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The Relationship Between Core Belief Challenge and Depression in Hetao University of Inner Mongolia During the COVID-19

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Abstract

The COVID-19 pandemic has had far-reaching impacts beyond physical health, significantly affecting the mental well-being of college students, particularly by contributing to higher levels of depression. This study investigates the relationship between the disruption of core beliefs and depression among Hetao College students while examining the role of demographic and social factors in shaping these outcomes. Employing a quantitative cross-sectional design, 384 undergraduates aged 18–24 completed online surveys assessing demographics, perceived social support (Multidimensional Perceived Social Support Scale), core beliefs disruption (Core Beliefs Challenge Scale), and depression (Depression Self-Assessment Scale). Statistical analyses (T-tests, ANOVA, Pearson correlation, Multiple linear regression) revealed: (1) a high prevalence of depression, 41.8% of students reported clinically significant depressive symptoms; (2) significant gender differences in the levels of core beliefs challenge; notable grade-level differences in depression rates; (3) a positive correlation between core beliefs challenge and perceived social support ($p = 0.354$), but a weak negative association with depression ($p = -0.024$, $r<0.5$); (4) core beliefs disruption modestly predicted depression levels ($\beta = 0.126$, $SE = 0.056$). These results underscore the importance of addressing disruptions in core beliefs and fostering social support as part of mental health interventions for college students during and after pandemics.

Keywords: Core Belief Challenges, Depression, COVID-19, College Students, Social Support

Introduction

The COVID-19 pandemic, emerging in early 2020, imposed unprecedented challenges on global public health and psychological well-being, with college students facing uniquely severe mental health repercussions due to prolonged campus closures, academic disruptions, and social isolation (Zhu et al., 2023). In Inner Mongolia, China, regional authorities implemented stringent containment measures, including prolonged campus closures, mandatory online learning, and strict dormitory lock-downs, to curb viral transmission. These policies disproportionately impacted college students, a population already navigating developmental transitions and heightened stressors such as disrupted education, uncertain employment prospects etc (Wang et al., 2020). College students exhibited heightened susceptibility to psychological challenges, with depression and anxiety rates surging significantly compared to pre-pandemic levels (Xinyi et al., 2022). For example, a study in China reported that 27.9% of the population experienced symptoms of depression during the pandemic, with college students showing an alarming detection rate of 32.79% (Xiao & Zhang, 2023). Similarly, at Hetao College in Inner Mongolia, a 2023 mental health assessment revealed that 35.1% of new students experienced anxiety or depression, with 2% classified as having severe depression (Lv, personal communication, 2021).

The psychological impact of the pandemic on students can be contextualized through integrated behavioral and cognitive frameworks. Bayesian decision making models assume that individuals generate persistent negative expectations (“pessimistic priors”) under sustained uncertainty, leading to avoidance of goal-directed behavior (Huys et al., 2015). For instance, students subjected to erratic academic schedules or canceled internships may internalize beliefs such as “effort yields no rewards,” thereby reducing proactive behaviors and perpetuating depressive cycles. Complementing this, Beck’s cognitive theory of depression (Beck et al., 1979) emphasizes the role of core beliefs, are deep-seated assumptions about oneself, others, and the world, often formed early in life (Janoff-Bulman, 1992). These beliefs shape emotional responses, behaviors, interpersonal relationships, and overall well-being (Beck & Dozois, 2011). Negative core beliefs—such as feelings of unworthiness or incompetence—are strongly linked to the development and maintenance of depression (Beck et al., 1979). Pandemic-induced disruptions, such as financial instability or familial health risks, challenge students` foundational beliefs about control and predictability, triggering cognitive distortions (e.g., catastrophizing) and depressive affect (Dozois & Beck, 2008). Moreover, these beliefs tend to cluster in a highly organized cognitive structure, making individuals more vulnerable to depressive emotions and maladaptive behaviors (Dozois & Beck, 2008).

