Family Environment and College Students' Psychological Health During the Normalization of the COVID-19 Pandemic

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Abstract. Since the outbreak in 2019, COVID-19 has spread around the world, and the ongoing infection and isolation have had a different psychological impact on people. This paper focuses the study group on college students, aiming to investigate the relationship between family environment and college students' psychological health under COVID-19. Based on relevant empirical studies since the epidemic, this study divides the family environment into subjective and objective environments. The subjective environment includes family economic status, family structure, and other objective factors; the subjective environment includes family function, parent-child relationship and parenting style. Finally, this paper provides specific suggestions for different groups such as the government, universities, and parents to improve the mental health of college students during the epidemic.

Keywords: Family environment; Mental health; College students; The COVID-19.

1. Introduction

The outbreak of COVID-19 at the end of 2019 spread rapidly and involved a wide area of the world which has had momentous impacts on the whole society in different aspects. Fortunately, in the early days of outbreaks, it was successfully contained with the joint efforts of the whole society. On April 29, 2020, the State Council of PRC declared that China had reached a normalization of the domestic policies on the prevention and control of the outbreaks, and the domestic economic and social development and citizen's life has gradually returned to the right track. China has entered the post-epidemic era since then. However, the psychological influences brought by COVID-19 cannot be ignored. Studies have shown that during the epidemic, the stress level of the public is much higher than that during the non-epidemic period, which means that they are more likely to experience those negative emotions, such as anxiety and depression, which to a certain degree may cause misbehaviors [1, 2]. As a special group, college students are generally considered unable to cope with the mental changes caused by such public health emergencies, so they are more prone to psychological stress reactions [3]. A study of 1816 college students in a university in Lanzhou showed that the probability of depression and anxiety during the outbreaks was 38.76% and 16.36%, respectively [4]. In response to this phenomenon, scholars at home and abroad have studied several factors affecting the mental health status of college students during the epidemic to reduce the negative impact of the COVID-19 pandemic on them. After a series of studies were conducted, it was shown that the factors related to the mental health of college students such as gender, age and major [5, 6]. Apart from that, many scholars have also noted the significant influences of family environment on college students' mental health during the outbreaks, took it as an important variable and studied its influences on mental health [7, 8]. More importantly, the family is an extremely important ecosystem for individuals and the starting point for individual socialization and a bridge connecting individual and external environment. In addition, the four dimensions of family resilience, including family communication

and resolution, the use of social and economic resources, the ability to hold positive views and give meaning to adversity, are all fundamental to the development of an individual's mental health which can help people to cope positively with adverse events and recover quickly from them [9]. To this end, based on relevant studies conducted at home and abroad, this paper will explore the influence of the objective and subjective family environment on the psychological health of college students during the COVID-19 pandemic and provide suggestions for the government to improve the relevant policies on college students' mental health, for colleges to implement personalized and precise mental health education, and for parents to develop parent-child relationship more healthily, as well as provide suggestion and references for future research.

2. Objective Family Environment Factors

2.1 Family Economic Status

COVID-19 had a negative impact on the financial situation of most college students. For instance, most Bangladeshi college students (81.1%) report a reduction in their household income, and half (49.8%) fear they will lose their homes [10]. Even referring to universities located in New York, 54.1% of students or others in their families (68.9%) lost income due to the outbreak [11].

Economic shocks raise the odds that college students will suffer from stress, anxiety, and depression. For example, a study of 69,054 current college students in France finds that students who experienced income loss are at higher risk of reporting mental health disorders compared to those who did not [12]. In addition, low household income is a risk factor for anxiety [6]. Household savings of less than $5,000 increase the risk of anxiety symptoms [5].

The above findings are consistent with relevant studies before the outbreak of COVID-19. Students from low-income families had higher depression and stress scores than those from wealthier families [7]. Therefore, the mechanism for the relationship between low-income family income and high risks of stress, anxiety, and depression is that COVID-19 has caused a reduction of household income due to the low economic activities and lockdown, which further affects the mental health of college students [4]. Especially students from low-income families have to endure a more tough situation.

