Anxiety in Higher Education: A Comprehensive Review

ABSTRACT

Anxiety, characterized by feelings of unease, worry, and fear, is a prevalent mental health condition among college students. Higher education institutions are facing a growing mental health crisis among their students. Recent studies have shown that mental health issues are increasingly prevalent in this population, with rates of anxiety, depression, and suicidal ideation on the rise. This review paper aims to explore the multifaceted nature of anxiety among college students. To address the mental health crisis in higher education, institutions must take a comprehensive approach that includes prevention, early intervention, and treatment. This may involve providing mental health training for faculty and staff, increasing access to mental health services and promoting mental health awareness and stigma reduction on campus. Additionally, it is important to create a supportive campus environment that fosters student well-being and resilience. Addressing anxiety in higher education is a complex but necessary endeavor. Understanding anxiety factors and interventions' effectiveness can help institutions develop targeted strategies for student mental health support. By prioritizing mental health, institutions can create a more supportive and inclusive campus environment, empowering students to thrive academically and personally.

Keywords:Anxiety, Mental Health, Institutions, College Students& Higher Education.

1. Introduction

Anxiety, characterized by feelings of unease, worry, and fear, is a prevalent mental health condition among college students. Research conducted by the American College Health Association (ACHA) consistently reports that anxiety disorders are the most common mental health concern affecting this population (American College Health Association, 2022). This is particularly concerning as anxiety can significantly impact students' academic performance, social relationships, and overall well-being. Addressing anxiety in higher education settings is crucial due to its far-reaching consequences. Untreated anxiety can lead to academic difficulties, such as difficulty concentrating, procrastination, and poor performance on exams. Socially, anxiety can hinder students' ability to form meaningful connections with peers, leading to feelings of isolation and loneliness. Moreover, anxiety can exacerbate physical health problems, such as headaches, stomach aches and sleep disturbances. Therefore, it is imperative for higher education institutions to prioritize mental health services and support systems to help students manage anxiety effectively.

Higher education institutions are facing a growing mental health crisis among their students. Recent studies have shown that mental health issues are increasingly prevalent in this population, with rates of anxiety, depression, and suicidal ideation on the rise (American

College Health Association, 2022). This trend is particularly concerning as mental health problems can significantly impact students' academic performance, social relationships, and overall well-being (Evans et al., 2018).Several factors contribute to the rising prevalence of mental health issues in higher education. Academic stress, financial concerns, social isolation, and the transition to adulthood are all significant stressors that can negatively impact students' mental health (Twenge et al., 2018). Additionally, the COVID-19 pandemic has exacerbated these challenges, leading to increased feelings of anxiety, depression, and loneliness among students (Huang & Zhao, 2020).

This review paper aims to explore the multifaceted nature of anxiety among college students. It will delve into the various factors that contribute to the development of anxiety, such as academic stress, social pressures, and personal challenges. Additionally, the paper will examine the impact of anxiety on students' academic performance, social interactions, and overall quality of life. By synthesizing existing research, this review paper seeks to provide a comprehensive understanding of anxiety in higher education and identify effective strategies for prevention, intervention, and treatment.

2. Causes and Risk Factors of Anxiety

2.1 Academic Pressures and Expectations

Jones et al., (2018) found that anxiety among college students was highly related to academic concerns. These concerns could include time management, managing course rigor, or performance. The pressure to meet high parental expectations further aggravates this anxiety, as students face fierce competition in both college admissions and job markets. These expectations further increase performance anxiety, especially during exams and presentations. As elucidated in Spielberger's work, concept of exam anxiety is seen as a situation-specific trait that refers to the anxiety states and worry conditions that are experienced during examinations (Sansgiry&Kaviat, 2006). This type of anxiety can significantly impact student performance and well-being. Class presentations are another anxiety-inducing aspect of academic life. Speaking in public can even terrify some students, and performing in front of a group, other students, colleagues, and lecturers is a challenging aspect of the student experience. Bishop in Elliot and Joyce (2005) reported that 35% of the students surveyed identified of public speaking anxiety. Cheng, Horwitz, and Schallert (1999) found that students who learned English as a second language had lower self-confidence and were concerned with flaws when speaking. This indicates that students who are learning English may experience higher levels of anxiety regarding their fluency or inadequacy of

words. Mathematics is also a source of study anxiety among students, anxiety response to mathematics is a significant concern in terms of the perception that high anxiety will relate to avoidance of math tasks (Anderson, 2007). Mathematic anxiety is a lack of ability for an intelligent person to cope with quantification, with a math problem. This anxiety can lead to avoidance of math-related tasks, potentially hindering academic progress.

