The Mediating Effect Of Resilience In The Effects Of Daily Stress On Mental Health In College Students

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ARTICLE INFO	ABSTRACT
	In general, college students undergo various psychological changes as they adapt to new environments and rapid social changes. Mental burden and stress have the largest effects in this time. Therefore, to overcome these negative outcomes and find their causes, the present study selected daily stress and resilience as variables that affect mental health, then analyzed the relationship between each variable as well as any gender differences. In total, 513 questionnaires were collected and analyzed using the SPSS 21 program and AMOS 21, descriptive statistics, correlation, independent sample T- test, confirmatory factor analysis, and structural equation modeling. The analysis results and implications are as follows. First, it was proved that daily stress had a positive effect on the mental health of college freshmen. These results showed that higher stress had larger effects on mental health, such as stimulating somatic symptoms, slack, despair, worry, and sensitivity. Second, resilience among college freshmen was found to have a negative effect on stress-based effects on mental health. To elaborate, those with higher resilience had a lower probability of falling into difficulties as a result of mental health issues. Third, examining differences by gender showed that female students were more sensitive to the negative effects of stress and mental health than male students. It is expected that the results of this study will provide major implications for the design of various counseling and training programs to support the mental health of college students who will come to be core personnel in universities and society in the future.

Keywords: College Freshman, Resilience, Daily Stress, Mental Health

1. Introduction

College student period, it is also a time in which it is necessary for them to establish the self both emotionally and psychologically, and prepare for adulthood by forming a self-identity. It is a time to grow into a mature human being through self-cultivation, interpersonal relationships, and exploring different viewpoints of life along with acquiring knowledge for the future. However, college students in Korea live in confusion during their college years after having grown up in a result-oriented structure that is excessively biased toward achieving success and avoiding failure on the entrance exam rather than forming an identity for themselves during their adolescence (Kim, 2003). Even before they have to adapt to the new environment of college, college life adds stress to the lives of students due to academic burdens, the pressure for employment after graduation, and diversified interpersonal relationships, and these factors themselves serve as stressors on the mental health of college students. College life is formed as faculty-student relationships, peer relationships, academic achievement, and school satisfaction move together like connected links, but many students are unable to adapt to college life due to the various stresses of college life, and they suffer psychological and social difficulties as a result (Koo, 2008; Lee, 2012). The commonly reported stress factors for university students include heterosexual dating, friendships, relationships with professors, family conflict, economic problems, value problems, future problems, and academic problems (Kim et al., 2000). These lead to negative results such as physical symptoms. In particular, during the variation from youth to adulthood, the danger of suicidal thoughts and behaviors may increase in relation to alcohol use, substance abuse, and risky behavior (Amett,

2000), and the incidence of many principal mental health diseases is relatively high at this time (Kessler et al., 2005).

Mental health has been restricted as a concept that does not only refer to the state of being free from physical diseases, but also the ability to maintain satisfactory interpersonal relationships (Kim & Jeon, 2013). Recently, the definition of mental health has grown to focus not only on negative aspects such as depression, anxiety, and stress, but also on positive aspects such as life satisfaction, emotional well-being, and subjective quality of life, such as the meaning of life (Ahn, 2003; Cha, 2005; Lim & Lee 2020). Mental health manifests itself in various ways in an individual's life, ranging from physical health outcomes to affecting one's emotional stability. Therefore, when an individual has a problem with mental health, it has a great impulse on the individual and the society around them, and it can lead to physical and mental diseases, so it is very significant to maintain a robust level of mental health.

Many universities have recently begun showing interest in the mental health of students, and they therefore developed and conducted various mental health-related investigations and mind care programs examining high-risk groups. For example, in a study on the development and validation of a mental health scale for college students, Oh, & Kim (2016), identified mental health in terms of five general factors (somatization, depression, anxiety, interpersonal sensitivity, lack of attention) and three special factors (suicidal ideation, problem drinking, Internet addiction), which were measured by restructuring the scale. The higher the total score and the score of each question, the lower the level of mental health. In this scale, mental health was measured by setting a state in which no abnormal psychopathological problems appeared. Variables related to mental health can manifest in many different ways. People with poor mental health are vulnerable to various stresses, and the level of pain perceived by an individual can be easily distorted, and an individual may lack the ability to effectively cope with stress. Therefore, it can be said that mental health and stress are closely related (Jang et al., 2014).

Band & Weisz (1998) divided stress into 'significant life event stress' and 'daily life event stress' according to the intensity of stimulation. Significant life event stress refers to things that are only experienced once or a few times in a lifetime but still have a great impact on the individual, such as the death or illness of a family member or close person, or the divorce or remarriage of one's parents. Meanwhile, daily life event stress refers to minor annoyances that are repeatedly experienced in daily life, such as being late, being late, or losing belongings. Of these, daily life event stress has a greater impact on psychological, emotional, and physical adaptation than principal life event stress, and it predicts future adaptability better (Lazarus & Folkman, 1984).

Gerben et al., (2010), said that a person with a healthy mind is a person who is free from mental disorders and experiences mental well-being, and they expressed this mental 'good life' as mental health. In this sense, mental health has been reported to affect job stress, job contentment, and organizational commitment, and adolescents with high stress have been reported to be more vulnerable to mental health. Through this, it is judged that there is a negative connection between stress and mental health (Kim, 2019). Looking at studies on the effects of stress on mental health, early studies focused on physical symptoms complained of stress (Han, 2012), mental health problems such as depression and hopelessness, and problems with substance abuse and suicidal behavior (Ko & Yun, 2007) (Kim & Park 2018). Since then, studies have examined the effect of stress on well-being (Ko, 2014; Kim, 2008; Kim et al., 2013; Kim & Kim, 2011) and mental health (Kim, 2020; Lee, 2014; Ann, 2020) as a result of psychological and social effects.

Resilience has also been reported to be a variable that is highly related to mental health outcomes (Kim, 2018; Cho & Lee, 2019; Go et al., 2020). Higher resilience is related with lower depression, and initial mental health and resilience are related (Jeong, 2020; Campbell et al., 2006), while resilience is also related to slack, worry, and somatization (Hu et al., 2018; Ran et al., 2020). Besides, people with low resilience experience excessive stress and show depression or deviant behavior (Chu, 2016). Conversely, people with high resilience exhibit emotional stability even in environments where it is difficult to cope with stress well (Tugade & Fredrickson, 2004). Resilience also minimizes the negative effects of stress (Sandier et al., 2007).

Looking at the studies related to daily stress and mental health that have been presented above, it can be seen that previous studies have explored the primary factors related to mental health and revealed their relationships, but more recent studies have gone beyond a fragmentary understanding of the relationship between variables related to mental health. This indicates a tendency to search for variables that are related to the main variables. Previous studies examining the direct effects of mental health on multiple factors have only focused on the primary relationship between two variables, which makes it difficult to explain the complex relationship between multiple factors.

