type of coping strategies and the stress coping strategies

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.13 Impact, Type of Coping Strategies, and Personality Trait Model of College Students

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.377a	0.142	0.139	1.012

Predictor variables: (constant), personality traits of college students, personality characteristics of students

As can be seen in Table 4.13, the multiple correlation coefficient (R) of the model is .377, suggesting a moderate correlation between undergraduate personality traits and the types of coping strategies. The R square (coefficient of determination) was 0.142, meaning that personality traits could explain 14.2% of the variation in the kind of coping strategies. The adjusted R square was 0.139, close to the R square, indicating that the model had a good fit and some explanatory power. The error in the standard estimate was 1.012, reflecting the magnitude of the model prediction error.

Table 4.14 Multiple Linear Regression Coefficients of Personality Traits Corresponding to the Type of Effect of Strategies

Model		Unstandardized Coefficients		Standardization Coefficient	t	Conspicuousness
		B	Standard error	Beta		
1	(constant)	2.238	0.136		16.401	0
	personality characteristics	0.226	0.095	0.253	2.388	0.017
	Quality level	0.122	0.099	0.13	1.232	0.219

A Dependent variable: the type of coping strategy

The data in Table 4.14 show that personality traits have a significant positive effect on the type of strategies (Beta = 0.253, $t=2.388$, $p=0.017$), which supports the research hypothesis that H2 means that personality traits of college students have a significant positive effect on stress coping strategies. However, the corresponding personality traits of college students did not significantly affect the type of strategy (Beta = 0.13, $t=1.232$, $p=0.219$). When exploring the types of stress-coping strategies among college students, personality traits are not a primary influencing factor.

H2c: The personality characteristics of college students, including

personality characteristics and quality level, affect the frequency of coping strategies and the preferred stress coping strategies

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.15 Model of Undergraduate Personality Traits Influencing the Frequency and Preference of Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.348a	0.121	0.118	0.99

Predictor variables: (constant), personality traits of college students, personality characteristics of students

As can be seen in Table 4.15, the multiple correlation coefficient (R) of the model is .348, suggesting a moderate correlation between undergraduate personality traits and the frequency and preference of coping strategies. The R square (coefficient of determination) was 0.121, meaning that personality traits could explain 12.1% of the variation in the frequency and preference of coping strategies. The adjusted R square is 0.118, which is very close to the R square, indicating that the model has a good fit and has some explanatory power. The error in the standard estimate was 0.99, reflecting the magnitude of the model prediction error. This result supports the research hypothesis that H2, the personality traits of college students, correspond to a significant positive effect on the frequency and preference of the strategy.

Table 4.16 Multiple Linear Regression Coefficients of College Students' Personality Traits Corresponding to the Effect on the Frequency and Preference of the Strategies

Model		Unstandardized Coefficients		Standardization Coefficient	t	Conspicuousness
		B	Standard error	Beta		
1	(constant)	2.394	0.133		17.932	0
	personality characteristics	0.161	0.093	0.186	1.74	0.082
	Quality level	0.151	0.097	0.167	1.562	0.119

A Dependent variable: the frequency and preference of coping strategies

As can be seen from the data in Table 4.16, personality traits have a positive effect on the frequency and preference of strategies. Still, the influence is significant (Beta = 0.186, $t=1.74$, $p=0.082$), which partly supports the research hypothesis that H2, that is, personality traits of college students, positively affect stress coping strategies. However, the corresponding personality traits of college students did not significantly affect the frequency and preference of the strategy (Beta = 0.167, $t=1.562$, $p=0.119$). Personality characteristics are essential when exploring the frequency and preference of stress-coping strategies. However, their influence is insignificant, while personality traits are not the main influencing factor.

H2d: The personality characteristics of college students, including personality characteristics and quality level, influence the stress coping strategies in the effectiveness assessment of coping strategies.

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.17 Personality Trait Models of College Students Influencing the Effectiveness Assessment of Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.394a	0.156	0.153	0.912

Predictor variables: (constant), personality traits of college students, personality characteristics of students

As can be seen in Table 4.17, the multiple correlation coefficient (R) of the model is .394, suggesting a moderate correlation between undergraduate personality traits and assessing the effectiveness of coping strategies. The R square (coefficient of determination) was 0.156, meaning that personality traits explained 15.6% of the variability in the effectiveness assessment of coping strategies. The adjusted R square is 0.153, which is very close to the R square, indicating that the model has a good fit and has some explanatory power. The error in the standard estimate was 0.912, reflecting the magnitude of the model prediction error. This result supports the research hypothesis that the H2 of college students has a significant positive impact on the effectiveness assessment of the strategy.

Table 4.18 Multiple Linear Regression Coefficients for Personality Characteristics of College Students Corresponding to the Impact of Strategy Effectiveness Assessment

Model		Unstandardized Coefficients		Standardizati	t	Conspicuousness
		B	Standard error	on Coefficient		
1	(constant)	2.504	0.123	Beta	20.372	0
	personality characteristics	0.329	0.085	0.406	3.863	0
	Quality level	-0.01	0.089	-0.012	-0.115	0.909

A Dependent variable: Assessment of the effectiveness of coping strategies

The data in Table 4.18 show that personality traits have a significant positive impact on the effectiveness assessment of the corresponding strategies (Beta = 0.406, $t=3.863$, $p=0$), which strongly supports the research hypothesis that H2, that is, college students' personality traits have a significant positive impact on stress coping strategies. However, the corresponding personality traits of college students did not significantly affect the effectiveness assessment of the strategy (Beta = -0.012, $t=-0.115$, $p=0.909$), indicating that personality traits were not the main factor influencing the effectiveness assessment of coping strategies.