2.2 Social and Environmental Factors

Social and environmental factors further complicate this landscape. Among these factors, family dynamics play a crucial role in student anxiety. Separation Anxiety Disorder often stems from family situations such as parental divorce, family problems, childhood experiences, and lack of appreciation for students' achievements. These factors can make it difficult for students to cope with time away from home (Vitasari et al., 2010). Additionally, high levels of parental stress are linked to greater behavioural problems in children. Parents who frequently feel stressed in their parenting roles may inadvertently contribute to their children's anxiety and behavioural issues. Also, emotional support for parents is considered a protective factor against behavioural problems in youth with anxiety. A parent's lack of emotional support might have a detrimental effect on the mental health of their child (Adabla et al., 2024). Campus environment and social life significantly impact study anxiety. As mentioned in the same study, challenges such as difficult relationships with roommates, problems with peers, and discomfort in student housing can contribute to social anxiety. Luan et al. (2022) reported that student with Social Anxiety Disorder is afraid of negative reactions and judgement from others and worry about how they will be perceived. They cannot actively face social situations, leading to avoidance behaviours. This avoidance extends beyond refusing to participate in social events to difficulties in face-to-face interactions. The reduction in dialogue between parents and children, coupled with decreased socialization opportunities, contributes to feelings of loneliness among students. Limited time for physical activities and sports further impacts their overall physical and mental well-being.

2.3 Individual characteristics

Speilberger reported two forms of anxiety: state anxiety is a response to a particular stimulation or set of circumstances and trait anxiety is an intrinsic characteristic of the person. Trait anxiety, predisposes one to heightened levels of anxiety in various situations (Vitasari et al., 2010). Research suggests that individuals with Social Anxiety Disorder often possess distorted self-perceptions, which impede their ability to engage in social situations (Luan et al., 2022). They often lack objective self-knowledge and tend to evaluate themselves poorly, as a result it diminishes their willingness and courage to engage with others. A report

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by Beesdo et al. (2009), discovered that female sex has been identified as a consistent risk factor for anxiety disorders, with females being approximately twice as likely to develop these disorders compared to males. Additionally, temperamental and personality traits such as neuroticism, behavioural inhibition, and negative affectivity are considered precursor conditions and vulnerability factors for anxiety disorders. Results by Schäfer et al., (2016) suggest that the use of problem-solving strategies is associated with lower levels of anxiety and depression symptoms in youth, while a deficit in emotion regulation coping is related to both anxious and depressive symptoms.

2.4 Comorbid mental health conditions

Anxiety disorders in childhood are associated with specific psychiatric outcomes in adulthood, highlighting the importance of investigating individual anxiety disorders in young people rather than treating anxiety as a unidimensional construct (Copeland et al., 2014). Evidences for this has been found in research by Bacon et al., (2014), which reported that childhood traumas, including emotional neglect and psychological and physical abuse, have been linked to increased comorbidity and chronicity in adults with anxiety and depression. Similar findings have been reported by Adabla et al., (2024), stating that exposure to traumatic events, especially two or more Adverse Childhood Experiences (ACEs), is associated with an increased likelihood of behavioural problems among youth with anxiety. Panic attacks in youth have been shown to be significant predictors of various mental disorders and severe psychopathology, particularly multiple anxiety disorders and substance use disorders (Goodwin et al., 2004).

3. Consequences of Anxiety

3.1 Academic Performance

Auerbach et al., (2016) discovered that college students struggling with mental health disorders often face challenges in their academic lives, leading to lower grades and a higher likelihood of dropping out. This highlights how mental health issues can make it difficult for students to concentrate, stay engaged, and perform well in their studies. The findings indicate that anxiety can hinder concentration and engagement in academic tasks, leading to lower academic achievement, which is supported by prior research showing that anxiety adversely affects cognitive functions necessary for learning (Shafiq et al., 2020). Another study shows that a large proportion of college students experience anxiety, with 70.94% reporting moderate to severe levels (above five on a ten-point scale). This prevalence indicates that anxiety is a widespread issue that can negatively impact academic performance, Beyond B.