Therefore, this study examines the structural relationship between daily stress, mental health, and resilience in college freshmen, and specifically aims to determine whether resilience (control, sociability, and positivity) plays a mediating role in the relationship between daily stress and mental health. The research questions set for this study are as follows.

First, what is the effect of daily stress on the mental health of college freshmen?

Second, how does resilience relate to mental health among college freshmen?

Third, what are the effects of resilience, daily stress, and mental health among college freshmen by gender?

2. Theoretical background

2.1 Resilience

Resilience is the power of the mind to conquered stress and anxiety, and it refers to an personal ability to recover and grow without experiencing frustration. It also refers to the strength of the individual's unique mind that can recover in a better direction by taking various adversities, hardships, and trials—large and small—as a springboard for leaping forward, and it allows one to bounce back or come back from a stretched or compressed state, which academically refers to mental resistance (Hong, 2006). Resilience explains the elastic properties of materials. In the broad sense of resilience, it means the ability to flexibly cope with external and internal stress and exhaustion, and in the narrow sense, it means an individual's ability to control their emotional level and actively change their situations and environments (Koo & Kim, 2016). Recently, "resilience" has come to be used to indicate a positive direction to overcome trials and difficulties, and previous studies have each had their own specific definitions of resilience. For example, Wangnild & Young (1993) linked it to the concepts of willpower, self-reliance and patience, independence, and equanimity, while Constantine et al., (1999), linked it to the concepts of self-efficacy and self-awareness, self-belief and impulse control, optimism and communication ability, and cause-analysis ability. and problem-solving ability or cooperation and empathy ability. Meanwhile, according to Seligman et al., (2006), resilience is the ability to solve problems, develop clear and realistic goals, and interact easily with others, and treat oneself and others with majesty. Competence is the capacity to think, face life's challenges, have self-confidence, destination, duty, sympathy, and hope. It is also a process ability that helps individuals actively adapt through the interaction of internal characteristics and external factors (Lee, 2006). Moreover, as a normal developmental mechanism in a difficult environment, it is a mechanism or process that helps humans resist stress and survive, and it can be seen to be a dynamic process of adaptive function that humans display when faced with difficult adversity (Schoon, 2006). Werner & Smith (1992), considered resilience to be power of growth that develops as a result of healthy adaptations when experiencing dangerous situations or serious adversity and shocking experiences, and they said that it is the ability to successfully harmonize by rapidly recovering from misfortune or shock (Shin, 2013). According to Kwon (2002), when problems arise, adolescents with high resilience show a tendency to try to solve problems more actively than adolescents who do not have high resilience. In other words, this is not an individual characteristic, but a positive adaptation type that can be demonstrated by behavior and life models in situations of serious danger and disaster. Therefore, resilience can be defined as the tendency to flexibly respond to situational problems such as changes in external and internal stress by controlling one's emotional level (Lee, 2014). Luther & Cicchetti (2000), stated that resilience is not a characteristic of personality, however a dynamic process, and that it is a characteristic that changes through the interaction of the individual and the environment over time at every moment of developmental integration throughout the human lifespan. In other words, resilience is an individual's ability or function that develops over time through interactions between innate and experiential elements in the context of a supportive environment, so it should be recognized as a process rather than a special ability that one inherently possesses. Next, looking at the components of resilience, Russell & Russell (1995), stated that they included self-reliance, personal vision, flexibility, organizational ability, problem-solving ability, interpersonal relationship, sociality, and planning, while Wagnild & Young (1993) cited patience, self-reliance, willpower, independence, and equanimity. Moreover, Klohnen (1996) suggested self-confidence, emotional control, interpersonal relationship efficiency, and optimistic attitude, while Shin et al., (2009) suggested emotional adjustment, impulse control, life satisfaction, positivism, cause analysis, communication skills, sympathy, relationship, and gratitude, and Ryan & Caltabiano (2009) considered self-efficacy, patience, internal control, family and social support networks, and adaptability. Although there may be slight differences for each scale, self-regulation, which is a component of resilience, is the capability to recognize and adjustment one's own emotions, and it is also a common characteristic of people who have successfully overcome adversity and difficulties. In addition, when faced with difficulties, people with high resilience show the emotional control to control negative emotions and bring about positive emotions and a healthy sense of challenge, impulse control to suppress impulsive reactions, and self-esteem which is the basis of confidence and the ability to succeed in any situation, etc. In the self-expansion theory of the psychologist Aron & Aron (1986) positive emotions were reported to aid in the formation of human relationships by strengthening the mind that matches oneself with the other person, and enables one to establish or maintain good human relationships. The drivers of positive emotions include optimism and gratitude.

In this study, the sub-factors of resilience are composed of controllability, positivity, and sociability. First, controllability refers to the ability to recognize one's own emotions and control them. Kim & Kang (2022) stated that control involves not reacting impulsively in stressful situations, but rather seeking solutions by objectively and accurately grasping the situation one is in. This can be said to be connected to the motivation for self-growth, having a positive belief and flexible attitude when looking at external situations or problems. A person who can control and control himself emotionally with the ability to appropriately adjust his internal situation from external stimuli can be said to be a person with high self-esteem. Components of control include emotional control, impulse control, and self-esteem.

Second, positivity is the ability to interpret situations optimistically while judging reality objectively. Positivity increases life satisfaction, which improves one's individual quality of life. In many people with high resilience, positivity serves as an important component of personality, and higher positivity is associated with higher resilience and a higher correlation with individual happiness. Therefore, positivity is a sub-factor of resilience, but thinking positively can also increase resilience by serving as a driving force that enhances resilience. Lee (2012) stated that positivity is the ability to lead in the direction one wants, sharing happiness with others, and leading to harmonious human relationships and a successful life. Kim & Jin (2019) defined positivity as a self-belief that work can be performed successfully, and they stated that it includes self-optimism, life satisfaction, and gratitude. Meanwhile, according to Choi & Han (2019), positivity is a life attitude that judges how similar your current life is to your ideal life, where one tries to think optimistically in difficult situations and overcome them with a hopeful and positive attitude.

Third, sociality is the capability to establish and keep up good relationships with others. A person with high sociability is a person with excellent communication skills who communicates well with other people, establishes good relationships with other people, and maintains smooth relationships. A person with excellent communication skills obtains what he wants to achieve his own goals while showing appropriate acceptance and rejection reactions to the needs of others. Kim (2018) defined sociability as the ability to maintain good relationships with others and stated that is related to interpersonal intelligence. It is said that it is the ability to read one's emotional state well and the ego expansion ability to feel oneself as being connected to others. Sociality is composed of relationship, empathy, and communication skills. Relevance is the ability to quickly grasp the thoughts of others and form and maintain human relationships through empathy, and empathy is the ability to understand and feel the psychological state and inner experience of others. Communication ability is the capability to properly express and convey one's feelings to others, and it is the source of good interpersonal relationships and the source of positive emotions, as it is the ability needed to maintain human relationships for a long time.