4.2.3. Sense of Hope Affects the Stress Coping Strategies

Hypothesis 3: A sense of hope has a significant positive impact on stress-coping strategies.

H 3a: The sense of hope affects the overview of the stress-coping strategies of college students

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.19 A Hope Model for Overview of Stress Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.427a	0.182	0.181	1.017

A Predictor variable: (constant) a sense of hope

As can be seen in Table 4.19, the multiple correlation coefficient (R) of the model is .427, suggesting a moderate correlation between the sense of hope and stress-

coping strategies. The R square (coefficient of determination) of 0.182 meant that the feeling of hope explained 18.2% of the variation in stress-coping strategies. The adjusted R square is 0.181, which is very close to the R square, indicating that the model has a good fit and has some explanatory power. The error in the standard estimate was 1.017, reflecting the magnitude of the model prediction error.

Table 4.20 Multiple Linear Regression Coefficients of the Effects of Perceived Hope on an Overview of Stress Coping Strategies

Model		Unstandardized Coefficients		Standardization Coefficient	t	Conspicuousness
		B	Standard error	Beta		
1	(constant)	2.522	0.14		17.986	0
	The sense of hope	0.452	0.039	0.427	11.543	0

A dependent variable: stress coping strategy

The data in Table 4.20 shows that the sense of hope significantly positively impacts stress-coping strategies (Beta = 0.427, $t=11.543$, $p=0$). This indicates that the stronger the sense of hope, the more effective the coping strategies college students adopt. A sense of hope is essential to helping college students better cope with stress and adopt more effective coping strategies.

H3b: Sense of hope affects the type of coping strategy of stress coping strategy

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.21 Impact, the Hope of the Type of Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.430a	0.185	0.183	0.986

A Predictor variable: (constant) a sense of hope

As seen in Table 4.21, the model's multiple correlation coefficient (R) is .430 indicates a moderate correlation between the sense of hope and the type of coping strategy. The R square (coefficient of determination) was 0.185, meaning the feeling of

hope explains 18.5% of the variation in coping strategies. The adjusted R square is 0.183, which is very close to the R square, indicating that the model has a good fit and has some explanatory power. The error in the standard estimate was 0.986, reflecting the magnitude of the model prediction error.

Table 4.22 Multiple Linear Regression Coefficients of Hope Corresponding to the Type of Effect of the Strategy

Model		Unstandardized Coefficients		Standardization Coefficient	t	Conspicuousness
		B	Standard error	Beta		
1	(constant)	1.948	0.136		14.327	0
	The sense of hope	0.442	0.038	0.43	11.645	0

A Dependent variable: the type of coping strategy

As can be seen from the data in Table 4.22, the sense of hope has a significant positive impact on the type of strategy (Beta = 0.430, $t=11.645$, $p=0$), indicating that the stronger the sense of hope, the more inclined college students are to adopt more active and effective coping strategies. A sense of hope is an essential psychological resource that can help college students better cope with stress and choose more appropriate coping strategies. This finding has important practical implications for understanding and promoting the mental health of college students.

H3c: The sense of hope affects the frequency of coping strategies and prefers the stress coping strategies

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.23 Sense of Hope Models Influencing the Frequency and Preferences of Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.421a	0.177	0.176	0.957

A Predictor variable: (constant) a sense of hope

As seen in Table 4.23, the model's multiple correlation coefficient (R) is .421, suggesting a moderate degree of correlation between the sense of hope and the frequency and preference of coping strategies. The R square (coefficient of determination) was 0.177, meaning a sense of hope explains 17.7% of the variability in coping strategy frequency and preference. The adjusted R square is 0.176, which is very close to the R square, indicating that the model is a fit and has some explanatory power. The error in the standard estimate was 0.957, reflecting the magnitude of the model prediction error. This result supports the hypothesis that H3, the sense of hope, significantly affects the frequency and preference of stress-coping strategies.

Table 4.24 Multiple Linear Regression Coefficients of Hope Corresponding to the Effect on the Frequency and Preference of the Strategy

Model		Unstandardized Coefficients		Standardization Coefficient	t	Conspicuousness
		B	Standard error	Beta		
1	(constant)	2.069	0.132		15.676	0
	The sense of hope	0.418	0.037	0.421	11.345	0

A Dependent variable: the frequency and preference of coping strategies

As seen from the data in Table 4.24, the sense of hope has a significant positive effect on the frequency and preference of the strategy (Beta = 0.421, t=11.345, p=0). It indicates that the stronger the sense of hope, the more frequently college students adopt and actively prefer some coping strategies. Hope sense is an important psychological resource that can help college students choose and adhere to effective coping strategies when facing stress more actively.

H3d: The sense of hope affects the stress coping strategies used to evaluate the effectiveness of coping strategies.

The data were analyzed using multiple linear regression, and the prediction equations were established at the 95% confidence level.

Table 4.25 Sense of Hope Model Influencing the Effectiveness of Coping Strategies

Model	R	R Square	Adjusted R Square	Error in the Standard Estimation
1	.408a	0.166	0.165	0.905

A Predictor variable: (constant) a sense of hope

As can be seen in Table 4.25, the multiple correlation coefficient (R) of the model is .408, suggesting a moderate correlation between feelings of hope and assessing the effectiveness of coping strategies. The R square (coefficient of determination) was 0.166, meaning that a sense of hope explains 16.6% of the variation in the effectiveness assessment of coping strategies. The adjusted R square is 0.165, which is very close to the R square, indicating that the model has a good fit and has some explanatory power. The error in the standard estimate was 0.905, reflecting the magnitude of the model prediction error. This result supports the research hypothesis that H3 is that the sense of hope significantly impacts assessing the effectiveness of stress coping strategies. This suggests that college students with a stronger sense of hope also have higher assessments of the effectiveness of their coping strategies.