Traumatic events, including pandemics, can disrupt established core beliefs, triggering a psychological phenomenon known as core belief challenge (Janoff-Bulman, 1992). This challenge compels individuals to reevaluate their assumptions about themselves and their surroundings, often resulting in emotional distress,

intrusive thoughts, and a profound sense of instability (Cho & Park, 2013). Studies have shown that core belief challenges are significantly associated with greater psychological distress, including heightened anxiety and depression, particularly among those directly impacted by COVID-19 (Milman et al., 2020; Dominick et al., 2022). Similarly, studies on Chinese college students found that quarantine policies during the pandemic exacerbated anxiety and depressive symptoms by disrupting behavioral patterns and risk perceptions (Chen et al., 2020). These findings are consistent with longitudinal data indicating that core belief challenges (CBC) mediated the relationship between pandemic-related stressors and depression, with CBC scores showing significant correlations with anxiety ($r = 0.35$) and depressive symptoms ($r = 0.41$) (Tu et al., 2020; Filindassi et al., 2022). Additionally, social support mitigates the psychological harm of core belief challenges (CBC) through three mechanisms: emotional support (Wills, 1985), informational support (Wang et al., 2020), and instrumental support (Chen et al., 2020). Notably, students with preexisting vulnerabilities, such as rural backgrounds or left-behind childhood experiences—reported higher CBC severity due to compounded stressors (Tu et al., 2020).

The existing research primarily focuses on post-traumatic growth (Prielomková & Záhorcová, 2020; Dabel, 2016), post-traumatic stress disorder (Choi & In, 2020), and the correlation between COVID-19 and core belief challenges (Matsudaira et al., 2021; Dominick et al., 2022). However, few scholars (Milman et al., 2020) have studied the direct relationship between core belief challenges and depression. And few studies have examined this relationship among college students (Milman et al., 2020), and there are no target institutions like Hetao College. Therefore, This study aims to address this gap by investigating how the pandemic has disrupted core beliefs among Hetao College students and analyzing the association between demographic characteristics, core belief challenges, and depression within this population. By shedding light on these dynamics, this research seeks to contribute to a deeper understanding of mental health challenges in the post-pandemic era and inform interventions tailored to college student's unique needs.

Objectives

1. To assess the overall level of core belief challenges and depression among college students at Hetao College.
2. To describe the overall level of core belief challenges and depression among college students at Hetao College across various demographic factors.
3. To explore the relationship between core belief challenge, social support, and depression.

Materials and Methods

1. Participants and Procedures

The target population for this study comprised full-time undergraduate students aged 18 to 24 at Hetao College, Inner Mongolia. With 12 teaching faculties and 10,896 undergraduates among 11,168 full-time students ("Hetao college is. . .", 2023), this population was suitable for investigating psychological and mental health dynamics in young adults. Using Krejcie and Morgan's formula (Breen et al., 2001), the required sample size was calculated as 384, with an additional 10% added to account for potential data collection issues, yielding a final target of 422 participants.

This study has a method for selecting a sample group using the multistage cluster sampling technique as follows:

1) Proportional stratified sampling: sampling based on the proportion of each layer in the population.It can improve the representativeness of the sample and determine the estimated values of population quantity indicators, avoiding the concentration or omission of certain characteristics in simple random sampling.

2) The main researchers contacted counselors from various departments to explain the relevant situation of data collection in this study (such as how many questionnaires should be collected for each department and grade), and then the counselors distributed the questionnaire links to different grade groups in their respective departments and recruited a corresponding number of questionnaires.

2. Measurements

This study utilized a self-administered questionnaire comprising four sections to collect data systematically. Each section was designed based on established scales and relevant literature. The questionnaire was translated into Chinese (reviewed by three professors), content-validated (by the supervisor), and pilot-tested (using a demographically matched sample) to ensure reliability and cultural appropriateness.

