Efficacy of Mindfulness Based Stress Reduction (MBSR) on Quality of Life of Young Adults with Adverse Childhood Experiences

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DEDICATION

To my beloved parents (Abdul Qadoos & Zahida Parveen) and siblings (Mubashar abdul Qadoos & Isha Fatima).

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ABSTRACT

The present study aimed to examine the effectiveness of Mindfulness-Based Stress Reduction (MBSR) in improving the quality of life (QoL) of young adults aged 18–25 years with a history of Adverse Childhood Experiences (ACEs). Given the profound long-term effects of ACEs on psychological and physical well-being, this study adopted a pre-experimental, one-group pre-test post-test design to assess whether an 8-week MBSR intervention could enhance participants' QoL. A purposive convenient sample of 20 young adults was recruited from educational institutions willing to implement the program. Participants completed the Adverse Childhood Experiences Questionnaire (ACE-Q) and the WHOQOL-BREF to assess baseline ACE exposure and QoL. Following the MBSR intervention, post-test assessments were conducted using the same measures. All instruments demonstrated acceptable internal consistency. Data were analyzed using SPSS version 21, where descriptive statistics summarized demographics, reliability analyses established consistency, and paired sample *t*-tests compared pre- and post-intervention QoL scores. Findings indicated significant improvements in quality of life after participation in the MBSR program, suggesting that mindfulness practices may serve as an effective intervention for mitigating the adverse effects of childhood trauma on young adults' well-being.

Keywords: Adverse Childhood Experiences (ACEs), Quality of Life (QoL), Mindfulness-Based Stress Reduction (MBSR), young adults, intervention.

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ABBREVIATIONS

Abbreviations	Full Form
MBSR	Mindfulness Based Stress Reduction
ACE	Adverse Childhood Experiences
QoL	Quality of Life

List of Symbols

Symbol	Full Form
α	Cronbach's alpha
M	Mean
SD	Standard Deviation
≤	Less than or Equal to
≥	greater than or Equal to
SE	Standard error
P	Significance value
%	Percentage
f	Frequency
k	No. of items
df	Degree of freedom
r	Effect size
n	Sample size
N	Size of participants

APPENDICES

CHAPTER 1

INTRODUCTION

The transition to young adulthood constitutes a pivotal developmental phase marked by improved autonomy, identity formation and assumption of broader social and occupational roles. Nonetheless, individual with histories of Adverse Childhood Experiences (ACEs) including emotional or physically abuse, neglect and household dysfunction, frequently face persistent mental, physiological and social challenges that may adversely affect their Quality of Life (QoL) in adulthood. Subsequently, targeted intervention strategies are essential to support this vulnerable population.

Young adults are particularly vulnerable to mental health challenges, as epidemiological data indicate that the onset of most psychiatric disorders, including anxiety, depression and substance abuse, occurs before the age of 25 (Cunningham et al., 2015). These stressors during this developmental phase can manifest in various forms, including vagueness about the future, economic instability and the struggle to establish a stable sense of self, all of which may be compounded by pre-existing emotional liabilities.

Addressing the mental health needs of this population requires an approach that is intersectional, trauma-informed and developmentally sensitive. It is important to acknowledge the co-existence of trauma and resilience, and to identify that targeted interventions can assist young adults in reconstructing a coherent and empowered sense of self, Programs that incorporate emotional literacy, peer support and mental health education have demonstrated promise in improving adaptive coping mechanism and fostering psychological resilience.

Empirical evidence suggests that MBSR can improve emotional regulation, reduce symptoms of anxiety and depression, and improve Quality of Life (QoL) across diverse populations (Li & Bressington, 2019). Importantly, MBSR are provides a non-pharmacological, cost-effective and easily adaptable approach for trauma-exposed young adults to develop self-awareness, regulate emotions, and engage with their experiences in a gentler manner.

Quality of life (QoL) encompasses various domains including mental health, physical health, social relationships, and functionality. Empirical studies consistently demonstrate that exposure to Adverse Childhood Experiences (ACEs) is associated with lower QoL scores, primarily resolved by persistent psychological distress and negative coping mechanisms (Sachs-Ericsson et al., 2015). Research focusing on youth population indicates a reduction in subjective well-being and happiness following ACE exposure (Jones et al., 2021).

By understanding the distinct challenges and opportunities inherent in young adulthood particularly in a relationship to early trauma mental health professional, educators and policy makers can frame more effective strategies to support this demographic. Mindfulness Based Stress Reduction (MBSR) when implemented within a trauma informed Framework, may constitute important mechanism for enhancing psychological well-being and Quality of Life (QoL) among young adults who have experienced significant childhood experiences.

1.1 Mindfulness Based Stress Reduction (MBSR)

Mindfulness Based Stress Reduction (MBSR) is a structured intervention designed to mitigate stress enhance well-being and improve Quality of Life (QoL). It integrates mindfulness exercises like yoga and meditation to help people become more aware of the here and now. The effectiveness of MBSR in reducing the symptoms of anxiety, depression and chronic pain has been shown by empirical study (Li & Bressington, 2019). This training program contains daily at-home exercises in addition to weekly group sessions and usually continues for 8 weeks. Body scan meditation, sitting meditation and mindful moment exercises were taught to participants as a part of mindfulness building practices. MBSR was developed by John Kabat Zinn in 1917s and it combines the elements of Buddhist meditation and contemporary psychological approaches of stress management. The fundamental principle of MBSR is to cultivate an awareness of one's thought, feelings and physical sensation in the here and now without passing judgment. This enhanced awareness enable individuals to respond stressors more effectively rather than reacting automatically based on habitual patterns.

The eight week Mindfulness Based Stress Reduction (MBSR) program encompasses range of mindfulness practices, each aimed at cultivating distinct faces of awareness in the participant. By methodologically focusing attention on different body areas, body scan meditation improves the relationship between the mind and body. Sitting meditation promotes inner peace and clarity by encouraging individuals to enhance their thoughts and feelings without getting caught up in them. Mindful moment exercises, often derived from gentle yoga practices, assist individuals in becoming more attuned to their physical sensations and the body’s natural rhythm. Stress management, emotional control

and general quality of life can all be greatly enhanced by incorporating these techniques to daily life.

1.1.1 Origins and Structure

Mindfulness Based Stress Reduction (MBSR) program was developed by John Kabat-Zinn in 1970s at the University of Massachusetts Medical Center as a structured 8-week program. This comprehensive approach to stress reduction incorporates weekly group meetings, daily home practice for participants. Mindfulness meditation, body scan and gentle yoga were the core components of the program, designed to cultivate non-judgmental acceptance of experiences and to cultivate present moment awareness (Andonian et al., 2018).

MBSR program has gathered considerable recognition and popularity in both non-clinical and clinical areas due to its impact in reducing depression, anxiety and stress (Li & Bressington, 2019). Participants were trained to observe their thoughts, feelings and bodily sensations without becoming engrossed in them, so as to promote better emotion regulation and over-all well-being. Framework of MBSR program allows for the stable improvement of abilities and the integration of mindfulness practices into their daily life and it is open to people with different experiences and types of meditation experience.

Resultantly, MBSR program has been widely used as a useful tool for promoting mental health and resilience among different individuals as it has been adopted in different healthcare setting, corporate environment and educational institutions.

1.1.2 Mechanisms

Effects of Mindfulness Based Reduction (MBSR) are multifaceted and complex that involves mechanisms with the interplay of biological and psychological process. Psychologically, MBSR promotes non-judgmental attitude towards feelings and thoughts by increasing the awareness of present moment (Andonian et al., 2018). Better emotional regulation and less response to stressors result from peoples increasing ability to monitor their mental processes without being unduly associated with them. Additionally, MBSR practices promote cognitive flexibility, enabling individuals to shift their attention more easily and adopted to changing circumstances.

1.1.2.1 Psychological Mediators

Psychological mediators encompasses alteration in cognitive processes and emotional regulation. Mindfulness-Based Stress Reduction (MBSR) influences cognitive behavior by enhancing awareness and self-regulation, thereby adding in the reduction of anxiety and depression symptoms (Kuipers, 2006). MBSR promotes positive emotional processing and assists participant in developing healthier stress responses. The psychological mediators of MBSR include range of cognitive and emotional processes that contribute to its therapeutic effects. People can observe their thoughts and feelings objectively through MBSR's enhancement of awareness and self-regulation, which improves emotional resilience and cognitive flexibility. This increased awareness lessens rumination and catastrophizing, which are frequently linked to anxiety and depression, by enabling individuals to identify and stop harmful thought processes. Additionally, MBSR fosters a more balanced view of experiences, helping people react to challenges

with less reaction and more composure.

1.1.2.2 Biological Mediators

Mindfulness-Based Stress Reduction (MBSR) is posited to exert effects on various biological systems, notably the neuroendocrine system, which encompasses the interaction between the nervous system and hormone-secreting glands. MBSR is believed to modulate stress hormones, such as cortisol, and has been demonstrated to influence brain regions associated with emotion regulation and executive functioning, thereby leading to enhanced psychological outcomes (Calderone et al., 2024). MBSR can:

1. **Alter stress hormone levels:** It can change the production of stress hormone, which is released at the time of stressful situation (e.g., cortisol).

2. **Impacting the regions of Brain:** It effects the regions of brain that are in charge of controlling and managing emotions (e.g., executive functioning).

3. **Enhancement of mental health:** By practicing MBSR, due to changes in biological process, people experience better psychological well-being. It helps in improving overall mental health by helping body and mind respond differently.

1.1.2.3 Therapeutic Effects

Mindfulness Based Stress Reduction (MBSR) is used as a therapeutic intervention for different types of conditions including chronic pain to psychological disorders. Researches has indicated its efficacy in enhancing the quality of life of individuals who have experienced psychological distress (Andonian et al., 2018).

Application of MBSR has expanded across many domains indicating its adaptability as a tool for stress reduction. MBSR was initially developed to deal with the chronic pain but now it has gained much recognition and importance in psychological and medical community due to its effectiveness and versatility. It has many uses including dealing with many ailments such as stress related diseases, depression and anxiety.

As evidenced by Andonian et al. (2018) the MBSR program's foundational principles of present moment awareness and mindfulness has been exclusively advantages in helping individuals in dealing with psychological distress. This study has highlighted the potential of MBSR as an adjunctive therapy strategy because of its beneficial impacts on patient's Quality of Life (QoL).

Mindfulness Based Stress Reduction (MBSR) has been incorporated into diverse therapeutic context ranging from occupational therapy to clinical psychology due to its adaptability (Cascales-perez et al., 2020). It is an appealing option for patients seeking complementary or alternative treatment because of its non-pharmacological nature.

1.1.3 ACE- Exposed Individuals and Mindfulness

Detrimental long term health consequences of ACEs are well documented as these experience are being associated with increased certainty of mental health and physical problems. MBSR has emerged as effective therapeutic tool for individual who have experience Adverse Childhood Experiences (Oral et al, 2015). The utilization of mindfulness practices such as MBSR has indicated potential in reducing some of these adverse effects. Researches indicate that there is significant improvement in mental health outcomes for individuals with ACEs because of mindfulness intervention which emphasize

on non-judgmental acceptance and present moment awareness. Such interventions have shown their effects in reducing anxiety and depression as well as enhancing mood, overall quality of life and coping mechanisms (Ortiz & Sibinga, 2017). Remarkably mindfulness has been found to mediate relationship between ACEs and depression showing that the aspects of mindfulness such as non-judgmental attitude, the ability to describe the emotions and awareness are critical. (Mckeen et al., 2021).

Recent researchers has shown the importance of mindfulness in enhancing psychological well-being and psychological health. For example among college students, mindfulness has been identified as a mediator in the relationship between psychological well-being and Adverse Childhood Experiences ACEs that shows its role as a beneficial factor that reduces the detrimental effects of childhood adversity (Huang et al , 2021).

Furthermore, individuals exhibiting high level of mindfulness did not demonstrate an increase in depressive symptoms despite experiencing a great number of ACEs, indicating that mindfulness serves as protective buffer (Mckeen et al., 2021).

Integrating mindfulness into therapeutic practices for individuals exposed to Adverse Childhood Experiences can provide a comprehensive healing approach. This method not only addresses the trauma related symptoms but also promotes a sense of wholeness and integration that extends beyond the capabilities of traditional talk therapy, as observed by participants engaged in mindfulness practices such as yoga (Taghavi & Kia-Keating, 2024). In the light of these findings mindfulness based intervention are increasingly acknowledged as a valuable components or trauma informed care design to meet complex needs of individuals with the history of ACEs. It is essential to establish and

optimize the implementation of mindfulness program specifically tailored for youth and adults which enhanc**e** their effectiveness benefits (Ortiz & Sibinga, 2017).

Mindfulness Based Stress Reduction (MBSR) has been shown to improve the quality of life by introducing psychological distress including anxiety depression and perceived stress while enhancing mindfulness, self-kindness, and overall psychological well-being.