Table 4.26 Multiple Linear Regression Coefficients of the Impact of Strategy Effectiveness Assessment

Model		Unstandardized Coefficients	Standard error	Standardization Coefficient	t	Conspicuousness
		B		Beta		
1	(constant)	2.297	0.125		18.4	0
	The sense of hope	0.381	0.035	0.408	10.924	0

A Dependent variable: Assessment of the effectiveness of coping strategies

As seen from the data in Table 4.26, the sense of hope has a significant positive impact on the effectiveness assessment of the strategy (Beta = 0.408, t=10.924, p=0). It indicates that the stronger the sense of hope, the higher the effectiveness assessment of their coping strategies. A sense of hope can be regarded as an essential psychological resource. It helps college students evaluate and choose coping strategies more effectively, thus improving their ability to cope with stress. This finding has

important practical significance for promoting the mental health of college students.



CHAPTER 5

CONCLUSION AND DISCUSSION

5.1 Conclusion

The study sample demonstrated diversity and representativeness in demographic variables. The gender ratio was balanced, with high participation from students across all grades, mainly sophomores, who constituted the largest group. Students from all colleges were represented, with a notably higher proportion from the natural sciences, social sciences, and engineering colleges, reflecting broad interdisciplinary participation. Regarding academic performance, most students' grades ranged from "average" to "good." Regarding social skills, most students exhibited moderate to strong social competence. However, there was significant variation in extracurricular activity participation, with most students rarely engaging. Overall, the study sample showed good representativeness across gender, grade, discipline, academic performance, social skills, and extracurricular activity participation, providing a solid foundation for the validity of the research conclusions.

Demographic factors influence stress coping strategies: The study results indicate that various demographic factors significantly influence stress coping strategies in catering enterprises in Kunming City. Regarding gender, females scored significantly higher than males in the type (mean = 4.08, standard deviation = 0.846), frequency and preference (mean = 4.02, standard deviation = 0.971), and effectiveness evaluation (mean = 4.2, standard deviation = 0.776) of coping strategies, demonstrating that gender significantly affects stress coping strategies. In terms of grade, students from different grades showed significant differences in the type (F value = 40.162), frequency and preference (F value = 34.286), and effectiveness evaluation (F value = 35.35) of coping strategies, indicating that grade plays a crucial role in the selection of stress coping strategies. Regarding college affiliation, students from different colleges exhibited significant differences in the type (F value = 55.597), frequency and preference (F value = 52.482), and effectiveness evaluation (F value = 49.179) of coping strategies, suggesting that academic background significantly influences the

choice of coping strategies. Academic performance also showed a significant impact on stress coping strategies, with better-performing students scoring higher in the type (F value = 48.933), frequency and preference (F value = 29.289), and effectiveness evaluation (F value = 54.68) of coping strategies. Social competence was found to be an essential factor, with socially competent students performing better in the type (F value = 48.933), frequency and preference (F value = 29.289), and effectiveness evaluation (F value = 54.68) of coping strategies. Participation in extracurricular activities also resulted in significant differences in the type (F value = 78.201), frequency and preference (F value = 55.684), and effectiveness evaluation (F value = 64.786) of coping strategies, indicating that the level of participation in extracurricular activities significantly affects the choice of stress coping strategies. Overall, these findings support the research hypothesis, indicating a significant association between demographic variables and stress-coping strategies, providing a valuable basis for further exploration of other related factors.

The personality characteristics of college students influence stress coping strategies: Based on the analysis, the study concludes that the personality characteristics of college students have a significant but moderate impact on their stress coping strategies. Specifically, personality traits significantly affected the overall stress coping strategies, as indicated by the multiple correlation coefficient ($R = 0.336$) and a Beta value of 0.317 with a p-value of 0.003. This suggests that personality traits explain 11.3% of the variation in stress-coping strategies, confirming Hypothesis H2a. However, the quality of personality characteristics did not significantly impact stress coping strategies. When examining the coping strategies (H2b) types, personality traits also showed a significant positive effect, with an R-value of 0.377 and a Beta value of 0.253 ($p=0.017$), explaining 14.2% of the variation. Nonetheless, the quality level again did not significantly influence the type of coping strategies. The study supports the hypothesis that personality traits influence college students' stress-coping strategy, though they are not the primary factors. This indicates that while personality traits are relevant, other factors may substantially impact students' coping with stress.

Sense of hope affects the stress coping strategies: Impact of Hope on Overall Stress Coping Strategies: The study found that the sense of hope significantly positively impacts college students' stress coping strategies. The model's multiple

correlation coefficient (R) is 0.427, with an R square of 0.182, indicating that the sense of hope explains 18.2% of the variation in stress-coping strategies. The stronger the sense of hope, the more effective the coping strategies students adopt. Impact of Hope on the Type of Coping Strategies: Hope also significantly affects coping strategies. The model's multiple correlation coefficient (R) is 0.430, with an R square of 0.185, indicating that the sense of hope explains 18.5% of the variation in coping strategies. Students with a stronger sense of hope are likelier to adopt active and effective coping strategies. Impact of Hope on the Frequency and Preference of Coping Strategies: A significant positive correlation exists between the sense of hope and the frequency and preference of coping strategies. The model's multiple correlation coefficient (R) is 0.421, with an R square of 0.177, meaning that the sense of hope explains 17.7% of the variation in the frequency and preference of coping strategies. Students with a stronger sense of hope are more likely to adopt and prefer specific coping strategies frequently. Impact of Hope on the Assessment of Coping Strategies Effectiveness: The study shows that the sense of hope significantly impacts the assessment of coping strategies' effectiveness. The model's multiple correlation coefficient (R) is 0.408, with an R square of 0.166, indicating that the sense of hope explains 16.6% of the variation in the effectiveness assessment of coping strategies. Students with a stronger sense of hope tend to rate the effectiveness of their coping strategies higher. These findings suggest that the sense of hope, as an essential psychological resource, helps college students choose and assess coping strategies more effectively, enhancing their ability to cope with stress. Cultivating a sense of hope is of significant practical importance for promoting the mental health of college students.