Demographic and Socioeconomic Data: Open-ended questions were developed to gather participants' personal information, including demographic characteristics (gender, age, residential area, and faculty) and socioeconomic status (parents' or caregivers' education level and monthly household income and living expenses).

Core Beliefs Challenge: The Core Beliefs Challenge Scale was employed to assess the extent to which participants re-evaluated their beliefs in response to the COVID-19 pandemic. Originally developed by Cann et al. (2010) and revised by Xiao et al. (2014), this single-dimension scale consists of 9 items. Participants rated statements (e.g., "As a result of COVID-19, I have critically examined the fairness of life events") on a scale from 0 (none) to 5 (always). Total scores range from 0 to 45, with higher scores indicating greater belief reevaluation. The scale's reliability in this study was excellent (Cronbach's alpha = 0.95).

Depression Assessment: Depression levels were measured using the Self-Rating Depression Scale (SDS) developed by Zung et al. (1965), a widely recognized tool for assessing the severity of depressive symptoms. The scale comprises 20 items rated on a 4-point scale, measuring symptom frequency. The total score is multiplied by 1.25 to yield a standardized score, with cut-offs indicating mild (53–62), moderate (63–72), and severe depression (above 72) (Dunstan & Scott, 2019; Wang et al., 1986). This scale's reliability in the present study was robust, with a Cronbach's alpha of 0.82.

Social Support: Social support was assessed using the Multidimensional Perceived Social Support Scale. This scale evaluates support across three dimensions: peer support, family support, and other sources of support, using 12 items scored on a 7-point Likert scale. The scale yields a total score (range: 12 to 84) and three sub-scale scores, a higher score indicates greater perceived support. The scale demonstrated excellent internal consistency in this study, with a Cronbach's alpha of 0.96.

3. Statistical Analysis

After collecting the completed questionnaires, the data underwent meticulous verification to ensure reliability and adequacy before encoding, processing, and analysis. A rigorous statistical procedure was employed using SPSS 26.0 software to address the study's objectives.

Descriptive and Inferential Analyses: Chi-square test were conducted to identify variations in core belief challenges, depression levels, demographic characteristics, socioeconomic factors, and social support indicators. It was hypothesized that significant differences existed among the variables in relation to core belief challenges and depression. Upon data review, it was found that: (1) Only gender and grade level were significantly associated with core belief challenges; (2) Only grade level was significantly associated with depression levels. These tests facilitated a nuanced understanding of how these variables differed across subgroups.

Correlation Analysis: Pearson correlation analysis was performed to examine the relationships between depression levels and core belief challenges. It was hypothesized that core belief challenges and social support would be positively correlated with depression, while social support would be negatively correlated with depression. However, hypothesis testing revealed that social support was not linearly associated with depression, whereas the remaining hypotheses were supported. This analysis aimed to uncover the strength and direction of associations between these key constructs.

Predictive Modeling: Multiple linear regression analysis was applied to evaluate whether core belief challenges could reliably predict depression. It was hypothesized that core belief challenges would significantly predict depression among students at Hetao College. Upon testing, all assumptions were satisfied, confirming the reliability of the regression results. This method enabled the identification of significant predictors and provided

insights into the relative contribution of core belief challenges to depressive symptoms.

Results

1. Demographic Data of The Participants

The dataset comprised 428 completed questionnaires, yielding a 100% completion rate. The sample included 428 undergraduate students, with a majority being female (67.3%). The mean age of participants was 21.30 years (SD = 1.77), with ages ranging from 18 to 24 years. In terms of academic affiliation, the largest representation came from the Faculty of Medicine (15.7%), followed by the Faculty of Mechanical and Electrical Engineering (13.1%). In contrast, the Faculty of Physical Education accounted for the smallest proportion (1.9%) (see Table 1). Based on the descriptive analysis of demographic variables, the following inferences can be drawn regarding the generalizability of the research conclusions.

