ADVERSE CHILDHOOD EXPERIENCES AND PSYCHOLOGICAL WELL-BEING AMONG COLLEGE STUDENTS: MEDIATION EFFECT OF MINDFULNESS

Dissertation submitted to Kerala University

In partial fulfilment of the requirements for the award of the Degree of

M. Sc. Counselling Psychology

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2022- 2024

CERTIFICATE

This is to certify that the Dissertation entitled is "**Adverse Childhood Experiences and Psychological Well-Being among College Students: Mediation Effect of Mindfulness"** an authentic work carried out by Nourin A Reg. No. 604221150218 under the guidance of Dr. Ammu Lukose during the fourth semester of M.Sc. Counselling Psychology programme in the academic year 2022- 2024.

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DECLARATION

I, Nourin A, do hereby declare that the dissertation titled "Adverse Childhood Experiences and Psychological Well-Being among College Students: Mediation Effect of Mindfulness" submitted to the Department of Counselling Psychology, Loyola College of Social Sciences, Sreekariyam, under the supervision of Dr Ammu Lukose, Assistant professor of the Department of Counselling Psychology, for the award of the degree of Master's in Science of Counselling Psychology, is a bonafide work carried out by me and no part thereof has been submitted for the award of any other degree in any University.

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ACKNOWLEDGEMENT

I would like to express my sincere gratitude to all those who have contributed to the completion of this project. I am thankful for the support and guidance of the following individuals:

First and foremost, praises and thanks to the Almighty, for the shower of blessings throughout my research work and to complete it successfully.

I would like to express my deep and sincere gratitude to my research guide Dr. Ammu Lukose, Assistant professor of Counselling Psychology, for providing me with valuable insights and guidance throughout my research.

Besides my guide, I would like to express my gratitude to Ms Jesline Maria Mamen, Assistant professor and Head of the Department of Counselling Psychology and Dr Pramod S K, Assistant professor, Department of Counselling Psychology for providing constant support to complete the research.

I extend my sincere thanks to all the participants who cooperated with me during the research with their time and patience.

Finally, I express my deep and heartfelt gratitude to my husband, for his support and encouragement throughout and also my family and friends for their constant motivation.

With Regards,

Nourin

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Abstract

Aim: This study aims to explore the mediating effect of mindfulness on the relationship between Adverse Childhood Experiences (ACEs) and psychological well-being among college students, with a focus on understanding how mindfulness can potentially mitigate the negative impact of ACEs on psychological wellbeing

Methods: A total of 301 participants (male:92, female 209) were selected using convenient sampling. The Adverse Childhood Experiences (ACE) Questionnaire, Mindful Attention Awareness Scale (MAAS), and Ryff's Psychological Well-being (PWB) Scale were utilized to collect data. Correlation and Mediation analyses were performed to investigate the medua and relations between ACEs and the other variables.

Results: Adverse Childhood Experiences (ACEs) significantly predicted both mindfulness (R^2 = 0.0474, $p < 0.0001$) and psychological well-being (R^2 = 0.3442, $p < 0.0000$), with a moderate negative correlation between ACEs and both psychological well-being ($r = -0.252$, $p < 0.01$) and mindfulness ($r = -0.260$, $p < 0.01$). Mindfulness, which was positively correlated with psychological well-being ($r = 0.332$, $p < 0.01$), partially mediated the relationship between ACEs and psychological well-being, suggesting that mindfulness can help mitigate the negative impact of ACEs on well-being. Gender differences were observed, with females reporting higher psychological well-being ($p < 0.01$) and slightly higher mindfulness ($p < 0.01$) compared to males. The prevalence of ACEs in the sample was 11.6%, with participants who experienced ACEs showing lower mindfulness scores. Age was not significantly correlated with any of the variables.

Conclusions: This study underscores the detrimental effects of Adverse Childhood Experiences (ACEs) on psychological well-being and mindfulness among college students. Notably, mindfulness was found to partially mediate the impact of ACEs on well-being, suggesting that mindfulness can help buffer the negative effects of ACEs. Gender differences were observed, with females reporting higher well-being and mindfulness. These findings highlight the importance of mindfulness-based interventions in mitigating the impact of ACEs and promoting better psychological outcomes.

key words: Adverse childhood experiences, psychological wellbeing, mindfulness, college student

CHAPTER I

INTRODUCTION

Adverse childhood experiences (ACEs) are stressful and traumatic events that people suffer early in life, usually before they turn 18. They are regarded as public health concerns, affecting the health and well-being of children, not only at the time of their exposure but also in their adult years of life (Felitti et al., 1998; Zahedi et al., 2019; Wiehn et al., 2018). Felitti et al. (1998) describe events such as violence against children, which includes abuse in any form, physical and/or emotional disregard, and abnormal household circumstances (e.g., divorced or separated partners, violent practices against the partner, use of intoxicants in the house, etc.), as majorly responsible for ACEs. According to Corcoran and McNulty (2018), ACEs are defined as "traumatic events (e.g., sexual abuse, physical abuse, emotional abuse) or chronic stressors (e.g., neglect, parental separation) that are uncontrollable to the child." Exposure to ACEs is rarely found to occur in isolation. So, it is pivotal to understand that children are vulnerable when they experience or are exposed to maltreatment (Finkelhor et al., 2007; Wiehn et al., 2018). Exposure to ACEs is universal and a historical constant that prevails in all societies and cultures at each social level (World Health Organization, 2014). For example, in 2014, an estimated 702,000 children were abused and neglected in the United States of America who were under the age of 18 years (Wildeman et al., 2014).

Emerging research has found an enduring influence of childhood experiences on long-term health of individuals. Children who experience stressful and poor-quality childhoods are more likely to adopt health-harming behaviours during adolescence, which can themselves lead to

mental illnesses and diseases such as cancer, heart disease and diabetes later in life (Jaffee et al, 2018). Studies have defined adverse childhood experiences (ACEs) as physical, mental, or sexual abuse, emotional or physical neglect, a violent home environment, household substance abuse, exposure to parent mental illness, parental separation or divorce, and parental incarceration (Felitti, et al., 1998). The original study on the effect of ACEs on adult health was done at the Kaiser Permanente clinics, were patients were surveyed regarding a variety of stressful experiences they had as children (Felitti et al., 1998). The ACEs survey asked about domestic violence against mothers, substance use by household members, mental illness, suicide thoughts, and imprisonment, as well as childhood experiences of physical, sexual, and psychological abuse. Participants with four or more ACEs (i.e., experienced multiple forms of abuse and/or household dysfunction) had a four to 12-fold higher risk of developing alcoholism, drug abuse, depression, and suicide attempts as adults compared to those with no ACEs (Felitti et al., 1998). Physiological reactions to stress and the propensity to engage in risky behaviours to deal with stress may be the cause of the link between ACEs and poor health outcomes (Felitti et al., 1998). Similar correlations between ACEs and subsequent health outcomes have been discovered in a large number of studies over the past two decades. For instance, having ACEs has been linked to increased sleep disturbances (Salinas-Miranda et al., 2015; Windle et al., 2018), increased stress and anxiety (Anda et al., 2006; Salinas-Miranda et al., 2015), decreased consumption of fruits and vegetables (Windle Et al., 2018), impaired executive functioning (Majer, Nater, Lin, Capuron, & Reeves, 2010), lower perceived psychological well-being (Nurius, Green, Logan-Greene, & Borja, 2015), lower levels of gratitude (Wu, Chi, Lin, & Du, 2018), and lower family closeness in middle and older adulthood (Savla et al., 2013).

A number of large-scale studies have been conducted to estimate the prevalence of ACEs in various countries across the globe. ACEs are common in high-income and low to middle-income countries (LMICs). Research reveals that >60 % of American adults (Merrick Et al., 2018) and 85 % of Brazilian adolescents (Soares et al., 2016) have been exposed to at least one type of ACEs in their life course. In Eastern Europe, 53 % of adolescents and adults (Bellis, Hughes, et al., 2014), and in the United Kingdom, 47 % of adults have experienced at least one type of ACEs (Bellis, Lowey, et al., 2014). Seventy-six percent of young adults in Vietnam experienced at least one type of ACEs (Tran et al., 2015). In India, no nationwide study on the prevalence of ACEs exists (Fernandes et al., 2021). About 19 % of the world's children live in India, which constitutes 42 % of the total Indian population, and nearly half of these children are vulnerable and need care and protection (Trivedi et al., 2021). Therefore, more information from a global health perspective is critical concerning the prevalence of ACEs in LMICs because most young people live in these countries (Le et al., 2022). Research suggests that exposure to a high number of ACEs can reduce about 20 years of life expectancy by increasing the risk of various causes leading to death (Anda et al., 2009; Brown et al., 2009). ACEs are also associated with health hazards like somatic and Psychosomatic disorders, cognitive-emotional reactions, or even experiences that cause death and posttraumatic stress symptoms (Douglas & Otten, 2017; Haj-Yahia et al., 2019). A recent study by Baldwin et al. (2021) on population versus individual prediction of Poor health from results of adverse childhood screening involving two birth cohorts [British children (n = 2232) studied until 18 years from 1964 to 1996 to 2012–2014 and Dunedin children of New Zealand (n = 1037) studied until 45 years from 1972 to 1973 to 2017–2019] found that at a population level ACEs as a risk index was associated with harmful outcomes, but did not predict the outcome for the individual. Further research indicates a "dose-response relationship" between ACEs and health

outcomes, i.e., greater exposure of a child to ACEs makes them more susceptible towards having problematic health issues in later stages of life (Felitti et al., 1998). Therefore, higher prevalence of ACEs is associated with an increased risk of psychological and behavioural problems, including depression, leading to suicidal ideation and behaviors (Bjorkenstam ¨ et al., 2017; Wiehn et al., 2018), consumption of alcohol (Dube Et al., 2006), drug misuse and abuse (Forster et al., 2018) and risky sexual behaviors (Hillis et al., 2001). Hence, childhood trauma serves as a risk factor for mental health. Thus, it is evident from existing literature that ACEs negatively impact individuals' health and well-being and aid in developing mental disorders and harmful behaviors in their adult years. ACEs are pervasive, with numerous studies indicating that a significant portion of the population has experienced at least one ACE. For example, a survey conducted by the Centers for Disease Control and Prevention (CDC) found that about 61% of adults reported having experienced at least one type of ACE, while nearly 16% reported four or more types.After types. In India, according to a research by Fernandes et al. (2021), one in two young individuals had ACEs related to child maltreatment and family-level ACEs. (Fernandes et al, 2021). To date, much of the ACEs literature has focused on children and adults. Greater attention should be paid to the distinct developmental needs of adolescents, as it is a unique developmental stage of rapid growth during which physiologic, cognitive, social, and emotional changes occur simultaneously. (Soleimanpour et al., 2017). Distinct from both childhood and adulthood, adolescence (ages 11 to 21 years) is a remarkable developmental period, during which adolescents experience physical and sexual maturation, develop more abstract and long-term thinking, and engage in risk-taking behaviors as they establish their independence.ACEs can have profound and lasting effects on an individual's development and health. The cumulative stress and trauma associated with ACEs can disrupt neurodevelopment and lead to a range of cognitive, emotional, and social impairments.

This disruption can manifest in various ways, including difficulties in learning, behavioral problems, and challenges in forming healthy relationships. The impact of ACEs extends into adulthood, where it is associated with an increased risk of various health problems, including mental health disorders, substance abuse, and chronic physical conditions such as heart disease, diabetes, and cancer. The underlying mechanisms include chronic stress, which can lead to dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, inflammation, and other physiological changes numerous studies have demonstrated the broad impact of ACEs. For instance, Anda et al. (2006) highlighted that individuals with multiple ACEs are more likely to engage in health risk behaviors, such as smoking, heavy drinking, and drug use. Another study by Edwards et al. (2003) showed that ACEs are strongly associated with the development of depressive disorders and suicidal behavior.

Psychological well-being (PWB) has been linked to health, quality of life, development, and success, making it a key determinant of life outcomes. (Lyubomirsky, King, & Diener, 2005). High PWB has also been associated with better physical and mental health, as well as greater life satisfaction. (Pressman, Jenkins, & Moskowitz, 2019). PWB is also related to higher levels of employment, income, work, performance, social support, and development in later life. (Cheng, 2009). A substantial body of literature has consistently linked adverse childhood experiences (ACEs) to poor wellbeing (Oshio et al. 2013; Hughes et al. 2017; Mosley-Johnson et al.2019) and both lifetime and recent depressive disorders (Chapman et al. 2004). According to the World Mental Health Survey, childhood adversity accounted for 29.8% of all mental health disorders worldwide (Kessler et al. 2010). Population-based research' findings suggest that adversity in childhood is common and linked to the emergence of psychological problems not only

in childhood but also in adolescence and adulthood (Green et al., 2010; Kessler, Davis, & Kendler, 1997; McLaughlin et al., 2012). People who have experienced adverse childhood experiences (ACEs) are more likely to experience anxiety or worry about their physical health, to rate their health and life satisfaction lower, and to report higher levels of disability in adulthood (Mersky,Topitzes, & Reynolds, 2013). Adverse childhood experiences (ACEs) can also make it difficult to find and keep a job, to maintain stable housing, and to build and maintain healthy relationships. These challenges can lead to decreased well-being and life satisfaction. (Larkin, & Park, 2012).