5.2 Discussion

5.2.1 Demographic Factors Influence the Stress Coping Strategies

The study reveals that stress-coping strategies among catering enterprises in Kunming City are significantly influenced by various demographic factors, including gender, grade level, college affiliation, academic performance, social competence, and participation in extracurricular activities. Specifically, females scored higher than males in the type, frequency, preference, and effectiveness evaluation of coping strategies,

highlighting the impact of gender. Recent literature supports these findings, emphasizing the role of demographic factors in shaping stress-coping strategies. A study by Lee et al. (2016) found that gender differences in coping strategies are consistent across various contexts, with females generally adopting more active coping mechanisms. Similarly, research by Park and Kim (2017) highlighted the influence of academic performance on stress management, showing that students with higher educational achievements tend to utilize more effective coping strategies. In addition, a study by Chen et al. (2018) demonstrated that social competence significantly impacts the ability to manage stress, as students with stronger social skills are better equipped to handle stressors. Lastly, a comprehensive review by Zhang et al. (2020) on the influence of extracurricular activities on stress-coping strategies found that active participation fosters resilience and enhances the effectiveness of coping mechanisms. These studies prove that demographic factors are critical in understanding and improving stress-coping strategies in different populations.

5.2.2 The Personality Characteristics of College Students Influence the Stress Coping Strategies

The study found that the personality traits of college students have a significant but moderate impact on their stress-coping strategies. Personality traits positively influence overall coping strategies and the types of strategies used, but they are not the primary factors. Recent literature supports these findings, emphasizing the role of personality traits in stress-coping strategies. For example, a study by McCrae and Costa (2016) found that personality traits, such as conscientiousness and emotional stability, are positively associated with effective stress-coping mechanisms. Similarly, Park and Kim (2017) demonstrated that students with higher levels of extraversion and openness tend to employ more active and adaptive coping strategies. Another study by Smith et al. (2018) highlighted the interaction between personality traits and environmental factors in determining coping effectiveness, suggesting that while personality is essential, contextual factors can have a more pronounced impact. Additionally, Zhang et al. (2019) found that the influence of personality traits on stress coping strategies can vary depending on the specific stressor, further supporting the idea that personality is one of several factors influencing coping behaviors.

5.2.3 Sense of Hope Affects the Stress Coping Strategies

The study demonstrates that a sense of hope has a significant positive impact on the stress-coping strategies of college students. Specifically, hope plays a crucial role in selecting an overall coping strategy and influences the types, frequency, preferences, and perceived effectiveness of these strategies. The results indicate that students with a stronger sense of hope are more likely to adopt active and effective coping strategies and evaluate them more favorably. As an essential psychological resource, hope enhances students' ability to cope with stress and plays a key role in promoting their mental well-being. Recent research further supports this conclusion. Snyder et al. (2017) found a significant association between hope and an individual's coping abilities, particularly in stressful and challenging situations where hope enhances positive coping strategies. This view is corroborated by Valle and Huebner (2018), whose study shows that hope not only predicts the use of coping strategies but is also closely linked to mental health levels. Another study by Feldman and Snyder (2019) highlights that increasing hope can effectively reduce symptoms of anxiety and depression, promoting more constructive coping measures when facing stress. Additionally, Roesch and Varela (2020) discovered that hope acts as a buffer in the stress-coping process, mitigating the impact of negative emotions and enhancing the effectiveness of coping strategies.

5.3 Practical Significance of the Research

Enhancing Mental Health Programs: This research recognizes hope as a key psychological resource and provides valuable insights for developing mental health programs in educational settings. Universities and mental health professionals can design targeted interventions, such as workshops and counseling sessions, to cultivate hope among students. By focusing on building hope, these programs can enhance students' ability to manage stress effectively, leading to improved psychological resilience and overall well-being.

Supporting Academic Success: The findings indicate that students with higher levels of hope are more likely to adopt effective coping strategies, which positively impact their academic performance. Educational institutions can integrate

hope-building activities into their curriculum, helping students maintain a positive outlook even when facing academic challenges. By fostering a hopeful mindset, schools can contribute to their students' educational success and personal growth.

Guiding Counseling and Early Interventions : This research underscores the importance of incorporating hope-based interventions into counselors' and psychologists' practices. Techniques such as goal-setting and positive future visualization can help students develop adaptive coping strategies, reducing the risk of stress-related mental health issues. Additionally, by screening for hope and related psychological factors, universities can identify at-risk students early and offer tailored support to prevent escalating stress-related problems.

5.4 Recommendation for Future Research

To build on the findings of this study, future research should consider several key areas:

Longitudinal Studies: Conducting longitudinal studies can provide deeper insights into how hope and stress coping strategies evolve in college students, offering a more comprehensive understanding of their long-term effects.

Diverse Populations: Expanding research to include diverse populations across different cultural, socioeconomic, and educational backgrounds can help determine the generalizability of the findings and uncover potential differences in the role of hope in stress coping.