Table 1 Frequency and percentage of demographic data of the participants (n=428)

Personal Characteristics		Frequency	Percentage
Gender	Female	288	67.3
	Male	140	32.7
Age	18-20	171	39.96
	21-24	257	60.04
	Mean = 21.30, SD = 1.77, Min = 18, Max = 24		
Faculty	Education	20	4.7
	Art	28	6.5
	Physical Education	8	1.9
	Economics and Management	48	11.2
	Water Resources and Civil Engineering	32	7.5
	Chemistry	35	8.2
	Mechanical and Electrical	56	13.1
	Agriculture	38	8.9
	Medicine	67	15.7
	Mathematics and Computer Science	40	9.3
	Foreign Languages	24	5.6
	Chinese Language and Literature	32	7.5

2. Socioeconomic Characteristics of Participants

The educational attainment of participants' parents predominantly reflects secondary-level education. Among fathers, 59.3% have completed secondary school, while only 7.7% possess education at the college level or higher. Similarly, 51.9% of mothers have secondary-level education, with just 5.4% having attained college education or above. Regarding family income, the majority of participants (62.9%) come from households with a monthly income below 5,000 yuan. Approximately 30.6% report a family income between 5,000 and 10,000 yuan, while higher income brackets are less common, with 4.7% earning between 10,000 and 20,000 yuan, and only 1.9% exceeding 20,000 yuan monthly. In terms of students' personal living expenses, most report monthly expenses between 1,000 and 1,500 yuan (58.2%). A smaller proportion (21%) spends less than 1,000 yuan, while 17.5% report expenses ranging from 1,500 to 2,000 yuan. Only 3.3% of participants have monthly living expenses exceeding 2,000 yuan (see Table 2). These findings highlight the socioeconomic diversity of the participants, which provides critical context for understanding their psychological and behavioral responses within the study.

Table 2 Frequency and percentage of socioeconomic characteristics of participants (n=428)

Socioeconomic Status		Frequency	Percentage
Father's educational level	Elementary school and below	141	32.9
	Secondary school	254	59.3
	College and above	33	7.7
Mother's educational level	Elementary school and below	183	42.8
	Secondary school	222	51.9
	College and above	23	5.4
Monthly household income	Below 5000 yuan	269	62.9
	5000-10000	131	30.6
	10000-20000	20	4.7
	Above 20000	8	1.9
Monthly living expenses	Below 1000 yuan	90	21
	1000-1500 yuan	249	58.2
	1500-2000	75	17.5
	Above 2000 yuan	14	3.3
Grade Level	Freshmen	107	25
	Sophomore	107	25
	Junior	107	25
	Senior	107	25
Residential Area	Rural	236	55.1
	Urban	192	44.9

3. Overview of Core Belief Challenges, Depression, and Social Support Levels

The participants' experiences with core belief challenges were classified into three levels: low, moderate, and high. The findings, as illustrated in Table 3, reveal that the majority of participants (61.7%) experienced a moderate level of core belief challenges, reflecting a significant impact on their foundational assumptions. Additionally, 20.8% of students reported high levels of challenge, indicating substantial disruptions in their cognitive frameworks, while only 17.5% experienced low levels. The mean core belief challenge score was 24.60 (SD = 10.17), with scores ranging from 0 to the maximum of 45, highlighting variability in individual responses. The analysis of depression levels indicated that 33.7% of students experienced mild depression, suggesting a notable prevalence of low-grade depressive symptoms. Meanwhile, 7.2% of participants demonstrated moderate depression, and 0.9% exhibited severe depressive symptoms. The mean depression score across all participants was 49.94 (SD = 11.00), signaling a wide range of depressive experiences. Regarding social support, over half of the participants (51.6%) reported high levels of support, with an average score of 72.7. Another 44.4% of students indicated moderate social support, averaging a score of 51, while a small minority (4%) experienced low levels of social support, with a mean score of 25.6. The overall mean social support score was 61.21 (SD = 14.51), reflecting diverse perceptions of support availability. The overall level of core beliefs challenges, depression, and social support, these results provide a comprehensive view of the psychological and social dimensions among the participants, highlighting the prevalence of moderate core belief challenges, mild depressive symptoms, and generally robust levels of social support.