Remarkably, a longitudinal study of the mental health status of medical students in India finds that elevated levels of student stress and anxiety are not affected by monthly household income [13]. This is inconsistent with the Brazilian study in China, both of which report a positive relationship between student psychological status and family income [14].

2.2 Family Structure

As the smallest unit of social organization, the family gives people great structural strength in the epidemic era. It has been shown that during the "climbing" phase of the new epidemic, people in stable marriages suffer relatively less psychologically and mentally [15]. Thus, it can be extended to consider the significance of a good mental state in the relationship for the mental health of the offspring. This view can be confirmed by the Chinese scholar Shu et al., who showed in their study that college students are more likely to have poor mental performance when their parents' marriage is in a non-stable state in the post-epidemic era [16]. Some students in a disharmonious family atmosphere were more likely to suffer from insomnia, anxiety, and feeling that life was not going well because they were unable to attend classes for home isolation.

A study used the Event Impact Scale-Revised to survey 904 college students in four colleges and universities in Shanghai, and the results showed that, relative to non-only children, only children scored higher on the three dimensions of the psychological stress response, indicating that only children have a more pronounced psychological stress profile, which is consistent with related studies [17]. It may be that in the home environment, only children can only interact with their parents, whereas non-only children have more opportunities to spend time with their siblings and have good family interactions and are therefore less likely to experience a range of psychological reactions such as depression. In addition, the mean scores of the three sub-scales of stress, anxiety, and depression

were higher for only children than for non-only children on the family child status dimension. The significantly lower mental health status of only children may be due to the fact that only children are given more support and resources by their parents and are less capable of facing problems and solving them on their own, resulting in more severe negative emotions. In a study using a sample of 11,596 secondary school students, the researchers found that anxiety was detected at a lower rate among only children than among non-only children [18].

Therefore, it is difficult to perform cluster analysis in a single segmented way when we consider the relationship between students' mental health factors and family structure in the early research phase of the epidemic. We also need to take into account factors such as geography, cultural background, students' age, family economy, and parents' conditions for thorough consideration.

2.3 Parental Education Level

College students' mental health is influenced to a certain extent by their parents' education level. Chen's research showed that parents' education might bring their children a psychological burden, thus affecting the establishment of self-confidence and making them more prone to negative emotions such as anxiety and depression when facing public health emergency [19]. In addition, many other studies have also shown that the level of parental education directly influences family parenting styles, family socio-economic status, family relationships, and parents' expectations of their children, which will, in turn, have an impact on college students' mental health state [20]. Thus, under such a special condition, many scholars have also taken parent's education level as an important variable and investigated its influences on college students' mental health.

Firstly, Wang et al. analyzed the influential factors of college students' psychological state during the outbreaks. The study shows that one of the leading factors is parents' education level [21]. In addition, one study by Jiang has found a significant inverse correlation between parental education and their stress and depression index during the outbreaks and their perception of COVID-19, including its transmission mechanism, origins, and symptoms exert mediating effect between them [22]. To explain it, families with more educated parents have more comprehensive knowledge about the prevention and control of COVID-19 and thus are less likely to have negative emotions such as depression and anxiety in the face of the epidemic, let alone transmit such emotions to college students.

In addition, a study by Guo et al. on the influence of family relationships on college students' psychological stress reaction during the COVID-19 outbreaks has clearly pointed out that both parents' educational levels have different influences on college students' mental responses to the epidemic [17]. They emphasize the role of mother's educational degree during this process. The mother's educational level is positively correlated with the psychological stress level of college students, while the father is negatively correlated. This disparity can be attributed to the traditional Chinese family model. Compared with males, women tend to devote more time and energy to children's education and the daily life of the whole family. Thus, women are more sensitive to "the internal conflict occurring in the family," so they may transmit such negative emotions to their children, which in turn affects their children's moods [23]. Furthermore, parents' educational level can influence the mental health of college students through their expectations of their children. In their study, Wang, Hu et al. noted that college students who have higher educated parents have higher anxiety and depression index during the online course period of the outbreaks. This phenomenon can be attributed to parent's expectations of their children. Parents with higher educational levels usually have higher expectations for their children, which may increase their children's academic stress, resulting in students' academic anxiety, especially when college students can not attend offline courses but only online courses, which can be easily influenced the external factors like family acoustic environment, and students' self-control. [24]. Beyond that, the study by Cao and Fang et al. focuses more on the relationship between parents' educational level, family income stability, and college students' negative emotions during the COVID-19 pandemic. The study has shown that families with higher parental literacy levels experience less income volatility than families with lower parental literacy levels. Therefore,