2.2 Daily stress

Daily stress causes irritation, disappointment, and anxiety stemming from issues in interpersonal relationships, family problems, economic problems, social problems, loneliness, quarrels, and poor grades; it refers to stress that most people experience on a daily basis (Lazarus & Folkman, 1984). In other words, the causes and symptoms of stress vary greatly depending on an individual's personality and temperament, as well as the environment they encounter. It also includes job stress that occurs in the process of performing one's job (Cavanaugh et al., 2000).

Stress is a state of physical and psychological tension felt when one is faced with an environment that is difficult to adapt to, and it can be caused by events or thoughts that cause disappointment, anger, or annoyance (Medlineplus, 2021; Kim & Lee, 2020). Everyone feels stress. The areas of stress that people feel can generally be divided into three types: daily stress, stress related to sudden negative changes (ex, job loss, divorce, illness, etc.), and traumatic stress (ex, major accidents, war, natural disasters, etc.) (Pyon, 2017). Among the stress areas, daily stress is related to pressure from work, family, and other daily responsibilities, and individuals have to constantly try to cope with such stress. However, some individuals may not have the ability to effectively cope with stress, which can cause changes in daily life or health (Medlineplus, 2021; Kim & Lee, 2020). In other words, when an individual perceives negative events occurring in daily life as stress, and the perceived stress exceeds the personal coping limit, he or she cannot effectively cope with it, which can seriously affect their life. Everyone experiences stress, and college students in late adolescence and early adulthood are no exception (Park, 2014; Ibrahim et al., 2013). In particular, during the college student period during human development, the possibility of experiencing continuous trial and error and frustration increases as one's interpersonal relationship system expands. Therefore, the degree of stress is also reported to be high (Lee, 2012; Arnett, 2000). Specifically, it is reported that college students experience high psychological stress related to their career, study, and time utilization, along with stress related to economic problems and interpersonal relationships (Ibrahim et al., 2013; Asberg et al., 2008). Regarding the components of daily stress that college students may experience, Kwon et al., (2015) divided the interpersonal task area into the interpersonal task area and the interpersonal task area into family relationships, same-sex friend relationships, opposite-sex friend relationships, and relationships with teachers. In this study, the task areas were divided into academic problems, leisure use problems, health and physical development problems, and daily life problems. Min & Yoo (1998) divided their research into parent-related stress, alienation stress in relationships with friends, conflict stress in relationships with peers, stress related to schoolwork and higher education, and stress in relationships with teachers. Rowlison & Felner (1998) and Han & Yoo (1995) categorized components of stress into parent-related stress, home environment-related stress, friend-related stress, academic-related stress, and teacher-related and school life-related stress.

Since human beings inevitably live in complex relationships with their surrounding environments, stress cannot be avoided while they exist. Stress is an unpredictable and powerful stimulus, and it can cause fatigue and boredom in the short period, while continuous and yonks stress is a fundamental internal and external threat to individual health and well-being (Son et al., 2008; Choi, 2006). In fact, if high-intensity stress persists, it causes psychological and emotional helplessness and reduces job satisfaction, thus resulting in reduced work efficiency (Oh & Lee, 2006). Continuous stress not only causes physiological changes in the body,

such as fatigue, headache, insomnia, shortness of breath, and digestive disorders, but it can also lead to various forms of burnout due to deterioration of physiological and psychological health and behavior (Vegchel et al., 2005). At the social level, individual stress also causes various conflicts and has social costs by reducing the efficiency and productivity of organizations and communities (Song, 2012). In this context, various related academic areas have expanded the issue from a macroscopic point of view rather than briefly limiting the discussion of stress to the level of individual health, which has become an important topic of discussion.

The daily stress we experience in our daily life substantially affects our physical and psychological health. Various stressful situations cause various psychological maladjustments such as emotional instability and psychopathology (Hochschild, 1983). However, it is important to find a moderating variable that can control the psychological difficulties caused by stress, as research results have shown that the negative effects of stress can vary depending on an individual's resources and environment (Choi, 2006; Mascaro & Rosen, 2016). In addition, daily stress is not just a matter of simple stimulation and response, but an individual's psychological action and environmental factors interact dynamically with each other, so it is not only a problem for oneself but also a factor that threatens the healthy development of their family and the society to which they belong. Moreover, it is difficult for an individual's struggles with mental health to be recognized by those around them because of their characteristics that are not easily revealed outwardly; as a result, missing the appropriate time to intervene can lead to negative results in development, thus requiring more careful attention and intervention. It is difficult to control the situation or the environment itself in terms of daily stress, but controlling the stress at hand more efficiently affects adaptation and well-being after college. Therefore, the intervention of positive variables that can contribute to healthy adaptation before the adverse effects of stress are revealed to help develop individual capacities and resources, improve emotional well-being, and decrease the negative effects of stress. This is because continuous stressful situations cause anxiety, depression, and mental disorders (Andrews, 2012) and affect mental health (Lazarus & Folkman, 1984), and daily stress can be highly related to maladjustment (Rowlison & Felner ,1998).

In the end, daily stress can be expressed as feelings of anxiety and threat that individuals feel when they are faced with difficult and difficult physical and psychological situations or events that they cannot handle. Lazarus & Folkman (1984) viewed daily stress as an interaction between an personal and the circumstances rather than being a simple individual response to external factors or stimuli. While emphasizing daily stress as a concept perceived subjectively by individuals, it was seen that determining whether or not an individual experienced stress depended on the cognitive evaluation of whether or not an individual perceived a stimulus as stress. In other words, an individual's cognitive perception of an event is an important factor in determining whether or not there will be stress (Lazarus & Folkman, 1984; Park & Kim, 2013). This point of view focuses on subjectively experiencing and evaluating daily stress events for an individual, so it has the advantage of being able to grasp individual stress in a relatively accurate manner. As such, the concept of stress as a mutual dynamic between the individual and the circumstances has evolved the perception of stress, and the individual's subjective role in daily stress has been emphasized (Seong & Kang, 2016). Lazarus et al., (1981) found that problems experienced in daily life include personal problems experienced in life such as health problems, time pressure, and financial worries, and regular events such as schoolwork, work, and housework (which can be divided into regular events and micro events such as sudden weather changes, loss of things, and traffic jams). Lazarus et al., (1985) defined daily stress as a state that is annoying, tense, or frustrating due to trivial but burdensome things experienced in daily life due to daily life events. Daily stress, which can be experienced frequently, is not as stimulating as stress stemming from major life events, but has a high probability of occurrence, and various problems can occur simultaneously, so it is considered to be more dangerous than major life event stress (Dohrenwend et al., 1984). Repetitive and continuous accumulation of daily stress can cause negative effects on an individual's emotional well-being as well as their attitudes toward life and social relationships. It has explanatory power (Crnic & Greenberg, 1990; DeLongis et al., 1982).