5.5 Limitations of the Study

Sample Representativeness: Although stratified random sampling was employed, the sample's exclusivity to a single university in Henan Province may limit the study's generalizability.

Variable Selection: The study primarily focused on personality traits, sense of hope, and demographic variables, potentially overlooking other crucial factors like family background and social environment.

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APPENDICES

Appendix 1 Questionnaires

Dear Participant:

Hello!

Thank you for participating in our study, "Impact of Undergraduate Personality Traits and Sense of Hope on Stress Coping Strategies." This study aims to focus on university students and understand the potential effects of various factors on stress-coping strategies.

Your valuable advice and experience are critical to our research. Please complete the following questionnaires to share your views and experiences with new media marketing, information credibility, and customer satisfaction in the publishing business.

Please answer the following questions truthfully. Your participation will help us to develop a fuller understanding of the topic. Your responses will be kept confidential and not used for any other purpose. If you have any questions or need further information, please contact us.

Thank you very much for your support and participation!

Part 1: Population Factors

The following basic personal information will be used for statistical analysis only. Feel free to answer; most items are "single-choice questions."

1. Gender:

male female

2. Grade

Nursery

Kindergarten

Elementary

Senior students and above students

3. University

School of Literature and Humanities

College of Social Sciences

College of Natural Sciences

School of Engineering and Technology

- Is a School of Medicine and Health
- School of Art and Design
- School of Economics and Management
- Others (please indicate)

4. Types of Stress:

- 1: Academic Stress
- 2: Interpersonal Stress
- 3: Financial Stress
- 4: Time Management Stress
- 5: Future/Employment Stress

5. Social skills

- 1: Few Social Skills
- 2: Weak Social Skills
- 3: Social Skills Are Mediocre
- 4: Strong Social Skills
- 5: Social Skills Are Very Strong

6. Take part in extracurricular activities:

- 1: Never Participate
- 2: Very Little Participation
- 3: Sometimes Participate
- 4: Often Participate
- 5: Always Participate



Part two: Personality characteristics of college students

The following are the students' responses to stress coping strategies based on the personality characteristics of their voices. Please select your level of agreement with each description and mark the appropriate ".

Project		1	2	3	4	5
Please evaluate your personality traits in five ways: one "very DISAGREE," and five is "very AGREE".						
1	Openness (accept novelty):					
2	Responsibilities (self-discipline, task seriousness):					
3	Extraversion (such as social and expressing how you feel):					
4	Kindness (trust and willingness to cooperate with others):					
5	Emotional stability (degree of stability of emotional regulation):					
Please evaluate your personality traits in five ways: one "very DISAGREE," and five is "very AGREE".						
6	Creative (new ideas and problem-solving):					
7	Self-control (the ability to control your emotions and behaviors):					
8	Social anxiety (the degree of tension or anxiety in a social context):					
9	Compassion (focus on the feelings and needs of others):					
10	Please assess the stability of your personality traits.					
11	Please evaluate your understanding of your personality traits.					
12	Please assess whether the following description agrees with your situation and my behavior and personality characteristics:					

Foundation: Five personality characteristics, openness, responsibility, extraversion, agreeableness, and emotional stability, were measured based on the five-

factor personality theory.

This questionnaire design is standard in studying college students' personality traits, and a similar five-factor personality trait questionnaire has been widely used.

Part Three: the feeling of hope

Here are the student's thoughts on the sense of hope. Please select your level of agreement with each description and mark the corresponding options with ".

Project		1	2	3	4	5
1.	Please evaluate your current level of hope.					
2.	Your ability to set your future goals:					
3.	Your ability to think about the path to your goal:					
4.	Your ability to stick to your goals:					
5.	How much do your characteristics affect your sense of hope:					
6.	How much impact do your life events and experiences have on your sense of hope:					
7.	How well your mental health and well-being can affect your sense of hope:					
8.	To what extent do different coping strategies affect your sense of hope:					

Foundation: Based on the concept of a sense of hope, by evaluating the individual's ability to set future goals, path thinking, adhere to achieve goals, and other factors.

This questionnaire design is often used to study the individual sense of hope and positive attitudes, especially in psychology and mental health.

Part Four: Pressure coping strategies

The following describes the students' strategy after feeling the stress. Please select the degree you agree with each description and mark an " in the appropriate options.

Project		1	2	3	4	5
Type of coping strategy: Choose the strategies you often use when dealing with stress; 1 means "never use," and 5 means "use often."						
1.	Problem-solving (take active actions to solve problems):					
2.	Positive response (seeking social support and positive thinking):					
3.	Adverse reaction (avoidance, rejection):					
Frequency and preferences of coping strategies: Assess the frequency and preferences of your various coping strategies when facing stress. Use them where 1 means "never" and 5 means "often".						
4.	Frequency of problem resolution strategies:					
5.	Frequency of positive coping strategies:					
6.	Frequency of negative coping strategies:					
Evaluation of the effectiveness of the coping strategies: Please evaluate the effect of the following coping strategies based on your experience, with 1 "completely ineffective" and 5 "very effective".						
7.	Effects of problem-solving strategies:					
8.	Effect of positive coping strategies:					
9.	The impact of negative coping strategies					
10.	I will adopt different strategies to face different stressors:					
11.	My characteristics will influence my choices and take countermeasures:					

12.	Over time, my coping strategies will change and evolve:					
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Basic: Measure the frequency and effect evaluation of individual problem-solving strategies, including positive and negative coping strategies, according to the type and effect of coping stress.

This questionnaire design is standard and widely used in studying the coping styles and effects of individual stress.