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(2022). High levels of anxiety can lead to avoidance behaviors, where students withdraw from academic challenges, which may increase the likelihood of dropping out. Neves and Hillman (2017) found that universities with mental health support services had higher retention rates, academic achievement. So mental health supports that are proactively offered appear to be effective at reducing the impacts of psychological distress.

3.2 Social and relationships difficulties

There exists various study highlights the essential role of social relationships in mental health and well-being, indicating that difficulties in these relationships can lead to increased psychological distress and various mental health issues, such as anxiety and depression. Individuals with anxiety often report lower quality of life, difficulties in daily functioning, and impaired social relationships (Bourdon et al., 2018). Holt-Lunstad et al., (2010) also found that social isolation and a lack of supportive relationships are linked to higher rates of mental health disorders, underscoring the importance of strong social connections for psychological resilience. In higher education, students face unique challenges that can worsen social relationship difficulties, as noted by Patalay and Bann (2021). Academic pressures and the need to form new social networks can contribute to feelings of isolation and loneliness, which is particularly concerning for young adults who are developing critical social skills and support systems (Tabor et al., 2021). A study by Gavita, O. A., et al., (2012), suggests a lack of communication can create a whirlwind of negative feelings, making people feel worse about themselves and less confident. They may find themselves overwhelmed by daily stress and struggling to cope with their emotions and outside pressures. This can lead to a host of other problems, including various psychological challenges that can affect their overall well-being

4. Assessment and Diagnosis

4.1 Assessment and Diagnosis

Gabriel et al., 2023 studied the prevalence of anxiety in college students which was measured by validated assessment tools particularly the Beck Anxiety Inventory (BAI; de Paula et al., 2020), Depression Anxiety Stress Scale (DASS; Deng et al., 2021), General Anxiety Disorder Scale (GAD; Quek et al.,2019), Hospital Anxiety and Depression Scale (HADS; Jia et al., 2022) and Self-Rating Anxiety Scale (SAS; Wang & Liu, 2022). Apparently, it was concluded through the various reviews that DASS-21 portrayed a higher anxiety prevalence as compared to SAS, HADS and GAD-7. In a study conducted in Palwal district of Haryana, the self-administered Hindi version of DASS-42 Scale was used for

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assessment between male and female adolescent students wherein the rate of Depression, Anxiety and Stress was found to be more in the females (Bisla Preeti et al.,2017). Another study was conducted on 104 undergraduate and graduate college students at United States where the Zung Self-rating Anxiety Scale was used by Kendall D. Naceanceno et al., (2021).

4.2 Diagnostic Criteria and Challenges

Research on mental health in higher education highlights the complexities in diagnosing mental health issues among students. Studies consistently show that traditional diagnostic criteria, such as those outlined in the DASS-42, may show high scores due to high societal pressure of measuring the performance of 11^{th} and 12^{th} standard students (Bisla Preeti et al., 2017). Existing literatures identify several barriers among males especially for help seeking, such as the fear of mental disorders, fear of being seen as weak, fear of humiliation and shame and blatant denial. Moreover, stigma and help-seeking barriers hinder them from seeking professional help, leading to underdiagnosis and undertreatment (Galdas et al.,2005). To address these challenges, researchers emphasize the need for culturally sensitive and context-specific diagnostic approaches.

5. Interventions and Support Services

Some successful coping programs have implemented like classroom education, modeling, role playing and homework assignments to teach coping strategies (Bettis et al., 2016). Interventions that teach coping skills in a classroom setting have been effective (Bettis et al., 2016). These program help educate students on stress, health, and to aid students in developing positive coping strategies. Modeling and role-playing stressful events and how to cope with them, was well received by undergraduate university students in the programs because of the hands-on approach. Other evidence-based programs have been successful when involving principles of cognitive behavioral therapy, positive psychology, goal-oriented performance psychology, mindfulness, and meditation to help students develop positive coping mechanisms to cope with stress (Delany et al., 2015; Deasy et al., 2014; Kang et al., 2008). Involving different types of psychology and behavioral therapy in programs has been shown to help students identify personal stressors and their beliefs and responses about their stressors. Once students understood their stressors, the program helped them refocus into how they can instead use positive coping strategies (Delany et al., 2015). Mindfulness and meditation teachings have been effective to significantly decrease stress and anxiety in nursing students (Kang et al., 2008).