2.3 Mental Health

Mental health is more than the stone of a mental chaos; it is a state of well-being in which one can realize one's abilities, cope with the stresses of everyday life, and be able to work productively and donate to one's community. Overall health, including physical health, cannot be maintained without maintaining mental health. Mental health is the comprehensive ability of human beings to think, emote, interact with each other, earn a living, and enjoy life (WHO, 2022). This involves viewing mental health as not simply a passive concept where one does not have any mental disorders, but emphasizes reaching a level of mental health in a positive aspect (Kim & Ko, 2016). In other words, it means expanding the concept of mental health from the existing 'disease model aspect' to the 'positive dimension' (Yoo, 2018). Further, mental health exists as an independent structure while positive and negative dimensions are related to each other (Keyes, 2002; Lenzenweger, 2004; Seligman & Csikszentmihalyi, 2000).

Modern people live in a complex and diverse society that changes more rapidly than ever before, so they live in constant stress to the extent that life itself is a series of stresses. The rapid development of medicine and civilization has greatly contributed to the convenience of human life and improvements in physical health, but it also causes psychological pain such as depression, anxiety, frustration, and lack of surroundings, so leading a mentally healthy life is emerging as a great concern in this era. In particular, university students in to the transition period from adolescence to adulthood undergo many changes physically, psychologically,

emotionally, and socially, while experiencing learning, independence from parents, establishment of self-identity, uncertainty about the future, and preparation for the future. As a result, they live under various stresses (Han & NamGung, 2008). University students experience the process of choosing and solving many parts of their lives by themselves as they switch to an autonomous and independent lifestyle after having lived a passive and dependent life before entering college. In other words, students in this period experience pressure from social expectations, separation from family, friends and people around them, and confusion and psychological difficulties in forming a sense of identity. Many scholars have conducted research examining the mental health of college students. It has been said that mental health problems are serious due to the development negatory psychological emotions such as slack and anxiety. Compared to other age groups, the various causes of stress faced by college students negatively affect their psychological adaptation. The psychological burden and problems of maladjustment experienced by college students threaten their mental health, which can lead to deviant behaviors such as addiction and violence (Lee et al., 2012).

University students are in an important developmental process to prepare for and prepare for adulthood, and they are using financial resources to play a leading role and position in the future society. With this background, as a result of a survey on the mental health of college students, 38.3% of college freshmen responded that they had psychological maladjustment or mental health problems (Park, 2017). Roh et al., (2007) depression in college students is the most prevalent mental illness and a very common disorder comparable to the common cold. Slump, which is the most reported mental health problem among college students, is one of the emotions that anyone living in a competitive modern society can experience at least once in their lifetime. Depression is accompanied by various cognitive, behavioral, and physical symptoms along with emotional symptoms dominated by sad feelings. A survey of American college students showed that 34.5% reported that it was difficult to maintain academic functioning due to severe depression, 56.9% experienced excessive anxiety, 8.9% considered suicide, and 1.4% reported at least one suicide attempt (American College Health Association, 2015). In addition, 47.5% of college freshmen reported experiencing mental disorders, and 23.7% reported experiencing depression, anxiety, and suicidal thoughts (Bruffaerts et al., 2018).

The most frequently reported mental health problems among college students are slack and worry, and 19.74% of college freshmen reported wanting counseling for these problems (Park, 2017). Depression in college freshmen is likely to persist into adulthood, and negative emotions such as slack and worry that freshmen may experience, along with suicide, can affect the overall mental health of adults, so they should be dealt with as matters of great importance (Gang et al., 2019). Depression is defined by the experience of a depressed and sad state characterized by marked sadness and discouragement, lack of energy, low self esteem, and guilt or related portent. Depressed people have a reduced need for activity, are less socially productive, and have slower movements and speech. Cognitively, they experience negative and helpless feelings, and may experience disturbances in appetite and sleep. In this way, in addition to sad feelings, depression appears overall across the domains of motivation, behavior, cognition, and physical function. Anxiety refers to the physiological and emotional responses of the central nervous system to vague feelings of threat or danger. It is a natural and adaptive psychological response to feel anxiety in a threatening situation that contains realistic risks, but if excessive anxiety persists despite the absence or disappearance of threatening tolerance, it can be seen as pathological anxiety. In most situations, people feel excessive anxiety and worry about everything, and if these symptoms persist for at least 6 months, it may lead to an anxiety disorder (American Psychiatric Association, 2013).

In particular, risk factors that deteriorate the mental health of college students who are directly facing social demands and changes are increasing, but there is a lack of social services and safety measures necessary to maintain mental health. Looking at previous studies related to college students' mental health, stress has been suggested to be a major factor influencing mental health (Kong & Kang, 2012; Lee & Jo, 2013; Goldston et al., 2009). In a study by Kong & Kang (2012), friendship and value problems were found to be types of college life stress that significantly affected the mental health of college students, and among the two factors, value stress had a greater impulse on mental health than friendship. Kim et al., (2015) studied 235 college students who had experienced high-intensity stress in the past 5 years and found that the stress experience of college students affects post-traumatic stress symptoms and that some of the symptoms, intrusive re-experiencing, were psychological. We looked at whether this contributed to the occurrence of health problems. As a result, it was found that the more stress one experienced, the higher tendency it had to inhibit behavior, and as a result, induce the experience of increased post-traumatic symptoms and affect mental health.

3. Research Method

3.1 Study subject and analysis method

The subjects targeted in this survey study were students at D University located in P City, Gyeonggi Province. Among a total of 550 questionnaires, 513 questionnaires were analyzed after excluding insincere questionnaires. Data were analyzed using the IBM SPSS 21 program, and descriptive statistical analysis, correlation analysis, and independent sample T-test were performed with a focus on gender comparisons. Next, the measurement model and structural model were verified using AMOS 21. Through verification of the measurement model, the validity and discriminative power between the latent variables were confirmed according to whether each indicator sufficiently explained the latent variables. Finally, by conducting

structural relationship analysis between variables, statistical significance between path coefficients and variables was confirmed. Structural equation model analysis used measurement model analysis to verify the validity of the scale and verify the significance of the mediating pathway.