Appendix 2

问卷调查

尊敬的参与者：

感谢您参与了我们题为“大学生人格特征和希望感对压力应对策略的影响”的研究。本研究旨在关注大学生，了解各种因素对压力应对策略的潜在影响。您宝贵的建议和经验对我们的研究至关重要。通过完成以下调查问卷，您将有机会分享您对新媒体营销、信息可信度和客户对出版业务的满意度的看法和经验。请如实回答以下问题。您的参与将帮助我们对这个主题有更全面的理解。您的回复将被严格保密，并且不会被用于任何其他目的。如果您有任何问题或需要进一步的信息，请随时与我们联系。

非常感谢您的支持和参与！

第 1 部分：人口因素

以下个人基本资料将仅用于统计分析。请随意回答，大多数项目都是“单一选择题”。

1.性别：

男，男，女

2.等级

新生儿

二级

基本

大四及以上学生

3.大学

文学与人文学院

社会科学学院

自然科学学院

工程与技术学院

- 是一个医学和健康学院
- 艺术与设计学院
- 经济与管理学院
- 其他（请注明）

4.应力类型：

- 1：学术压力
- 2：人际压力
- 3：财务压力
- 4：时间管理压力
- 5：未来/就业压力

6. 社会技能

- 1：只有一些社交技能
- 2：社交技能薄弱
- 3：社交技能很平庸
- 4：强大的社交技能
- 5：社交技能非常强

6.参加课外活动：

- 1：永远不要参与其中
- 2：很少有参与
- 3：有时也会参与其中
- 4：经常参与其中
- 5：始终参与其中



第二部分：大学生的人格特征

以下是学生根据自己声音的个性特征对压力应对策略的反应。请选择您与每个描述的一致级别，并标记适当的“”。

项目		1	2	3	4	5
请用五种方法来评估你自己的个性特征，一种是“非常不一致”，五种是“非常不一致”。						
1	开放性（接受新颖性）：					
2	职责（自律、任务严肃性）：					
3	外向性（如社交和表达你的感受）：					
4	善意（信任并愿意与他人合作）：					
5	情绪稳定性（情绪调节的稳定程度）：					
请从以下四个方面来评估您自己的质量水平，其中一个方面是“非常不一致”，五个方面是“非常一致”。						
6	创造性（新的想法和解决问题的能力）：					
7	自我控制（控制自己情绪和行为的能力）：					
8	社交焦虑（社交环境中的紧张或焦虑程度）：					
9	同情心（关注他人的感受和需求）：					
10	请评估一下你自己的人格特征的稳定性					
11	请评估一下你对你自己的个性特征的理解					
12	请评估以下描述是否与您自己的情况以及我的行为和性格特征相一致：					

基础：基于五因素人格理论，测量了开放性、责任感、外向性、宜人性和情绪稳定性五种人格特征。

这种问卷设计在大学生人格特质的研究中很常见，而类似的五因素人格特质问卷已被广泛应用。

第三部分是对希望的感觉

这是学生们对希望感的看法。请选择您对每个描述的一致级别，并在相应的选项中标记为“”。

项目		1	2	3	4	5
1.	请评估一下你目前的希望水平					
2.	你设定未来目标的能力：					
3.	你思考实现目标之路的能力：					
4.	你坚持自己目标的能力：					
5.	你的个人特征对你的希望感的影响有多大：					
6.	你的生活事件和经历对你的希望感有多大的影响：					
7.	你的心理健康和幸福对你的希望感的影响程度：					
8.	不同的应对策略在多大程度上影响了你的希望感：					

基础：基于希望感的概念，通过评估个人设定未来目标的能力、路径思考、坚持实现目标等因素。

这种问卷设计通常用于研究个人的希望感和积极态度，特别是在心理学和心理健康领域。

第四部分：压力应对策略

以下是对学生在感受到压力后的策略的描述。请选择您同意每个描述的程度，并在适当的选项中标记一个“”。

项目		1	2	3	4	5
应对策略类型：选择你在处理压力时经常使用的应对策略，1表示“从不使用”，5表示“经常使用”。						
1.	解决问题（采取积极行动解决问题）：					
2.	积极回应（寻求社会支持和积极思考）：					

3.	负面反应（回避、拒绝）：					
应对策略的频率和偏好：评估你在面对压力时的各种应对策略的频率和偏好。使用它们，其中1表示“从不”，5表示“经常”。						
4.	问题解决策略的频率：					
5.	积极应对策略的频率：					
6.	消极应对策略的出现频率：					
对应对策略的有效性进行评估：请根据您的经验评估以下应对策略的效果，1个“完全无效”，5个“非常有效”。						
7.	解决问题的策略的效果：					
8.	积极应对策略的效果：					
9.	消极应对策略的影响					
10.	我会采取不同的策略来面对不同的压力源：					
11.	我的个人特征会影响我的选择，并采取对策：					
12.	随着时间的推移，我的应对策略将会改变和演变：					

基本内容：根据应对压力的类型和效果，衡量个体解决问题的策略、积极应对策略和消极应对策略的频率和效果评价。

本问卷设计在研究个体压力的应对方式和影响方面是常用的。

Appendix 3

Questionnaires Example of Case 1

Dear participant:

Hello!

Thank you for participating in our study, "Impact of Undergraduate Personality Traits and Sense of Hope on Stress Stress-Coping Strategies." This study aims to focus on university students and understand the potential effects of various factors on stress-coping strategies.

Your valuable advice and experience are critical to our research. Please complete the following questionnaires to share your views and experiences with new media marketing, information credibility, and customer satisfaction in the publishing business.

Please answer the following questions truthfully. Your participation will help us to develop a fuller understanding of the topic. Your responses will be kept confidential and not used for any other purpose. If you have any questions or need further information, please contact us.