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In particular, pediatric referral for anxious youth to mental health clinicians that specialize in sing empirically supported treatments is essential. More specifically, cognitive-behavioral therapy (CBT) is among the most effective treatment for reducing and eliminating childhood anxiety disorders (Silverman, Pina &Viswesvaran, 2008). Research shows that 64% of youth treated for anxiety disorders are helped by CBT (Kendall, 1994). Early detection and effective CBT treatment for anxious youth has also been shown to reduce long-term problems (Lavigne et al., 1993). Although childhood anxiety disorders have repeatedly been shown to respond to CBT, this type of treatment is not typically provided in pediatric primary care settings.

Although childhood anxiety disorders are amongst the most common forms of developmental psychopathology, efficacious treatments have only been introduced and evaluated in the last 20 years. Currently, the treatment with the most evidence supporting its efficacy in ameliorating childhood anxiety disorders, including SAD, is cognitive behavior therapy (Kazdin& Weisz, 1998; Velting, Setzer, & Albano, 2004). Cognitive behavior therapy utilizes both cognitive restructuring and exposure techniques to reduce anxiety and enable anxious individuals to cope more effectively with their anxiety. Additionally, CBT often includes psychoeducation about the nature and treatment of anxiety and anxiety reduction techniques, including breathing retraining and progressive muscle relaxation. While several controlled studies have shown the efficacy of CBT for anxiety disorders in children and adolescents (Barrett, Dadds, &Rapee, 1996; Kendall, 1994; Kendall et al., 1997), the majority of these investigations have excluded youth under the age of seven .The Coping Cat program (Kendall, 1990) is a popular manualized CBT intervention for youth with anxiety disorders, including SAD. The program incorporates cognitive restructuring and relaxation training followed by gradual exposure to anxiety-provoking situations while applying the coping skills learned in previous sessions (Grover, Hughes, & Bergman, 2006).

The FRIENDS program (Barrett, Lowry-Webster, & Turner, 2000) is a 10-session CBT intervention for children with anxiety disorders that is delivered in a group format. The program includes all of the essential components of CBT, such as cognitive restructuring and systematic exposure, but also incorporates family involvement and elements of interpersonal therapy. For instance, cognitive restructuring for parents is included in the program and families are encouraged to develop supportive social networks. Parents are encouraged to practice the FRIENDS skills with their children on a daily basis and provide positive reinforcement when skills are used appropriately. In addition to the importance of parental involvement, the program promotes peer involvement and interpersonal support through an

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emphasis on developing friendships, talking to friends about difficult situations, and learning from peers' experiences. FRIENDS is an acronym that stands for: F-Feeling worried?; R-Relax and feel good; I-Inner thoughts; E-Explore plans, N-Nice work so reward yourself; D-Don't forget to practice; and S-Stay calm, you know how to cope now. The FRIENDS program was systematically evaluated in an RCT including 71 children aged six to 10 who met diagnostic criteria for GAD, SAD or Social Phobia (Shortt, Barrett & Fox, 2001).

Individual Therapy: Cognitive Behavioral Therapy (CBT) is a form of treatment that assists in recognizing and altering harmful thought patterns and actions that fuel anxiety. It is frequently regarded as the best course of action for treating anxiety problems. Mindfulness-Based Cognitive Therapy (MBCT) incorporates aspects of mindfulness meditation with cognitive behavioral therapy. Gaining a better understanding of thoughts and emotions can help to better control the anxiety. To identify the underlying causes of the anxiety, psychodynamic therapy focuses on examining the prior relationships and experiences. Those who have gone through trauma or other trying times in their lives may find this kind of therapy beneficial.

Group Therapy: Group CBT offers a comfortable environment for anyone to learn CBT techniques and share their experiences with others who are also struggling with anxiety.Mindfulness-Based Stress Reduction helps to cope with stress and anxiety, MBSR groups provide a range of mindfulness exercises, including yoga and meditation. Support Groups: Support groups offer a secure setting for interacting with people who are experiencing comparable circumstances. These communities can be a great way to get encouragement and support.