1.2 Quality of Life (QoL)

Quality of life (QoL) is a complex paradigm that includes multiple dimensions of evaluated by using subjective and objective measures. Many researches has conducted to investigate these dimension: the social relationships, psychological well-being, physical health, level of independence and environmental factors. Studies has shown that there is a complex interaction among different dimensions of quality of life and necessity of holistic approaches in social policy and health care. Results from a longitudinal research has shown that Quality of Life can value overtime and is influenced by societal changes, individual coping mechanisms and life events. Furthermore cross-cultural comparisons have brought attention to how important it is to take the cultural context into consideration when interpreting and evaluating QoL data because priority and perceptions can vary greatly among different groups.

1.2.1 Physical Health

Researches has shown that physical health is linked to overall well-being and life satisfaction and it is a very important component of QoL. For instance in patients with anxiety, depression and cardiovascular diseases were found to mediate the relationship

between QoL and life satisfaction emphasizing the effectiveness of addressing mental health issues to improve physical health (Mei et al., 2020). Many studies has shown that physical health has a major impact on overall well-being and life satisfaction making it a very important factor in evaluating an individual's Quality of Life. Patients with chronic diseases like cardiovascular disease and diabetes are especially influenced by the complex relationship between Quality of Life and physical health. Researchers has shown that in cardiovascular patients, mental health factors especially anxiety and depression act as mediator between quality of life and life satisfaction. This result shows how important is to deal or treat psychological health along with physical health in order to enhance the individuals overall quality of life.

By taking a comprehensive strategy that take into account for mental and physical health insurance, medical professional can more successfully raise the general quality of life with a long term illness.

1.2.2 Psychological Health

The psychological dimensions of Quality of Life (QoL) has been a prominent focus, which studies examining the role of psychological capital and life satisfaction. Positive psychology suggests that courage and psychological resources can enhance life satisfaction and flourishing, indirectly affecting QoL (Santisi et al., 2020). Overall well-being and level of satisfaction are influenced by a complex web of interrelated aspects that make up their QoL. Research and positive psychology has clarified the significance of psychological capital, which encompasses quality are like self-efficacy, optimism, resilience and hope. The Psychological resources not only directly impact life satisfaction but also serve as protective factor against psychological distress. Courage, in particular, has been identified

as a crucial element in fostering psychological wellbeing, enabling individuals to face challenges and pursue personal growth, thereby indirectly enhancing QoL (Santi's et al., 2020).

1.2.3 Social Domain

Social relations and functioning are part of Quality of Life, which determines the way people cope with the challenges and their sense of well-being. The importance of social interactions, support and participation in the society are highlighted in the literature, as they are known to come in handy in overall life satisfaction and psychological well-being (Xin, 2023).

Individual capacity to manage hardships and view their overall state of well-being is highly dependent or their interpersonal connections as well as their functionality which is critical in defining the Quality of Life. The quality of life of seniors can be significantly enhanced maintaining social relations, engaging in valuable activity and having a sense of belonging (Miller et al., 2018).

1.2.4 Level of Independence

One of the major determinants of quality of life is independence, especially among the elderly and people recovering after a health condition. Studies have shown that independence achieved by management of physical and mental health directly improves Quality of Life (Turan et al., 2012).

1.2.5 Environmental Domain

The environment has great influence on QoL in terms of both the natural and built surroundings, and socio economic status. A more comprehensive picture of Quality of Life

has been demonstrated by the combination of social and economic Measures and environmental indicators and all the indicators have a shared impact on life satisfaction (Macku et al., 2020). The complex interplay of natural, build and social economic factors that resulted in increased influence of environmental domain's on Quality of Life that extends beyond the immediate physical surrounding. Air Quality, water resources and grain spaces are included in natural environment that directly affect mental well-being and physical health. Urban infrastructure, accessibility to amenities and housing quality are included in built environment that shapes opportunities and daily experiences. Employment opportunities, access to education and income inequality are included in socioeconomic conditions that furthermore impact the change on quality of life.

Contemporary studies have further illustrated the complexity of these dimensions, analyzing how they interact to shape individuals overall perception of Quality of Life e. The holistic approach enables the researchers to draw a more colored picture of Quality of Life considering that the experience of 1% is predetermined by an internal psychological condition as well as external conditions (Beltram et al., 2024). The interaction of these subjective and objective aspects has demonstrated the existence of complicated relations that did not support the simple understanding of QoL.

Consequently modern studies of QoL offer a stronger basis to elaborate specific intervention to improve general well-being among the various population and contexts. Young adulthood is characterized by the complexity of interconnections between social, psychological and health-related factors that influence the quality of life, whereas barriers and resources vary based on the context. Factors including impulsivity, compulsivity and mood disorders are elements of mental health that can greatly lower QoL, and good family

bonds are critical to batter adaptation and success in development. In general, QoL in young adult who needs to be addressed in terms of both psychological and relational aspects and the needs that are associated with the health conditions.

1.3 Young Adulthood

The stage of young adulthood, which is otherwise known as the age group of 18-25 years, is characterized by dramatic change of body, mind and society. Studies of adulthood, namely, the period between 18 and 25 years of age, are extensive in their coverage of the broad range of subjects in the complexity and diversity of the developmental stage. This age bracket is defined as a unique development period known as the emerging adulthood concept, which according to Jeffrey Arnett is variable in nature depending on the cultural context and the course taken by individuals in their life. The need to identify exploration in an emerging adulthood and its implication or mental health is an important research topic. The concept of “emerging adulthood”, popularized by Jeffrey Arnett, identifies this age range as a distinct developmental stage characterized by variability due to cultural context and individual pathways (Arnett et al., 2011; the Oxford handbook of emerging adulthood, 2014).

Identify exploration during emerging adulthood and its implication for mental health is a critical area of study. According to research, this period involves significant identity development, with varying mental health outcomes depending on individual’s ability to explore their identities successfully. Social support plays a meditating role as perceived support from others can positively influence mental health by reducing depressive symptoms (Scardera et al., 2020; Wong and Hamza, 2023).

Physical health during this transitional period has also garnered attention, linking successful navigation through emerging adulthood with fewer health issues. Stress management and individual's perception of their transition can significantly influence physical health outcomes during these years (Bartlett et al., 2018).

Social relationships, particular particularly concerning online privacy and social media use, demonstrate generational shifts in how young adults interact with technology compared with earlier generations. The social usefulness of online tools and the need to respect their privacy is commonly balanced by young adults who exhibit and develop their attitude to digital interaction (Van Den Broeck er al., 2015).On the whole, the awareness that young adulthood is the period of transition during which Adverse childhood experiences take their toll is the key. People are satisfied with their identity and health, personal connections, and technology relationships, which correspond to the wider societal changes that they experience as they approach complete adulthood.

1.4 Adverse Childhood Experiences (ACEs)

Adverse Childhood Experiences (ACEs) are a potentially traumatic event that happens during childhood, usually at a young age before the age of 18, and can have long-term impacts on the physical, mental, and emotional health of an individual in their lifetime(Treat et al., 2019). These traumas are physical, emotional or sexual abuse, physical or emotional abandonment as well as dysfunctional home environment such as witnessing domestic violence, substance misuse, mental illness or family member who is imprisoned.

According to research, exposure to ACEs has been associated with many adverse adult outcomes, including increased risk of mental health problems, substance abuse, social

problems, and long-term health morbidity. Dose-response is indicated by the association between the amount of ACEs experienced and the likelihood of adverse outcomes, which implies that the cumulative impact of multiple ACEs may be particularly damaging. The development and treatment of ACEs has become an important priority in the field of public health, education and social services as early intervention and support can be effective in reducing the long-term impact and developing resilience in adverse childhood experience individuals.

1.4.1 ACEs Framework

The idea of ACEs is firmly rooted in its capacity to capture a wide range of childhood misfortunes including abuse and family dysfunction. Critically evaluated these experiences and their wide influence on the health of adulthood (Hartas, 2019). Critics, however, state that the method can at times over-simplify complex social settings and personal vulnerabilities (Kelly-Irving & Delpierre, 2019).

The classic works of. Felitti ET al. and Bellis et al. have played a critical role in proving the correlation of these childhood adversities and the myriad of health problems in adulthood, such as chronic illnesses, mental illnesses, and dangerous behaviors (Hartas, 2019). This study has brought paradigm shift in how our health professionals and policy makers are going to approach prevention and intervention strategies.

Nonetheless, there are opponents of the ACEs framework. Some studies show that the approach can be too simplistic to capture the complex relationships between social, environmental, personal factors that influence the long-term health outcomes. Kelly-Irving and Deliverer(2019) note that the ACEs model may not be entirely accurate in reflecting

the subtlety with which various adversities can interact and interplay with one another and with the specific vulnerabilities and resilience factors of an individual. Also, it has been raised whether by focusing on specific childhood experiences, other important health factors such as socio-economic status, cultural background and structural injustice are being ignored. This criticism highlights the fact that more comprehensive and sophisticated knowledge of childhood adversity and its impact during life, perhaps considering a broader set of variable, should be considered, including resilience and human development.

1.4.2 Basis of life-long health outcomes

ACEs have a lifelong health effect, and they tend to forecast a region of persistent ailments and mental health disorders (Khrapatina & Berman, 2016). Research shows that ACEs are associated with an elevated health risk like depression, anxiety, and suicidality, whereas resilience and social support are meditating factors (Kobrinsky & Siedlecki. 2022). Specifically, there is a dose-response connection, with increased ACE exposure being connected to increase and health and developmental challenges (Cprek et al., 2019; Webster, 2022). The impact of Adverse Childhood Experiences on health course of a person are dramatic and extended well into adulthood. These stressful events in early life have the potential of causing considerable rise in the risk of developing different chronic and psychiatric disorders during the course of one one's lifetime.

This frequency of adverse experiences exposure particularly important in determining long-term health outcomes, a dose response relationship has been observed, individuals with higher ACE scores tend to experience more and numerous health and developmental changes(Cprek et al., 2019; Webster.2022). In order to lessen the impacts of ACEs on public health, early intervention and preventive initiatives are crucial, as this cumulative

effect emphasizes. Additionally, knowing how ACEs effect health outcomes can help develop focused intervention and support and network that will increase resilience and enhance the general well-being of individuals who have experienced childhood adversity.

1.4.3 Sequelae of ACEs Exposure

The consequences of adverse childhood Experiences in the long run can manifest in various ways throughout adulthood. Individuals who have experienced multiple ACEs are at high risk of developing chronic health conditions, mental health disorders, and substance abuse issues. The Sequelae often result in decreased Quality of Life and increased healthcare utilization and highlighting the impact of early intervention and trauma informed care approaches.

1.4.3.1 Physical Impact

Studies have indicated that ACE often cause the development of chronic pain and physiological problems, which are associated with stress and utilization of biological changes in the body (Alhowaymel et al., 2023; Tidmash et al., 2022). In addition to their direct psychological consequences, ACEs have been linked to a range of long-term physical health outcomes. The stress that ACEs cause may cause a series of biological changes within the body, resulting in chronic pain and other physiological complications

The effects of ACEs on the physical health are multifactorial and may occur in many ways across the lifetime of an individual. Besides, ACEs have also been associated with a high risk of metabolic syndrome, autoimmune diseases, and cardiovascular diseases. Biological processes behind these links include dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, an increase in markers of inflammation, and an altered pattern

of gene expression (Tidmarsh et al., 2022). These findings underscore the importance of early intervention and trauma-informed care as to minimizing the long-term consequences of an ACEs on physical health.

1.4.3.2 The Social Impact

ACEs profoundly affect social outcomes and become the cause of such problems as low academic performance and impaired interpersonal relationships (Tyrone et al., 2023). Siblings relationships have been described as a possible mitigates, alleviating the situation with social support (Schweitzer & Sonnentag, 2023). The impact of Adverse Childhood Experiences (ACEs) on social outcomes are far-reaching, not only on the well-being of the individual but also on the bigger societal systems. The impact of ACEs is reflected in many areas of the social life including academic performance, with extremely affected individuals struggling to concentrate, engage in learning, or to maintain regular attendance. This may result in the lower educational and career opportunities in adult life. Moreover, ACEs may severely disrupt interpersonal relations, as victims can become distrustful, unable to control their emotions, or have poor coping styles that prevent them to develop and sustain healthy relationships with other people (Tyrone et al., 2023).

Recent research findings have, however, pointed to the potentially protective role of sibling bond in mitigating the negative impact of ACEs. Siblings can provide a social support of a specific kind, namely the emotional support, the similar experiences, and a feeling of belonging that may be lacking in other spheres of the life of a person who has experienced negative events. This support man has adaptive coping mechanism and resilience by acting as a buffer against the negative effects of the ACEs. The work by Schweitzer and Sonnentag (2023) indicates that strong sibling relationships may be a

potential intervention practice in dealing with social issues of individuals with ACEs, resulting in better social life and well-being.