their college students are less likely to have negative emotions such as anxiety and depression brought on by family financial problems [25]. This is consistent with the findings of other scholars in China [26]. In addition, a study by foreign scholars Bono and Reil et al. on urban college students in a certain region of the United States during the outbreaks also points out that students with higher levels of parental education have a lower index of stress and have a higher sense of well-being than urban college students whose parents received low levels of education [27].

In general, although numerous scholars have done a series of research on the influence of the educational level of parents on college students' mental health state during the COVID-19 pandemic, most of them only conducted correlated studies and quantitatively analyzed its effects as an important variable. However, the mediating effects of other objective or subjective family environments between parental education level and college students' mental health should also be considered.

2.4 Other Objective Factors of Family Environment

In addition to the objective family environment factors mentioned above, some foreign scholars have also noted the inescapable effects of other objective factors, including the living environment, the acoustic environment, and the living environment during the lockdown.

First, the effects of the acoustic environment at home on university students' mental health should never be overlooked. A study of 323 students from two universities in the Plovdiv region of Bulgaria focuses on the relationship between home acoustic environment and the level of Self-Rated Health and Restorative quality of home [28]. It is suggested that the length of exposure of college students to mechanical sounds such as sounds of vehicles, decoration sounds, or alarms during home quarantine is inversely associated with their self-rated health scores and the restorative quality of the home. In contrast, the length of exposure to natural sounds like birds chirping and falling leaves and human sounds like talking has little relationship to students' self-rated health score, without an overt linear relationship, but is positively associated with the quality of the home restorative environment. However, a good restorative environment can help relieve the adverse effects of those negative emotions, and the home restorative quality directly influences its function as a pacifier. Therefore, researchers based on the data conclude that the quality of the home acoustic environment during the lockdown directly affects the restorative quality of the home, which in turn exerts an influence on college students' mental health state.

Furthermore, Indian psychologist Chandra has also focused on the impact of noise during the COVID-19 lockdown on negative emotions such as anxiety among college students, and she used the Perceptions of Academic Stress Scale and related questionnaires to evaluate the academic stress of American students and its sources. Research showed that the academic pressure on college students has increased significantly compared with that before the epidemic [29]. In follow-up telephone interviews, many students have complained that the noises from or near their homes make them hard to concentrate on their studies, which finally leads to excessive academic stress and anxiety.

In addition, the online learning environment at home during the lockdown is also a significant factor affecting the perceived academic stress of college students. More than half of the students have expressed their dissatisfaction with the network fluctuation and family conflicts caused by the sovereignty of personal space because students have to take part in household chores. Thus, those college students feel difficult to focus on study, which finally leads to worse academic stress and anxiety [29]. A study by Olson et al. also focuses on family conflicts caused by personal space invasion when living with parents during lockdown [1].

3. Subjective Family Environment Factors

3.1 Family Function

Family functioning refers to the effectiveness of members of the family system in emotional connection, family rules, family communication, and coping with external events [30]. A longitudinal survey in China finds that a dysfunctional family significantly predicts of mental health symptoms in

college students [31]. Besides, the low-income family function also increases the likelihood of depression persisting during lockdown [32]. This relationship between mental health and family function is consistent with previous research. For instance, a survey conducted among vocational college students in 2019 finds that students growing up in an environment with good family functioning (e.g., open communication) have high levels of mental health [33]. The possible explanation for this relationship is that when the family has become the main place for students to live and study during COVID-19, good family functioning helps relieve anxiety and restlessness and fosters better coping with learning and life events, thus improving their mental health [34]. Conversely, students with low-income family function may increase their psychological problems, such as anxiety and depression.