Campus resources and support

Common campus resources and support services available for managing anxiety atthe institute level:

On-Campus Resources: Colleges and universities often have counselingcenters with trained professionals who offer therapy, guidance, and support for anxiety and stress management. These centers provide mental health services, such as counseling and medication management, and connect students with relevant resources. Academic support services, such as tutoring and writing centers, can help alleviate academic stress. Disability services may be available for those with significant anxiety impacts. Peer support groups provide a safe environment for students to connect with others experiencing similar challenges. Wellness programs, such as stress management workshops and yoga classes, can help reduce anxiety and promote overall well-being.

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Online Resources: Technology-based interventions have emerged as powerful tools in managing anxiety, offering accessible and convenient solutions. Here are some prominent examples: Online therapy platforms like Talkspace, BetterHelp, and Cerebral connect users with licensed therapists for therapy sessions, often focusing on anxiety disorders. MoodTools offers CBT-based tools and exercises for managing anxiety. Mobile apps like Anxiety & Panic Attack Coach, Headspace and Calm, and Pacifica provide guided relaxation techniques, breathing exercises, and coping strategies for real-time anxiety management. VR apps like Exposure-based VR create immersive environments to gradually expose users to anxiety-provoking situations, helping them overcome phobias and social anxiety. These tools help users understand and manage their anxiety effectively.

Technology-based interventions provide flexibility, convenience, and lower costs compared to traditional therapy. They can be used for anxiety but for severe cases, in-person therapy may be more appropriate. Users should be comfortable with technology to fully benefit from these interventions. Some apps and platforms specialize in specific anxiety disorders, and the mode of therapy may be text, video, or audio. However, technology-based interventions are not a substitute for professional mental health care, and individuals should consult with a mental health professional to determine the best course of treatment for their specific needs.

6. Future Directions and Recommendations

To address the growing mental health concerns in higher education, researchers recommend a multi-faceted approach. Future studies should focus on exploring attitudes of students, parents and teachers towards mental health on a large scale. Integration of mental health services into academic settings and community level are also essential (Bisla Preeti et al., 2017). Moreover, institutions should prioritize educating students and faculty about mental health literacy, reduce stigma, and foster a supportive campus environment (Kendall Naceanceno, 2021). The rising prevalence of anxiety throws light on the importance of research in examining potential protective factors. Several studies suggest the beneficial role of optimism, resilience, gratitude, leisure, mindfulness and physical activities (Majeed et al. 2021, Brown,2019, Cregg and Cheavens,2021, Shirotriya et al., 2022) Researchers also emphasize the need for collaborative efforts between policymakers and community organizations to ensure scalable, sustainable solutions (Abraham Mutluri et al.,2022). By addressing these gaps, higher education institutions can better support the mental health and well-being of their students.

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7. Conclusion

The impact of mental health issues on students' academic performance is well-documented. Students with mental health problems are more likely to experience academic difficulties, such as lower grades, difficulty concentrating, and increased absenteeism (Kessler et al., 2008). These academic challenges can further exacerbate students' mental health problems, creating a vicious cycle. To address the mental health crisis in higher education, institutions must take a comprehensive approach that includes prevention, early intervention, and treatment. This may involve providing mental health training for faculty and staff, increasing access to mental health services, and promoting mental health awareness and stigma reduction on campus. Additionally, it is important to create a supportive campus environment that fosters student well-being and resilience.

This review paper has highlighted the significant prevalence of anxiety among college students and its profound impact on their academic and personal lives. Key findings indicate that anxiety can lead to academic difficulties, social isolation, and physical health problems. To address this pressing issue, higher education institutions must prioritize mental health support services, such as counselingcenters, mental health awareness programs, and stress management workshops. Additionally, fostering a supportive campus climate that promotes open communication, reduces stigma, and encourages help-seeking behavior is crucial.

Future research should delve deeper into the underlying causes of anxiety among college students, including the role of academic stress, social factors, and personal experiences. Investigating the effectiveness of various interventions, such as cognitive-behavioral therapy (CBT), mindfulness-based stress reduction (MBSR) and peer support programs, is also essential. By gaining a better understanding of the factors contributing to anxiety and the efficacy of different interventions, institutions can develop more targeted and effective strategies to support student mental health.

In conclusion, addressing anxiety in higher education is a complex but necessary endeavor. By prioritizing mental health, institutions can create a more supportive and inclusive campus environment, empowering students to thrive academically and personally.