1.4.3.3 Psychological Effects

Heightened vulnerability to mental health disorders, such as anxiety and sadness, is one of the psychological post-event effects. Those are additionally compounded by parental ACEs which affect the child development through maternal mental health pathways (Rieder et al., 2019). ACEs can exert a permanent psychological impact that far extends the agony inflicted on them. An increased risk of anxiety disorder and depression that persist into adulthood is presented to individuals who have been faced with ACEs. Constant feelings of anxiety, despair and the inability to control emotions are only some of the ways these mental health conditions may manifest. The dose-response relationship between childhood adversity and subsequent mental problems are emphasized by the fact that the magnitude and persistence of childhood adversity characteristically occur in parallel with the magnitude of psychological symptoms.

Besides, the ACEs are carried across generations, which complicates the psyche scenario. The experiences of childhood adversity dysfunction that parents go through have large impacts on the development of their children via maternal mental health pathways (Rieder et al., 2019). The mother who has gone through ACEs may have problems with her mental illness, and this may cause a distortion of her parenting model, attachment bonds, and the overall family structure. This becomes an inter-generational cycle with the ability to bring on psychological vulnerabilities and a complex dynamic involved between the parental background and the present family systems and child mental health outcomes. These psychological effects are multiple and complex, and dealing with them entailed a

complex intervention taking into consideration the individual and the Family context.

1.4.4 Health and Neurobiological Impacts of ACEs

The available evidence of ACEs frameworks describes the problem of severe disruption in neurobiology, with toxic stress interfering with brain development and actions (Navalta et al., 2018). These disturbances are represented in the form of mental health disorder and cognitive disorders at different levels of development (Nelson et al., 2017). The next trending examination in 2018 relates to molecular markers such as Telomeres and mitochondrial DNA, to help decipher stress effects. The ACE framework gives a clear picture on how childhood adversarial experiences may become severe neuro biological interference. Toxic stress, which is one of the main elements of ACE proved to cause severe changes in brain development and the functioning of the entire brain, alternation of neutral pathway and structure is instrumental in the cognitive and emotional processing 2018. These alterations can happen in numerous ways including a change in the stress response mechanisms, ability to control emotions and executive functioning. The magnitude of these neurological developments largely varies with the severity and the duration of the exposure to ACE; the longer or more severe the exposure the sweeter and longer lasting the effects.

The effects of these neuro biological disturbances are not restricted to childhood but may continue across the life span which is evident in the form of mental health and cognitive disorder at various stages of development 2017. As an example, individuals who had ACE in the past can be more vulnerable to mood disorders, anxiety, PTSD, and substance misuse in their adolescence and adulthood. Cognitive impairments, such as difficulties with attention, memory, and decision-making, may also emerge. Recent advancements in research have begun to explore molecular markers like diploid and

mitochondria DNA to gain a deeper understanding of how stress impact the body at cellular level 2018. The biological mechanism behind the long-term health effects ACE are better understood thanks to these molecular markers which may open up new treatment and intervention options.

1.5 Research Gap

1.5.1 Theoretical Gap

While mindfulness interventions have shown promise in improving mental health outcomes for individual with ACE, the mechanism underline these effects, especially overtime, remain unexplode. Specifically, the temporal dynamics and long-term impacts of MBSR on trade mindfulness and related psychological symptoms need further investigation. There is also a need to understand how mindfulness can meditate the relationship between ACE and quality of life, potentially offering a theoretical framework for resilience building in affected youth.

1.5.2 Contextual Gap

Most existing studies in this area have been conducted in western contexts or among populations with specific socio economic backgrounds. Research on the effects of mindfulness therapies on young adult adults with ACEs in Pakistan with vary cultural norms, mental health stigma, and limited access to psychological interventions may affect both participate patient and outcomes are few, especially when taking into account the regions particular cultural social and economic characteristics. Understanding the role of cultural context in the efficacy of MBSR on psychological outcomes is crucial, as factors such as religious or spiritual beliefs may influence the implementation and acceptance of such interventions.

1.5.3 Methodological Gap

Although the effectiveness of Mindfulness Based Stress Reduction (MBSR) on Quality of Life (QOL) has been the subject of multiple studies, the majority have been conducted with western context, typically involving larger and more diverse samples in clinical or institutional settings. There exist a paucity of empirical evidence regarding the impact of MBSR on young adults aged 18 to 25 with adverse childhood experiences ACE. Moreover, few studies within this demographic have employed a pre-test posttest designed to directly assess changes in QOL due to MBSR intervention. Research in Pakistan has also in frequently utilized purposive sampling to specifically target individuals with the documented ACE, leaving the unique needs of this high risk group under explored. Addressing these gaps through a focused, small skill intervention with 20 purposively selected participants will provide valuable, context specific evidence to inform both practice and policy on trauma sensitive mindfulness intervention in low resource settings.

1.6 Problems Statement

There are nonetheless few focused therapies created especially to address the particular difficulties faced by individuals with a history of ACEs, despite the increasing amount of data showing the detrimental effects of ACE. Mindfulness Based Stress Reduction (MBSR), which involves educating individuals about mental health, coping strategies and emotional well-being, has been recognized as an effective intervention for improving functioning and quality of life. However, the efficacy of MBSR in context with unique cultural and social economic factors, such as Pakistan, remains under explored.

By investigating the impact of Mindfulness Based Stress Reduction (MBSR) on the Quality of Life of young adults (18-25 years old) who have experienced ACEs, this study

seeks to close this gap. At two time point pre-intervention and post intervention this study will evaluate changes in physical health, psychological well-being, social relationships, and environmental factors using validated tools like the Adverse Childhood Experiences Questionnaire (ACE-Q) and the WHO Quality of Life scale (WHOQoL-BREF). This research seeks to contribute valuable insights into the potential of Mindfulness Based Stress Reduction (MBSR) as a tool to enhance the quality of life for individuals effected by ACEs to inform future interventions in this field.

In Pakistan, this issue remains under research, particularly concerning interventions that could mitigate these adverse effects in young adults aged 18-25.Thus, the proposed study aims to investigate the efficacy of MBSR on enhancing the Quality of Life in young adults with ACEs in Pakistan using a pre-test posttest design with purposive sampling of 20 participants. This study is motivated by the need to provide empirical evidence for effective mental health interventions incorporated to the socio cultural context of Pakistani with a history of adverse experiences. The findings are expected to contribute to the development of culturally sensitive mental health policies and policies in lower and middle income countries.

1.7 Research Questions

1. What is the impact of Mindfulness Based Stress Reduction (MBSR) on overall Quality of Life (QoL) of young adults with Adverse Childhood Experiences (ACEs).

1.8 Objectives

1. To assess improvements in overall Quality of Life (QoL) of young adults with Adverse Childhood Experiences (ACEs) after participation in Mindfulness Based Stress Reduction

(MBSR) program.

1.9 Hypothesis

1. H1: there will be significant improvements in overall Quality of Life (QoL) of young adults with Adverse Childhood Experiences (ACEs). after participation in Mindfulness Based Stress Reduction (MBSR).

1.10 Significance of the study

This research is significant because it addresses a critical gap in understanding the effectiveness of Mindfulness Based Stress Reduction (MBSR) in enhancing the Quality of Life for adults with Adverse Childhood Experiences (ACEs). ACEs have long lasting effects on psychological well-being, physical health, and social relationships, yet there is limited evidence on how Mindfulness Based Stress Reduction (MBSR) can mitigate these effects. By focusing on the impact of Mindfulness Based Stress Reduction (MBSR) on the multiple dimensions of quality of life such as physical health, psychological well-being, social relationships and environmental factors. This study provides valuable insights into how this intervention can improve the overall quality of life of young adults with an ACEs, offering a cost effective and accessible approach to mental healthcare.

The research's conclusion can have wide ranging effects on public health, legislation, and clinical practice. If Mindfulness Based Stress Reduction (MBSR) proves effective, it could be integrated into therapeutic programs and mental health services, making it a scale intervention for individuals with ACEs, particularly those who may not have access to more intensive therapies. This research also has the potential to lower down the long-term societal burden associated with ACEs, such as the increased risk of mental health disorders

and physical health problems. Ultimately, this study could contribute to developing evidence based intervention that promote resilience and improve quality of life, both at the individual level as well as with a larger community and healthcare systems.

Implementing MBSR in a setting like Pakistan allows for cultural adaptation and understanding how mindfulness interventions interact with local context. This can provide insights into the programs applicability and effectiveness across different cultural backgrounds, addressing a gap in current research. MBSR is a low cost, non-invasive intervention that can be implemented in various settings, including educational and healthcare institution. This makes it an accessible option for addressing mental health issues in young adults, particularly in resource Limited settings.

The researchers focus on Pakistan is particularly pertinent as it contributes to a broad understanding of MBSR in non-western context, which is crucial for developing culturally sensitive mental health interventions. Furthermore, given the lack of extensive research on MBSR are specifically with the Pakistani context, this study could pave the way for more localized mental health strategies, empowering young adults to manage the psychological ramification of ACEs more effectively.

CHAPTER 2

LITERATURE REVIEW

This study investigates the efficacy of Mindfulness Based Stress Reduction (MBSR) in improving the Quality of Life of young adults with have experienced Adverse Childhood Experiences (ACEs). The intervention aimed to develop mindfulness skills, such as focused attention, non-judgemental awareness, and emotional regulation, which are hypothesized to alleviate all the effects of ACEs and enhance the Quality of Life.

The transition to young adulthood is Pivotal developmental stage marked by increased autonomy, identity formation, and expanding social and occupational roles. However, young adults with a history of Adverse Childhood Experiences. (ACEs) such as emotional or physical abuse, neglect, and household dysfunction often face persistent mental, physiological and social challenges that undermine the quality of life. These individuals are at heightened risk of anxiety, depression, substance abuse, with most psychiatric disorders emerging before the age of 25. Such vulnerabilities are compounded by stresses typical of this live stage, including uncertainty about the future, economic instability, and a struggle to establish a stable sense of self.

Addressing the mental health needs of young adults with ACEs requires an intersectional, trauma-informed, developmentally sensitive approach. While trauma often has lasting effects, resilience can also develop, especially when supported by targeted interventions. Psychosocial interventions must focus on assisting young adults in rebuilding a unified and empowered identity, developing coping skills, and achieving a higher quality of life. Mindfulness Based stress reduction (MBSR) has become a promising, non-pharmacological intervention in this regard, providing skills of self-insight,

emotional regulation, and kindly related attention to one-self.

The MBSR is an eight week program developed by Kabat-Zinn (1990) and is an integrated combination of mindfulness meditation, yoga, and body awareness. It seeks to develop mindfulness, lower stress, and improve the psychological well-being. Evidence suggests that MBSR can be used to alleviate symptoms of depression, anxiety, and stress as well as enhance mental health related quality of life in a wide range of populations, such as young adults and people with social anxiety disorders (Chi et al., 2018; Hjeltnes et al., 2016). The lasting coping mechanisms that Fostering Mindfulness and self-compassion and MBSR can offer to trauma victims will help them cope with any situation.

QoL encompasses several spheres, including mental health and physical health, social relations and functional abilities. These remains tend to be negatively impacted in young adults with ACEs, and the effects are long-term in terms of personal and professional growth. The effects of this impact may be reduced by MBSR through the modulation of emotions and resilience that eventually leads to improved life quality and well-being (Silva et al., 2024; McCormick et al., 2017). It has been shown that mindfulness-based interventions cancer are protective against the psychological sequelae of early life drama.

Young adults in Pakistan may also experience other sociocultural stressors like economic uncertainty, commitments and strict social norms that may compound the effects of ACEs. At a low cost, high adaptability, and cultural flexibility, MBSR is a potentially useful intervention in this population (Chaudhary et al., 2023). Mindfulness-based programs in a Pakistani university and community context may fill a severe gap in mental health delivery, and provide culturally appropriate trauma recovery and resilience-building

strategies.

2.1 Mindfulness Based Stress Reduction (MBSR)

Mindfulness-based stress reduction (MBSR) is a clinical program, which was created by Jon Kabat Zinn in the late 1970s at the university of Massachusetts medical school. Originally created to support patients with chronic pain, stress and illness, MBSR generally includes and eight week program with weekly group and daily at-home practice. The study population was exposed to several mindfulness practices, including body-scan meditation, sitting meditation, and mindful moment practices, including gentle yoga. Evidence has suggested that MBSR has the potential of causing dramatic changes in psychological well-being, stress, and the overall quality of life of various population and health status.

MBSR involves fundamental processes, such as mindfulness meditations, body scanning and a gentle yoga. These techniques are used to build increased present-tense awareness and a non-judgmental stance toward thoughts and feelings, which are the core of stress reduction and emotional regulation. Mindfulness meditation is the practice of paying close attention to breathing or other senses developing a sense of present moment awareness. Body scanning entails systematic progression through different parts of the body promoting relaxation and awareness. Gentle yoga combines physical posture with mindful breathing, enhancing flexibility and the mind connection.