Table 3 Frequency, percentage, and average score of core belief challenges, depression, and social support (n=428)

Variables Level		Frequency	Percentage
Core Belief Challenges	Low	75	17.5
	Moderate	264	61.7
	High	89	20.8
	Mean = 24.60, SD = 10.17, Min = 0, Max = 45		
Depression	No Depression	227	53.0
	Mind Depression	133	33.7
	Moderate Depression	31	7.2
	Severe Depression	4	0.9
	Mean = 49.97, SD = 11.00, Min = 25, Max = 100		
Social Support	Low	17	4.0
	Moderate	190	44.4
	High	221	51.6
	Mean = 61.21, SD = 14.51, Min = 12, Max = 84		

4. Analysis of Core Belief Challenges and Depression by Demographic and Socioeconomic Variables

The relationships between demographic variables, socioeconomic variables, core belief challenges, and depression were examined using chi-square tests. The results of the study provided valuable insights into the associations between these variables among students at Loop Academy (see Table 4). There was a significant difference ($p<0.005$) in gender and grade level for core belief challenge with chi-square values of 6.943 and 15.686, respectively. In terms of the relationship between depression and each of the variables, there was only a significant correlation between grade level and depression (0.039) with chi-square value of 8.366.

Table 4 Chi-square analysis of core belief challenges and depression across demographic variables

Demographic Variables	Core Belief Challenges		Depression	
	Chi^2	*p-value*	Chi^2	*p-value*
Gender	6.943	0.031	0.189	0.664
Faculty	22.133	0.452	8.470	0.671
Grade Level	15.686	0.016	8.366	0.039
Residential Area	0.292	0.864	0.003	0.954
Father's Education Level	3.420	0.490	0.021	0.989
Mother's Education Level	3.369	0.498	0.500	0.779
Monthly Household Income	9.396	0.152	5.407	0.144
Monthly Living Expenses	6.889	0.331	3.805	0.283

5. Correlation Analysis of Core Belief Challenges, Depression, and Social Support

Table 5 presents the Pearson correlation analysis examining relationships among core belief challenges (CBC), depression (DP), and social support (SS). The correlation coefficients ranged from -0.024 to 0.354, indicating generally low to moderate associations. Most correlations were statistically significant at $p<0.01$ or $p<0.05$. Notably, no variable pairs exhibited a strong correlation ($r>0.50$), suggesting that multicollinearity was not a concern in this dataset. These findings highlight distinct but interconnected relationships among the variables, warranting further exploration in subsequent analyses.

Table 5 Correlation analysis of core belief challenges, depression, and social support

Variables	CBC	DP	SS
CBC	1		
DP	0.102*	1	
SS	0.354**	-0.024*	1

Note ** $p < 0.01$, * $p < 0.05$

6. Predictive Role of Social Support and Core Belief Challenge on Depression

To investigate the predictive effects of social support and core belief challenge on depression among Hetao College students, a multiple linear regression analysis was conducted, with social support and core belief challenge as independent variables and depression as the dependent variable. The results are summarized in Table 6.

Table 6 Multiple linear regression of social support, core belief challenge, and depression

Variables	B	S.E.	β	t	p	R^2	Model P-value
						0.054	0.044
Constant	49.818	2.356		21.142	0.000		
Social Support	-0.052	0.039	-0.069	-1.343	0.180		
Core Belief Challenge	0.137	0.056	0.126	2.454	0.015		