High levels of psychological wellbeing are associated with numerous benefits, including greater life satisfaction, better physical health, and increased longevity. Individuals with high psychological wellbeing are more resilient to stress, less likely to develop mental health disorders, and more likely to engage in positive health behaviors. Low psychological wellbeing can lead to various negative outcomes, including increased vulnerability to mental health disorders such as depression and anxiety, poor physical health, and reduced life satisfaction. Psychological wellbeing is influenced by a range of factors, including genetics, personality, life experiences, and social relationships.ACEs can severely compromise psychological wellbeing. The chronic stress and trauma associated with ACEs can lead to the development of maladaptive coping strategies, negative self-perceptions, and difficulties in forming and maintaining healthy relationships. This can manifest as depression, anxiety, low self-esteem, and a sense of hopelessness.(Kessler et al. 2010) conducted a large-scale study that found a strong association between ACEs and various mental health disorders, including major depressive disorder and generalized anxiety disorder. (Bellis et al. 2014) demonstrated that individuals with a higher number of ACEs are more likely to

report lower levels of psychological wellbeing and engage in harmful behaviors such as substance abuse.

Mindfulness is a translation of traditional Eastern words including smrti (Sanskrit), sati (Pali), and dranpa (Tibetan). In contemporary Western psychology, mindfulness is considered to be the awareness one achieves through intentionally attending in an accepting and discerning way to one's current moment-to-moment experience (Kabat-Zinn, 2003; Shapiro & Carlson, 2009). Mindfulness is more than paying attention as it also involves an intimate knowing of what is arising as it is arising, without trying to change or control it. Thus, the process of mindfulness involves changing one's relationship to experience as opposed to changing experience itself a way of training the mind, heart, and body to be fully present with life relating to all experience whether positive, negative, or neutral with kindness and openness.Mindfulness is often referred to as a consciousness practice a training and cul-tivation of awareness and presence. Although associated with meditation, mindful-ness is more than a meditation technique or practice. Mindfulness can be a state, or an immediate experience of being present (sometimes referred to as mindful aware-ness). State mindfulness, in turn, can translate into more of a trait or disposition over time, in essence a fundamental way of being. Recent empirical work supports this idea that increasing state mindfulness over repeated meditation sessions may ultimately contribute to one having a more mindful disposition or trait (Kiken, Garland, Bluth, & Gaylord, 2015)

The roots of mindfulness can be traced back to Buddhist meditation practices, but it has been adapted into various forms of psychotherapy, most notably through the work of Jon Kabat-Zinn in the development of Mindfulness-Based Stress Reduction (MBSR) in the late

1970s.Mindfulness has gained significant attention in recent years as a therapeutic tool for a wide range of mental health issues, including depression, anxiety, and stress-related disorders. Mindfulness practices are now widely integrated into various forms of psychotherapy, including Mindfulness-Based Cognitive Therapy (MBCT), Acceptance and Commitment Therapy (ACT), and Dialectical Behavior Therapy (DBT). Mindfulness contributes to psychological wellbeing by enhancing self-awareness, emotional regulation, and resilience to stress. Regular mindfulness practice has been shown to reduce symptoms of anxiety and depression, improve attention and concentration, and promote a greater sense of life satisfaction. Mindfulness practices encourage individuals to engage with their experiences non-judgmentally, which can reduce the tendency to ruminate on negative thoughts and experiences.Mindfulness has been shown to mediate the negative effects of ACEs by promoting resilience and reducing the severity of trauma-related symptoms. For individuals with a history of ACEs, mindfulness can provide a powerful tool for managing the long-term psychological consequences of these experiences. Studies have shown that mindfulness-based interventions can reduce symptoms of PTSD, anxiety, and depression in individuals with a history of trauma.(Garland et al. 2017) demonstrated that mindfulness-oriented recovery enhancement significantly reduced opioid craving among individuals with opioid use disorder, partly by enhancing emotional regulation. Another study by Briere & Scott (2015) found that mindfulness practices can help individuals with a history of childhood trauma to better regulate their emotions and reduce symptoms of PTSD.

Adverse Childhood Experiences (ACEs) are traumatic events occurring during childhood that have been linked to significant negative psychological and physical health outcomes throughout an individual's life (Felitti & Anda, 1998; Dube et al., 2003). The impact of

ACEs on psychological well-being (PWB) is substantial, contributing to various mental health issues such as anxiety, depression, and posttraumatic stress disorder (PTSD) (Anda et al., 2006; Chapman et al., 2004). Trauma theory suggests that ACEs can trigger three symptom clusters—hyperarousal, constriction, and intrusion—which disrupt an individual's sense of safety and trust, leading to impaired emotional and psychological regulation (van der Kolk, 1989). Mindfulness, defined as a mental state achieved by focusing awareness on the present moment, has been shown to mitigate the adverse effects of ACEs on PWB (Kabat-Zinn, 1990; Baer, 2003). Individuals with higher levels of mindfulness are better equipped to manage their emotional responses and maintain psychological well-being, even in the presence of significant past trauma (Brown & Ryan, 2003; Baer et al., 2006). Mindfulness enhances self-regulation, emotional resilience, and the ability to recognize and address negative emotions, thereby counteracting the harmful effects of ACEs (Schonert-Reichl & Lawlor, 2010; Meiklejohn et al., 2012).

Empirical studies support the role of mindfulness as a protective factor in the relationship between ACEs and PWB. Research indicates that individuals with high mindfulness levels report better life satisfaction, lower stress, and fewer mental health issues despite ACE exposure (Brown & Ryan, 2003; Baer et al., 2006). Moreover, mindfulness has been identified as a mediator between ACEs and adverse outcomes, suggesting that enhancing mindfulness may reduce the impact of ACEs on PWB (Creswell et al., 2019; Whitaker et al., 2014). Individuals with higher ACE scores often exhibit reduced mindfulness, which exacerbates the negative effects on PWB (Lovallo, 2013; Chapman et al., 2004; Felitti et al., 1998). This reduction in mindfulness leads to poorer self-regulation, diminished emotional management, and subsequently lower psychological well-being (Nagel et al., 2019; Voith et al., 2020). The cyclical relationship between

ACEs, mindfulness, and PWB underscores the importance of mindfulness as a critical factor in mitigating the long-term psychological damage caused by childhood adversity (Bret et al., 2018; Emirtekin et al., 2020). ACEs significantly and negatively impact psychological well-being, mindfulness can effectively reduce these effects, promoting higher levels of PWB even among those with a history of childhood trauma. Thus, interventions aimed at increasing mindfulness offer a promising approach to enhancing PWB in individuals affected by ACEs (Kabat-Zinn, 1990; Baer, 2003; Whitaker et al., 2014).

Need and significance

Adverse Childhood Experiences (ACEs) have been widely recognized as critical factors that can negatively impact an individual's psychological well-being, often leading to long-lasting mental health issues (Felitti & Anda, 1998; Dube et al., 2003). By analyzing the relationship between ACEs and psychological well-being among college students, this study will help to identify the detrimental effects of ACEs on mental health. Understanding this relationship is crucial, as it highlights the potential risk factors that may compromise an individual's ability to thrive during their college years, a period marked by significant personal and academic challenges (Merrick et al., 2017; Petruccelli, Davis & Berman, 2019).

This study will evaluate the role of mindfulness as a mediating factor in the relationship between ACEs and psychological well-being. Mindfulness has been shown to have a positive

impact on psychological well-being by enhancing emotional regulation, reducing stress, and promoting a greater sense of self-awareness and acceptance (Kabat-Zinn, 1990; Brown & Ryan, 2003). By examining the mindfulness levels of individuals, this study will contribute to understanding how mindfulness can mitigate the adverse effects of ACEs, thereby fostering greater psychological well-being (Creswell et al., 2019; Whitaker et al., 2014).

Considering the existing literature and recognizing the limited understanding of how mindfulness mediates the relationship between adverse childhood experiences (ACEs) and psychological well-being among college students in the Indian context, especially in Kerala, the present study entitled "Adverse Childhood Experiences and Psychological Well-being Among College Students: Mediation Effects of Mindfulness" is highly significant.

Statement of the problem

The problem of the present study has been stated as "Adverse Childhood Experiences and Psychological Well-Being in College Students: Mediation Effect of Mindfulness"

Operational definitions of key terms

Adverse Childhood Experiences

In the present study, adverse childhood experiences refer to stressful or traumatic events that take place before a child is eighteen years old (Felitti et al.,1998). It may Include physical, mental, or

sexual abuse, emotional or physical neglect, a violent home environment, household substance abuse, exposure to parent mental illness, parental separation or divorce, and parental imprisonment.

Psychological well-being

In the present study, psychological well-being refers to positive mental health, person's welfare, happiness, advantages, interests, utility, and quality of life (Burris, Brechting, Salsman, & Carlson, 2009)

Mindfulness

In the present study Mindfulness has been described as a process of bringing a certain quality of attention to moment-by-moment experience (Kabat-Zinn, 1990).

College students

"In the present study, college students refer to individuals aged 18-25 who are studying in colleges in Kerala."

Objectives of the study:

Primary objective

1. To assess the mediation effect of mindfulness on the relationship between Adverse childhood experiences and psychological wellbeing.

a)To assess the relationship between adverse childhood experiences and psychological wellbeing among college students .

b) To assess the relationship between mindfulness and psychological well-being among college students

c) To assess the relationship between ACE and mindfulness

Secondary objective

- To understand the effects of mindfulness on ACE among college students
- To understand the effects of psychological well-being on ACE among college students
- To assess the prevalence of adverse childhood experiences among college students
- To find out any difference in adverse childhood experiences among college students based on gender.

Hypotheses of the study:

- Mindfulness will not significantly mediate the relationship between adverse childhood experiences (ACEs) and psychological well-being among college students
- There will be no significant relationship between adverse childhood experiences (ACEs) and psychological well-being among college students.
- There will be no significant relationship between mindfulness and psychological well-being among college students.

CHAPTER II

REVIEW OF LITERATURE

Theoretical review

Adverse Childhood Experiences (ACEs) are defined as stressful or traumatic events that occur during childhood and have the potential to negatively impact developmental processes. The concept was first introduced by Anda and Felitti (1998). Their landmark study, known as the CDC-Kaiser Permanente ACE Study, conducted from 1995 to 1997, is one of the most significant research efforts in this area. This study involved more than 17,000 participants from Southern California, who provided confidential responses about their childhood experiences and current health status (National Center for Injury Prevention and Control, 2021). The findings were striking: approximately two-thirds of participants (63.5%) had experienced at least one ACE, and about 12% reported four or more. The study established a robust link between ACEs and various health problems, such as heart disease, cancer, and diabetes. A dose-response relationship was identified, showing that as the number of ACEs increased, so did the risk of these adverse health outcomes (Felitti et al., 1998). This study was groundbreaking in its demonstration of the long-term physical health consequences of early adverse experiences.

Research into childhood adversity has long roots in the fields of psychology and psychiatry. Early theorists like Freud (1910) and Bowlby (1952) recognized the profound impact of early life experiences on later mental health. Freud's psychoanalytic theory, which draws on case studies of individuals recounting childhood abuse, continues to influence contemporary understandings of personality and motivation (Craig & Baucum, 2002). Bowlby's attachment

theory suggests that children depend on their caregivers for security, and that disruptions such as neglect or rejection can have lasting negative effects on mental health (Stroebe & Archer, 2013). This theory underscores the idea that interruptions in early attachment relationships can impede a child's psychological development by destabilizing their sense of security and interpersonal relationships. Beyond the foundational work of Anda and Felitti (1998), several other theoretical frameworks have been developed to better understand the impact of ACEs. For instance, Bronfenbrenner's Ecological Systems Theory (1979) highlights the multiple layers of environmental influences on development, suggesting that ACEs can disrupt these systems, affecting overall development. The Developmental Psychopathology framework (Cicchetti & Rogosch, 2002) examines how developmental disruptions caused by ACEs can lead to maladaptive outcomes. The Bioecological Model of Human Development (Bronfenbrenner & Morris, 2006) expands this idea by considering the interaction between biological processes and environmental contexts. Meanwhile, the Neurodevelopmental Model (Shonkoff & Garner, 2012) focuses on how ACEs can affect brain development, particularly in areas related to emotional regulation and mental health. Life Course Theory (Elder, 1998) explores how early adversities influence long-term developmental trajectories and overall health. Lastly, Resilience Theory (Masten, 2001) emphasizes the factors that enable individuals to achieve positive outcomes despite significant adversities, highlighting the role of resilience in buffering the effects of ACEs.

The Toxic Stress Model(Shonkoff et al., 2012)

The Toxic Stress (TS) model describes how chronic or intense stressors can lead to both mental and physical health disparities by disrupting the body's stress response system. Toxic stress occurs when the body's stress response systems, especially the hypothalamic-pituitary-adrenal (HPA) axis, are repeatedly or continuously activated without sufficient social support (Shonkoff et

al., 2012). When a child is exposed to uncontrollable stress, especially without a supportive caregiver or effective coping mechanisms, there is likely prolonged activation of the HPA and SAM axes. This sustained activation can prevent the child from achieving both physical and emotional balance (Bucci et al., 2016). According to the TS model, ACEs can lead to toxic stress, which can negatively Impact brain development and overall health. The model also underscores the critical role of caregivers in protecting children from overwhelming adversity, with warm and sensitive parenting helping children return to HPA homeostasis more effectively (Dougherty et al., 2013).