Mindfulness based stress reduction (MBSR) Interventions have demonstrated significant efficacy in improving the psychological well-being of healthcare professionals. Martin-Asuero & Garcia-Banda (2010) Found that participants experienced substantial

decreases in psychological distress, Rumination, and negative effect following the MBSR Program. These positive outcomes were not merely short term effects but persisted for several months after the intervention, indicating the long lasting impact of mindfulness training on mental health. The sustained benefits of MBSR for healthcare professionals are particularly noteworthy, given the high stress nature of their work environment.

These results highlight the importance of consistent practice and adherence to mindfulness techniques in achieving desired behavioural Changes The study outcomes indicate that MBSR may offer a promising complimentary approach to traditional smoking cessation Methods, potentially addressing both addictive behaviour and the underlying stress that often contributes to smoking habits. However, as this was a pilot study, further research with larger sample sizes and longer follow-up periods is necessary to confirm the long-term effectiveness of MBSR for smoking Cessation and stress reduction among smokers. Furthermore, MBSR has shown positive effects on mental health among patients with diabetes, enhancing mindfulness and reducing anxiety and depression (Fisher et al., 2023).

Mindfulness Based Stress Reduction (MBSR) has demonstrated significant benefit in non-clinical settings. Notably, randomised controlled trial conducted by Frank et al. (2013) The inclusion of educators demonstrated that engagement in MBSR programs led to stress management improvement, self-compassion, and mindfulness. Teachers who often face a lot of job stress see great improvements in these areas. The results suggest that MBSR can be an efficient strategy to use with professionals working in high stress jobs, which can contribute to their future well-being and job performance. The use of MBSR in non-clinical environments has wide-ranging impact on business wellness and professional

growth. With stress related problems persisting in many sectors such as the education sector, health sector and corporate fraternities, MBSR can be seen as a potential method to increase individual resilience and coping mechanism within the work place.

The improvements in stress management and self-compassion observed in educators may translate into better class dynamics, increased job satisfaction, and reduced burnout. Furthermore, the development of mindfulness skills can contribute to improved decision-making, emotional regulation and interpersonal relationships in professional context, highlighting the potential of MBSRS a valuable tool for organisational well-being and productivity.

Nonetheless, extant literature indicates that MBSR holds substantial potential as a viable intervention for stress reduction and emotional regulation across diverse setting and population. Criticisms of MBSR studies primarily emphasises the need of more rigorous methodological approaches and well designed, controlled trials. Although existing studies have demonstrated promising results, there is a lack of standardisation in MBSR protocols and outcome Measures, complicating the ability to draw definitive conclusions regarding its effect effectiveness in treating chronic pain. Furthermore, some critics have identified the potential for selection bias in participant recruitment and the challenge of isolating the specific effects of mindfulness from other intervention components.

Empirical studies have demonstrated its beneficial effects on various psychological and physiological outcomes, including reduction in stress, anxiety, and depression and enhancement in immune function and overall well-being. The adaptability of MBSR in addressing diverse populations, ranging from healthcare professionals to individuals with

chronic illnesses, highlights its Potential as a broadly applicable intervention. As research in this domain advances, Addressing methodological limitation and conducting more comprehensive studies will like fortify the scientific foundation for MBS's Effectiveness of MBSR in promoting emotional regulation and stress reduction.

2.2 Quality Of life (QoL) in young adults

Quality of life in young adults is multifaceted concept that in compasses various domains, particularly those related to mental health and it's functioning. That can be understood through multiple theoretical models and definitions, which generally emphasise life satisfaction, personal fulfilment and the ability to perform daily activities effectively. Quality of life in young adults is multifaceted concept that encompasses physical, psychological, social, and environmental aspects. This stage of life involves significant transitions that affect perceived QoL, with mental health playing a crucial rule. QoL Assessment evaluates interconnected domain such as physical health, psychological state, Independence, social relationships, and environmental interactions. These domains influence each other and create a dynamic picture of overall well-being. Perceptions and cultural contexts also play an important role in QoL Evaluation, making individualised approaches to QoL understanding and improvement essential among young adults.

The QoL Domains relevant to mental health entail emotional well-being, social relationships, level of independence, physical health and existence of stressors or adversity. These domains contribute to the quality of life of a person as a whole and may be affected by a number of factors, including socio economic conditions, personal connections, and previous drama, including adverse childhood experiences (ACEs) (Logan-Greene et al., 2014). Mental health professionals employ the use of standardised instruments to evaluate

the quality of life in a variety of domains, which provides a broad picture of the well-being of an individual. Such evaluations determine the strengths and weaknesses, allowing clinicians to create the specific and effective treatment strategies that will support the unique needs and circumstances of each individual.

The prevalence of the ACEs has been well-documented to influence QoL in the age bracket of 18 to 25. As an example, adolescents who are emotionally abused, neglected, or otherwise exposed to childhood adversity are likely to show poor mental health outcomes, such as anxiety and depression. ACEs have a significant effect on the quality of life of young adults between the ages of 18 and 25, and the effects spill into mental health challenges, academic performance, career development, and interpersonal relationships. These people tend to suffer with anxiety, depression, and functioning in their daily lives, which leads to a disadvantageous cycle that generates problems in economic stability and social integration. The second reason is the fact that, in the context of the global pandemic, the organization has to increase the number of its employees (Davies et al., 2021).

The impacts of ACEs are widespread, which highlights the necessity of early intervention measures and continued support networks to minimize the long-term impacts and enhance the overall quality of life of individuals who have encountered childhood adversity. Moreover, the supportive social network and the mitigation of the effect of the ACEs suggest the significant role of the social relationships in the development of mental well-being (Schneider et al., 2017).

The studies have demonstrated that the introduction of trauma and informed care practices in learning institutions and healthcare facilities may drastically enhance the

performance of individuals with ACEs (Johnson et al., 2019). Moreover, community-based interventions that emphasize resilience and coping skills had good outcomes in enabling people to recover the impact of childhood adversity (Smith and Brown, 2020). These results emphasize the necessity of a multidimensional intervention to dealing with ACEs, including the collaboration of healthcare providers, teachers, and community organizations to establish a support system to assist affected individuals comprehensively.

Studies have discovered that Aces adversely affect QoL among young adults. In one study of university students, there was a strong correlation between childhood adversity and reduced QoL, as well as higher levels of anxiety (Davies et al., 2021). The other study indicated that the effects of ACEs On mental health may also be influenced by factors such as resilience, which may negate the potentially negative effects of ACEs On mental health (Schnarrs et al., 2020).

Comprehensive interventions to overcome Adversities related to childhood experiences are very important to enhance QoL In young adulthood. These are the promotion of resilience, the enhancement of the social support system, and trauma informed care practices that take into account the long-term consequences of childhood trauma (Oral et al., 2015). Early intervention programs within the at-risk children and their families can have a Pivotal Role in curbing the adverse effect of adverse childhood experiences

2.3 Adverse childhood experiences (ACEs)

The adverse childhood experiences, which comprise several types of abuse, neglect, and household dysfunction, have been shown to have long-lasting implications on

psychological health and general quality of life.

Therefore, identifying effective intervention to support resilience and recovery in this population is a public health imperative. One promising intervention is Mindfulness Based Stress Reduction (MBSR), designed to cultivate Present moment awareness and mitigate stress. ACEs include a spectrum of traumatic childhood experiences, such as physical, emotional, or sexual abuse, neglect, and exposure to household dysfunction, including domestic violence and substance abuse. These experiences can profoundly and lastingly affect the individual's mental health, emotional regulation, and overall quality of life, extending into adulthood. Research has consistently indicated that individuals with a history of ACEs Are at an elevated risk for various psychological disorders, including depression, anxiety, and post-traumatic stress disorder, as well as physical health issues and diminished life satisfaction.

Adverse childhood experiences have garnered significant attention owing to their profound impact on various life outcomes. These experiences, often traumatic, include a range of potentially harmful events occurring before the age of 18, such as abuse, neglect, and household dysfunction. ACEs operate with a conceptual framework that highlight the complex interplay between these adversity and the long-term consequences on physical and mental health, suggesting for direct and indirect pathways of influence (Oralet al., 2015; Webster, 2022). Cumulative nature of ACEs Has been shown to have our dose response relationship with negative health outcome, meaning that individual with higher ACE scores tend to experience more with numerous health problems later in life. This relationship underscores the importance of early intervention and prevention strategies to reduce the prevalence and impact of ACEs In vulnerable populations. Moreover, research

has increasingly focused on understanding the biological mechanisms through which ACEs affect health, including alterations in the stress response systems, immune function, and epigenetic changes that may persist across generations.

The prevalence of adverse childhood experiences is significant both globally and in specific regions, such as Pakistan although the direct data from Pakistan may be limited. Global research indicates that over half the population reports experience at least one ACE, with a subset of individuals encountering multiple such events (Chanlongbutra et al., 2018; Oral et al., 2015). For instance, in usual areas in United States, more than 55% of individuals reported at least one ACE, demonstrating a consistent pattern of widespread occurrence (Chanlongbutra et al., 2018).

The psychological and physical health consequences of ACEs have well documented. There is compelling correlation between the number of ACEs and increased risk of chronic diseases, mental health issues, and poor quality of life. For instance, mental health issues and poor quality of life. As an example, multiple ACEs have a significant association with chronic pain, anxiety, and depression and reduced quality of life in adulthood (Cramer et al., 2022). The relationship between Adverse Childhood Experiences (ACEs) and quality of life during young adulthood is gaining more and more clarity. Such studies have also revealed that CEs have adverse effects on the Quality of Life (QoL) indicators, such as mental and physical wellbeing among students in universities (Davies et al., 2021).

Moreover ACEs have been shown to mediate the relationship between early life socio-economic conditions and adolescent outcomes, highlighting their role in perpetuating

disadvantages throughout the life course (Straatmann et al., 2020).The influence of Adverse Childhood Experiences (ACEs) extends significantly beyond childhood and exert a profound Impact on various dimension of young adult life. Empirical research has consistently indicated that individuals who have encountered ACEs are more susceptible to challenges in their mental and physical well-being during their university years and thereafter. These challenges may manifest in various forms, including elevated rates of depression, anxiety, substance abuse, and chronic health conditions. The cumulative effects of ACEs Can include low academic achievements, relationship-building and maintenance problems, and a low overall life satisfaction in young adults (Davies et al., 2021).

Moreover, the association between Adverse Childhood Experiences (ACEs) and QoL Any young adulthood is not isolated but intricately linked to broader socio-economic factors. ACEs have been identified as critical medicating factors in the relationship between early life socio economic conditions and adolescent outcomes. This indicates that ACEs Please, a substantial role in perpetuating cycles of disadvantage across generation. Children from lower social economic backgrounds are more likely to encounter ACEs, Which adversely affect their development and future prospects. This results in a complex network of interconnected factors that can significantly influence an individual's life trajectory, potentially con training opportunities for upward social mobility and rainforest socio economic disparities (Straatmaan et al., 2020).

These findings highlight the critical importance of early detection and intervention in mitigating the long-term effects of Adverse Childhood Experiences (ACEs). Strategies that bolster resilience, such as fostering supportive attachment and implementing trauma informed care, are essential for mitigating negative outcomes and enhancing long-term

health trajectories (Logan-Greene et al., 2014; Oral et al., 2015).

The prevalence and impact of Adverse Childhood Experiences (ACEs) on mental health and quality of life have been extensively examined globally, however, specific data from Pakistan remain limited. Nevertheless, the general finding of various studies provide significant insights into global and regional trends. ACEs, which referred to stressful or traumatic events occurring during childhood, such as abuse and household dysfunction, represent a significant public health concern because of their long-term impact on mental and physical health (Webster, 2022).

Globally, prevalence of ACEs varies, but studies indicate that a substantial proportion of population reports experience one or more ACEs. For instance, a study focusing on Zimbabwe found that a significant proportion of adolescent and youth reported experiencing mental distress linked to ACEs (Chipalo, 2024). Similarly, in rural areas of United States despite a lower likelihood of experiencing ACEs then in urban settings, the majority of individuals reported at least one ACE, which was associated with adverse health outcomes (Chanlongbutra et al., 2018). These patterns suggest that, while prevalence rates might vary, the presence of ACEs Is a widespread issue affecting various populations.

The long-term effects of ACEs on mental health are significant. These are consistently associated with range of physical, mental, and developmental challenges. There is evidence of a dose response relationship, with an increase in the number of ACEs correlates with an increased risk of negative health outcomes (Moore & N Ramirez, 2015; Webster, 2022). For example, exposure to ACEs Has been linked to higher anxiety levels and lower quality of life among university students (Davies et al., 2021). Additionally,

ACEs Associated with depression and anxiety symptoms in adults, as well as poorer mental health related quality of life (Young-Wolff et al., 2019).