The demographic data of the study subjects are listed in [Table 1].
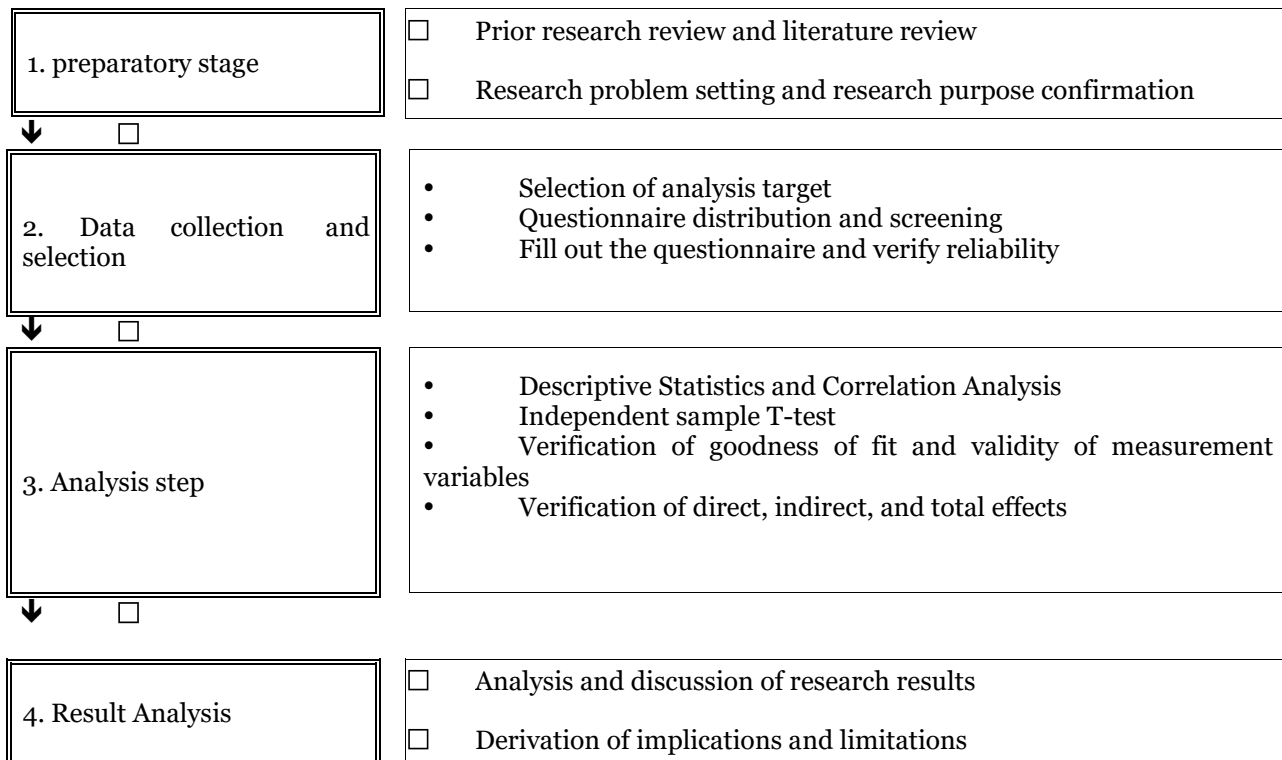
[Table 1] General characteristics of study subjects

	Division	Number of respondents		%	
Gender	Male	193		37.6	
	Female	320		62.4	
College	Humanities major	205	Male : 58	40.0	Male : 11.3
			Female : 147		Female : 28.7
	Engineering major	308	Male : 135	60.0	Male : 26.3
			Female : 173		Female : 33.7
Total		513		100	

3.2 Research Ethics Compliance

Before the start of the survey, the subjects were notified the purpose of the research and that the collected data would be used only for research purposes. The information of the collected data was kept strictly confidential, and the right to withdraw was explained to the research participant at any time and a structured questionnaire was distributed. Since the survey did not include any personal information that could identify the test subject, anonym was maintained, and the collected data went through the process of managing and disposing under the management and supervision of the Institutional Ethics Review Committee.

The study design is described in [Table 2].

[Table 2] Research Procedure

1. preparatory stage	☐ Prior research review and literature review ☐ Research problem setting and research purpose confirmation

↓ ☐

2. Data collection and selection	• Selection of analysis target • Questionnaire distribution and screening • Fill out the questionnaire and verify reliability

↓ ☐

3. Analysis step	• Descriptive Statistics and Correlation Analysis • Independent sample T-test • Verification of goodness of fit and validity of measurement variables • Verification of direct, indirect, and total effects

↓ ☐

4. Result Analysis	☐ Analysis and discussion of research results ☐ Derivation of implications and limitations

3.4 Measuring tool
3.4.1 Resilience

The resilience scale (YKRQ-27) was created by modifying the measurement tool developed by Reivich & Shatte (2003). The scale consisted of nine primary factors grouped into three secondary (parent) factors. Secondary factors consisted of control, positivity, and sociability, each with nine items, ultimately totaling 27 items. The higher the score for each sub-factor, the better the resilience. The overall Cronbach's Alpha of this study was .927, and the reliability of each sub-factor was .860 for control, .857 for positivity, and .862 for sociability.

3.4.2 Daily Stress

To measure the daily stress experienced by college freshmen, this study used a stress measurement scale centered on problems occurring in daily life that was prepared by Delongis et al., (1998). This scale, which consists of a total of 36 questions, is answered on a 4-point Likert scale ranging from 'not at all (1 point)' to 'very much so (4 points)', and respondents answered how much they worried about each item in the past week; a higher score means a higher stress level. The overall Cronbach's Alpha in this study was .934, and the reliability of each sub-factor was .806 for economy, .867 for family, .807 for academic, and .849 for society.

3.4.3 Mental Health

In this study, for mental health, five factors in the general area (somatization, depression, anxiety, interpersonal sensitivity, and attention deficit) out of a total of 105 items on the scale developed by Oh & Kim (2016) in a study on the development and validation of a mental health scale for college students were used. In this scale, mental health is measured by setting it as a state in which no abnormal psychopathological problems appear. This scale, which consists of a total of 39 questions, was measured on a Likert 4-point scale ranging from 'not at all (1 point)' to 'very much so (4 points)', and the higher the score on the scale, the lower the mental health. The overall Cronbach's Alpha in this study was .960, and by subdomain, somatization was .824, attention deficit was .881, depression was .888, anxiety was .895, and sensitivity was .889.

4. Research results

4.1 Descriptive Statistics

The descriptive statistics results for each variable are shown in [Table 3]. The average of each variable was resilience M=3.06 (SD=.430), daily stress M=1.58 (SD=.489), and mental health M=1.82 (SD=.528). The standard skewness of all measured variables was found to be less than ±2 and the standard kurtosis was within the range of ±7 or less, thus forming a normal distribution.

[Table 3] Descriptive Statistics

Variable		Average (M)	Standard Deviation (SD)	Minimum value	Maximum value	Skewness	Kurtosis
Resilience	controllability	2.97	.493	1.00	4.00	-.595	2.312
	sociability	3.13	.521	1.00	4.00	-.317	.449
	positivity	3.09	.548	1.00	4.00	-.567	.938
	Total	3.06	.430	1.00	4.00	-.330	1.838
Daily Stress	economic stress	1.62	.742	1.00	4.00	1.367	1.341
	family stress	1.38	.529	1.00	4.00	1.812	3.597
	academic stress	1.90	.763	1.00	4.00	.842	.176
	social stress	1.41	.582	1.00	4.00	1.751	3.217
	Total	1.58	.489	1.00	3.67	1.230	1.580
Mental Health	physicalization	1.58	.531	1.00	3.33	.619	-.513
	lack of attention	1.96	.614	1.00	3.88	.312	-.310
	depressed	1.83	.689	1.00	4.00	.559	-.451
	unrest	2.12	.758	1.00	4.00	.168	-.796
	interpersonal sensitivity	1.60	.582	1.00	4.00	.909	.567
	Total	1.82	.528	1.00	3.30	.319	-.688

4.2 Correlation Analysis

Correlation between study variables was analyzed and the results are shown in [Table 4] and [Table 5]. [Table 4] lists the results of correlation analysis, which was conducted to examine the relationship between latent variables and measurement variables prior to model verification.