The Trauma Model (Ross, 2006)

Colin Ross's Trauma Model (2006) posits that trauma is a central issue that will continue to challenge and complicate individuals' lives for decades to come. Ross suggests that by understanding trauma, one can make predictions about various psychiatric conditions and then test these through research. The model draws on various sources, including prevalence rates, treatment outcomes, and advanced techniques like brain imaging and biological testing. Ross argues that early psychic trauma is the most critical factor contributing to mental illness, likening chronic childhood trauma in psychiatry to germs in general medicine. The model provides an explanation for the varying severity of mental disorders and why some patients do not recover as quickly as others—often due to factors related to the complications of psychic trauma. The trauma Model also emphasizes the role of childhood adversity, particularly how increased exposure to stressful events can distort cognitive processes, leading to hostile interpretations of experiences and disruptions in the brain's dopamine system, which are often abnormal in psychosis (Read et al.,

2014; Guy et al., 2017). Research has shown that trauma, whether from caregivers (e.g., abuse) or peers (e.g., bullying), can increase the risk of psychotic disorders later in life (Varese et al., 2012; Croft et al., 2018). Some studies have linked specific types of trauma to increased risk of psychosis (Bell et al., 2019). While the effects of childhood abuse might involve gene-environment correlations, such as the intergenerational transmission of violence (Hines & Saudino, 2002), bullying does not involve this correlation and has been found to have similar effects on psychosis (Fisher et al., 2013; Wolke et al., 2014), even after controlling for genetic risks (Croft et al., 2018).

The Traumagenic Neurodevelopmental Model of Psychosis (Read, Perry, Moskowitz, & Connolly, 2001)

The Traumagenic Neurodevelopmental (TN) model of psychosis (Read, Perry, Moskowitz, & Connolly, 2001) integrates biological and psychological research to highlight the similarities between brain abnormalities in abused children and those in adults with psychosis. The model suggests that the heightened stress sensitivity observed in psychosis patients may not be inherited but could result from formative exposure to abuse and neglect. This idea aligns with the original stress-vulnerability model of schizophrenia (Zubin & Spring, 1977), which proposed that stress sensitivity could be acquired through trauma, disease, perinatal complications, family experiences, and other life events. The TN model challenges the notion that environmental stressors are merely “triggers” for those genetically predisposed to psychosis, proposing instead that these stressors should be viewed as causal factors.

Cumulative Risk Model(Evans, Li, & Whipple, 2013; Felitti et al., 1998)

The cumulative risk model is a widely used approach to understanding the developmental impact of ACEs. This model sums the number of adverse experiences, regardless of type, chronicity, or severity, and uses this score to predict developmental outcomes. Research using this model has demonstrated strong links between the number of ACE exposures and developmental outcomes, highlighting the importance of preventing adverse experiences. However, the cumulative risk model offers limited insight into the developmental mechanisms that explain the links between exposure and outcomes.

Dimensional Model of Adversity and Psychopathology (DMAP)

An alternative approach to the cumulative risk model is the Dimensional Model of Adversity and Psychopathology (DMAP), proposed by McLaughlin & Sheridan (2016) and Sheridan & McLaughlin (2014). The DMAP identifies two core dimensions of ACEs—threat and deprivation—each with distinct mechanisms leading to psychopathology. Threat involves experiences of harm or the threat of harm (e.g., physical abuse), while deprivation refers to the absence of expected inputs from the environment (e.g., lack of cognitive and social stimulation due to inadequate caregiver interactions). Although threat and deprivation often co-occur, the DMAP suggests that the developmental consequences of each dimension are at least partially distinct. In contrast to cumulative risk approaches, the DMAP provides unique insights into the specific features of adverse experiences that may influence development differently, offering more targeted information for intervention strategies (Humphreys & Zeanah, 2015; Johnson, Riis, & Noble, 2016; Manly, Cicchetti, & Barnett, 1994).

A seminal study by Felitti et al. ”1998) examined the relationship between ACEs and a broad range of adult health outcomes. This research involved over 17,000 participants from a health maintenance organization, who provided data on their childhood experiences and current health status. The study used a retrospective survey to gather information on childhood abuse, neglect, and household dysfunction and analyzed the associations with various health conditions. The results indicated that individuals with a higher number of ACEs were at significantly increased risk of developing chronic diseases such as ischemic heart disease, cancer, and diabetes. The study demonstrated a dose-response relationship, underscoring the long-term impact of childhood adversities on adult health and highlighting the importance of preventative measures and early interventions.

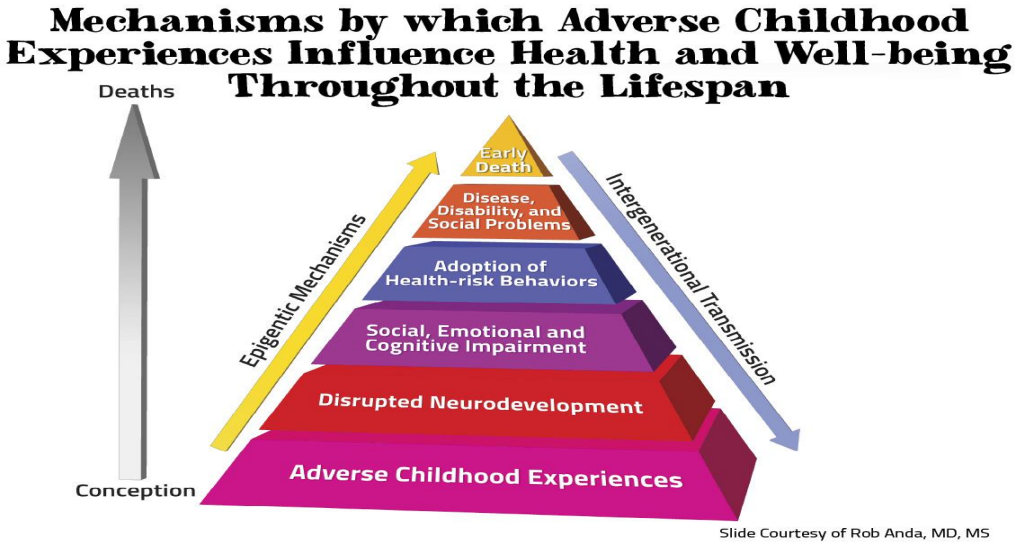
A Biopsychosocial Conceptual Model for Defining and Developing ACEs (Miller & McCoy)

To develop a comprehensive understanding of ACEs, Miller and McCoy propose a biopsychosocial conceptual model that integrates various theoretical frameworks to predict and analyze ACE indicators. This model draws on Bronfenbrenner’s socio-ecological system theory (1977) and Belsky’s ecological models (1980) to focus on clinically measurable ACEs within individual The ACEs framework synthesizes multiple theories, including attachment theory (Bowlby, 1969-1982; Ainsworth et al., 1978), the cumulative stress model, which includes the allostatic load model, and the ecobiodevelopmental framework, as well as cognitive-behavioral theories of emotions. By integrating these theories, the framework seeks to identify and predict ACEs, offering insights into their impact at both individual and family levels. It emphasizes a multi-level approach to understanding how different ecological and theoretical perspectives

interact to influence psychological and emotional development, ultimately informing strategies for intervention.

ACE Pyramid Conceptual Framework

The ACE Pyramid Conceptual Framework illustrates how adverse childhood experiences can disrupt neurodevelopment, leading to impairments in social, emotional, and cognitive functioning, which can result in physical and mental health issues later in life. This framework, developed by Vincent Felitti and colleagues in their groundbreaking study, posits that early life stress and trauma are linked to leading causes of death in adulthood. The framework proposes that the effects of ACEs are dose-dependent, meaning that the more ACEs an individual experiences, the greater the likelihood of health problems. It highlights the role of historical trauma, which can influence psychological functioning and increase vulnerability to health issues across generations (Felitti et al., 1998; Lorenc et al., 2020; McGee et al., 2020).



2.1 ACE Pyramid Conceptual Framework

The model also emphasizes the impact of ACEs on neurodevelopment, particularly in the prefrontal brain region associated with executive function (Bernard et al., 2021). This disruption in neurodevelopment can lead to deficits in social, emotional, and cognitive functioning, which may increase the risk of health-compromising behaviors such as substance use and eating disorders, eventually leading to diseases and early mortality (Bernard et al., 2021; Felitti et al., 1998).

Psychological Well-Being

Ryff's Psychological Well-Being Theory (1989)

Carol Ryff's theory of psychological well-being (1989) presents well-being as a multidimensional concept. Drawing on the ideas of self-actualization (Maslow, 1968), the fully functioning person (Rogers, 1961), individuation (Jung, 1933), maturity (Allport, 1961), Erikson's psychosocial stages (1959), Buhler's life fulfillment tendencies (1935), and Neugarten's descriptions of personality change in adulthood and old age (1973), Ryff identified six key dimensions of psychological well-being: self-acceptance, positive relations with others, personal growth, purpose in life, autonomy, and environmental mastery. Ryff's theory emphasizes the importance of moving beyond mere happiness to achieving a deeper sense of purpose and self-realization (Ryff, 1989; Ryff & Keyes, 1995).In later work, Ryff (2014) revisited her theory and highlighted the importance of resilience—the ability to maintain or regain well-being in the face of adversity—as a crucial factor in achieving sustainable well-being.

Bradburn's Structure of Psychological Well-Being (1969)

N. M. Bradburn's model of psychological well-being (1969) is based on the idea that well-being is determined by the balance between positive and negative affect. According to this model, psychological well-being is high when positive affect outweighs negative affect and low when the opposite is true. This balance is influenced by various factors, including work, marriage, income, health, and social participation.

Seligman's PERMA Model (2011)

Martin Seligman's PERMA Model is a foundational concept in positive psychology, outlining five key elements of well-being: Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment. Each element contributes independently to an individual's overall sense of well-being and life satisfaction. The PERMA model is often used in therapeutic settings to guide interventions aimed at enhancing these elements to improve overall psychological well-being.

Diener's Subjective Well-Being (SWB) Model (1984)

Ed Diener's Subjective Well-Being (SWB) Model emphasizes the subjective nature of well-being, focusing on individuals' self-reported life satisfaction, positive affect, and negative affect. According to Diener, psychological well-being is determined by individuals' perceptions and evaluations of their own lives, making it a highly personal and subjective experience. This model is widely used in research to assess well-being and guide interventions that aim to improve life satisfaction and emotional health.

Mindfulness

Mindfulness, with roots in Buddhist psychology, intersects with various philosophical and psychological traditions, such as ancient Greek philosophy, phenomenology, existentialism, naturalism, transcendentalism, and humanism. These traditions share a focus on awareness and attention, which are fundamental to mindfulness. Awareness involves the conscious recognition of stimuli, including sensory experiences, bodily sensations, and mental activities (Nyaniponika, 1973). Attention, a more concentrated form of consciousness, entails an initial engagement with stimuli before cognitive and emotional responses are generated (Gunaratana, 2002). Traditional cognitive processing often imposes automatic judgments and pre-existing schemas on stimuli based on past experiences and self-referential thoughts (Bargh & Chartrand, 1999; Leary, 2004). While this method can help in organizing experiences and achieving goals, it can also distort or oversimplify reality. In contrast, mindfulness involves a receptive state of mind, allowing for an unbiased observation of events, emotions, and thoughts. This approach promotes a direct, flexible, and objective engagement with reality (Brown & Ryan, 2003).Derived from the Pali term “sati,” meaning “to remember,” mindfulness is defined as a receptive awareness of present events and experiences (Brown & Ryan, 2003). It encompasses several interrelated characteristics, as detailed in Buddhist scholarship (Bodhi, 2000; Rahula, 1974), and serves as a foundation for understanding mindfulness’s theoretical aspects and its impact on consciousness.

Self-Regulation Theory (Carver & Scheier, 1981)

Self-Regulation Theory highlights the role of attention in directing behavior toward achieving goals. It posits that individuals continuously monitor their actions, comparing them against desired standards and adjusting behaviors to bridge gaps between current and goal states. While Self-Regulation Theory focuses on goal-directed behavior and modification, mindfulness emphasizes maintaining a non-striving awareness of the present. Rather than aiming for specific outcomes, mindfulness involves observing experiences without attachment, which can complement Self-Regulation Theory by providing a broader, more accepting perspective that may alleviate stress associated with rigid goal pursuit.

Theory of Reflexive Self-Consciousness (Duval & Wicklund, 1972)

Duval and Wicklund's Theory of Reflexive Self-Consciousness explores how self-focused attention can lead to self-evaluation and behavior adjustment, influencing conformity to social norms or avoidance of negative self-perceptions. Mindfulness, however, promotes a non-evaluative and observational approach to the self, fostering an accepting awareness without inducing judgment or behavior change. This non-judgmental stance helps mitigate the cognitive and emotional challenges associated with reflexive self-consciousness, offering a more balanced view of the self and its experiences.

Mindfulness as Novel Distinction-Making Theory (Langer, 1989)

Langer's Mindfulness as Novel Distinction-Making Theory emphasizes the cognitive aspects of mindfulness, particularly how it involves recognizing new features in the environment

and creating novel distinctions. This approach fosters cognitive flexibility and creativity. Unlike mindfulness practices in MBSR (Mindfulness-Based Stress Reduction) and MBCT (Mindfulness-Based Cognitive Therapy), which focus on present-moment awareness and detachment from habitual cognitive processes, Langer's theory underscores the active cognitive engagement in awareness. Traditional mindfulness practices integrate both cognitive engagement and a passive, observational mode that avoids unnecessary categorization or judgment.