Furthermore, the impact of ACEs Extends beyond mental health, affects physical health and increases the risk of developing chronic diseases. Research has also highlighted Psychosocial factors, such as social support and resilience resources, which can moderate the negative impact of ACEs, Suggesting potential pathways for intervention and support (Logan-Greene et al., 2014). Several studies have emphasised the need of trauma informed care and public health interventions to mitigate the negative consequences of ACEs. This includes addressing the broader social determinants of health and implementing strategies to prevent ACEs and support affected individuals (Ceccarelli et al., 2022; Oral et al., 2015).

Adverse Childhood Experiences (ACEs) have garnered increased scholarly attention because of their profound impacts on both mental and physical health. ACEs Are prevalent in South Asia, particularly India, and constitute a significant public health concern. Although the research on ACEs in India is somewhat limited, existing evidence indicates a notable prevalence, Exacerbated by the cultural and socio-economic factors inherent in the region.

In India, a nation with approximately 0. 4 billion children and adolescents, the prevalence of ACEs Is associated with a range of adverse outcomes, including mental health problems. A study focusing on young adults from the Delhi-NCR area revealed that exposure to ACEs Increased the likelihood of experiencing depression, anxiety, and stress and are diminished sense of well-being. This study identified bullying and emotional abuse as significant contributors to mental health challenges (Chaudhary et al., 2023).

A study conducted in Singapore, a multi-ethnic Asian country, found that 63.9% of individuals reported experiencing at least one ACE. This study highlights the pervasive nature of ACEs in Asian population and their association with mental health disorders, such as mood and anxiety disorders the presence of ACEs is strongly correlated with these health conditions, advocating the integration of trauma informed care with and community health services to address these challenges effectively (Subramaniam et al., 2020).

The impact of ACEs in South Asia is further complicated by socio-demographic factors, including a lack of awareness and mental health resources, which impede the identification and management of such trauma. The literature advocates, a comprehensive public health strategy that encompasses increasing awareness of ACEs, fostering trauma informed communities, and implementing effective intervention programs targeting children and adolescents (Trivedi et al., 2021). Overall, while data specific to the entire south Asian region are limited, existing studies suggest that ACEs prevalent in regions are significantly linked to long-term adverse health outcomes, necessitating Arjun public health interventions tailored to these unique cultural and socio-economic contexts.

A significance correlation was observed between ACEs and adverse chronic health outcomes. For instance, a high ACE score, typically defined as four or more experiences, is associated with elevated rates of chronic disease. This finding underscores the importance of Identifying and addressing ACEs As a strategy for preventing chronic health issues later in life (Alhowaymel et al., 2023).

Systematic reviews and Meta-Analysis have identified a weak negative relationship between ACEs and academic performance. This suggests that while ACEs Can affect

educational outcomes, this relationship may be moderated by various factors (Tyrone et al., 2023).

This research has indicated that early ACEs Influence children's social and emotional development. Factors such as maternal depression, self-efficacy, and social support and media relationship between ACEs and developmental challenges, highlighting the significance of the family and environmental contexts in these trajectories (Treat et al., 2019).

Buy understanding the distinct challenges and opportunities inherent in young adulthood particularly in a relationship to early trauma mental health professional, educators and policy makers can frame more effective strategies to support this demographic. Mindfulness Based Stress Reduction (MBSR) when implemented within a trauma informed Framework, may constitute important mechanism for enhancing psychological well-being and quality of life among young adults who have experienced significant childhood experiences.

2.4 Mindfulness Based Stress Reduction (MBSR)

Mindfulness Based Stress Reduction (MBSR) is a structured intervention designed to mitigate stress enhance well-being and improve quality of life. It integrates mindfulness exercises like yoga and meditation to help people become more aware of the here and now. The effectiveness of MBSR in reducing the symptoms of anxiety, depression and chronic pain has been shown by empirical study. The training usually last 8 week and includes daily at-home exercises in addition to weekly group session.Participants were taught a variety of mindfulness building practices including body scan meditation, sitting meditation and a

mindful movement exercises. Invented by John Kabat-Zinn in the late 1970s, MBSR is an amalgamation of Buddhism meditation and modern psychological practices of managing strength. The central tenet of MBSR is to develop a mindfulness of the thoughts, feelings, and physical sensations in the present moment without judgement. This increased awareness allows individuals to react to stressors in a more effective way as opposed to reacting habitually (Tian et al., 2022)

In woman subjected to trauma, MBSR has been linked to decrease perceived stress, depression and anxiety as well as elevated mindfulness, which points to its potential applications in psychological functioning and inflammation alleviation (Gallegos et al., 2015). These results indicate that MBSR may be an effective complementary treatment option to patients with and individual exposed to trauma. The beneficial impacts on psychological well-being and quality of life suggested that MBSR could be more widely used in the treatment of chronic stress and mental illnesses. Future studies to investigate the long term effects of MBSR and its possible implementation into the standard care protocols of different patient categories are also warranted.

In addition, Mindfulness Based Stress Reduction (MBSR) has been shown to have potential benefits to cognitive functioning in multiple sclerosis, such as reducing depressive symptomatology and fatigue and improving visual-spatial processing (Blankespoor et al., 2017). Studies that have been conducted have explored other neurological conditions, including Parkinson, and epilepsy, and the impact of MBSR on these conditions. These studies reported positive changes in quality of life, stress and emotional well-being on the participants. However, more rigorous clinical trials are required to determine the long term effectiveness and best uses of MBSR in a

heterogeneous neurological population.

In the same way, the intervention showed a positive change in the quality of life, psychological distress, and cognitive emotional regulation strategies in breast cancer patients, thus showing the overall effect it has on the psychological well-being of cancer treatment (Zhu et al., 2023). The analysis of revealed that the participants in the intervention experienced an increase in self-efficacy in the management of their cancer-related symptoms. This greater feeling of control over health leads to greater compliance with treatment regimen and a greater role in self-management. Also, the beneficial impact of the intervention on cognitive emotion regulation strategies was also notable, since it helped patient deploy more adaptive coping mechanism to counteract the emotional difficulties related to the diagnosis and treatment of cancer.

2.4 MBSR and ACEs

Mindfulness-Based Stress Reduction (MBSR) has been found to be promising in managing the psychological effect of adverse childhood experiences (ACEs). The impact of mindfulness and meditating on the negative effects of ACEs and improving psychological well-being through different routes, including emotional regulatory and resilience-building, has been studied. Studies have shown that mindfulness can be important as a mediator and moderator in the association between ACEs and depression, which means that mindfulness can help individuals be more mindful and non-judgmental about what is happening to them in the present moment and thus alleviate depressive symptoms (Mckeen et al., 2021).

Moreover, the awareness aspect played the role of a moderator by not allowing the

development of higher levels of depression in those who had high awareness levels regardless of the number of ACEs (Mckeen et al., 2021). This safeguarding impact of awareness demonstrates the significance of building mindfulness and self-reflection skills in individuals who have undergone childhood incidences by enhancing a higher level of awareness; people will be better placed to process and tackle past traumas, and this may help to reduce the long-term effects of such experiences on mental health. Additional Measures to be taken to prevent depression in individual persons with ACEs Should be directed at increasing the level of awareness with the help of mindfulness-based practices and therapeutic methods.

There is additional evidence that mindfulness can reduce the negative consequences of childhood experiences through improved psychological well-being. ACEs And psychological well-being in Chinese college students were found to be mediated by mindfulness, which can therefore be considered a protective factor against the impact of ACEs (Huang et al., 2021).This highlights the potential of mindfulness interventions to improve psychological resilience and overall well-being in individuals with a history of ACEs.

Moreover, emotional resilience plays a vital role in post-traumatic growth following ACEs. Research has demonstrated that emotional resilience can mediator transition for experiencing negative effect to achieving post traumatic growth, suggesting that bolstering resilience through mindfulness practises can lead to positive psychological changes (Tranter et al., 2021).

2.5 MBSR in Pakistan

The current state of research on Mindfulness-Based Stress Reduction (MBSR) in Pakistan, particularly in relation to trauma recovery, young adults, and cultural adaptations, highlights several significant aspects and gaps. Unfortunately, the specific context of MBSR in Pakistan has not been addressed in the provided information. However, several points can be inferred based on broader understanding of MBSR and general research practices. Research on MBSR in Pakistan is likely to encounter challenges owing to limited resources and cultural barriers adapting MBSR practices to align with Pakistani cultural norms and religious beliefs may be crucial to their acceptance and effectiveness. Further studies could explore the potential benefits of MBSR for drama recovery among young adults in Pakistan, considering the country's unique socio-cultural context.

Existing mindfulness interventions and cultural adaptations while specific studies on MBSR in Pakistan are limited, mindfulness interventions are gradually gaining attention in South Asian contexts. Cultural adaptation of such interventions is crucial because of the diverse cultural backgrounds and religious beliefs prevalent in the region. A greater need to adapt mindfulness practices to local cultural norms and values to make them more acceptable and effective among the Pakistani people is emerging. Cultural adaptation of Mindfulness-Based Stress Reduction (MBSR) interventions in Pakistan must take into consideration the rich fabric of traditions, religious beliefs and practices, and social norms in the country. Researchers and practitioners should maneuver among the intricate interaction between Islamic Teaching, indigenous healing practices, and modern psychological interventions in order to develop interventions that will be acceptable to the local population. Such a procedure can be based on the inclusion of animals in Islamic

mindfulness practices, e.g., Dhikr (Remembrance of God) Or Muraqabah (Meditation), and secular mindfulness practices of mindfulness in conservative communities is necessary to promote acceptance and participation.

Addressing certain cultural stresses and mental health issues that are common in the area is also necessary for adapting MBSR to Pakistani contexts. These are family relations, social norms, Gender roles and influence of political instability or economic pressures. Customizing mindfulness intervention to these special stressors can increase relevance and efficacy. Moreover, the language barrier and literacy level should be taken into account when creating mindfulness materials and training programs. Application of culturally specific metaphor, examples, and delivery mode can help to greatly enhance the accessibility and effectiveness of MBSR interventions among Pakistani groups, which will subsequently increase the acceptance and adoption of mindfulness practices in mental health care and daily life.

2.6 Theoretical framework

2.6.1 Trauma-Informed Care (TIC)

The theoretical framework includes trauma-informed care principles, the mindfulness theory, and the psychosocial model of health. Trauma-Informed care principles Trauma-Informed care (TIC) is changing the model of service delivery by emphasizing the concept of a greater understanding of the impact of trauma. Its core values contain safety, trustworthiness, transparency, collaboration, empowerment, choice, and Intersectionality (Bowen & Murshid, 2015). The TIC recognizes the possibility of traumatization within the healthcare environments and encourage a sensitive healthcare approach that would help reduce distress and promote patient autonomy (Reeves, 2015).

In Australia, the introduction of TIC into mental health care has been highlighted, and a collaborative approach to care is encouraged to promote trust and healthy environments (Isobel et al., 2020).

Moreover, it is proposed to implement TIC principles in the policy realm to mitigate health disparities augmented by trauma (Bowen & Murshid, 2015). Trauma-Informed care (TIC) is an approach that reflects a paradigm shift in health and social services by acknowledging the pervasiveness of trauma and its impact on health and well-being. This practice is not just symptomatic but deep rooted in treating the effects of traumatic experiences on the life of an individual. TIC principles are intended to establish environments through interactions that foster healing and preclude re-traumatization. Focusing on safety, trust awareness, transparency, collaboration, empowerment, Joyce, and Intersectionality, TIC aims to create a sense of control and agency in the service recipients, which are commonly undermined with traumatic experiences (Bowen & Murshid, 2015; Reeves, 2015).

The Trauma-Informed care (TIC) is implemented in various areas, such as healthcare, mental health services, social work, and policy development. In particular, in Australia, there has been an active focus on integrating TIC principles into mental health care with a focus on the importance of building trust and safe environments in collaborative care. The study of the relationship between the two-dimensional and three-dimensional models presents an interesting question of how the two-dimensional model translates to the three-dimensional model (Isobel et al., 2020).This transition acknowledges that Traditional service models may in advertently trigger or exacerbate drama responses, underscoring the need for a more holistic approach to care furthermore, the incorporation of TIC principles

in two policy frameworks signifies recognition of the role that drama plays in perpetuating health disparities and social in equities. By addressing trauma at a systemic level, TIC not only enhances individual outcomes but also contributes to broader social change and health equity (Bowen & Murshid, 2015).