Resilience showed a low negative correlation with daily stress, with a correlation coefficient of -.398[**] (r = -.398[**], p < .01), and mental health showed a correlation coefficient of -.564[**] (there was a negative correlation with r = -.564[**], p < .01).

Daily stress showed a high positive correlation with mental health, exhibiting a correlation coefficient of .629[**] (r = .629, p < .01).

[Table 4] Correlations among Latent Variable

Variable	1	2	3
1. Resilience	1		
2. Daily Stress	-.398**	1	
3. Mental Health	-.564**	.629**	1

** p< .01

The results of correlation analysis between measured variables and sub-factors are shown in [Table 5]. The correlation coefficients between all variables were found to be significant at the 95% confidence interval level. Specifically, there was a significant correlation between the subvariables of resilience and all subvariables of daily stress and mental health, with a correlation coefficient ranging from -.148 to -.534. Next, a significant correlation was confirmed between the daily stress subvariables and the mental health subvariables in the correlation coefficient range of .307 ~ .497.

[Table 5] Correlations among Observed Variables

Variable		Resilience			Daily Stress				Mental Health				
		1	2	3	4	5	6	7	8	9	10	11	12
Resilience	1.controllability	1											
	2.sociability	.541**	1										
	3.positivity	.530**	.509**	1									
Daily Stress	4.economic	-.285**	-.173**	-.328**	1								
	5.family	-.241**	-.194**	-.357**	.469**	1							
	6.academic	-.261**	-.216**	-.306**	.510**	.385**	1						
	7.social	-.238**	-.171**	-.148**	.340**	.347**	.339**	1					
Mental Health	8.physicalization	-.321**	-.245**	-.394**	.367**	.344**	.394**	.307**	1				
	9.lack of attention	-.457**	-.374**	-.379**	.354**	.338**	.450**	.307**	.472**	1			
	10.depressed	-.396**	-.389**	-.534**	.393**	.404**	.497**	.353**	.575**	.658**	1		
	11.unrest	-.367**	-.333**	-.402**	.374**	.390**	.481**	.408**	.576**	.580**	.710**	1	
	12.interpersonal sensitivity	-.380**	-.346**	-.464**	.402**	.348**	.427**	327**	.549**	.558**	.700**	.673**	1

**. P < .01

4.3 Independent samples T-test

[Table 6] lists the T-test results for the difference in average values according to the main variables and gender of this study. Looking at the results in [Table 5], it can be seen that female students had significantly higher scores than male students in daily stress (t=-3.646, p<.001) and mental health ((t=-3.088, p<.001). However, there was no significant difference between males and females in resilience, which means that female students are more vulnerable than male students in terms of daily stress and mental health.

[Table 6] Gender differences in key variables

Variable	Division(n)	Average (M)	Standard Deviation (SD)	t	p
Resilience	Male(193)	3.071	.497	.283	.778
	Female(320)	3.059	.386		
Daily Stress	Male(193)	1.477	.468	-3.646	.000***
	Female(320)	1.637	.491		
Mental Health	Male(193)	1.726	.538	-3.088	.000***
	Female(320)	1.874	.515		

*** p< .001

Next, a verification was conducted to distinguish specific factors that show differences in daily stress according to gender, and the results of this verification are listed in [Table 7]. There were gender differences in family stress, academic stress, and social stress.

[Table 7] Results of Daily Stress Test by Gender

Division	Average		Standard Deviation		t	p
	Male(193)	Female(320)	Male(193)	Female(320)		
1. . economic	1.584	1.642	.769	.725	-.857	.392
2. family	1.267	1.443	.411	.579	-4.017	.000***
3. academic	1.786	1.965	.801	.732	-2.586	.010*
4. social	1.269	1.498	.485	.618	-4.652	.000***

* p< .05, ** p< .01, *** p< .001

A verification was conducted to identify specific factors that showed differences in mental health according to gender, and the results are shown in [Table 8]. There were differences according to gender in terms of physicalization, lack of attention, depressed, and unrest.

[Table 8] Mental Health Screening Results by Gender

Division	Average		Standard Deviation		t	p
	Male(193)	Female(320)	Male(193)	Female(320)		
1..physicalization	1.453	1.664	.506	.531	-4.436	.000***
2. lack of attention	1.876	2.012	.644	.591	-2.431	.015*
3. depressed	1.720	1.901	.681	.685	-2.902	.004**
4. unrest	1.982	2.199	.782	.732	-3.159	.002**
5. interpersonal sensitivity	1.601	1.594	.607	.567	.126	.900

* p< .05, ** p< .01, *** p< .001

4.4 Confirmatory Factor Analysis (CFA)

For parameter estimation in confirmatory factor analysis, we conducted an analysis using the maximum likelihood method (ML), and the results are presented in [Table 9] and <Fig. 1>. In the confirmatory factor analysis model, all observed variables constituting the latent variable were found to be statistically significant (p<.001). Factor loadings were within the range from .522 to .873; therefore, the observed variable constituting the latent variable can be judged to reflect the relevant latent variable suitably. Next, we examined the Conceptual Reliability (CR) of the measurement model. This is a reliability estimation method calculated from the error values of path coefficients and measurement variables, and it is judged to be suitable if the estimated value is 0.7 or more (Fornell & larcker, 1981). CR is obtained by calculating the standardized factor coefficient of the measured variable and the error term of the measured variable according to the formula below. As a result of the analysis, the CR values of all measured variables were over 0.7, so it was judged that the concept reliability was secured. Convergent validity is the degree of concordance of the observed variables measuring

the latent variable. The degree to which the multiple scales measuring the same concept coincide. If each measurement variable measures one and the same latent variable well, then the factor load will be high.