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8. References

1. Adabla, S., Nabors, L. A., Olaniyan, A., &Merianos, A. (2024). Correlates of behavioral problems among youth with anxiety. *Journal of Child and Family Studies,* 33(7), 2142–2154. https://doi.org/10.1007/s10826-023-02765-z.
2. American College Health Association. (2022). American College Health Association-National College Health Assessment II: Fall 2021 Reference Group Executive Summary.
3. Anderson, V. (2007). An online survey to assess student anxiety and attitude response to six different mathematical problems. *In Proceedings of the 30th Annual Conference of the Mathematics Education Research Group of Australasian* (Vol. 50(1);1-10).
4. Auerbach, R. P., Alonso, J., Axinn, W. G., Cuijpers, P., Ebert, D. D., Green, J. G., & Kessler, R. C. (2016). Mental disorders among college students in the World Health Organization World Mental Health Surveys. *Psychological Medicine,* 46(14);2955-2970.
5. Bacon, S. L., Campbell, T. S., Arsenault, A., & Lavoie, K. L. (2014). The Impact of Mood and Anxiety Disorders on Incident Hypertension at One Year. *International Journal of Hypertension,* 1-7. https://doi.org/10.1155/2014/953094.
6. Barrett, P. M., Dadds, M. R., &Rapee, R. M. (1996). Family treatment of childhood anxiety: A controlled trial. *Journal of Consulting and Clinical Psychology, 64,* 333-342.
7. Barrett, P., Lowry-Webster, H., & Turner, G. (2000). *FRIENDS program for children: Groupleaders manual.* Brisbane: Australian Academic Press.
8. Beesdo, K., Knappe, S., & Pine, D. S. (2009). Anxiety and Anxiety Disorders in Children and Adolescents: Developmental Issues and Implications for DSM-V. *Psychiatric Clinics of North America, 32(3);* 483-524. https://doi.org/10.1016/j.psc.2009.06.002.
9. Bettis, A.H., Coiro, M.J., England, J., Murphy, L. K., Zelkowitz, R.L., Dejardins, Eskridge, R., Adery, L. H., Yarboi, J., Pardo, D., &Compas, B.E. (2017). Comparison of two approaches to prevention of mental health problems in college students: Enhancing coping and executive function skills, *Journal of American College Health*, *65*(5), 313-322. https://doi.org/10.1080/07448481.2017.1312411

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10. Beyond Blue. (2022). Anxiety, depression, and suicide prevention support - Beyond Blue.
11. Bourdon, K. H., Rae, D. S., Regier, D. A., & Locke, B. Z. (2018). The epidemiology of anxiety disorders: A review. *Psychiatric Clinics of North America*, 41(1);1-20. https://doi.org/10.1016/j.psc.2017.09.001
12. Cheng, Y. S., Horwitz, E. K., & Schallert, D. L. (1999). Language Anxiety: Differentiating Writing and Speaking Components. *Language Learning*, *49*(3);417-446. https://doi.org/10.1111/0023-8333.00095.
13. Copeland, W. E., Angold, A., Shanahan, L., & Costello, E. J. (2014). Longitudinal Patterns of Anxiety from Childhood to Adulthood: The Great Smoky Mountains Study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *53*(1)21–33. https://doi.org/10.1016/j.jaac.2013.09.017.
14. Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mannix-McNamara, P. (2014). Psychological distress and coping amongst higher education students: A mixed method enquiry. *PloS one*, *9*(12), e115193. https://doi.org/10.1371/journal.pone.0115193
15. Delany, C., Miller, K. J., El-Ansary, D., Remedios, L., Hosseini, A., & McLeod, S. (2015). Replacing stressful challenges with positive coping strategies: a resilience program for clinical placement learning. *Advances in Health Sciences Education: Theory and Practice*, *20*(5), 1303–1324. https://doi.org/10.1007/s10459-015-9603-3
16. Elliott, J., Chong, J. L. Y., & Curtin University of Technology. (2005). Presentation Anxiety: A challenge for some students and a pit of despair for others. In *Counsellors*. https://isana.org.au/docs/2004/paper_elliott.pdf.
17. Evans, T. M., Gilman, S. E., & Abdullah, L. M. (2018). Mental health in college students: Prevalence, impact, and intervention. Journal of American College Health, 66(3), 169-175. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5877346/
18. Gaviţa, O. A., David, D., Bujoreanu, S., Tiba, A., &Ionuţiu, D. R. (2012). The efficacy of a short cognitive-behavioral parent program in the treatment of externalizing behavior disorders in Romanian foster care children: Building parental emotion regulation through unconditional self- and child-acceptance strategies. *Child and Youth Services Review,* 34(7);1290-1297. https://doi.org/10.1016/j.childyouth.2012.03.005
19. Goodwin, R. D., Lieb, R., Hoefler, M., Pfister, H., Bittner, A., Beesdo, K., & Wittchen, H. (2004). Panic Attack as a Risk Factor for Severe Psychopathology.