2.6.2 Mindfulness Theory and Stress Reduction Models

Mindfulness has become an integral component of psychological interventions, fostering present-moment Awareness and emotional regulation. Research indicates that mindfulness enhances Meta cognitive skills, leading to improve emotional stability and behavioural changes, particularly in stress-related scenarios (Hamilton et al., 2006; Heppner et al., 2015). It's applications extent to organisational settings where mindfulness is linked to improved workplace performance and well-being (Atkins, 2015). Despite its widespread adoption, mindfulness practices face challenges, such as conceptual confusion and unintended adverse effect, necessitating further clarification and research to optimise its therapeutic use (Henley et al., 2016). The integration of mindfulness into clinical practice has led to the development of various mindfulness-based interventions, such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT). However, the mechanisms through which mindfulness exerts its beneficial effort efforts are still not fully understood prompting researchers to explore the neuro biological and cognitive processes underlying mindfulness practices.

CHAPTER 3

RESEARCH METHODOLOGY

This section described the procedures used to determine the effectiveness of Mindfulness Based Stress Reduction (MBSR) on the Quality of Life (QoL) of young adults 18 to 25 with Adverse Childhood Experiences (ACEs). It reported the research design, population, sampling, instruments intervention, procedures, data analysis plan and ethical considerations.

3.1 Research Design

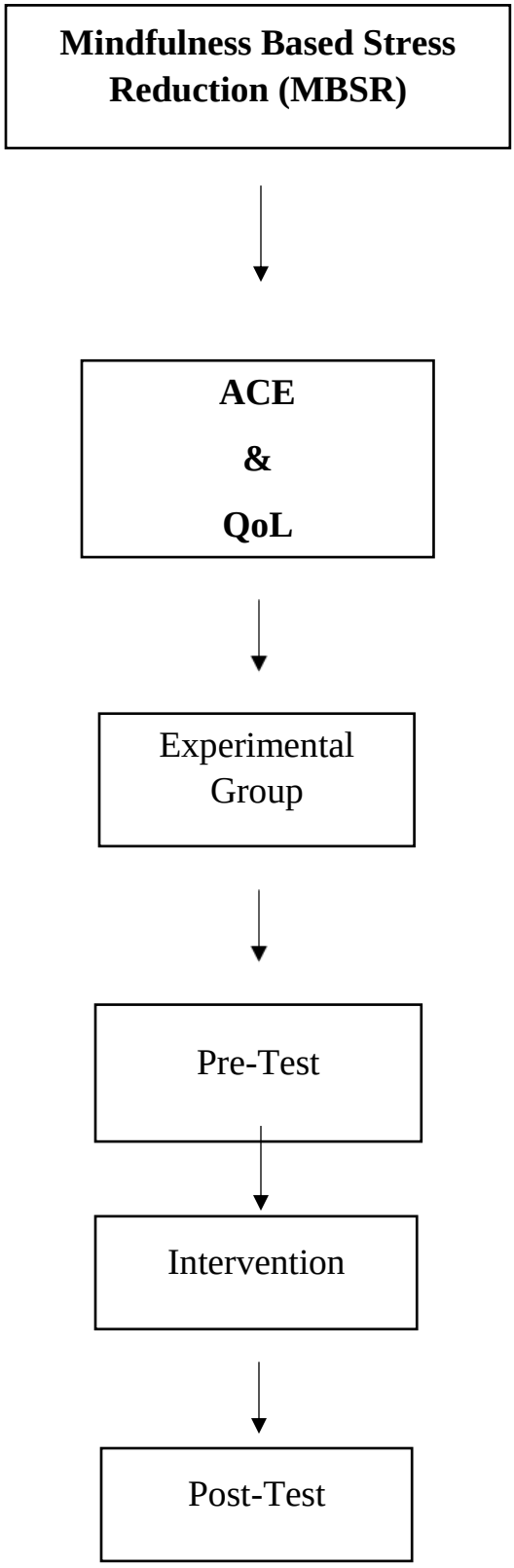
The study used a Pre-experimental network that applied a One Group Pre-test Post-research design to examine the impacts of Mindfulness Based Stress Reduction (MBSR) on the Quality of Life (QoL) of young adults 18 to 25 who have Adverse Childhood Experiences (ACEs). This design was considered appropriate to determine the effect of the interventions by comparing QoL scores prior to the intervention and after the intervention.

3.2 Population and Sampling

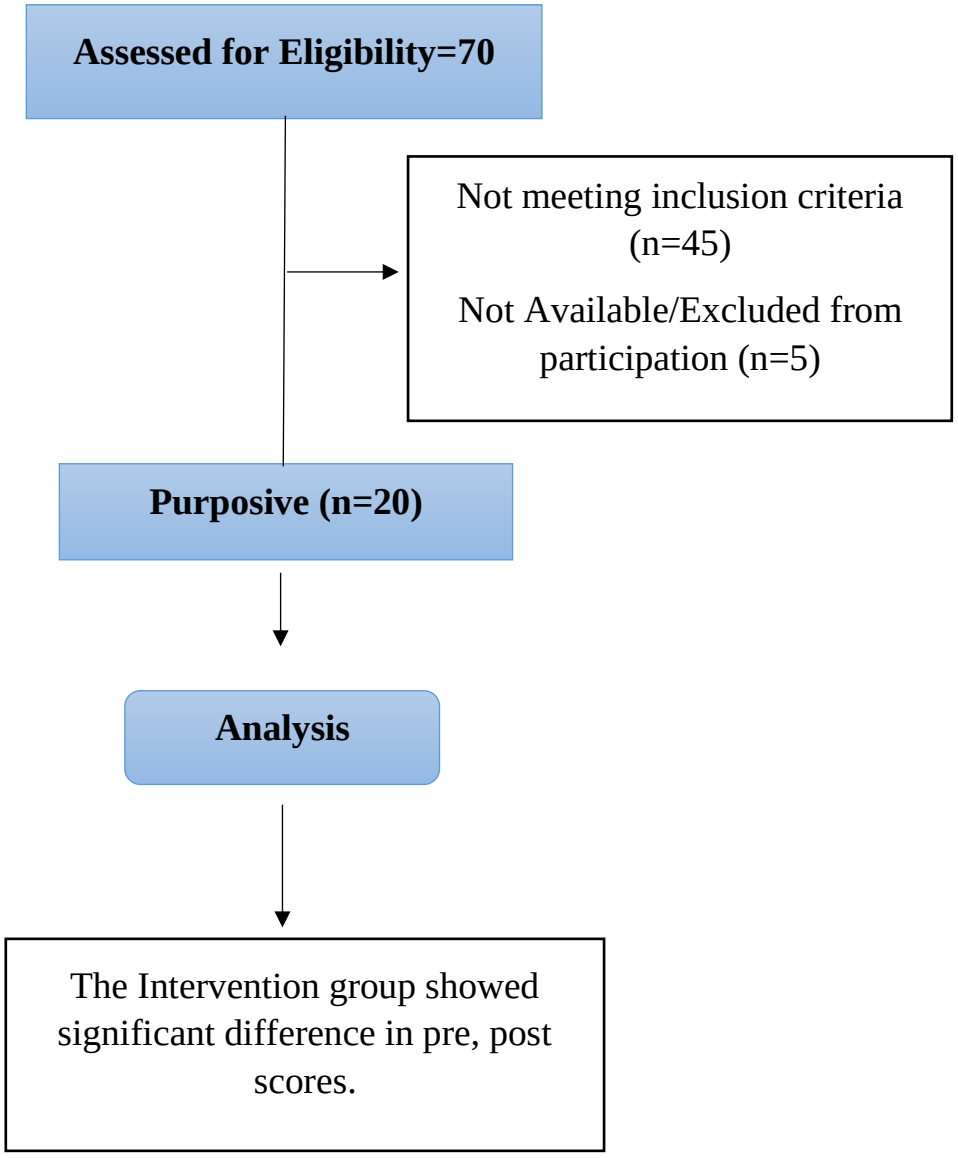
The target population was young adults aged 18 to 25 years of age with the history of Adverse Childhood Experiences (ACEs). The sample consisted of 20 participants these participants. Participants were selected from educational institutes that were willing to incorporate a Mindfulness Based Stress Reduction (MBSR) intervention.

A purposive convenient sampling technique was used to recruit participants from various educational institutes.

3.1 Pictorial Representation of the Study Procedure



3.2 Pictorial Representation of the Study



3.3 Inclusion Criteria

- Young adults from different educational institutions.
- Young adults including both male and female.
- Young adults aged between 18–25 years.
- Young adults with history of Adverse Childhood Experiences.
- Young adults from all socioeconomic backgrounds.
- Young adults willing to participate in the full program.

3.4 Exclusion Criteria

- Young adults with recent history of trauma or crisis.
- Young adults with diagnoses of psychological illness or disorder.
- Young adults getting any current psychological treatment for ACEs.
- Young adults with failure to meet the inclusion criteria.
- Young adults who skipped one or more intervention sessions.

3.5 Operational definitions

3.5.1 Adverse childhood experiences (ACEs)

Adverse Childhood Experiences (ACEs) are potentially traumatic events that occur before the age of 18. These encompass a range of negative experiences including various forms of abuse; physical, emotional and sexual, neglect; both physical and emotional and household dysfunction such as exposure to substance abuse, mental illness within the

household parental separation or divorce and domestic violence. Such experiences can profoundly impact a child's development leading to both immediate and long-term physical and mental health consequences (Oral et al., 2015; Wang & Maguire-Jack, 2018),

3.5.2 Quality of life (QoL)

Quality of life (QoL) refers to the general well-being of individuals in societies encompassing both physical and psychological aspects of health. It takes into consideration the person's mental state level of independence social relationships and their interaction with environmental features. Quality of life is multi-dimensional concept that extends beyond mere physical health to encompass holistic view of individuals overall well-being (Bowling et al., 2002).Various aspects of life satisfaction including emotional and mental health, social connections, personal autonomy and ability to engage meaning fully with once environment. QoL assessments often consider factors such as access to education, employment, opportunities, financial stability and the quality of healthcare services available.

3.5.3 Mindfulness Based Stress Reduction (MBSR)

Mindfulness Based Stress Reduction (MBSR) is a systematic program it aimed at enhancing wellbeing and addressing symptoms related to stress through mindfulness techniques. It generally involves practices like meditation body scan and yoga which are intended to promote awareness and presence in the present moment. MBSR has shown a particular effectiveness and alleviating systems of depression, anxiety and trauma. The programs main elements include guided meditation, yoga and body awareness exercises all crafted to nurture profound sense of present t moment awareness and no judgmental acceptance of personal experiences. For trauma survivors MBSR provides a particular

valuable set of skills and practices (Andonian et al., 2018). But learning to observe thoughts and emotions without being overwhelmed individuals can build resilience and improve emotional regulations. The programs focus on body awareness also aids individuals in reconnecting with their physical self's which is often essential for those dealing with the somatic aspects of trauma.

3.6 Assessment Measures

3.6.1 Informed Consent

A detailed informed consent was taken from the participants in which they were asked about their voluntary participation in the study and was also taken to know about their consistency in presence in the continuation of study till the completion of it.

3.6.2 Demographic Questionnaire

To know the samples homogeneous characteristics demographic details were collected from the sample.

It included information about age, gender, Education, socio economic status, parent's education and occupation, siblings, income range, birth order, psychological disorder.

3.6.3 Quality of Life Measurement

The WHOQOL scale, developed by the World Health Organization, is a standardized tool for assessing individuals' perceptions of their quality of life, considering cultural background, personal values, goals, and expectations. Unlike assessments that focus solely on medical symptoms, it adopts a holistic approach to understanding how people feel about their lives, recognizing that quality of life is a broad concept shaped by

physical health, psychological well-being, and level of independence, social relationships, personal beliefs, and environmental conditions. One of the most widely used formats is the WHOQOL-BREF, a concise 26-item questionnaire adapted from the longer WHOQOL-100. It measures four core domains: physical health (energy, pain, sleep, mobility, daily functioning), psychological well-being (positive emotions, self-esteem, memory, thinking, body image), social relationships (personal connections, social support, sexual activity), and environment (safety, finances, access to healthcare, leisure, physical environment).

Each WHOQOL-BREF item is rated on a 5-point Likert scale, where higher scores indicate better quality of life, and negatively phrased items are reverse-scored so that all responses align in direction.0 represents the poorest possible quality of life, and 100 represents the best. The questionnaire also contains two general items measuring overall quality of life and general health, which are reported separately.

In terms of reliability, the WHOQOL-BREF has been shown in multiple international studies to have high internal consistency, with Cronbach's alpha values typically above 0.70 for all domains (often 0.80 or higher for physical and psychological domains). Its test- retest reliability is also strong indicating stability of results over time. When quality of life remains unchanged furthermore the scale was demonstrated good culture cross cultural validity as it was developed and trusted across diverse cultural settings to ensure linguistic and conceptual equivalence. This combination of reliability, culture sensitivity and multi-dimensional coverage makes the WHOQOL-BREF trusted instrument in clinical research and public health settings.