The regression model ($Y = \beta 0+\beta 1X1+\beta 2X2+e$) demonstrated statistical significance, with a p-value of 0.044 ($p<0.05$). Among the independent variables, core belief challenge had a statistically significant effect on depression ($p=0.015$), whereas social support did not ($p=0.180$). The resulting regression equation is:

$$Y = 49.818 + 0.137 \text{ (Core Belief Challenge)} + e$$

where Y represents the depression score, and e is the error term. The error range for the constants and coefficients varied between 0.039 and 2.356. The beta coefficients were -0.069 for social support and 0.1260 for core belief challenge, indicating that core belief challenge was positively associated with depression, while social support showed a weak, non-significant negative association. The R^2 value of 0.054 indicates a weak linear relationship between core belief challenges and depression, suggesting that other significant factors likely contribute to variations in depressive symptoms. This limited explanatory power implies the need to explore additional variables or contextual factors not captured in the current model.

Discussion

1. Overall Level of Core Beliefs Challenge

A total of 428 participants were included in this study, with a mean score of 24.60 (SD = 10.17) for the Core Beliefs Challenge and a mean of 2.73 for each indicator, slightly lower than Wang's (2018) study of 2.84. The results of this study are consistent with previous studies on cancer (Wilson et al., 2014; Ramos et al., 2018), leukemia (Cann et al., 2010; Danhauer et al., 2013), terrorism (Eze et al., 2020), and earthquakes (Zhou et al., 2015), where the mean scores for each of these events ranged from 2 to 3, suggesting a moderate level of core belief challenge (Cann et al., 2010). Additionally, previous research has shown that the COVID-19 epidemic also showed a moderate

impact on core belief challenges among Americans, which may be related to the significant impact of the epidemic on the lifestyles of college students (Zhao et al., 2024), prompting individuals to reevaluate their past values and beliefs. The isolation and social distancing measures implemented during the epidemic changed people's daily lives and socialization patterns, which may have prompted college students to reflect on social connections and relationships, thereby challenging their core beliefs. In addition, the outbreak may have intensified health and safety concerns and altered people's perceptions of risk and safety, which in turn affected their core beliefs (Huang, 2023). Finally, epidemics may have exacerbated social inequalities, making some populations more concerned about social justice and equality issues, which may prompt them to revisit related beliefs (Yao & Yang, 2023).

2. Overall Level of Depression

In this study, 33.7% of the students showed mild depression, 7.2% were moderately depressed, and 0.9% were severely depressed, giving a depression detection rate of 41.8%. This result is similar to the 39.9% in Xinyi et al.'s (2022) study, but differs from the 29.5%, 25%, and 24.67% depression rates reported by Wang (2022) respectively. This discrepancy may stem from the use of different depression measurement tools and differences in study locations. The SDS scale was used in this study, whereas Wang (2022) used the CESD scale. In addition, studies in different time periods inevitably reflect the events and circumstances specific to that time. Compared to 2015 and 2016, the nation experienced the COVID-19 epidemic in 2022, which led to an increase in depression rates among college students, including changes in studies and lifestyles, economic pressures, uncertainty about the future, weakened social support systems, and the psychological impact of the epidemic itself.

3. Analysis of Core Belief Challenges and Depression by Demographic and Socioeconomic Variables

This study found a significant difference between gender and core belief challenge ($p<0.001$), with females scoring slightly higher than males, a result that contradicts Wang's (2018) study, which showed that male students scored slightly higher on core belief challenge. According to the functional description model of core belief challenge, traumatic events are like earthquakes that destroy an individual's past goals, beliefs, and coping abilities. After experiencing trauma, individuals tend to reflect to make sense of the situation and process emotional responses (Haspolat & Çırakoğlu, 2021; Cook, 2017; Tedeschi & Calhoun, 2004). The present study was at the beginning of the gradual relaxation of COVID-19 controls in China, and research has noted that women typically show stronger tendencies for reflection and emotional distress in the face of trauma (Wang, 2022). Therefore, the environment and challenges posed by COVID-19, as well as socio-cultural factors, may cause women to be more prone to overthinking when coping with stress, a pattern of thinking that, although a normal response to uncertainty and fear, may have a negative impact on mental health if it persists (Wang et al., 2020). As a result, women's core beliefs are more likely to be challenged in different contexts. The difference between this study and Wang (2018)

reflects the interaction of three variables: trauma nature (systemic epidemic vs individual chemical stress), measurement context (collective safety net collapse vs individual goal obstruction), and social role expectations (family responsibility reinforcement vs competitive environment maintenance). Subsequent research needs to adopt a mixed method, combining physiological indicators (such as cortisol levels) with discourse analysis, to reveal the dynamic formation mechanism of gendered core belief challenges.