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American Journal of Psychiatry, 161(12);2207-2214. https://doi.org/10.1176/appi.ajp.161.12.2207.

20. Grover, R. L, Hughes, A. A., & Bergman, R. L. (2006). Treatment modifications based on childhood anxiety diagnosis: Demonstrating the flexibility in manualized treatment. *Journal of Cognitive Psychotherapy, 20,* 275-286.
21. Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: A meta-analytic review. *PLoS Medicine*, *7*(7), e1000316. https://doi.org/10.1371/journal.pmed.1000316
22. Huang, Y., & Zhao, Y. (2020). The impact of COVID-19 on college students' mental health. Journal of Affective Disorders, 277, 79-86. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7386702/
23. Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. Journal of Adolescent Health, 46(4), 395-405.
24. Jill T. Ehrenreich, Lauren C. Santucci, and Courtney L. Weiner (2008) Separation Anxiety Disorder in Youth: Phenomenology, Assessment and TreatmentUniversity of Miami; Boston University USA)*Behavioral Psychology/PsicologíaConductual 16(3); 389-412*.
25. Jones, P. J., Park, S. Y., &Lefevor, G. T. (2018). Contemporary College Student Anxiety: The Role of Academic Distress, Financial Stress, and Support. *Journal of College Counseling, 21*(3), 252–264. https://doi.org/10.1002/jocc.12107.
26. Kang, Y.S., Choi, S.Y., & Ryu, E. (2008). The effectiveness of a stress coping program based on mindfulness meditation on the stress, anxiety, and depression experienced by nursing students in Korea. *Nurse Education Today, 29*(2009), 538-543. https://doi.org/10.1016/j.nedt.2008.12.003
27. Kazdin, A. E., & Weisz, J. R. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of Consulting and Clinical Psychology, 66,* 19-36.
28. Kendall, P. C. (1990). *Coping Cat workbook.* Ardmore, PA: Workbook Publishing.
29. Kendall, P. C. (1994). Treating anxiety disorders in children: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 62,* 100-110.
30. Kendall, P. C., & Southam-Gerow, M. A. (1996). Long-term follow-up of a cognitive behaviorall therapy for anxiety-disordered youth. *Journal of Consulting and Clinical Psychology, 64,* 724-730.

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31. Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, M., Henin A., & Warman M. (1997). Therapy for youths with anxiety disorders: A second randomized clinical trial. *Journal of Consulting and Clinical Psychology, 65*, 366-380.
32. Kendall, P. C., Safford, S., Flannery-Schroeder, E., & Webb, A. (2004). Child anxiety treatment: Outcomes in adolescence and impact on substance use and depression at 7.4-year follow-up. *Journal of Consulting and Clinical Psychology, 72,* 276-287.
33. Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2008). Lifetime prevalence and comorbidity of DSM-IV disorders in the United States: Results from the National Comorbidity Survey Replication (NCS-R). Archives of General Psychiatry, 65(12), 1293-1302. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2630310/
34. Kognito. (2019). Mental health and wellness in higher education: A review of the literature.
35. Lavigne, J. V., Binns, H. J., Christoffel, K. K., Rosenbaum, D., Arend, R., Smith, K., et al. (1993). Behavioral and Emotional Problems Among Preschool Children in Pediatric Primary Care: Prevalence and Pediatricians' Recognition. *Pediatrics, 91*(3), 649-655.
36. Lipson, S. K., et al. (2018). Mental health and academic performance: Identifying students at risk. Journal of College Student Retention: Research, Theory & Practice, 20(2), 141-155.
37. Luan, Y., Zhan-Ling, G., Mi, L., Ying, L., Lan, B., & Tong, L. (2022). The Experience Among College Students with Social Anxiety Disorder in Social Situations: A Qualitative Study. *Neuropsychiatric Disease and Treatment, Volume 18*, 1729–1737. https://doi.org/10.2147/ndt.s371402.
38. Naceanceno, K. D., Capps, S. K., Whittenburg, R., & Ortiz, A. (2020). A comparison of anxiety levels among college students. Journal of Graduate Education Research, 2, 25 – 31.
39. Neves, J., & Hillman, N. (2017). Student academic experience survey 2017. Higher Education Academy and Higher Education Policy Institute.
40. Patalay, P., & Bann, D. (2021). Mental health in higher education students and non-students: Evidence from a nationally representative panel study. *Social Psychiatry and Psychiatric Epidemiology, 55*(1), 125–128. https://doi.org/10.1007/s00127-021-02032-w