3.6.4 Adverse Childhood Experiences Questionnaire (ACE-Q)

The Adverse Childhood Experiences Questionnaire (ACE-Q) is a widely used screening tool designed to identify potentially traumatic experiences that has occurred before the age of 18.It is based on the landmark CDC Kisser Permanent Adverse Android Experiences study (1995-1997). Which demonstrated a strong link between early life adversity and negative health behavioral and social outcomes in adulthood. The ACE-Q is not a diagnostic instrument but a way to quantify exposure to specific categories if it are a childhood adversity providing insight into possible risk factors for long term physical and mental health problems.

The Adverse Childhood Experiences (ACE) framework groups the 10 core items into three categories; abuse, neglect and household dysfunction. Abuse include emotional physical and sexual harm directed toward the child, neglect refers to the failure to meet a child's basic emotion and physical needs and household dysfunctioning was growing up in an unstable or stressful home environment such as living with someone who abuses substances has mental illness is incarcerated, engages in domestic violence or parents are separated or divorced. Together these categories capture a broad range of early life adversities that can have lasting impact on physical, emotional and social well-being.

Respondents answer each question with a simple “Yes” or “No” based on whether the event occurred before they turned 18. Each “Yes” is scored as 1 point, producing a total ACE score ranging from 0 to 10. Higher scores indicate greater exposure to adverse experiences.

The test-retest reliability of the ACE-SQ was evaluated in a sample of college athletes, yielding a test-retest coefficient of 0.71 over a one-year period (Zanotti et al., 2018). This coefficient is considered modest but acceptable for psychological measures, suggesting that the instrument is reliably stable over time.

3.7 Procedure

Questionnaires were taken from the websites and from the relevant authors and after checking the permission criteria, and after getting permission to use, these scales were attached or selected to use in study. To give intervention to the sample population, permission was mainly taken from the department of professional psychology, Bahria University Lahore Campus, who was supervising this study, and permission was also taken from the ethical review board and then permission was taken from the different educational institutes, where the intervention was carried out with young adults.

After informing the participants of the nature and goal of the study, their written agreement was obtained. There was not any kind of harm in the study, and it was according to ethical standards. All the participants were assured by the researcher that their information would be kept confidential and would only be used for study purposes. A workshop on stress management was conducted to engage with students, with a total of 70 participants in attendance. At the conclusion of the workshop, participants received psychoeducation on Adverse Childhood Experiences (ACEs) and Quality of Life (QoL). Subsequently, a questionnaire survey was administered for pre-testing purposes. From the 70 participants, 25 individuals who exhibited high scores in ACEs and low scores in QoL were selected for intervention.

The participants were informed about the objectives and benefits of each lesson in the manual, as well as the requirements and guidelines for attending this interventional study. The intervention spanned approximately two months. Upon completion, post-intervention assessments were conducted using the same questionnaires employed during the pre-testing phase to evaluate specific variables. Participants were subsequently thanked for their involvement in the study and were provided with an incentive, which had not been disclosed to them beforehand.

Procedure for Treatment or intervention

The institutes for the provision and implementation of interventional program were selected. The permission was taken from the authority figures of the institute. The purpose and objectives of the study were elaborated on them and confidentiality of their student's information were insured to them. The respective population was selected and a screening procedure was applied to obtain the desired sample. Adverse Childhood Experiences and Quality of life was taken as a baseline. Before the intervention, participants completed baseline assessment like the World Health Organization Quality of Life BREF (WHOQoL-BREF).The MBSR program typically includes activities such as mindfulness meditation, mindful moments and awareness exercises that help participants develop skills to cope with stress better (Campbell et al., 2011). After completing the MBSR program the WHOQoL-BREF was re-administered to the participants. This aim to evaluate any changes in the Quality of Life (QoL) attributable to the MBSR intervention. The post results then compared with the previous results to measure the efficacy of the program in improving the participants psychological and overall well-being (Stefan et al., 2018). The tool is used

to gauge their Quality of Life (QoL) in terms of physical health psychological state and social relationships and environment which can be used to gauge changes in post intervention (Frank et al., 2013). As can be seen based on the studies, ACE have the long-term effects on Quality of Life (QoL) in various populations and environments.

Addressing ACEs through public health interventions that provide tailored support to those affected can potentially improve QoL. This includes developing targeted educational programs, family supports structures and therapeutic interventions focusing on a resilience and social support (Kobrinsky & Siedlecki, 2022; Larkin at all 2013). In the initial phase of the study, data was collected from 70 students. Upon analysis it was found that 25 students has experienced multiple Adverse Childhood Experiences and reported a low Quality of life (QoL). Participants were thoroughly informed about the studies purpose and objectives as well as the tasks, session activities and homework exercises included in the intervention program. They were also appraised of the significance of completing these components for the interventions effectiveness. Participants were given the option to withdraw from the research process after being fully briefed on the procedure and objectives a titration was effectively managed throughout the study. The intervention was implemented following the standardized procedures outlined in the Mindfulness-Based Stress Reduction (MBSR) manual. This intervention differed from regular academic lectures due to its distinctive nature and the inclusion of various variables. The program was completed over a period of two months.

Each lesson spanned a total of two hours and encompassed various agendas. Ideally, one session was conducted weekly. Most students were accommodated in the same room, with a few exceptions, and the schedule was managed accordingly. Each session was

delivered to the sample population, and the necessary materials were provided to the students. Participants received incentives, which were not explicitly disclosed to them beforehand. Following data collection, pre- and post-intervention ratings were compared to assess the impact of the program on Quality of Life (QoL). Statistical analyses were conducted to obtain precise quantitative results, which were reported in accordance with APA format.

3.8 Ethical Considerations

- Approval was obtained from Bahria University's Institutional Review Board (IRB).
- Permission to use assessment tools was sought from the respective authors.
- Written informed consent was obtained from all participants.
- Participant confidentiality was maintained through anonymized data.
- Participants had the right to withdraw at any time without penalty.
- Psychological safety was prioritized, with access to support services to prevent re-traumatization.
- The MBSR program was delivered sensitively, considering participants' trauma histories

3.9 Statistical Analysis

Statistical techniques was employed on the raw scores to test the significance difference in the scores using Statistical Package for Social Science (SPSS) version 21.

1. To check the mean and standard deviation of the demographic variables, descriptive analysis was performed.

2. Reliability analysis was used to check the inter item correlation of scales.

- 3. Paired t-tests were conducted to compare pre- and post-intervention QoL scores.

3.10 Intervention Description

Mindfulness-Based Stress Reduction (MBSR) was developed in the late 1970s by Jon Kabat-Zinn at the University Of Massachusetts Medical Center as a structured 8-week program. This comprehensive approach to stress reduction incorporates weekly group meetings, daily home practice for participants. The program's core components include mindfulness meditation, body scanning, and gentle yoga exercises, which are designed to cultivate present-moment awareness and non-judgmental acceptance of experiences (Singh et al., 2008).

Session 1 — Welcome, Orientation & Mindfulness of Breath				
Sr. No	1	2	3	4
Agenda	Welcome & Orientation	Group Introductions	Introduction to Mindfulness	Guided Practice – Mindfulness of Breath
Goals, Strategies and Outcome	Goals: Introduce participants to MBSR program, structure, and expectations. Strategy: Group welcome, overview of 8-week course, confidentiality guidelines. Outcome: Participants understand program aims and commit to participation.	Goals: Create safe, supportive environment. Strategy: Brief self-introductions, sharing personal intentions for joining. Outcome: Increased group cohesion and comfort.	Goals: Define mindfulness, explain benefits, clarify role in stress reduction. Strategy: Facilitator-led discussion with examples from daily life. Outcome: Participants understand mindfulness as purposeful, present-moment, non-judgmental awareness.	Goals: Develop basic present-moment awareness through breath. Strategy: 15–20 minute guided breathing meditation from Lesson 1. Outcome: Participants can anchor attention using breath awareness.
Duration	15 min	15 min	15 min	20 min
Material/ Resources	Participant handbook, flip chart, markers	—	Flip chart/board, markers	Lesson 1 script, chairs/yoga mats

Session 1 — Welcome, Orientation & Mindfulness of Breath					
5	6	7	8	9	10
Reflection & Discussion	Practice – Three-Minute Breathing Space	Break	Practice – Short Breathing Space for Difficult Situations	Discussion & Q&A	Home Practice Assignment
Goals: Process experiences from first practice. Strategy: Group sharing, facilitator prompts about sensations, challenges, wandering mind. Outcome: Greater understanding of mindfulness process and common obstacles.	Goals: Teach a brief mindfulness tool for daily stress. Strategy: Guided "Awareness–Breath–Expand" practice. Outcome: Participants learn to pause and reset during stressful moments.		Goals: Apply mindfulness to real-life challenges. Strategy: Guided practice focusing on awareness of thoughts, feelings, and body sensations. Outcome: Increased skill in responding rather than reacting.	Goals: Clarify doubts, share insights, and normalize experiences.	Goals: Encourage daily mindfulness of breath and three-minute breathing space. Strategy: Explain home practice log. Outcome: Commitment to 10–15 min daily practice before next session.
15 min	15 min	10	15 min	15 min	10 min
—	Lesson 1 script	—	Lesson 1 script	—	Home practice logs, pens

Session 2 — Body Scan & Mindfulness of Daily Activities				
Sr. No	1	2	3	4
Agenda	Review of Home Practice	Introduction to Body Scan	Guided Body Scan Practice	Reflection & Discussion
Goals, Strategies and Outcome	Goals: Reflect on experiences from previous week's mindfulness of breath and three-minute breathing space. Strategy: Group sharing to reinforce learning, address challenges, and encourage regular practice. Outcome: Participants feel supported, motivated, and ready to deepen practice.	Goals: Explain purpose and benefits of body scan practice in cultivating awareness of bodily sensations. Strategy: Facilitator-led introduction referencing Lesson 2. Outcome: Participants understand how to use body scan to observe sensations non-judgmentally.	Goals: Develop awareness of bodily sensations from head to toe. Strategy: 30–40 minute guided body scan meditation from Lesson 2. Outcome: Participants increase ability to notice tension, relaxation, and bodily cues without judgment.	Goals: Process experiences of the body scan. Strategy: Group sharing, facilitator prompts about sensations, and mind wandering. Outcome: Participants gain insight into their habitual patterns awareness.
Duration	15 min	10 min	40 min	15 min
Material/ Resources	Flip chart	Lesson 2 notes	Lesson 2 script, yoga mats, cushions	—

5	6	7	8	9
Break	Mindfulness of Daily Activities	Practice – Three-Minute Breathing Space	Discussion & Q&A	Home Practice Assignment
—	Goals: Learn to integrate mindfulness into routine activities. Strategy: Group brainstorming and practice using simple daily tasks (e.g., brushing teeth, walking). Outcome: Participants identify opportunities to bring mindfulness into everyday life.	Goals: Reinforce use of breathing space as a daily mindfulness tool. Strategy: Guided “Awareness–Breath–Expand” exercise. Outcome: Participants strengthen ability to pause and refocus during the day.	Goals: Clarify doubts, share personal observations, and normalize experiences.	Goals: Encourage daily body scan practice and mindfulness in at least one daily activity. Strategy: Explain home practice log. Outcome: Commitment to 30–40 minutes of daily practice plus informal mindfulness during the week.
10 min	20 min	15 min	15 min	10 min
—	Lesson 2 notes	Lesson 2 script	—	Home practice logs, pens

Session 3 — Mindful Movement & Awareness of Thoughts				
Sr. No	1	2	3	4
Agenda	Review of Home Practice	Introduction to Mindful Movement	Guided Mindful Movement Practice	Reflection & Discussion
Goals, Strategies and Outcome	Goals: Reflect on experiences with body scan and mindfulness of daily activities. Strategy: Group sharing to reinforce regular practice, discuss challenges, and celebrate progress. Outcome: Participants feel encouraged and supported to continue daily practice.	Goals: Explain purpose of gentle mindful movement in developing body awareness and reducing tension. Strategy: Facilitator-led discussion based on Lesson 3. Outcome: Participants understand how movement can be approached mindfully.	Goals: Cultivate awareness of bodily sensations during gentle stretches and postures. Strategy: 30–40 minute guided mindful movement sequence from Lesson 3. Outcome: Participants develop greater flexibility, balance, and awareness of the body in motion.	Goals: Process experiences from mindful movement practice. Strategy: Group discussion exploring comfort, discomfort, and awareness during movement. Outcome: Participants recognize the importance of listening to the body and practicing safely.
Duration	15 min	10 min	40 min	15 min
Material/ Resources	Flip chart	Lesson 3 notes	Lesson 3 script, yoga mats	—