Self-Determination Theory (Deci & Ryan, 1985)

Self-Determination Theory (SDT) emphasizes the importance of autonomous functioning, where behavior aligns with one's values and interests. It asserts that well-being improves when individuals engage in activities that satisfy their needs for autonomy, competence, and relatedness. Mindfulness aligns with SDT by enhancing self-awareness of one's experiences, needs, and motivations, facilitating more authentic and self-determined actions. Through mindfulness, individuals gain insight into their intrinsic motivations, enabling them to make choices that reflect their true selves and contribute to their overall well-being.

Empirical Study

A study by Chien-Chung Huang et al. (2021) explored how Adverse Childhood Experiences (ACEs) affect psychological well-being among college students in China, with a particular focus on mindfulness as a mediating factor. Structural equation modeling demonstrated that various childhood adversities, including emotional abuse and neglect, were strong predictors

of diminished psychological well-being. Mindfulness, defined as the continuous awareness of one's thoughts, emotions, and surroundings, was identified as a significant mediator in this relationship. The study found that students exhibiting higher levels of mindfulness showed increased psychological resilience, which lessened the adverse effects of ACEs on their mental health. This supports the Mindfulness-to-Meaning Theory, which suggests that mindfulness enables individuals to reinterpret and derive positive meaning from challenging experiences. Consequently, mindfulness-based interventions could be a valuable therapeutic approach to counteract the long-term psychological repercussions of childhood adversity in college students (Garland et al., 2005).

The connection between Adverse Childhood Experiences (ACEs) and various long-term health outcomes has been well-established through numerous studies. One of the foundational works in this area was conducted by Felitti et al. (1998), which involved a large-scale investigation with 17,337 participants in the United States. The study explored how childhood abuse and household dysfunction are associated with a range of adult health issues. Participants completed a retrospective survey detailing their exposure to childhood adversities, and the data were analyzed using methods such as logistic regression and chi-square tests. The results revealed a significant correlation between higher ACE scores and an elevated risk of major health problems, including cardiovascular disease, cancer, and respiratory conditions. This groundbreaking research highlighted the long-lasting health implications of childhood adversities and emphasized the critical need for early interventions and preventive strategies to mitigate these risks.

In a global context, Hughes et al. (2018) conducted a systematic review of studies from various countries to assess the influence of ACEs on mental health outcomes in emerging adults. This review included meta-analyses to evaluate the strength of associations between ACEs and negative mental health outcomes, such as depression and anxiety. Additionally, the study explored resilience factors, including mindfulness, which might buffer these adverse effects. The findings strongly supported the link between ACEs and poor mental health, leading to a call for resilience-enhancing interventions as a means to improve mental well-being in affected individuals.

Building on this understanding, Bethell et al. (2014) examined the impact of ACEs on health and academic performance among 5,000 participants from the United States. Using multiple regression and correlation analyses, the study demonstrated that ACEs negatively affected both health and academic engagement. However, it also found that resilience factors, such as mindfulness, could mitigate these adverse effects, underscoring the importance of resilience-building strategies in supporting individuals with ACEs to achieve better health and academic outcomes.

Smith et al. (2005) focused on the long-term behavioral consequences of adolescent maltreatment by tracking 1,000 adolescents in the United States. This longitudinal study employed survival analysis and regression models to analyze the data, revealing a significant link between adolescent maltreatment and increased antisocial behaviors in young adulthood. The findings suggested that mindfulness-based interventions could be effective in addressing these long-term behavioral issues.

In a systematic review of mindfulness meditation research, Chiesa & Serretti (2010) synthesized findings from various studies conducted across different countries. The meta-analysis demonstrated that mindfulness positively influences brain regions involved in emotional regulation and stress response. This supports the use of mindfulness as a tool to mitigate the psychological impacts of ACEs and enhance cognitive and emotional functioning.

Focusing on the Indian context, Maurya & Maurya (2013) explored the relationship between ACEs and risky health behaviors among adolescents and young adults using data from the "Understanding the Lives of Adolescents and Young Adults (2018–2019)" survey. Bivariate and logistic regression analyses showed that a significant proportion of adolescents with multiple ACEs engaged in risky behaviors, with boys exhibiting higher rates of substance use and early sexual activity. The study highlighted the urgent need for targeted interventions to address these behaviors at an early stage.

Roy (2018) investigated the influence of childhood adversities on self-esteem and the role of resilience in this relationship among 117 students at Christ University. The study used resilience and ACE-IQ questionnaires alongside Rosenberg's Self-Esteem Scale. While a moderate positive correlation was found between resilience and self-esteem, the relationship between ACEs and self-esteem was not statistically significant. Nonetheless, resilience emerged as a modest yet important contributor to self-esteem development.

Johnson et al. (2019) used data from 6,323 participants in the Midlife Development in the United States study to examine the effects of ACEs on life satisfaction, psychological well-being, and social well-being. Through repeated measures models and generalized estimating equations, the study found that individuals with ACEs reported significantly lower levels of life satisfaction

and well-being, highlighting the enduring impact of childhood adversity on various aspects of adult life.

More recent studies have continued to explore the complex interplay between ACEs, mindfulness, and mental health outcomes. For instance, Haley McKeen et al. (2024) examined how mindfulness mediates and moderates the relationship between ACEs and depression among 279 university students. Using tools like the Five Facet Mindfulness Questionnaire (FFMQ), the Adverse Childhood Experiences Scale (ACES), and the Patient Health Questionnaire (PHQ-8), the study found that certain facets of mindfulness, such as awareness, played a significant role in moderating and mediating the relationship between ACEs and depression. Higher levels of mindfulness were associated with lower levels of depression, even among those with higher ACE scores.

Similarly, Christyn L. Dolbier et al. (2024) explored the moderating effect of dispositional mindfulness on the relationship between ACEs and adult psychopathological symptoms among 560 undergraduate students. Hierarchical multiple regression analyses revealed that higher levels of dispositional mindfulness significantly mitigated the adverse effects of ACEs on psychopathological symptoms, suggesting that mindfulness could be a protective factor for mental health in individuals with a history of childhood adversity.

The Impact of ACEs on stress and social support was examined by Canan Karatekin and Rohini Ahluwalia (2020), who studied 321 college students. Their findings, based on multiple regression analyses, indicated that higher ACE scores were associated with increased stress and lower social support. Notably, stress emerged as the most significant predictor of mental health

issues in this group, emphasizing the need for interventions that address the combined effects of ACEs and stress on college students' health.

Whitaker et al. (2014) conducted a study among 2,160 predominantly female staff from Pennsylvania Head Start programs to assess the association between dispositional mindfulness and health outcomes across different levels of ACE exposure. Using Poisson regression analyses, the study found that higher levels of dispositional mindfulness were associated with fewer health conditions and better health-related quality of life, suggesting that mindfulness can mitigate the negative health effects of ACEs.

In another study, Joss et al. (2019) conducted a pilot study to assess the effects of a mindfulness-based behavioral intervention on self-compassion and psychological health in young adults with a history of childhood maltreatment. The intervention led to significant reductions in stress, anxiety, and depression, while also increasing mindfulness and self-compassion. The study found that self-compassion mediated the relationship between mindfulness and anxiety, highlighting the effectiveness of mindfulness-based interventions in improving psychological health among individuals with a history of childhood maltreatment.

Yundt (2019) explored the effects of ACEs on psychosocial well-being, focusing on factors such as self-compassion, resilience, and posttraumatic growth among adults. The study utilized various psychological scales and found that resilience was a key mediator between childhood adversity and posttraumatic growth. However, ACEs were only weakly correlated with other factors such as self-compassion and hardiness, underscoring the importance of resilience in mitigating the effects of childhood adversity.

Stevenson (2024) reviewed various empirical studies on the role of positive psychological factors in mitigating the effects of childhood adversity among university students. The review highlighted that interventions targeting positive psychological traits, including mindfulness and resilience, can significantly improve well-being and reduce symptoms related to childhood adversity. These findings suggest that positive psychological interventions could effectively enhance resilience and mental health outcomes for individuals with a history of childhood trauma.

Chi et al. (2022) investigated the relationship between ACEs and anxiety symptoms among Chinese adolescents, focusing on the mediating role of self-compassion and the moderating role of social support. The study found that self-compassion partially mediated the relationship between ACEs and anxiety, while social support moderated both the ACEs-anxiety and self-compassion-anxiety relationships. These results suggest that enhancing self-compassion and social support could be beneficial in reducing anxiety among adolescents who have experienced ACEs.

Research Gap

Despite the extensive body of research examining the connections between Adverse Childhood Experiences (ACEs) and various emotional, behavioral, and health outcomes, there remains a significant gap in understanding how ACEs specifically impact psychological well-being among college students. Moreover, while mindfulness has been identified as a potential

mediator in this relationship, its effects, particularly within the cultural context of Kerala, India, have not been thoroughly explored. Existing studies often overlook the unique developmental and cultural factors that influence college students in this region, leading to a limited understanding of how mindfulness might mediate the effects of ACEs on their psychological well-being. This gap underscores the need for further research to develop targeted, culturally sensitive mindfulness-based interventions aimed at enhancing the psychological resilience and mental health outcomes of college students who have been exposed to ACEs.

CHAPTER III

METHODOLOGY

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. It involves describing, explaining, and predicting phenomena in order to solve a problem. The research methodology comprises aspects such as research designs, target population, sample size and sampling procedure, data collection instruments and data analysis procedure. It is necessary for the researcher to know not only the research methods/techniques but also the methodology. (Kothari, 2004).

Research Design

Research design can be considered as the structure of research. It is the "Glue" that holds all of the elements in a research project together. In short, it is a plan of the proposed research work. According to Jahoda, Deutch & Cook "A research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure".

The study adopts a quantitative research design to investigate the mediating effect of mindfulness on the relationship between Adverse childhood experiences and psychological wellbeing. A quantitative research method deals with quantifying and analysis of variables in order to get results. Williams (2011) remark that quantitative research starts with a statement of a problem, generating of hypothesis or research question, reviewing related literature, and a quantitative analysis of data. Similarly, (Creswell 2003; Williams, 2011) states, quantitative

research “employ strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistical data”.

Participants

The data were drawn from a sample of 301 college students aged between 18-25. The samples were selected using convenience sampling and data was collected through both online and offline mode. The sample consists of 208 females and 92 males.

Tools used for data collection

Variables: The variables in the current study are Adverse Childhood Experiences, Psychological well-being and mindfulness.

In the present study existing standardized research questionnaires were used to assess Adverse Childhood Experiences, Psychological well-being and mindfulness .A number of studies have statistically analyzed and tested the questionnaires in order to corroborate the reliability and validity.

The following scale was used to measure Adverse Childhood Experiences:

Adverse Childhood Experiences (ACE) Questionnaire (Felitti et al., 1998)

Experiences of childhood adversity were assessed using the Adverse Childhood Experiences (ACE) questionnaire (Felitti et al., 1998). It is a self-rated scale comprised of 10 dichotomous items that assesses the number of adverse childhood events faced by an individual aged <18 years. The scale assesses childhood abuse (i.e., psychological, physical, sexual. E.g., Did a parent or other adult in the household often push, grab, slap, or throw something at you?), neglect (i.e., psychological neglect, physical neglect. E.g., Did you often feel that no one In your family loved you or thought you were important or special?), and household dysfunction (i.e., parental separation/divorce, domestic violence, drug use/dependence, mental illness, incarceration. E.g.,Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?). The total ACE score equaled the number of "yes" responses to the 10 items. Experiencing four or more ACEs greatly increases the risk of being diagnosed with adverse health conditions (Anda et al., 2008; Chartier et al., 2010; Dube et al., 2009; Felitti et al., 1998).

Reliability

The ACE is a reliable, valid and economic screen for retrospective assessment of adverse childhood experiences. Has adequate internal consistency (Cronbach's alpha = .88).

Validity

The ACE questionnaire shows an adequate internal validity ($r = 0.28–0.70$, $p < 0.001$) in adolescent sample.

Scoring

Each response answered as "yes" is scored as 1, whereas "no" responses are scored as zero. The total ACE Questionnaire score is a summation of all individual responses. Those who scored four or more were placed in a high-scoring group, whereas those who scored less than four were categorized as a low-scoring group.

The following scale was used to measure Psychological well-being:

Ryff, C. D., Almeida, D. M., Ayanian, J. S., Carr, D. S., Cleary, P. D., Coe, C., Williams, D. (2010).

The 18-item Psychological Wellbeing Scale is based on the work of Carol Ryff, who originally developed the Psychological Well-Being (PWB) scales in the late 1980s. The original version of Ryff's scale included 84 items, which was later condensed into shorter versions, including the 18-item scale here used. This 18-item version capturing the essential dimensions of well-being that Ryff identified: Autonomy, Environmental Mastery, Personal Growth, Positive Relations with Others, Purpose in Life, and Self-Acceptance. The scale is widely used in various studies, particularly those related to midlife and aging, as part of the MIDUS (Midlife in the United States) study series.

Reliability

The scale demonstrates strong internal consistency, with Cronbach's alpha coefficients ranging from 0.70 to 0.90 across subscales, indicating stable and consistent measurement.