[Table 9] Confirmatory Factor Analysis (CFA)

| Latent Variable	Metric	B	S.E.	β	C.R.	AVE	Concept reliability
Resilience	controllability	1	-	.726	-	.816	.930
	sociability	.995	.076	.684	13.104***		
	positivity	1.162	.083	.760	13.983***		
Daily Stress	economic stress	1	-	.686	-	.619	.865
	family stress	.641	.055	.618	11.569***		
	academic stress	1.060	.083	.708	12.817***		
	social stress	.596	.060	.522	10.007***		
Mental Health	physicalization	1	-	.677	-	.803	.953
	lack of attention	1.247	.084	.731	14.926***		
	depressed	1.670	.096	.873	17.341***		
	unrest	1.723	.105	.818	16.458***		
	interpersonal sensitivity	1.293	.080	.800	16.158***		

p*** < .001
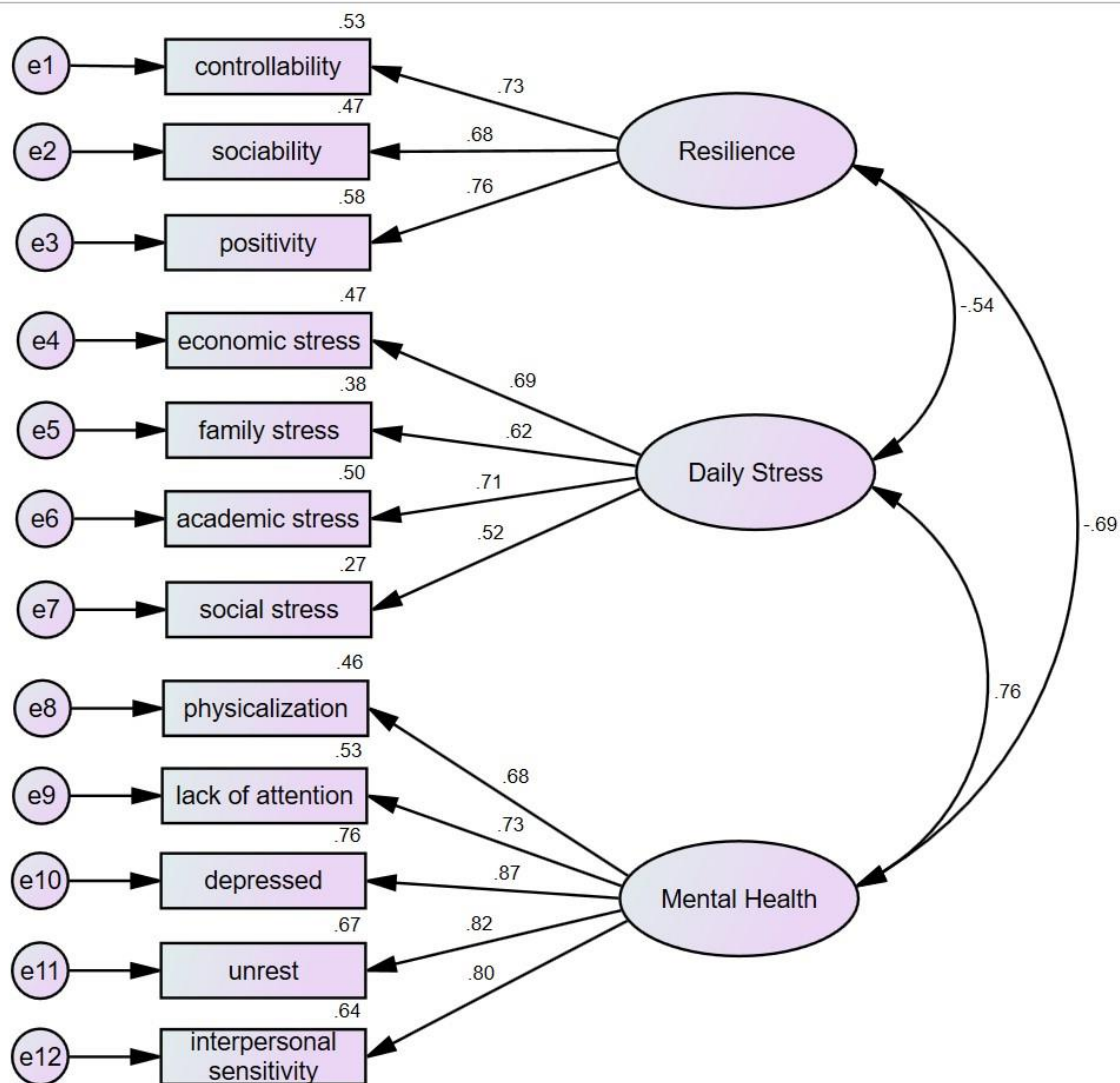
Figure 1. CFA Model

[Table 10] shows the results of verifying the goodness of fit of the structural model using the maximum likelihood estimation method (ML) to identify the structural relationship between the variables assumed to achieve the purpose of this study. The index for evaluating the fit of the measurement model is divided into absolute fit index, incremental fit index, and simple fit index. Since there is no selection criterion or absolute

single index, the researcher must present the results in consideration of the purpose of this study. The analysis results based on the criteria for each index are =99.68, df=48, CFI=.981, GFI=.968, NFI=.964, TLI=.974, RMSEA=.046, RMR=.012, From this, it can be confirmed that the model of this study is a good model that fits well with the data and appropriately reflects reality.

[Table 10] Model Fit

Goodness of fit index	χ^2	df	CFI	GFI	NFI	TLI	RMSEA	RMR
Output	99.68	48	.981	.968	.964	.974	.046	.012
Criteria	-	-	>.90	>.90	>.90	>.90	<.05	<.05

[Table 11] and <Figure 2> show the structural model parameter value estimation and significance verification results of this study, and the detailed analysis results are as follows. Daily stress was found to affect resilience, a mediating variable, at a statistically significant level (β=-.398, p<.001). Moreover, this study proved that the dependent variable, mental health, also had a statistically significant (β=.481, p<.001) effect. Resilience, a mediating variable, was also found to have a substantial effect on mental health (β=-.373, p<.001).

[Table 11] Structural Equation Modeling

Relational Variable		Standardized Factor (β)			Non-standardized Factor (B)		
		Total Effect	Direct Effect	Indirect Effect	Total Effect	Direct Effect	Indirect Effect
→ Daily Stress →	Resilience	-.398***	-.398***	-	-.351***	-.351***	-
	Mental Health	.629***	.481***	.148***	.680***	.520***	.161***
Resilience →	Mental Health	-.373***	-.373***	-	-458***	-.458***	-
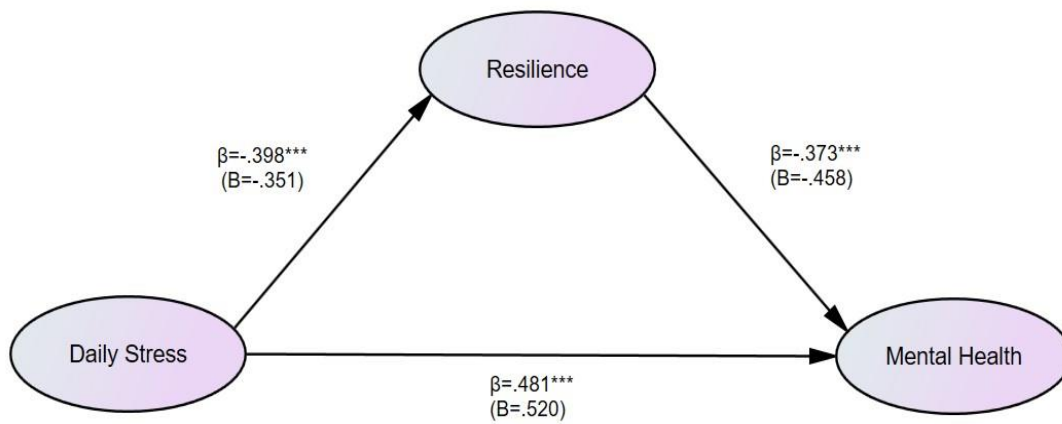
p*** < .001,