In addition, this study did not find a significant difference between grade level and core conceptual challenges. This may be related to the types of challenges experienced by students at different grade levels during the COVID-19 epidemic (Zhu & Lei, 2021). For example, incoming freshmen may have faced the stress of adjusting to college life while also dealing with the uncertainty and isolation associated with the outbreak (Gu, 2024), while upperclassmen may have faced more complex career pressures, such as internship and employment-related challenges (Ye & Chen, 2023). These different experiences may lead to differences in the extent to which students' core beliefs are challenged in the face of the epidemic at each grade level.

there is a statistical difference between grade variables and depression among Hetao college students. The results of this study are similar to those of the Qiao (2022) study. Specifically, the depression rate of lower grade students is higher than that of higher grade students. This may be because entering university for younger students means bidding farewell to familiar high school life and facing a completely new learning environment, social circle, and lifestyle, which is a huge challenge for most students. The pressure of adapting to a new environment may lead to increased anxiety, loneliness, and stress in lower grade students, thereby increasing the risk of depression (Hu et al., 2021). In addition, many lower grade courses have switched to online teaching, Online lectures lacked real-time feedback, reducing retention rates for complex concepts. Limited peer interactions weakened collaborative learning, exacerbating feelings of academic inadequacy. 42% of students experienced delayed submission of assignments due to online learning technology issues, with a correlation coefficient of $r=0.31$ ($p<0.01$) with depressive symptoms (Lou, 2023). However, counter-intuitive findings emerged for upperclassmen: Despite demonstrating lower depression rates, senior students faced intensified career-related stressors during the pandemic, including remote internship disruptions (39.2% reported delayed job placements) and heightened competition in saturated job markets (Yang et al., 2021). Senior students face accumulated pressure from overlapping academic career demands, which may manifest more as “busy fatigue” rather than clinical depression

4. The Relationship Between Social Support, Core Belief Challenges, and Depression

This study found a positive correlation between social support and core belief challenge, i.e., the more social support college students receive, the higher their level of core belief challenge, and vice versa. This is consistent with the findings of Xiao et al. (2014). Higher social support typically means that individuals have more

resources and opportunities for self-exploration and reflection (Liu et al., 2023), which may involve a reassessment of one's core beliefs (e.g., self-worth and worldview). Comparatively, individuals with lower levels of social support may have difficulty engaging in in-depth psychological exploration due to life stress or feelings of social isolation. In addition, through high levels of social support, individuals are exposed to a wider and more diverse range of perspectives and experiences, and this exposure may prompt them to revisit pre-existing core beliefs, thereby increasing the likelihood that they will be challenged in a given situation.

This study did not find a significant correlation between social support and depression, which is contrary to the findings of Wei (2007), Zhang and Gong (2017) and Lou and Cheng (2024). This phenomenon may indicate that the relationship between social support and depression is not single or direct, but a complex interactive process that is influenced by multiple factors such as individual characteristics, the form and quality of social support, the availability of support, and cultural background. Therefore, individuals may still experience depression even when social support is present, reflecting the complexity of the relationship.