Validity

Developed through the MIDUS II study, the scale has strong content and construct validity, confirmed through factor analyses and its correlation with other well-being measures. This makes it a dependable tool for assessing psychological well-being in various contexts.

Scoring

Respondents are asked to rate how strongly they agree or disagree with 18 statements using a 7-point scale (1 = strongly agree; 7 = strongly disagree).Among the 18 items,10 items are reverse coded so that higher scores indicate greater wellbeing, and then separate subscale scores are calculated by summing all items within each subscale.

The Mindful Attention Awareness Scale (MAAS)

Brown, K.W. & Ryan, R.M. (2003)

The Mindful Attention Awareness Scale (MAAS) is a 15-item self-report questionnaire designed to measure a core component of mindfulness: the individual's ability to maintain a receptive state of mind characterized by heightened awareness and attention to the present moment. This scale captures how often people experience mindfulness in their everyday lives, where mindfulness is defined as the ability to pay attention to the present moment in a non-judgmental and accepting

manner. Respondents rate each item on a 1-6 scale, indicating how frequently they experience specific thoughts or feelings.

Reliability

The MAAS has demonstrated high internal consistency, with Cronbach's alpha values typically ranging from 0.80 to 0.90, indicating strong reliability. Test-retest reliability over various intervals has also shown to be stable, suggesting that the scale consistently measures the mindfulness trait over time.

Validity

The MAAS has been validated through multiple studies. It shows good convergent validity, correlating well with other mindfulness measures, and discriminant validity, distinguishing between mindfulness and related but distinct constructs like self-esteem or general well-being. Additionally, it has been shown to predict psychological outcomes such as emotional well-being, reduced stress, and lower levels of depressive symptoms.

Scoring

The MAAS consists of 15 items, each rated on a 6-point Likert scale ranging from 1 to 6. To score the MAAS, reverse-code the responses (as higher scores indicate greater mindfulness) and then calculate the mean of the items. The final score ranges from 1 to 6, with higher scores indicating greater mindfulness, reflecting a higher frequency of mindful states in daily life. There

are no specific cut-off points, but the scores can be used to compare individuals or groups in research settings.

Personal Data Sheet

To collect the sociodemographic details of the participants a personal data sheet was provided which included the variables such as name, age, gender, college

Informed Consent Form

An informed consent form which includes the terms of confidentiality and the purpose of the study was given to the participants to ensure their voluntary participation in the study.

Procedure for Data Collection

Data is collected through two methods: direct administration of questionnaires and online data collection using Google Forms. Permission is obtained from college authorities to collect responses directly from students in their classrooms. Participants are selected conveniently. Consent is obtained from each participant, and a rapport is established to ensure their voluntary participation.

Participants are provided with the questionnaires and instructed to carefully read the instructions. They are requested to provide honest responses and complete all items of the questionnaires. A time frame of 15-25 minutes is given for completion. After participants finish the questionnaires, they are collected, and gratitude is expressed for their cooperation.

Ethical Considerations:

Ethical guidelines will be followed throughout the study to protect the rights and well- being of the participants. Confidentiality of data will be maintained, and participants will be assured that their personal information will remain anonymous and confidential.

Statistical Techniques used for Data Analysis

The collected data underwent comprehensive statistical analysis to explore the relationships between Adverse Childhood Experiences (ACE), Psychological Wellbeing (PWB), and mediating effect of Mindfulness. The following statistical techniques were employed to derive significant insights:

Descriptive Statistics: Descriptive statistics, including means, standard deviations, frequencies, and percentages, were calculated to summarize the sociodemographic characteristics of the sample. These statistics provided an overview of the distribution of key variables, such as gender, ACE, PWB, and Mindfulness, across the study population.

Tests of Normality: The Kolmogorov-Smirnov and Shapiro-Wilk tests were used to assess the normality of the data distribution for ACE, PWB, and Mindfulness. These tests determined that

the data were not normally distributed, necessitating the use of non-parametric statistical methods in subsequent analyses.

Correlation Analysis: Spearman's rank-order correlation analysis was conducted to assess the relationships between ACE, PWB, and Mindfulness. This non-parametric technique was selected due to the non-normal distribution of the data and was used to evaluate the strength and direction of the associations between these variables.

Group Comparisons: The Mann-Whitney U test was employed to compare differences in PWB and Mindfulness between individuals with and without ACEs, as well as between genders. This analysis provided insights into the impact of ACEs on PWB and Mindfulness and revealed gender differences in these variables.

Mediation Analysis: A mediation analysis was performed to investigate whether Mindfulness mediates the relationship between ACEs and PWB. This analysis assessed both the direct and indirect effects of ACEs on PWB through Mindfulness, highlighting the role of Mindfulness in mitigating the negative impact of ACEs on psychological well-being.

These statistical techniques were critical in understanding the complex interplay between ACEs, PWB, and Mindfulness, providing a foundation for interpreting the study's findings.

CHAPTER IV

RESULT AND DISCUSSION

The present study evaluated the relation between Adverse childhood experiences, Psychological wellbeing and mindfulness. A total of 301 samples were selected and the variables of interest namely adverse childhood experiences, Psychological wellbeing and mindfulness were measured using Adverse Childhood Experiences Questionnaire (Felitti et al., 1998),), and Ryff's Psychological Wellbeing (PWB) Scale (Ryff et al., 2007; adapted from Ryff, 1989) and mindful attention awareness scale (MAAS) (Brown, K.W. & Ryan, R.M. 2003) respectively. For the purpose of data analysis, descriptive statistical techniques were used to summarize and understand the data. However, since the data did not follow a normal distribution, the Shapiro-Wilk test was conducted to confirm non-normality. Consequently, non-parametric tests were utilized for further analysis. This approach ensured that the statistical methods were appropriately aligned with the data's characteristics, enhancing the accuracy and reliability of the results.

The results obtained in the study have been presented in the tables and the results are discussed with respect to objectives and hypotheses.

Table 4.1 Test of normality of the sample

Variables	Shapiro-wilk test	
	Statistics.	**p-value**
ACE	.701	.000
PWB	.951	.000
MAAS	.986	.005

Table 1 shows the results of the Shapiro-Wilk test are presented in the table. For the Adverse Childhood Experience variable, the Shapiro-Wilk test ($W(301) = 0.701$, $p < 0.001$) indicates that the data are not normally distributed. Similarly, for the Mindfulness Total variable, the Shapiro-Wilk test shows a significant result ($W(301) = 0.986$, $p = 0.005$), suggesting non-normality. For the Psychological Wellbeing Total variable, the Shapiro-Wilk test also shows a significant result ($W(301) = 0.951$, $p < 0.001$), indicating that this data is not normally distributed. Therefore, non-parametric tests were used for further analysis to accommodate the non-normal distribution of the data.

Table 4.2 Gender distribution

Gender	Frequency	N(percentage)
Female	208	69.1
Male	92	30.6
Prefer not to say	1	.3

Table 2 , The gender distribution of the sample shows that 69.1% of participants identified as female, while 30.6% identified as male. A very small proportion, 0.3%, chose not to disclose their gender. This indicates that the majority of participants were female, with a significant number of males and a minimal number opting not to specify their gender.

Table 4.3 Discription of psychological measures in the study

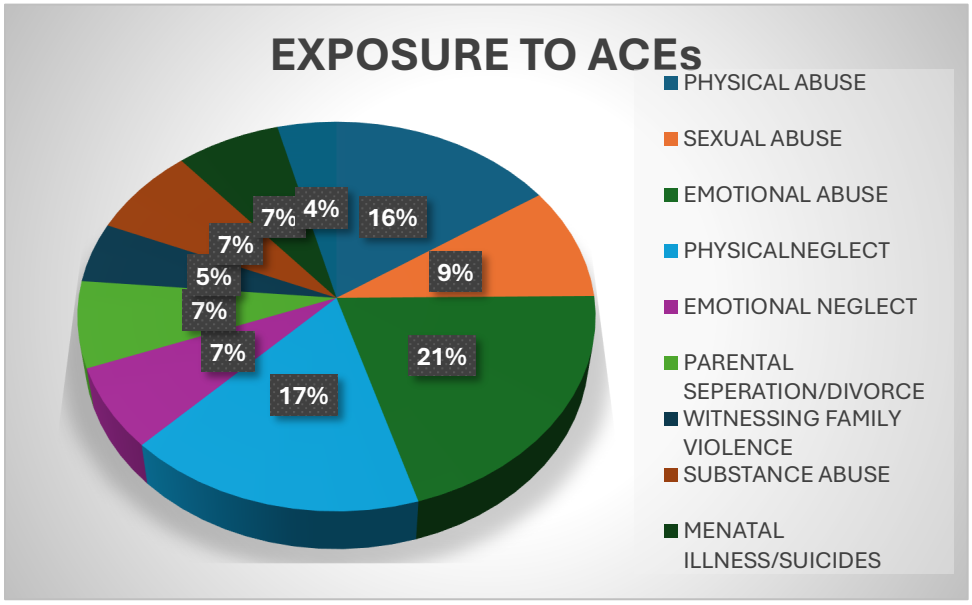
Scale	Mean,SD, Range
ACE	1.11,1.708,0-10
PWB	84.90,12.805,5-116
MAAS	3.80, .905, 1-6

The table indicates the data on Adverse Childhood Experiencees (ACE) indicates a mean score of 1.11, suggesting that, on average, participants report experiencing a low level of childhood adversity. The standard deviation of 1.708 highlights considerable variability, indicating that while most participants report few adversities, some have experienced significantly more. The range of 10, from a minimum of 0 to a maximum of 10, underscores a wide spectrum of experiences, with some participants facing no adversities and others encountering a high number of adversities.

In terms of Psychological Well-Being (PWB), the mean score is 84.90, reflecting a moderately high level of well-being among participants. The standard deviation of 12.805 points to a fair amount of variability in well-being scores, suggesting that although the average level of psychological well-being is high, there are significant differences among individuals. The broad range of 111, from a minimum of 5 to a maximum of 116, further illustrates the substantial variability in psychological well-being, with scores varying widely from very low to very high.

For Mindfulness, the mean score is 3.80, indicating a moderate level of mindfulness among participants. The standard deviation of 0.905 suggests relatively low variability in mindfulness scores, implying that most participants' scores are close to the average. The range of 5, from a minimum of 1 to a maximum of 6, shows a degree of variability, but the scores are more concentrated around the mean compared to the other scales.

Figure 4.2 Exposure to Adverse Childhood Experiences (ACEs)



The pie chart provides a visual representation of the prevalence of various Adverse Childhood Experiences (ACEs) within a given population, underscoring the widespread nature of these traumatic events and their potential long-term impact on mental and physical health. Emotional neglect emerges as the most common ACE, affecting 21% of the population, indicating a significant lack of emotional support and warmth from caregivers. Witnessing family violence is the second most prevalent, at 17%, reflecting the trauma of observing domestic abuse. Emotional abuse, affecting 16%, further highlights the psychological toll of verbal and psychological mistreatment. Physical neglect, experienced by 9% of individuals, points to caregivers' failure to meet basic needs such as food, clothing, or shelter. Substance abuse and parental separation/divorce, each affecting 7%, illustrate additional stressors that can disrupt a child's sense

of security. Physical abuse, occurring in 5% of cases, and sexual abuse, the least common at 4%, represent severe forms of maltreatment with profound consequences. Additionally, 7% of individuals are impacted by the presence of mental illness or suicides within the family, adding another layer of emotional strain. These findings emphasize the importance of recognizing and addressing ACEs in efforts to improve individual and community well-being, as early intervention and prevention strategies can mitigate the adverse effects of these experiences.

Table 4.4, Correlation between Age, Adverse childhood experiences, psychological wellbeing and mindfulness

Variable	Age	ACE	PWB	MAAS
Age	( )			
ACE	0.054	( )		
PWB	0.076	-0.252**	( )	
MAAS	0.036	-0.260**	0.332**	( )

Correlation is significant at $p<0.05$

The correlation analysis reveals several key relationships among age, Adverse Childhood Experiences (ACE), Psychological Well-Being (PWB), and Mindfulness (MAAS). Age is not

significantly correlated with ACE ($r = 0.054$, $p > 0.05$), PWB ($r = 0.076$, $p > 0.05$), or MAAS ($r = 0.036$, $p > 0.05$), indicating that participants' age does not have a meaningful impact on their reported levels of childhood adversity, psychological well-being, or mindfulness. This suggests that these factors remain relatively stable across different age groups within the sample. In contrast, ACE is significantly negatively correlated with both PWB ($r = -0.252$, $p < 0.01$) and MAAS ($r = -0.260$, $p < 0.01$), highlighting that individuals with more adverse childhood experiences tend to have lower levels of psychological well-being and mindfulness. Specifically, as ACE increases, psychological well-being and mindfulness decrease, suggesting a detrimental effect of childhood adversities on both mental health and mindfulness. Additionally, there is a moderate positive correlation between psychological well-being and mindfulness ($r = 0.332$, $p < 0.01$), indicating that individuals with higher psychological well-being also tend to exhibit greater mindfulness. In summary, while age does not appear to influence ACE, psychological well-being, or mindfulness, the presence of adverse childhood experiences is associated with poorer psychological well-being and lower mindfulness, which are themselves positively linked. These findings are consistent with previous research indicating a significant relationship between adverse childhood experiences and both psychological well-being and mindfulness. For instance, Hughes et al. (2017) found that individuals with higher ACE scores tend to report poorer mental health outcomes, including lower psychological well-being. Similarly, in a study by Farb et al. (2014), mindfulness was shown to be negatively impacted by early life stressors, supporting the observed negative correlation between ACE and MAAS in this analysis. The positive association between mindfulness and psychological well-being also aligns with findings by Keng, Smoski, and Robins (2011), who demonstrated that higher mindfulness levels are linked to better emotional regulation and overall mental health.