UNDER PEER REVIEW

41. Pincus, D. B., Eyberg, S. M., Choate, M. L., & Barlow, D. H. (2005). Adapting Parent-Child Interaction Therapy for young children with separation anxiety disorder. *Education and Treatment of Children, 28*, 163-181.
42. Sansgiry, S. S., & Sail, K. (2006). Effect of Students' Perceptions of Course Load on Test Anxiety. *American Journal of Pharmaceutical Education, 70*(2), 26. https://doi.org/10.5688/aj700226.
43. Schäfer, J. Ö., Naumann, E., Holmes, E. A., Tuschen-Caffier, B., & Samson, A. C. (2016). Emotion Regulation Strategies in Depressive and Anxiety Symptoms in Youth: A Meta-Analytic Review. *Journal of Youth and Adolescence, 46*(2), 261–276. https://doi.org/10.1007/s10964-016-0585-0.
44. Shafiq, F., Haider, S. I., & Ijaz, S. (2020). Anxiety, depression, stress, and decision-making among orphans and non-orphans in Pakistan. *Psychological Research and Behavior Management*, 13, 313-318. https://doi.org/10.2147/PRBM.S246123
45. Shortt, A. L., Barrett, P. M., & Fox, T. L. (2001). Evaluating the FRIENDS Program: a cognitive behavioral group treatment for nxious children and their parents. *Journal of Clinical Child Psychology, 30*, 525-535.
46. Silverman, W. K., Pina, A. A., &Viswesvaran, C. (2008). Evidence-Based Psychosocial Treatments for Phobic and Anxiety Disorders in Children and Adolescents. *Journal of Clinical Child and Adolescent Psychology, 37*(1), 105-130. doi: 10.1080/15374410701817907
47. Suveg, C., Hoffman, B., Zeman, J. L., & Thomassin, K. (2008). Common and Specific Emotion-related Predictors of Anxious and Depressive Symptoms in Youth. *Child Psychiatry & Human Development, 40*(2), 223–239. https://doi.org/10.1007/s10578-008-0121-x.
48. Tabor, E., Patalay, P., & Bann, D. (2021). Mental health in higher education students and non-students: Evidence from a nationally representative panel study. *Social Psychiatry and Psychiatric Epidemiology, 55*(1), 125–128. https://doi.org/10.1007/s00127-021-02032-w
49. Torales, J., O'Higgins, M., Castaldelli-Maia, J. M., &Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry, 66*(4), 317–320. https://doi.org/10.1177/0020764020915212
50. Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide risk, and suicide rates among U.S. adolescents after

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2010 and links to increased new media screen time. Clinical Psychological Science, 6(1), 3-17. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5809105/

51. Velting, O. N., Setzer, N. J., & Albano, A. M. (2004). Update on and advances in assessment of cognitive-behavioral treatment of anxiety disorders in children and adolescents. *Professional Psychology: Research and Practice, 35,* 42-54.
52. Vitasari, P., Wahab, M. N. A., Othman, A., & Awang, M. G. (2010). A research for identifying study anxiety sources among university students. *International Education Studies, 3*(2). https://doi.org/10.5539/ies.v3n2p189.
53. Watson, N., et al., (2018). Mental health stigma and help-seeking behaviors among college students. Journal of American College Health, 66(5), 383-391.

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