This study found a positive relationship between core belief challenge and depression, i.e. the higher the depression score, the higher the level of core belief challenge and vice versa. This result is similar to studies such as Milman et al. (2020), Oswald et al. (2021) and Choi and In (2020). This may be because cognitive restructuring triggered by core belief challenges alters an individual's worldview and perception of stressors (Haspolat & Çırakoğlu, 2021; Cho & Park, 2013). The disruption of core beliefs may exacerbate the distress individuals feel after trauma (Matsudaira et al., 2021; Calhoun & Tedeschi, 2006; Janoff-Bulman, 2006). Sundrasekaran et al.'s (2021) study showed that there is a significant positive correlation. Oswald et al. (2021) also found that young people with poorer mental health exhibited greater core belief challenges during the epidemic. Additionally, Choi and In (2020) argued that the more challenged core beliefs were, the more likely individuals were to think about the traumatic event. Repeated uncontrollable thoughts may lead to PTSD unless these intrusive thoughts are transformed into more reflective ones. According to Beck's cognitive model, the onset and persistence of depression is associated with an individual's negative core beliefs, which are typically rooted in an individual's cognitive structure and reflect his or her distorted perceptions of self, others, and the world. When these core beliefs are challenged by a traumatic event, individuals need to revisit and reassess their perceptions, which in some cases may trigger feelings of emotional discomfort or depression.

Conclusion

1. The incidence of depression is relatively high among Hetao college students, with 33.7% of students suffering from mild depression. The proportion of students with moderate depression is 7.2%, and 0.9% of students suffer from severe depression.

2. There are significant differences between gender, Grade level and core beliefs challenges, while there are no significant differences in birthplace, department, parents' education level, monthly family income, and monthly living expenses of college students compared to core belief challenges.

3. There were no significant differences between gender, place of birth, department, parents' education level, monthly household income, and monthly living expenses and depression. Only grade was significantly correlated with depression.

4. There was a positive correlation between core belief challenge and social support, and a positive correlation between core belief challenge and depression, but the correlation at the significance level was not high.

5. According to the results of the multiple linear regression model, core belief challenges have a certain predictive effect on depression among college students at Hetao University.

Suggestions for The Application of Research Results

Based on the above research conclusions, combined with the mental health status and mental health education status of Hetao college students, this study proposes the following suggestions on how to improve depression and enhance the mental health level of college students in Hetao College:

1. Policy-Level Recommendations

1.1 Establish a Tiered Depression Intervention Framework

1) Stakeholders: University administrators, counseling centers, and faculty advisors.

2) Action: Develop policies to categorize depression risk levels (e.g., universal prevention for all students, targeted interventions for high-risk groups like first-year students and females). Require annual mental health screenings for early identification of core belief-related vulnerabilities.

1.2 Promote Interdepartmental Collaboration

1) Stakeholders: Administrators, faculty, and counseling services.

2) Action: Create cross-departmental task forces to align mental health initiatives with academic support services (e.g., integrating resilience training into coursework, coordinating peer mentor-ship programs).

2. Practical-Level Recommendations

2.1 Implement Targeted Mental Health Education Programs

1) Stakeholders: Counselors, psychologists, and peer educators.

2) Action: Design workshops to teach students to identify core beliefs (e.g., "What are core beliefs?" "How trauma triggers belief challenges") and apply cognitive restructuring techniques. Use case studies from this research to illustrate connections between belief challenges and depressive symptoms.

2.2 Tailor Interventions for High-Risk Subgroups

1) Stakeholders: Counselors, academic advisors, and resident advisors.

2) Action:

A. For female students: Offer group therapy sessions addressing gender-specific stressors (e.g., societal expectations, academic pressure) and their links to core belief disruptions.

B. For lower-grade students: Develop orientation programs emphasizing adaptive belief-building strategies to mitigate the transition shock common in first-year students.

2.3 Enhance Trauma-Informed Counseling Practices

1) Stakeholders: Clinical psychologists, interns, and counseling staff.

2) Action: Train counselors to use trauma-focused CBT techniques to help students re-frame maladaptive core beliefs (e.g., “What happened?” to “How did this event challenge my worldview?”). Incorporate mindfulness practices to reduce rumination on negative beliefs.

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