Table 4.5, prevalence of Adverse Childhood Experiences (ACEs) within the sample population,

ACE	Frequency	Percentage
Present	35	11.6
Not present	266	88.4

Table 4.5 illustrates that 35 participants, representing 11.6% of the sample, have experienced ACEs, while the majority, 266 participants (88.4%), have not. This prevalence rate is notably lower compared to national data from India, which reports that approximately 20-30% of children and 30-50% of adolescents with mental health issues have encountered ACEs (Bharadwaj et al., 2022; Kumar et al., 2023). The discrepancy between the sample's lower prevalence and the broader national statistics may reflect differences in demographic characteristics or contextual factors. For instance, the sample might include a population with greater access to protective resources or a lower exposure to adversity. This relatively low prevalence within the sample provides a baseline for assessing the impact of ACEs on mindfulness and psychological well-being and suggests that the sample may have unique characteristics compared to broader populations.

Table 4.6, Statistical Differences in Mindfulness Based on ACEs

ACE	Mean	SD	Z value	P value	Hypothesis
Present	3.43	.652			
Not present	3.84	.924			
Comparison			-3.31	.0009	Reject the null hypothesis

Table 4.6 compares mindfulness scores between participants with and without ACEs. The mean mindfulness score for those with ACEs is 3.43 (SD = 0.652), whereas for those without ACEs, the mean score is 3.84 (SD = 0.924). The statistical analysis shows a z-value of -3.31 and a p-value of 0.0009, indicating a significant difference between the two groups. This suggests that individuals who have experienced ACEs exhibit lower mindfulness levels compared to those who have not.

The lower mean mindfulness score among participants with ACEs Indicates that childhood adversities may impair the ability to engage fully in the present moment, a core component of

mindfulness. The smaller standard deviation (SD = 0.652) in the ACE group suggests less variability in mindfulness scores, possibly reflecting a more uniformly negative impact of ACEs on mindfulness. Conversely, the larger standard deviation (SD = 0.924) in the non-ACE group implies greater variability in mindfulness, which could be attributed to other influencing factors beyond ACEs. These findings align with previous research indicating that ACEs negatively impact mindfulness. Rao et al. (2024) have documented that ACEs can disrupt self-regulation and emotional stability, which are integral to mindfulness practices. The significant difference in mindfulness scores emphasizes the potential long-term effects of childhood adversity on one's capacity for mindfulness.

Table 4.7, Statistical Differences in Psychological Well-Being Based on ACEs

ACE	Mean	SD	Z value	P value	Hypothesis
Present	79.17	10.709			
Not present	85.66	.790			
Comparison			-3.29	.001	Reject the null hypothesis

Table 4.7 presents the mean psychological well-being scores for participants with and without ACEs. Those with ACEs have a mean score of 79.17 (SD = 10.709), while those without

ACEs score a mean of 85.66 (SD = 12.884). The z-value of -3.29 and p-value of 0.001 indicate that this difference is statistically significant, leading to the rejection of the null hypothesis. The substantial difference in mean psychological well-being scores underscores the adverse impact of ACEs on mental health. Participants without ACEs report higher psychological well-being, suggesting that childhood adversities are associated with lower levels of mental health and overall well-being. This finding is consistent with extensive research highlighting the long-term psychological effects of ACEs, including increased susceptibility to depression, anxiety, and other mental health issues (Patel et al., 2023).

The analysis of Adverse Childhood Experiences (ACEs) in the sample population reveals notable insights into the relationship between childhood adversity, mindfulness, and psychological well-being. The data from these tables provide critical insights into the influence of ACEs on mindfulness and psychological well-being. The lower prevalence of ACEs in the sample compared to national averages might reflect unique demographic or contextual factors. The significant differences in mindfulness and psychological well-being scores between participants with and without ACEs highlight the detrimental impact of childhood adversity on these variables.

The lower mindfulness and psychological well-being scores among those with ACEs align with previous research indicating that ACEs can disrupt emotional regulation and overall mental health. Rao et al. (2024) and Patel et al. (2023) have noted that ACEs interfere with the development of coping mechanisms and resilience, leading to poorer mental health outcomes.

Overall, these findings underscore the importance of addressing childhood adversities and enhancing mindfulness as part of interventions aimed at improving psychological well-being. The results contribute to the growing body of evidence on the long-term effects of ACEs and emphasize

the need for targeted support to foster resilience and mental health in individuals with a history of childhood adversity

Table 4.8, Gender Differences in Adverse Childhood Experiences (ACEs), Psychological Well-Being (PWB), and Mindfulness (MAAS)

Variable	Gender	Mean	SD
ACE	Male	1.37	1.901
	Female	1.00	1.614
PWB	Male	81.09	12.379
	Female	86.50	12.706
MAAS	Male	3.69	1.007
	Female	3.84	.858

Gender Differences in Adverse Childhood Experiences (ACEs), Psychological Well-Being (PWB), and Mindfulness (MAAS). The group statistics indicates the gender differences in Adverse Childhood Experiences (ACEs), Psychological Well-Being (PWB), and Mindfulness (MAAS) within the sample population.

For ACEs, males reported a slightly higher average number of adverse childhood experiences (Mean = 1.37) compared to females (Mean = 1.00). This suggests that males in this sample tend to experience more childhood adversities than females. However, the standard deviation for males (SD = 1.00) is lower than that for females (SD = 1.614), indicating that ACE scores among males are more consistent, with less variability compared to females.

Regarding Psychological Well-Being (PWB), the data show that females have a significantly higher average PWB score (Mean = 86.50) than males (Mean = 81.09). This indicates that, on average, females in this sample experience better psychological well-being compared to their male counterparts. The standard deviations for both genders are relatively similar (SD = 12.706 for females and SD = 12.379 for males), suggesting that the variability in psychological well-being scores is comparable between males and females.

In terms of Mindfulness (MAAS), the mean scores indicate a slight difference between genders, with females showing marginally higher mindfulness levels (Mean = 3.84) compared to males (Mean = 3.69). The standard deviations for mindfulness are close for both genders (SD = 0.858 for females and SD = 1.007 for males), suggesting that the variability in mindfulness scores is similar between males and females.

Adverse Childhood Experiences (ACEs)

Males reported a slightly higher average number of ACEs (Mean = 1.37) compared to females (Mean = 1.00). This suggests that in this sample, males are more likely to have encountered adverse events during childhood. However, the lower standard deviation for males (SD = 1.00) compared to females (SD = 1.614) indicates that the experiences of ACEs are more consistent among males, with less variation, whereas females show greater variability in their ACE scores. This finding aligns with previous research suggesting that males may be more exposed to certain types of adversities, such as physical abuse or exposure to violence, during childhood, while females might experience a broader range of adverse events, leading to greater variability in their ACE scores (Felitti et al., 1998). The higher variability among females could also suggest that while some females experience very few adverse events, others may face significant challenges, potentially leading to differing long-term outcomes.

Psychological Well-Being (PWB)

The analysis indicates a notable gender difference in PWB, with females reporting significantly higher average PWB scores (Mean = 86.50) than males (Mean = 81.09). This suggests that females in this sample generally experience better psychological well-being compared to males. The similar standard deviations for both genders (SD = 12.706 for females and SD = 12.379 for males) imply that the range of well-being scores is consistent across genders, although females on average report higher well-being. This finding is consistent with literature that suggests women often report higher levels of psychological well-being, possibly due to stronger social support networks and better emotional regulation strategies (Ryff & Singer, 2008). However, some studies have also highlighted that societal expectations and gender roles might lead women to develop more resilience, which could explain the higher PWB scores observed among females (Diener et al., 2009).

Mindfulness (MAAS)

The results show a slight gender difference in mindfulness levels, with females reporting marginally higher scores (Mean = 3.84) than males (Mean = 3.69). The standard deviations (SD = 0.858 for females and SD = 1.007 for males) indicate that mindfulness scores are similarly distributed across both genders. Although the difference is minimal, it suggests that females may be slightly more mindful than males. This finding corresponds with some research suggesting that women might engage more in reflective practices and emotional awareness, which are key components of mindfulness (Brown & Ryan, 2003). However, the small difference also suggests that mindfulness, as a construct, may be relatively stable across genders, supporting the idea that both males and females can equally benefit from mindfulness practices.

The findings from this analysis offer insights into the gender differences in ACEs, PWB, and mindfulness, with important implications for mental health interventions. The higher PWB observed among females suggests a potential protective factor that could be further explored in therapeutic contexts. Additionally, while males report slightly more ACEs, the small difference and lower variability among males indicate a need for gender-sensitive approaches in addressing the impact of childhood adversities.

The relationship between ACEs and long-term outcomes has been well-documented, with Felitti et al. (1998) highlighting how childhood adversities can lead to various mental health challenges in adulthood. Ryff and Singer (2008) discuss the gender differences in psychological well-being, emphasizing the role of social and emotional factors that often favor women. Brown and Ryan (2003) explore mindfulness across different populations, noting the slightly higher levels among women, which could be attributed to greater emotional awareness and reflective practices.

These findings underscore the importance of considering gender differences in psychological research and interventions, particularly in addressing the long-term effects of ACEs and promoting psychological well-being through mindfulness practices.

Table 4.9, shows the indirect effects of x on m(path a)

Variable	B	se	t	p	Beta	R^2	F
Constant	3.9234	.0609	64.45	.000			
Ace	-.1154	.0299	-3.8583	.0001	-.2178		
						.0474	14.885

Table 4.9: The Indirect Effect of ACE on Mindfulness (Path a)

The first table shows that Adverse Childhood Experiences (ACE) significantly negatively affect mindfulness, with a coefficient of -0.1154 (SE = 0.0299, t = -3.8583, p = 0.0001). The R^2 value of 0.0474 indicates that ACE explains 4.74% of the variance in mindfulness. This suggests that individuals with higher ACE scores tend to have lower levels of mindfulness. This finding aligns with prior research indicating that early adverse experiences can impair one's ability to stay present and emotionally regulated.

The findings from this mediation analysis provide detailed Insights into the relationships between Adverse Childhood Experiences (ACEs), mindfulness, and psychological well-being (PWB). Specifically, the first table (Path a) demonstrates that ACEs have a significant negative effect on mindfulness, with a coefficient of -0.1154 (SE = 0.0299, t = -3.8583, p = 0.0001). The R^2 value of 0.0474 indicates that approximately 4.74% of the variance in mindfulness is explained by ACEs. This aligns with previous research, such as Felitti et al. (1998), which suggests that early adverse experiences can diminish an individual's capacity for mindfulness. Additionally, studies like that of Shonkoff and Garner (2012) emphasize the long-term impacts of early life stress on psychological functioning, including mindfulness. These findings underscore the crucial role that mindfulness plays in buffering against the negative psychological impacts of ACEs, highlighting its importance in mental health interventions aimed at individuals with a history of early life stress.

Table 4.10 shows the direct effect of y on x and m(path b m →y and x →y

Variable	**B**	**se**	**t**	**p**	**Beta**	**R^2**	**F**
Constant	71.93	3.201	22.47	.0000			
ACE	-1.2461	.4177	-2.9828	.0031	-.1662		
Mindfulness	3.78	.7881	4.7972	.0000	.2673		
						.1185	20.0210

Table 4.10: The Direct Effect of ACE and Mindfulness on Psychological Well-being (PWB) (Path b and c'). In this table, the analysis reveals that both Adverse Childhood Experiences (ACE) and mindfulness significantly impact psychological well-being (PWB). Specifically, ACE has a negative effect on PWB, with a coefficient of -1.2461 (SE = 0.4177, t = -2.9828, p = 0.0031), while mindfulness positively influences PWB, with a coefficient of 3.7807 (SE = 0.7881, t = 4.7972, p = 0.0000). The R^2 value of 0.1185 indicates that approximately 11.85% of the variance in PWB is explained by these two variables. This suggests that while ACEs reduce psychological well-being, higher levels of mindfulness can significantly enhance it, reflecting the buffering role of mindfulness against the negative effects of ACEs.

These findings are consistent with prior research. For example, Greeson and Brantley (2009) found that mindfulness practices can significantly enhance psychological well-being, especially in populations with a history of trauma. Similarly, Brown and Ryan (2003) demonstrated that mindfulness positively impacts well-being, highlighting its role as a protective factor that mitigates the adverse effects of ACEs on psychological health.

Table 4.11 shows the total effects of x on y(path c)

Variable	B	se	t	p	Beta	R^2	F
Constant	86.77	.8595	100.9	.0000			
Ace	-1.6825	.4225	-3.9826	.0001	-.2244		
						.0504	15.8608

Table 4.11 examines the total effect of Adverse Childhood Experiences (ACE) on psychological well-being (PWB), showing a significant negative impact with a coefficient of -1.6825 (SE = 0.4225, t = -3.9826, p = 0.0001). The R^2 value of 0.0504 indicates that ACE alone explains 5.04% of the variance in PWB. This underscores the long-term detrimental effects of ACEs on adult psychological well-being, consistent with the broader literature highlighting the enduring impact of ACEs on mental health outcomes.