Figure 2. Parameter measurement results of the research model

5. Discussion

College students go through a lot of physical and mental changes according to social changes experienced during the adolescence to adulthood transition period. One of the most influential factors is the stress experienced in everyday life; daily stress is related to mental health disoders including somatization, attention deficit, depression, anxiety, and interpersonal sensitivity. University students who experience prolonged high levels of stress tend to be more vulnerable to mental health disorders, which can cause physical symptoms such as depression and despair, as well as related problems such as matter abuse and suicidal behavior.
In this study, the direct effects of multiple key figure mental health were examined. Resilience as a factor that affects college students' mental health, academic performance, and subjective welfare as the ability to overjump failures and difficulties, adapt to the environment, and grow emotionally was examined. Resilience plays an important role in the prevention and treatment of college students' mental health problems and educational dimension. In a narrow sense, it is the ability to control individual emotions and change situations and environments, and in a broad sense, it acts as the ability to flexibly adapt to external and internal stress. Therefore, research on continuous social interest and daily stress, mental health, and resilience may help improve college students' mental health and subsequent successful school life.

6. Conclusion

The final purpose of this study is to verify the mediating effect of resilience in the effect of daily stress on the mental health of college freshmen. The discussion based on the results of this research is as follows.

First, as a result of examining the influence of college freshman's daily stress on mental health, daily stress was found to had a positive effect on mental health. These results mean that the higher the perceived daily stress, the higher the risk of mental health. This is consistent with the results of prior research (Kim et al., 2013; Shin & Kim, 2019; Eoh et al., 2015). The occurrence of stress cannot be controlled. In this sense, we understand stress in terms of interactions in which individuals perceive and evaluate the stress occurring in their surroundings, and focus on how they interpret and cope with stress beyond focusing on the stimulus or response of stress. It is necessary to emphasize this approach.

Second, resilience among college freshmen was found to negatively affect mental health.

Since resilience focuses on preventive and positive factors that can make a healthy person healthier, it can typically be described as the capability of an individual to vanquish difficulties, harmonize to the environment, and grow mentally. In other words, it refers to mental resistance, and it can be said that it is the overall human adaptability better in situations of stress or difficulty and lead the situation in a more favorable direction. It refers to the strength of mind to overcome adversity and use it as an opportunity for spiritual growth. Therefore, it can be seen that people with high resilience are significantly less likely to suffer from slack, worry, sensitivity, and a lack of attention. In particular, resilience is a useful concept for identifying core competencies and attitudes that help college students grow positively

Third, as a result of examining the difference in each variable affecting gender, daily stress and mental health were found to have a significant effect. University students' daily stress problems are accepted and expressed differentially depending on the individual, and they may cause mental health-related problems while experiencing negative emotions such as anger, worry, and depression according to structural relationships and gender.

In this study, it was found that female students were more stressed and sensitive than male students in the areas of family, academic, and social stress. This result can be attributed to the higher sensitivity of female students to perceive stress. Specifically, female students are more possible experience increased stress in family relationships, because they are subject to more family interference than male students. Therefore, the reasons why female students have higher daily stress are that they experience more stress than male students in terms of family relationships and future problems, and that they have a desire to gain an equal footing with men in terms of employment and future problems and self-realization. It can be seen that, as this will increase, it serves as a cause of stress. Specifically, female students are known to be likely to adopt avoidance coping, which is a generally ineffective and passive coping method in stressful situations. It has been reported that it can lead to negative mental health conditions by maintaining or worsening (Kim & Kim, 2010; Jeong, 2009).

In addition, the daily stress of college students is related to mental health, such as difficulties in interpersonal relationships when daily stress is high, and college students with high stress show symptoms of depression and anxiety (Shim, 2010). It is said that the more stress people receive, the lower their mental health (Park et al., 2002; An, 2006; Ju & Mun, 2014), and daily stress and mental health have consistently been reported to show an organic correlation.

Looking at previous studies on gender effects, there was no difference between male and female in the path analysis of mental health conditions such as psychological stability, but overall, female college students were more stressed and often felt a sense of crisis in daily lives, particularly in depression and anxiety disorders. From a mental health perspective, there are studies that have reported that female college students have higher stress sensitivity, with female college students having more than twice as much stress sensitivity as male college students (Jeong, 2009; Donns et al., 2016).

In other words, college students in the process of transitioning from adolescence to adulthood face psychological problems due to new academic environments, wider interpersonal relationships, and concerns about careers and employment. Therefore, accurately grasping how mentally healthy college students are living will be an important task in preventing their mental problems in advance and then solving them. Mental health reflects the degree to which students feel comfortable and successful while participating in the school environment with interest, and it is an active process to achieve a balance between themselves and the school environment by changing themselves according to the demands of the school environment. It can be explained as a factor that is related to one of the most important areas of lives, functioning well as a member of school society.

Therefore, looking at the detailed factors showing gender differences in terms of mental health, female students were found to be more sensitive than male students in physicalization, lack of attention, depressed, and unrest. Somatization appears in symptoms complaining of functional abnormalities of body organs affected by the autonomic nervous system, such as headaches and indigestion, and attention deficit is characterized by being easily distracted, having difficulty concentrating, making frequent mistakes, and failing to complete tasks. Depression refers to a low mood or emotion caused by lack of motivation in life, hopelessness, and pessimistic thoughts about the world and the future, while anxiety refers to tension, nervousness, nervousness, fear, and obsessive thoughts. Interpersonal sensitivity is a negative emotional state consisting of feelings such as discomfort, inadequacy, inferiority consciousness, anger, and doubt that appear

in interpersonal relationships. Through these results, it can be seen that female students revealed more vulnerability in terms of mental health than male students (Jung, 2020).

Looking at the implications based on these conclusions, it is not easy to eliminate or manage daily stress in real life. Therefore, this study suggests that it may be a reasonable way to respond appropriately to daily stress by improving resilience as a way to solve the problem of maladjustment to college due to daily stress. This suggests that resilience has a mediating effect on the affection of college students' daily stress on their mental health.

As a limitation of this study, the subject of this study was limited to students of one college, and there is a limitation that the characteristics of each university or the factors of the situation were not considered. Therefore, since it represents the limit of convenience sampling in subject selection, the generalization of the results should be limited. Therefore, in future studies, it is expected that longitudinal studies will continue as the COVID-19 situation continues this year, along with cross-sectional comparisons by year. Moreover, it did not consider the temporal impact of college students who entered the period affected by COVID-19 and students who entered the previous period.

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