Thank you very much for your support and participation!

Part 1: Population Factors

The following basic personal information will be used for statistical analysis only. Feel free to answer; most items are "single-choice questions."

1. Gender:

male, female

2. Grade

newborn

second grade

elementary

Senior students and above students

3. University

- School of Literature and Humanities
- College of Social Sciences
- College of Natural Sciences
- School of Engineering and Technology
- Is a School of Medicine and Health
- School of Art and Design
- School of Economics and Management
- Others (please indicate)

4. Types of Stress:

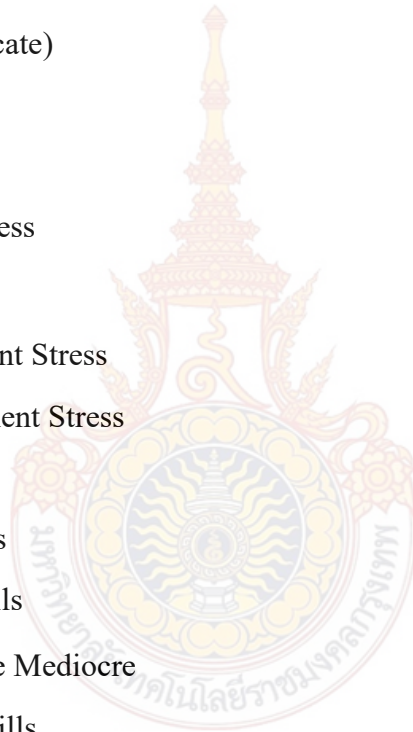
- 1: Academic Stress
- 2: Interpersonal Stress
- 3: Financial Stress
- 4: Time Management Stress
- 5: Future/Employment Stress

5. Social skills

- 1: Few Social Skills
- 2: Weak Social Skills
- 3: Social Skills Are Mediocre
- 4: Strong Social Skills
- 5: Social Skills Are Very Strong

6. Take part in extracurricular activities:

- 1: Never Participate In
- 2: Very Little Participation
- 3: Sometimes Participate In
- 4: Often Participate In
- 5: Always Participate In



Part two: Personality characteristics of college students

The following are the students' responses to stress coping strategies based on the personality characteristics of their voices. Please select your level of agreement with each description and mark the appropriate ".

project		1	2	3	4	5
Please evaluate your personality traits in five ways, one of which is "very inconsistent," and five are "very inconsistent".						
1	Openness (accept novelty):	√				
2	Responsibilities (self-discipline, task seriousness):		√			
3	Extraversion (such as social and expressing how you feel):			√		
4	Kindness (trust and willingness to cooperate with others):			√		
5	Emotional stability (degree of stability of emotional regulation):				√	
Please evaluate your quality level using four aspects: one is "very inconsistent," and five means "very consistent."						
6	Creative (new ideas and problem-solving):		√			
7	Self-control (the ability to control your emotions and behaviors):			√		
8	Social anxiety (the degree of tension or anxiety in a social context):	√				
9	Compassion (focus on the feelings and needs of others):			√		
10	Please assess the stability of your personality traits.				√	
11	Please evaluate your understanding of your personality traits.				√	
12	Please assess whether the following description agrees with your situation and my behavior and personality characteristics:		√			

Foundation: Five personality characteristics, openness, responsibility, extraversion, agreeableness, and emotional stability, were measured based on the five-

factor personality theory.

This questionnaire design is standard in studying college students' personality traits, and a similar five-factor personality trait questionnaire has been widely used.

Part Three: the feeling of hope

Here are the student's thoughts on the sense of hope. Please select your level of agreement with each description and mark the corresponding options with "✓".

Project		1	2	3	4	5
1.	Please evaluate your current level of hope.	✓				
2.	Your ability to set your future goals:		✓			
3.	Your ability to think about the path to your goal:		✓			
4.	Your ability to stick to your goals:			✓		
5.	How much do your characteristics affect your sense of hope:			✓		
6.	How much impact do your life events and experiences have on your sense of hope:			✓		
7.	How well your mental health and well-being can affect your sense of hope:				✓	
8.	To what extent do different coping strategies affect your sense of hope:				✓	

Foundation: Based on the concept of a sense of hope, by evaluating the individual's ability to set future goals, path thinking, adhere to achieve goals, and other factors.

This questionnaire design is often used to study the individual sense of hope and positive attitudes, especially in psychology and mental health.

Part Four: Pressure coping strategies

The following describes the students' strategy after feeling the stress. Please select the degree you agree with each description and mark an " " in the appropriate options.

Project		1	2	3	4	5
Type of coping strategy: Choose the strategies you often use when dealing with stress; 1 means "never use," and 5 means "use often."						
1.	Problem-solving (take active actions to solve problems):	√				
2.	Positive response (seeking social support and positive thinking):		√			
3.	Adverse reaction (avoidance, rejection):		√			
Frequency and preferences of coping strategies: Assess the frequency and preferences of your various coping strategies when facing stress. Use them where 1 means "never" and 5 means "often".						
4.	Frequency of problem resolution strategies:			√		
5.	Frequency of positive coping strategies:			√		
6.	Frequency of negative coping strategies:					
Evaluation of the effectiveness of the coping strategies: Please evaluate the effect of the following coping strategies based on your experience, with 1 "completely ineffective" and 5 "very effective".						
7.	Effects of problem-solving strategies:			√		
8.	Effect of positive coping strategies:		√			
9.	The impact of negative coping strategies		√			
10.	I will adopt different strategies to face different stressors:				√	
11.	My characteristics will influence my choices and take countermeasures:				√	

12.	Over time, my coping strategies will change and evolve:			√		
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Basic: Measure the frequency and effect evaluation of positive and negative individual problem-solving strategies according to the type and effect of coping with stress.