3.2 Parenthood/ Parent-child relationship

The inappropriate parent-child relationship, including prolonged non-communication or inappropriate conversations with fathers, may lead to increased psychological stress among college students. In order to maintain good parent-child relationships and improve parent-child communication during the epidemic, different strategies have been used for male and female college students, with both parents and children working together to improve the quality of communication, making full use of time at home to actively communicate, reconciling their habits or trying to change their perceptions of each other in order to improve parent-child intimacy.

Scholars from different countries have also researched and made suggestions in this area. Best mentioned that many existing problems have become more serious due to the epidemic and that parent-child relationship in families is one of the social problems that need to be solved by external forces [35]. The quality and time of parental companionship during the epidemic and the relationship between parents and children are the most important criteria for evaluating family education. At the same time, the requirement of home isolation during the epidemic catalyzed an already conflicted parent-child relationship, on top of which the solidified family atmosphere and relationships, the increased intensity of parental companionship in the short term, and the differences in philosophy between parents and children during the epidemic exacerbated the conflicts between them [36]. Good family communication and problem-solving levels can provide resilient protection for children's sense of hope.

3.3 Parenting Style

Masud et al. indicated that parenting styles significantly impact children's mental health [37]. Different family parenting styles produce different family atmospheres and different parent-child relationships in different types of family parenting styles. Moreover, a study conducted by Liu, which surveyed 1093 college students were surveyed by the revised parenting styles questionnaire and Zung's Self-Rating Scale for Depression showed that parenting style had a significant effect on the depression status of college students, and different types of parenting styles had different effects on the depression of college students [38] The probability of children being depressed was highest when the parenting style of the father or mother was "authoritarian" and lowest when it was "authoritative." Therefore, in families where children are depressed, parents with "authoritarian" parenting styles should adjust their parenting styles to increase their children's ability to cope with negative life events through emotional communication and behavioral support when children face emotional risks such as anxiety and anxiety.

Warm and supportive parenting styles positively impact children's behaviors, such as caring and giving back to the community. A previous study showed that emotionally warm and supportive parenting styles are crucial to pro-social behaviors of college students during the epidemic in dual-class colleges and universities. Emotionally warm parenting styles are a core factor influencing family relationships and pro-social behaviors during the epidemic and have a strong facilitative effect on pro-social behaviors, which can enhance children's sense of security and well-being [39]. In short, the "overprotection" parenting style refers to parents' excessive control and interference with their

children, which undermines children's ability to make independent judgments and choices through strong possessiveness and psychological control. Through strong possessiveness and psychological control, this parenting style undermines children's ability to make independent judgments and choices ultimately leading to the decline of children's pro-social behavior. At the same time, the theory of "affectionate restraint" parenting style proposed by Parker also confirms the view mentioned above that implicit bondage and restraint, usually in the name of love, are not beneficial to the development of socialization of individuals, especially the cultivation of gratitude and responsibility [40].

Therefore, in this particular period of the epidemic, family parenting should, on the one hand, try to adopt warm and encouraging parenting strategies; on the other hand, school education and school life can also compensate to a certain extent for the negative effects of overprotective parenting.

4. Conclusion

On the one hand, the home isolation caused by the epidemic disrupted the campus life of college students, but on the other hand, the home isolation provided a rare opportunity for family members to spend time together. It is a chance for family members who used to be separated by thousands of miles to "reunite for the evening." The problems magnified by the epidemic are no longer an unbreakable wall if reasonable family intervention strategies are implemented in conjunction with their subjective and objective circumstances. Therefore, this review has made some suggestions to help college students' families to get along with each other in the epidemic era.

Living in an era of high-speed information flow, parallel multiculturalism, and high-intensity society, the father's generation and the children's generation are inevitably hit by the pressure, which both enriches and divides families. The epidemic is a magnifying glass for family relationships and mental health problems, but also a good time to heal neglected relationship rifts. A healthy psychological state for college students is built by healthy relationships between parents and parents and children on the one hand and relies on the help of institutional and structural changes in society on the other.

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