The findings from this analysis are supported by previous research. For instance, Keng, Smoski, and Robins (2011) demonstrated that mindfulness-based interventions can significantly improve psychological health in individuals with trauma histories. Additionally, Shapiro et al. (2008) have highlighted the role of mindfulness in reducing symptoms of anxiety and depression, reinforcing its therapeutic value in enhancing well-being among those with ACEs. These studies emphasize the importance of mindfulness as a therapeutic target to mitigate the negative effects of ACEs and enhance overall well-being.

In the mediation analysis of the relationship between Adverse Childhood Experiences (ACE) and Psychological Well-being (Y), with Mindfulness (M) as a mediator, several significant findings emerge.

Indirect Effect of ACE on Mindfulness (Path a) The analysis reveals a significant negative relationship between ACE and mindfulness, with an unstandardized coefficient of -0.2178 and a standardized coefficient of -0.2178 ($p < 0.00001$). This indicates that higher ACE scores are associated with lower levels of mindfulness. The R^2 value of 0.0474 suggests that approximately 4.74% of the variance in mindfulness can be explained by ACE. This result aligns with previous

research demonstrating that adverse experiences can detrimentally impact mindfulness. For example, Rosenkranz et al. (2010) found that early life stressors can reduce an individual's ability to engage in present-focused awareness, underscoring the significant impact of ACEs on psychological resources.

Direct Effect of Mindfulness on Psychological Well-being (Path b) examines the impact of mindfulness on PWB, showing a positive effect with an unstandardized coefficient of 3.7807 and a standardized coefficient of 0.2673 ($p = 0.0000$). This indicates that increased mindfulness is associated with enhanced psychological well-being. The R^2 value for this path is not provided separately but is integrated into the overall model summary. This finding supports the beneficial effects of mindfulness on mental health, as highlighted by Kabat-Zinn (1990) and Goyal et al. (2014), who demonstrated that mindfulness can significantly improve psychological well-being and emotional regulation.

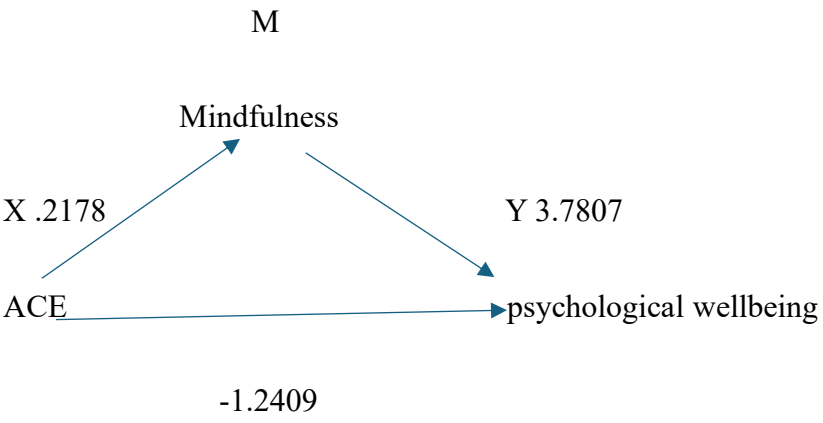
Total Effect of ACE on Psychological Well-being here examines the direct effect of ACE on PWB without considering the mediator (mindfulness). The results show a negative relationship with an unstandardized coefficient of -1.2409 and a standardized coefficient of -0.1662 ($p = 0.0031$). This indicates that higher ACE scores are directly associated with lower psychological well-being, explaining 5.04% of the variance in PWB. This finding underscores the enduring detrimental effects of ACEs on psychological health, consistent with previous literature such as Anda et al. (2006), which documents the long-term impacts of early life stress on mental health outcomes.

Model Summary Statistics reveal that for Path a (ACE → Mindfulness), the R-squared value is 0.0474, indicating that about 4.74% of the variance in mindfulness is explained by ACE, with an F-statistic of 14.8855 and a p-value of <0.0001, suggesting the model is significant. For Path b & c (ACE + Mindfulness → Psychological Well-being), the R-squared value is 0.3442, meaning approximately 34.42% of the variance in psychological well-being is explained by ACE and mindfulness together. The F-statistic of 20.0210 with a p-value of <0.0000 confirms the overall significance of the model.

The mediation analysis reveals that mindfulness partially mediates the relationship between ACE and psychological well-being. Specifically, while ACEs directly reduce psychological well-being, mindfulness partially mitigates these negative effects. This supports previous research on mindfulness as a buffer against the adverse impacts of early life stressors (Garnefski & Kraaij, 2006; Briere & Scott, 2015). By enhancing mindfulness, it is possible to reduce some of the negative consequences associated with ACEs, highlighting the potential of mindfulness-based interventions to promote psychological resilience.

The findings are consistent with a range of studies that explore the Impact of mindfulness and ACEs on psychological health. For instance, a Chinese study by Zhang et al. (2019) found that mindfulness can significantly reduce the negative effects of childhood trauma on adult mental health, supporting the current analysis's conclusions about the buffering role of mindfulness. Additionally, research by Keng, Smoski, and Robins (2011) demonstrates that mindfulness-based interventions are effective in improving psychological well-being among individuals with trauma

histories. Similarly, Shapiro et al. (2008) highlight the role of mindfulness in reducing anxiety and depression symptoms, further reinforcing its therapeutic value.



In conclusion, this mediation analysis provides a comprehensive view of how Adverse Childhood Experiences (ACE) impact psychological well-being, with mindfulness serving as a partial mediator. The analysis reveals that higher ACE is associated with lower mindfulness, as indicated by a standardized coefficient of -0.2178 (Path a, B = 0.2178, $p < 0.00001$). This reduction in mindfulness, in turn, contributes to lower psychological well-being. The significant effect of mindfulness on psychological well-being is evidenced by a positive standardized coefficient of 0.2673 (Path b, B = 3.7807, p = 0.0000), indicating that increased mindfulness is linked to improved psychological well-being. The total effect of ACE on psychological well-being, without considering mindfulness, is reflected in a standardized coefficient of -0.1662 (Path c, B = -1.2409, p = 0.0031). These findings highlight the direct negative impact of ACE on psychological well-being and suggest that enhancing mindfulness

could partially buffer these adverse effects. This underscores the potential for mindfulness-based interventions to improve resilience and psychological well-being in individuals affected by early life stressors.

CHAPTER V

SUMMARY AND CONCLUSION

The aim of the current study was to examine "Adverse childhood experiences and psychological wellbeing among college students; mediation effects of mindfulness". The sample size of the present study was 301 college students both males and females within the age group of 18 to 25 years, selected using the convenience sampling technique. To measure the variables of interest, existing standardized measures are used such as Adverse Childhood Experiences Questionnaire (Felitti et al., 1998), Mindful attention awareness scale(Brown, K.W. & Ryan, R.M. 2003) . (Ryff's Psychological Wellbeing (PWB) Scale (Ryff et al., 2007; adapted from Ryff, 1989). Informed consent and personal data sheet are also collected from the selected participants. After data analysis, test of normality was done because itt is not normally distributed then non parametric tests such as the spearson correlation method and mediation analysis are used for the statistical analysis of the data. The results obtained by the analysis are discussed comprehensively with respect to objectives and hypotheses.

The study's findings reveal several significant outcomes. A moderate negative correlation was identified between Adverse Childhood Experiences (ACEs) and psychological well-being ($r = -0.252$, $p < 0.01$), indicating that higher levels of childhood adversity are associated with lower psychological well-being. Additionally, a significant negative correlation was found between ACEs and mindfulness ($r = -0.260$, $p < 0.01$), suggesting that increased exposure to childhood adversities is linked to reduced mindfulness. Conversely, there was a positive correlation between psychological well-being and mindfulness ($r = 0.332$, $p < 0.01$), indicating that individuals with

higher psychological well-being tend to have greater mindfulness. The mediation analysis further demonstrated that mindfulness significantly mediates the relationship between ACEs and psychological well-being. Specifically, ACEs predicted mindfulness with a standardized coefficient (β) of -0.2178 ($p < 0.00001$), while mindfulness predicted psychological well-being with a standardized coefficient (β) of 0.2673 ($t = 4.7970$). These results suggest that mindfulness partially mediates the impact of ACEs on psychological well-being, meaning that individuals with higher levels of mindfulness may be better able to mitigate the negative effects of childhood adversities on their psychological well-being.

Major findings and conclusions

- Adverse childhood experiences (ACE) are a significant predictor of mindfulness, accounting for 4.74% of the variance in mindfulness ($R^2 = 0.0474$, ($p < 0.0001$)
- Adverse childhood experiences (ACE) are also a significant predictor of psychological well-being, explaining 34.42% of the variance ($R^2 = 0.3442$, $p < 0.0000$)
- Age is not significantly correlated with any scale scores, indicating that age does not have a strong linear relationship with the other variables in the study.
- There is a moderate negative correlation between adverse childhood experiences (ACE)and psychological well-being (PWB), with ($r = -0.252$) and ($p < 0.01$)
- There is a moderate negative correlation between adverse childhood experiences (ACE) and mindfulness, with ($r = -0.260$) and ($p < 0.01$).
- There is a moderate positive correlation between psychological well-being (PWB) and mindfulness, with ($r = 0.332$) and ($p < 0.01$)
- The prevalence of adverse childhood experiences (ACEs) in the sample is 11.6%.

- Participants with ACEs have a lower mindfulness score (M = 3.43, SD = 0.652) compared to those without ACEs (M = 3.84, SD = 0.924).
- There is a significant difference in ACE scores between males (M = 1.37, SD = 1.901) and females (M = 1.00, SD = 1.614), with ($p < 0.01$).
- Females have higher psychological well-being (M = 86.50, SD = 12.706) compared to males (M = 81.09, SD = 12.379), with ($p < 0.01$).
- Females exhibit slightly higher mindfulness (M = 3.84, SD = 0.858) compared to males (M = 3.69, SD = 1.007), with ($p < 0.01$)

IMPLICATIONS OF THE STUDY

This study's exploration of Adverse Childhood Experiences (ACE) and its impact on psychological well-being among college students, with mindfulness serving as a mediator, has significant implications for both research and practice. ACEs, such as abuse and neglect, are known to have long-lasting effects on individuals' mental health. By identifying mindfulness as a partial mediator, the study highlights the potential for mindfulness-based interventions to mitigate some of the adverse impacts of ACEs. The findings emphasize the need for integrating mindfulness practices into therapeutic interventions, particularly for individuals who have experienced early life adversities. Such interventions could help enhance psychological well-being and resilience among affected students.

In the context of counseling and psychotherapy, these findings support the inclusion of mindfulness strategies in cognitive-behavioral therapies (CBT), Mindfulness based cognitive therapy (MBCT) aimed at improving psychological outcomes for those with a history of ACEs. This approach can assist individuals in addressing both the physical and psychological challenges

associated with their adversities and develop healthier coping mechanisms, ultimately contributing to better mental health and well-being. Policymakers and mental health professionals should consider incorporating mindfulness-based programs into mental health services for college students to address the pervasive issue of ACEs and their psychological consequences.

LIMITATIONS OF THE STUDY

- The ACE scale used in this study may not fully capture the range of adverse childhood events experienced by college students, especially those specific to different cultural or regional contexts.

- The study's sample size of 301 is relatively large, but it may not fully represent the broader population of college students across Kerala, limiting the generalizability of the findings to the entire state context.

- The gender distribution in the sample was not proportionate, which could affect the study's findings and their applicability across different gender groups.

- The study did not explore how ACEs might interact with other demographic characteristics such as family type, socio-economic status, or geographical location, which could provide additional insights into the variability of ACE effects.

- The reliance on self-reported data may introduce response biases, potentially impacting the accuracy and reliability of the findings.

SUGGESTIONS FOR FUTURE RESEARCH

1. Future research should consider using an adapted version of the ACE scale that reflects a wider range of adverse experiences relevant to different cultural and regional contexts.

2. Expanding the sample size in future studies to include all regions of Kerala or India could enhance the robustness and generalizability of the findings, providing a more comprehensive understanding of the effects of ACEs and mindfulness.

3. Investigating the relationship between ACEs and specific demographic variables, such as family structure and socio-economic status, could provide deeper insights into the differential impact of ACEs.

4. Conducting qualitative research could offer a more nuanced exploration of the experiences and effects of ACEs, providing richer data to complement quantitative findings and inform more targeted interventions.

REFERENCES

Anda, R. F., Butchart, A., Felitti, V. J., & Brown, D. W. (2010). Building a framework for global surveillance of the public health implications of adverse childhood experiences. *American Journal of Preventive Medicine*, *39*(1), 93-98. https://doi.org/10.1016/j.amepre.2010.03.015

Arslan, G. (2017). Psychological maltreatment, forgiveness, mindfulness, and internet addiction among young adults: A study of mediation effect. *Computers in Human Behavior*, *72*, 57-66.

Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, *10*(2), 125-143. https://doi.org/10.1093/clipsy.bpg015

Bradburn, N. M. (1969). *The structure of psychological well-being.* Aldine Publishing Company.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*(4), 822-848. https://doi.org/10.1037/0022-3514.84.4.822

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310-357. https://doi.org/10.1037/0033-2909.98.2.310

Cole, N. N., Nonterah, C. W., Utsey, S. O., Hook, J. N., Hubbard, R. R., Opare-Henaku, A., & Fischer, N. L. (2015). Predictor and moderator effects of ego resilience and mindfulness on the relationship between academic stress and psychological well-being in a sample of Ghanaian college students. *Journal of Black Psychology*, *41*(4), 340-357.

Creswell, J. D., & Lindsay, E. K. (2014). How does mindfulness training affect health? A mindfulness stress buffering account. *Current Directions in Psychological Science, 23*(6), 401-407. https://doi.org/10.1177/0963721414547415

Dar, A. A., Deb, S., Malik, M. H., Khan, W., Haroon, A. P., Ahsan, A., Jahan, F., Sumaiya, B., Bhat, S. Y., M., D., & Qasim, M. (n.d.). Prevalence of adverse childhood experiences (ACEs) among young adults of Kashmir. Department of Psychology, SRM University, Amaravati, Andhra Pradesh. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7915366/

Davidson, R. J., & McEwen, B. S. (2012). Social influences on neuroplasticity: Stress and interventions to promote well-being. *Nature Neuroscience, 15*(5), 689-695. https://doi.org/10.1038/nn.3093

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* Plenum Press.

Dhanabhakyam, M., & Sarath, M. (2023). Psychological wellbeing: A systematic literature review. *International Journal of Advanced Research in Science Communication and Technology, 10*(1), 603-607.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*(3), 542-575. https://doi.org/10.1037/0033-2909.95.3.542

Emirtekin, E., Balta, S., Kircaburun, K., & Griffiths, M. D. (2020). Childhood emotional abuse and cyberbullying perpetration among adolescents: The mediating role of trait mindfulness. *International Journal of Mental Health and Addiction, 18*, 1548-1559.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine, 14*(4), 245-258. https://doi.org/10.1016/S0749-3797(98)00017-8

Fitzgerald, M., & Kawar, C. (2022). Mindfulness and attachment as concurrent mediators linking childhood maltreatment to depressive, anxious, and dissociative symptoms. *Journal of Trauma & Dissociation, 23*(3), 229-244.

Frazier, P., Gabriel, A., Merians, A., & Lust, K. (2019). Understanding stress as an impediment to academic performance. *Journal of American College Health, 67*(6), 562-570. https://doi.org/10.1080/07448481.2018.1499649

Garland, E. L., Gaylord, S. A., & Fredrickson, B. L. (2011). Positive reappraisal mediates the stress-reductive effects of mindfulness: An upward spiral process. *Mindfulness, 2*(1), 59-67. https://doi.org/10.1007/s12671-011-0043-8

Gilbert, L. K., Breiding, M. J., Merrick, M. T., Thompson, W. W., Ford, D. C., Dhingra, S. S., & Parks, S. E. (2015). Childhood adversity and adult chronic disease: An update from ten states and the District of Columbia, 2010. *American Journal of Preventive Medicine, 48*(3), 345-349. https://doi.org/10.1016/j.amepre.2014.09.006

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research, 57*(1), 35-43. https://doi.org/10.1016/S0022-3999(03)00573-7

Gu, J., Strauss, C., Bond, R., & Cavanagh, K. (2015). How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and well-being? A systematic review and meta-analysis of mediation studies. *Clinical Psychology Review, 37*, 1-12. https://doi.org/10.1016/j.cpr.2015.01.006

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experimental approach to behavior change.* Guilford Press.

Heineken, K., & Morelen, D. (2019). Mindfulness and Religiosity/Spirituality as Protecting Factors for Internalizing Symptoms Associated with Adverse Childhood Experiences: A Moderated Moderation Model.

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 78*(2), 169-183. https://doi.org/10.1037/a0018555

Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: A systematic review and meta-analysis. *The Lancet Public Health, 2*(8), e356-e366. https://doi.org/10.1016/S2468-2667(17)30118-4

Jaggi, T. M., & Kumari, N. (2024). Impact of Adverse Childhood Experiences on Subjective Well-Being and Emotional Regulation in Young Adults. *International Journal of Interdisciplinary Approaches in Psychology, 2*(4), 1032-1059.

Joss, D., Khan, A., Lazar, S. W., & Teicher, M. H. (2019). Effects of a mindfulness-based intervention on self-compassion and psychological health among young adults with a history of childhood maltreatment. *Frontiers in Psychology, 10*, 2373.

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness.* Delacorte Press.

Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review, 30*(7), 865-878. https://doi.org/10.1016/j.cpr.2010.03.001

Keng, S. L., Smoski, M. J., & Robins, C. J. (2011). Mindfulness and emotion regulation: Theoretical review and empirical research. *Cognitive Therapy and Research, 35*(6), 561-575. https://doi.org/10.1007/s10608-011-9371-7

Kumar, V., & Jain, A. (2018). A meta-analysis of the relationship between mindfulness and depression. *Journal of Affective Disorders, 234*, 161-167. https://doi.org/10.1016/j.jad.2018.01.021

Langer, E. J., & Moldoveanu, M. (2000). The construct of mindfulness. *Journal of Social Issues, 56*(1), 13-32. https://doi.org/10.1111/0022-4537.00148

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer Publishing Company.

Luthar, S. S., & Ciciolla, L. (2016). The social costs of adversity: Psychosocial consequences of adverse childhood experiences. *Current Directions in Psychological Science, 25*(5), 275-280. https://doi.org/10.1177/0963721416655933

McEwen, B. S., & Gianaros, P. J. (2010). Central role of the brain in stress and adaptation: Links to socioeconomic status, health, and disease. *JAMA, 303*(6), 608-619. https://doi.org/10.1001/jama.2009.2024

Meyer, B., & Mook, E. (2020). The impact of adverse childhood experiences on psychological well-being in adolescents: A review of the literature. *Journal of Child and Family Studies, 29*(6), 1681-1696. https://doi.org/10.1007/s10826-020-01743-1

Morris, M. A., & Wu, S. (2019). Mindfulness and academic performance in university students: The mediating role of academic stress. *Journal of Educational Psychology, 111*(3), 454-464. https://doi.org/10.1037/edu0000274

Morrison, A. S., & O'Connor, T. G. (2016). Childhood adversity, mindfulness, and depression in adulthood: A meta-analysis. *Journal of Affective Disorders, 202*, 306-314. https://doi.org/10.1016/j.jad.2016.05.074

Neff, K. D. (2003). *Self-compassion: An alternative to self-esteem.* Contemporary Books.

Nicol, J., & Wright, J. (2018). Resilience, mindfulness, and positive mental health: The effects of mindfulness training on resilience and psychological well-being. *Journal of Resilience Studies, 7*(2), 105-122.

Rutter, M. (2013). Annual research review: Resilience–clinical implications. *Journal of Child Psychology and Psychiatry, 54*(4), 474-487. https://doi.org/10.1111/jcpp.12016

Selye, H. (1956). *The stress of life.* McGraw-Hill.

Smith, C. E., & Carlson, D. L. (2022). Childhood adversity, stress, and health in young adults: The role of emotional regulation and mindfulness. *Journal of Behavioral Medicine, 45*(4), 485-499. https://doi.org/10.1007/s10865-021-00287-1

Smyth, J. M., & Pennebaker, J. W. (2008). Revising the past: Examining the role of emotional disclosure in health. *International Journal of Behavioral Medicine, 15*(3), 230-237. https://doi.org/10.1080/10705500802228389

Tolin, D. F., & Foa, E. B. (2006). Sex differences in trauma and posttraumatic stress disorder: A quantitative review of 25 years of research. *Psychological Bulletin, 132*(6), 959-992. https://doi.org/10.1037/0033-2909.132.6.959

Van Der Kolk, B. A. (2014). *The body keeps the score: Brain, mind, and body in the healing of trauma.* Viking.

Walsh, F. (2016). *Strengthening family resilience.* Guilford Press.

Williams, J. M. G., & Barnhofer, T. (2012). The role of mindfulness in depression and emotion regulation. *Journal of Cognitive Psychotherapy, 26*(4), 343-356. https://doi.org/10.1891/0889-8391.26.4.343

APPENDICES

INFORMED CONSENT FORM

Hello, I am Nourin A currently pursuing Masters in Counselling Psychology at Loyola college Of Social Sciences. As part of my course-curriculum, I'm conducting a study on the topic "Adverse Childhood Experiences and psychological wellbeing among college students: mediation effect of mindfulness" under the guidance of Dr. Ammu lukose. In this concern, your opinion is really Valuable to proceed with my study. This study requires the completion of questionnaires, which Will take roughly 10 to 15 minutes. You are requested to give your honest opinion. The Information provided by you will be kept completely confidential and will be used for research Purposes only. I am in sincere hope that you will participate in this study and I greatly appreciate Your help in assisting me with this research.

I give my voluntary consent to participate in this study.

Yes:

No:

Socio Demographic Detail

Please fill in your details

Name(initials only)

_____

Age

_____

Name of the college

_____

Gender

Male

Female

Prefer not to say

Other

Adverse Childhood Experiences (ACEs) Questionnaire

Prior to your 18th birthday:

1. Did a parent or other adult in the household often or very often…
   Swear at you, insult you, put you down, or humiliate you? or
   Act in a way that made you afraid that you might be physically hurt?
   ◯ Yes ◯ No

2. Did a parent or other adult in the household often or very often… Push, grab, slap, or throw something at you? or
   Ever hit you so hard that you had marks or were injured?
   ◯ Yes ◯ No

3. Did an adult or person at least 5 years older than you ever…
   Touch or fondle you or have you touch their body in a sexual way? or
   Attempt or actually have oral or anal intercourse with you?
   ◯ Yes ◯ No

4. Did you often or very often feel that …
   No one in your family loved you or thought you were important or special? or
   Your family didn't look out for each other, feel close to each other, or support each other?
   ◯ Yes ◯ No

5. Did you often or very often feel that …
   You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
   ◯ Yes ◯ No

6. Was a biological parent ever lost to you through divorced, abandonment, or other reason?
   ◯ Yes ◯ No

7. Was your mother or stepmother:
   Often or very often pushed, grabbed, slapped, or had something thrown at her? or
   Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
   ◯ YeS ◯ No

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
   ◯ Yes ◯ No

9. Was a household member depressed or mentally ill? or
   Did a household member attempt suicide?
   ◯ Yes ◯ No

10. Did a household member go to prison?
    ◯ Yes ◯ No

PSYCHOLOGICAL WELL-BEING SCALE

Instructions: Circle one response below each statement to indicate how much you agree or disagree.

1."I like most parts of my personality."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

2."When I look at the story of my life, I am pleased with how things have turned out so far."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

3."Some people wander aimlessly through life, but I am not one of them."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

4."The demands of everyday life often get me down."

Strongly	Somewhat	A little	Neither	A little	Somewhat	Strongly

5."In many ways I feel disappointed about my achievements in life."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

6."Maintaining close relationships has been difficult and frustrating for me."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

7."I live life one day at a time and don't really think about the future."

Strongly	Somewhat	A little	Neither	A little	Somewhat	Strongly

8."In general, I feel I am in charge of the situation in which I live."

Strongly	Somewhat	A little	Neither	A little	Somewhat	Strongly

9."I am good at managing the responsibilities of daily life."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

10."I sometimes feel as if I've done all there is to do in life."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

11."For me, life has been a continuous process of learning, changing, and growth."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

12."I think it is important to have new experiences that challenge how I think about myself and the world."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

13."People would describe me as a giving person, willing to share my time with others."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

14. "I gave up trying to make big improvements or changes in my life a long time ago"

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

15."I tend to be influenced by people with strong opinions"

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

16."I have not experienced many warm and trusting relationships with others."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

17."I have confidence in my own opinions, even if they are different from the way most other people think."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

18."I judge myself by what I think is important, not by the values of what others think is important."

Strongly agree	Somewhat agree	A little agree	Neither agree nor	A little disagree	Somewhat disagree	Strongly disagree

The Mindful Attention Awareness Scale (MAAS)

Instructions: Below is a collection of statements about your everyday experience. Using the 1-6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be. Please treat each item separately from every other item.

1	2	3	4	5	6
almost always	very frequently	somewhat frequently	somewhat infrequently	very infrequently	almost never

1.I could be experiencing some emotion and not be conscious of it until some timelater. _____

_2.I break or spill things because of carelessness, not paying attention, or thinking of something else. _____

3.I find it difficult to stay focused on what's happening in the present._____

4.I tend to walk quickly to get where I'm going without paying attention to what Iexperience along the way._____

5.I tend not to notice feelings of physical tension or discomfort until they really grabmy attention._____

6.I forget a person's name almost as soon as I've been told it for the first time._____

7.It seems I am "running on automatic," without much awareness of what I'm doing._____

8.I rush through activities without being really attentive to them._____

9.I get so focused on the goal I want to achieve that I lose touch with what I'm doingright now to get there._____

10.I do jobs or tasks automatically, without being aware of what I'm doing._____

11.I find myself listening to someone with one ear, doing something else at the same time._____

12.I drive places on 'automatic pilot' and then wonder why I went there._____

13.I find myself preoccupied with the future or the past._____

14. I find myself doing things without paying attention_____.

15. I snack without being aware that I'm eating._____