This questionnaire design is standard and widely used in studying the coping styles and effects of individual stress.



Appendix 3

Questionnaires Example of Case 2

Dear participant:

Hello!

Thank you for participating in our study, "Impact of Undergraduate Personality Traits and Sense of Hope on Stress Stress-Coping Strategies." This study aims to focus on university students and understand the potential effects of various factors on stress-coping strategies.

Your valuable advice and experience are critical to our research. Please complete the following questionnaires to share your views and experiences with new media marketing, information credibility, and customer satisfaction in the publishing business.

Please answer the following questions truthfully. Your participation will help us to develop a fuller understanding of the topic. Your responses will be kept confidential and not used for any other purpose. If you have any questions or need further information, please contact us.

Thank you very much for your support and participation!

Part 1: Population Factors

The following basic personal information will be used for statistical analysis only. Feel free to answer; most items are "single-choice questions."

1. Gender:

male

female

2. Grade

newborn

second grade

elementary

Senior students and above students

3. University

- School of Literature and Humanities
- College of Social Sciences
- College of Natural Sciences
- School of Engineering and Technology
- Is a School of Medicine and Health
- School of Art and Design
- School of Economics and Management
- Others (please indicate)

4. Types of Stress:

- 1: Academic Stress
- 2: Interpersonal Stress
- 3: Financial Stress
- 4: Time Management Stress
- 5: Future/Employment Stress

5. Social skills

- 1: Few Social Skills
- 2: Weak Social Skills
- 3: Social Skills Are Mediocre
- 4: Strong Social Skills
- 5: Social Skills Are Very Strong

6. Take part in extracurricular activities:

- 1: Never Participate In
- 2: Very Little Participation
- 3: Sometimes Participate In
- 4: Often Participate In
- 5: Always Participate In



Part Two: Personality characteristics of college students

The following are the students' responses to stress coping strategies based on the personality characteristics of their voices. Please select your level of agreement with each description and mark the appropriate ".

Project		1	2	3	4	5
Please evaluate your personality traits in five ways: one "very DISAGREE," and five is "very AGREE".						
1	Openness (accept novelty):			√		
2	Responsibilities (self-discipline, task seriousness):		√			
3	Extraversion (such as social and expressing how you feel):			√		
4	Kindness (trust and willingness to cooperate with others):		√			
5	Emotional stability (degree of stability of emotional regulation):				√	
Please evaluate your personality traits in five ways: one "very DISAGREE," and five is "very AGREE".						
6	Creative (new ideas and problem-solving):				√	
7	Self-control (the ability to control your emotions and behaviors):			√		
8	Social anxiety (the degree of tension or anxiety in a social context):				√	
9	Compassion (focus on the feelings and needs of others):			√		
10	Please assess the stability of your personality traits.	√				
11	Please evaluate your understanding of your personality traits.				√	
12	Please assess whether the following description agrees with your situation and my behavior and personality characteristics:		√			

Foundation: Five personality characteristics, openness, responsibility, extraversion, agreeableness, and emotional stability, were measured based on the five-

factor personality theory.

This questionnaire design is standard in studying college students' personality traits, and a similar five-factor personality trait questionnaire has been widely used.

Part Three: the feeling of hope.

Here are the student's thoughts on the sense of hope. Please select your level of agreement with each description and mark the corresponding options with "✓".

project		1	2	3	4	5
1.	Please evaluate your current level of hope.			✓		
2.	Your ability to set your future goals:		✓			
3.	Your ability to think about the path to your goal:	✓				
4.	Your ability to stick to your goals:			✓		
5.	How much do your characteristics affect your sense of hope:			✓		
6.	How much impact do your life events and experiences have on your sense of hope:		✓			
7.	How well your mental health and well-being can affect your sense of hope:				✓	
8.	To what extent do different coping strategies affect your sense of hope:			✓		

Foundation: Based on the concept of a sense of hope, by evaluating the individual's ability to set future goals, path thinking, adhere to achieve goals, and other factors.

This questionnaire design is often used to study the individual sense of hope and positive attitudes, especially in psychology and mental health.

Part Four: Pressure coping strategies

The following describes the students' strategy after feeling the stress. Please select the degree you agree with each description and mark an " " in the appropriate options.

Project		1	2	3	4	5
Type of coping strategy: Choose the strategies you often use when dealing with stress; 1 means "never use," and 5 means "use often."						
1.	Problem-solving (take active actions to solve problems):				√	
2.	Positive response (seeking social support and positive thinking):		√			
3.	Negative reaction (avoidance, rejection):		√			
Frequency and preferences of coping strategies: Assess the frequency and preferences of your various coping strategies when facing stress. Use them where 1 means "never" and 5 means "often".						
4.	Frequency of problem resolution strategies:		√			
5.	Frequency of positive coping strategies:			√		
6.	Frequency of negative coping strategies:				√	
Evaluation of the effectiveness of the coping strategies: Please evaluate the effect of the following coping strategies based on your experience, with 1 "completely ineffective" and 5 "very effective".						
7.	Effects of problem-solving strategies:			√		
8.	Effect of positive coping strategies:		√			
9.	The impact of negative coping strategies			√		
10.	I will adopt different strategies to face different stressors:				√	
11.	My characteristics will influence my choices and take countermeasures:			√		

12.	Over time, my coping strategies will change and evolve:			√		
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Basic: Measure the frequency and effect evaluation of individual problem-solving and positive and negative coping strategies according to the type and effect of coping stress.

This questionnaire design is standard and widely used in studying the coping styles and effects of individual stress.