5	6	7	8	9
Break	Awareness of Thoughts	Practice – Three-Minute Breathing Space	Discussion & Q&A	Home Practice Assignment
—	Goals: Recognize thoughts as mental events, not facts. Strategy: Facilitator-led exercise from Lesson 3 to observe and label thoughts without judgment. Outcome: Participants gain insight into the nature of thoughts and their influence on feelings and actions.	Goals: Apply breathing space during thought awareness. Strategy: Guided "Awareness–Breath–Expand" exercise. Outcome: Participants strengthen skills in detaching from unhelpful thought patterns.	Goals: Clarify concepts, share insights, and normalize common experiences.	Goals: Encourage alternating body scan and mindful movement practices, plus informal mindfulness of thoughts. Strategy: Explain home practice log. Outcome: Commitment to daily 30–40 minutes of formal and informal practice.
10 min	20 min	15 min	15 min	10 min
—	Lesson 3 notes	Lesson 3 script	—	Home practice logs, pens

Session 4 — Stress Reactivity & Mindfulness in Daily Life				
Sr. No	1	2	3	4
Agenda	Review of Home Practice	Understanding Stress Reactivity	Guided Practice – Mindfulness of Breath & Body	Reflection & Discussion
Goals, Strategies and Outcome	Goals: Reflect on experiences with mindful movement, body scan, and mindfulness of thoughts. Strategy: Group discussion to share insights, identify challenges, and reinforce commitment to practice. Outcome: Participants feel supported and motivated to continue daily mindfulness.	Goals: Introduce the stress reaction cycle and its impact on the body and mind. Strategy: Facilitator-led discussion with visual aids from Lesson 4. Outcome: Participants understand the aspects of stress responses.	Goals: Strengthen skills in grounding attention during moments of stress. Strategy: 30-minute guided breath and body awareness meditation from Lesson 4. Outcome: Participants improve ability to notice stress signals.	Goals: Explore experiences of noticing stress and using breath/ awareness. Strategy: Group sharing with facilitator prompts on sensations, thoughts, and emotions during stress. Outcome: Participants recognize personal stress triggers.
Duration	15 min	20 min	30 min	15 min
Material/ Resources	Flip chart	Lesson 4 notes, flip chart	Lesson 4 script, mats or chairs	—

5	6	7	8	9
Break	Applying Mindfulness in Daily Life	Practice – Three-Minute Breathing Space	Discussion & Q&A	Home Practice Assignment
—	Goals: Identify opportunities to use mindfulness in routine activities and challenging situations. Strategy: Group brainstorming and practical examples from participants' own lives. Outcome: Participants develop personalized strategies to integrate mindfulness beyond formal practice.	Goals: Reinforce quick application of mindfulness during stress. Strategy: Guided "Awareness–Breath–Expand" exercise. Outcome: Participants strengthen the ability to pause and respond rather than react.	Goals: Clarify any uncertainties, share progress, and normalize experiences.	Goals: Encourage alternating breath & body awareness meditations, plus mindfulness in one challenging daily activity. Strategy: Explain home practice log. Outcome: Participants commit to daily formal and informal practice.
10 min	20 min	15 min	15 min	10 min
—	Lesson 4 notes	Lesson 4 script	—	Home practice logs, pens

Session 5 — Responding to Stress & Mindfulness of Emotions			
Sr. No	1	2	3
Agenda	Review of Home Practice	Responding vs. Reacting to Stress	Guided Practice – Mindfulness of Emotions
Goals, Strategies and Outcome	Goals: Reflect on experiences with applying mindfulness in daily life and practicing breath & body awareness. Strategy: Group sharing to identify benefits, challenges, and patterns in stress reactivity. Outcome: Participants feel supported and more aware of personal stress responses.	Goals: Understand the difference between reacting impulsively and responding mindfully. Strategy: Facilitator-led discussion with real-life examples and input from participants. Outcome: Participants recognize situations where a mindful pause can change outcomes.	Goals: Cultivate awareness of emotional states without suppression or over-identification. Strategy: 30-minute guided meditation focusing on noticing, naming, and allowing emotions. Outcome: Participants develop greater emotional regulation and acceptance.
Duration	15 min	20 min	30 min
Material/	Flip chart	Lesson 5 notes	Lesson 5 script, mats or

4	5	6	7	8	9
Reflection & Discussion	Break	Applying Emotional Awareness in Daily Life	Practice – Three-Minute Breathing	Discussion & Q&A	Home Practice Assignment
Goals: Explore experiences from emotional awareness practice. Strategy: Group sharing on challenges, insights, and emotional triggers. Outcome: Participants gain deeper understanding of emotions as transient experiences.	—	Goals: Learn strategies for integrating emotional mindfulness in every situations. Strategy: Group brainstorming on mindful approaches to challenging interactions. Outcome: Participants identify opportunities to respond to emotions with balance.	Goals: Use breathing space to work with emotions in the moment. Strategy: Guided “Awareness–Breath–Expand” exercise focusing on emotional states. Outcome: Participants strengthen skills in creating space	Goals: Clarify questions, normalize experiences, and reinforce practice commitment.	Goals: Encourage mindfulness of emotions practice and informal awareness during emotional situations. Strategy: Explain home practice log. Outcome: Participants commit to daily formal and informal emotional mindfulness practice.
15 min	10 min	20 min	15 min	15 min	10 min
—	—	Lesson 5 notes	Lesson 5 script	—	Home practice logs,

Session 6 — Communication, Interpersonal Mindfulness & Self-Care				
Sr. No	1	2	3	4
Agenda	Review of Home Practice	Mindful Communication	Guided Practice – Mindful Listening & Speaking	Reflection & Discussion
Goals, Strategies and Outcome	Goals: Reflect on experiences with the Three-Minute Breathing Space and mindfulness in daily activities. Strategy: Group discussion to share progress, barriers, and insights. Outcome: Reinforced consistency and peer motivation.	Goals: Introduce the concept of mindful speaking and listening to enhance relationships and reduce conflict. Strategy: Interactive discussion with examples from Lesson 6. Outcome: Participants understand the role of presence and empathy in communication.	Goals: Cultivate attentiveness, non-judgment, and patience in communication. Strategy: Partner-based listening/speaking exercise with specific prompts. Outcome: Improved ability to communicate calmly and openly.	Goals: Process experiences from communication exercise. Strategy: Group sharing on challenges, emotional reactions, and takeaways. Outcome: Greater awareness of automatic patterns and mindful alternatives.
Duration	15 min	20 min	30 min	15 min
Material/ Resource	Flip chart	Lesson 6 notes, flip chart	Lesson 6 script	—

5	6	7	8	9
Break	Self-Care & Interpersonal Mindfulness	Guided Practice – Loving-Kindness Meditation	Discussion & Q&A	Home Practice Assignment
—	Goals: Explore self-care as a foundation for healthy relationships and emotional well-being. Strategy: Group brainstorming of practical strategies and barriers. Outcome: Participants create a personal self-care plan.	Goals: Develop compassion for self and others. Strategy: 15-minute guided loving-kindness meditation. Outcome: Strengthened empathy, reduced self-criticism.	Goals: Clarify concepts, address obstacles, encourage ongoing practice.	Goals: Continue formal practice (breath awareness, loving-kindness) and apply mindful communication in at least one real-life interaction. Strategy: Provide detailed home practice log. Outcome: Integration of mindfulness into interpersonal contexts.
10 min	20 min	15 min	15 min	10 min
—	Lesson 6 notes	Lesson 6 script	—	Practice log

Session 7 — Mindfulness for Daily Living & Maintaining Practice				
Sr. No	1	2	3	4
Agenda	Review of Home Practice	Mindfulness in Daily Activities	Guided Practice – Mindful Walking	Reflection & Discussion
Goals, Strategies and Outcome	Goals: Reflect on experiences with loving-kindness meditation and mindful communication. Strategy: Group sharing to reinforce commitment and discuss real-life applications. Outcome: Increased motivation to sustain daily mindfulness practice.	Goals: Identify ways to integrate mindfulness into routine tasks such as eating, walking, and working. Strategy: Facilitator-led discussion with examples from participants and Lesson 7. Outcome: Participants recognize everyday opportunities to practice mindfulness.	Goals: Develop awareness of bodily sensations and environment while moving. Strategy: 20-minute guided walking meditation, indoors or outdoors. Outcome: Enhanced grounding, balance, and sensory awareness.	Goals: Process experiences of mindful walking. Strategy: Group sharing on differences between automatic and mindful movement. Outcome: Participants appreciate benefits of slowing down.
Duration	15 min	20 min	20 min	15 min
Material/ Resources	Flip chart	Lesson 7 notes	Lesson 7 script	—

5	6	7	8	9
Break	Maintaining Long-Term Practice	Practice – Three-Minute Breathing Space	Discussion & Q&A	Home Practice Assignment
—	Goals: Explore strategies for sustaining mindfulness beyond the program. Strategy: Group brainstorming, addressing barriers, and creating individual action plans. Outcome: Participants develop a realistic plan for ongoing practice.	Goals: Reinforce using short mindfulness practices throughout the day. Strategy: Guided Awareness–Breath–Expand exercise. Outcome: Strengthened ability to pause and reset in daily life.	Goals: Clarify doubts, encourage peer support, and share insights.	Goals: Continue formal and informal mindfulness, integrating it into at least three daily activities. Strategy: Provide detailed home practice log. Outcome: Participants commit to sustaining practice after course completion.
10 min	20 min	15 min	15 min	10 min
—	Lesson 7 notes	Lesson 7 script	—	Practice log

Session 8 — Review, Integration & Moving Forward				
Sr. No	1	2	3	4
Agenda	Review of Home Practice	Summary of Key Learnings	Guided Practice – Extended Mindfulness	Reflection & Sharing
Goals, Strategies and Outcome	Goals: Reflect on experiences integrating mindfulness into multiple daily activities. Strategy: Group sharing to consolidate learning and discuss long-term benefits. Outcome: Participants gain confidence in continuing practice independently.	Goals: Review main concepts, practices, and strategies from all sessions. Strategy: Facilitator-led recap using visual aids and participant input. Outcome: Reinforced understanding of mindfulness principles and applications.	Goals: Deepen integration of mindfulness skills. Strategy: 30-minute guided meditation incorporating breath, body, thoughts, and emotions. Outcome: Participants experience a mindfulness practice.	Goals: Allow participants to share their journey and progress. Strategy: Group circle discussion on personal changes, challenges, and successes. Outcome: Increased sense of accomplishment and community support.
Duration	15 min	20 min	30 min	20 min
Material/ Resources	Flip chart	Lesson 8 notes, flip chart	Lesson 8 script, mats or chairs	—

5	6	7	8	9
Break	Planning for the Future	Practice – Three-Minute Breathing Space	Closing Circle & Q&A	Home Practice Assignment
	Goals: Create individualized plans for sustaining mindfulness practice. Strategy: Worksheets and discussion on realistic strategies for maintaining practice. Outcome: Participants leave with a personalized mindfulness maintenance plan.	Goals: Reinforce short, accessible mindfulness practices. Strategy: Guided Awareness–Breath–Expand exercise. Outcome: Strengthened commitment to daily micro-practices.	Goals: Provide closure, celebrate progress, and address final questions. Strategy: Gratitude sharing and mindful closing practice. Outcome: Participants leave feeling supported and empowered to continue.	Goals: Encourage ongoing formal and informal practice beyond the program. Strategy: Provide resources and suggestions for continued learning. Outcome: Participants maintain mindfulness as a lifelong habit.
10 min	20 min	15 min	20 min	10 min
	Lesson 8 notes, worksheets	Lesson 8 script	—	Practice log, resource list

3.10.1 Session Summary of Study

Session 1

Participants were introduced to the Mindfulness-Based Stress Reduction (MBSR) program, including its structure and expectations, through a group welcome and orientation session designed to foster commitment and mutual trust. During this session, participants articulate their personal intentions, learn the definition and benefits of mindfulness, and engage in a 15–20 minute guided mindfulness of breath meditation to cultivate present-moment awareness. Reflections and discussions are conducted to normalize common experiences, followed by instruction in the Three-Minute Breathing Space technique for daily stress management, as well as a shorter version for challenging situations. The session concludes with a question-and-answer segment and a home practice assignment that encourages daily breath awareness and brief mindfulness exercises.

Session 2

The session commences with a review of the previous week's home practice, aimed at reinforcing learning and motivation. Participants are introduced to the body scan technique, which is explored for its role in fostering non-judgmental awareness of bodily sensations. Subsequently they engage in a 30 to 40 minute guided body scan meditation. Reflection and group discussions are employed to deepen understanding, followed by an emphasis on integrating mindfulness into simple daily activities. The three minute breathing space is revisited and a question and answer session addresses challenges before assigning home practice, which includes daily body scans and mindfulness attention to one routine activity.

Session 3

The session commences with the participants sharing their experiences from the body scan exercise activities. The session was then introduced with the concept of mindful moment as an enhancement followed by a 30 to 40 minute guided movement session. Participants are given time for reflection to explore sensations of comfort, discomfort safety during practice. Following a break, the focus shifts to cultivating awareness of thoughts recognizing them as mental events rather than objective facts and applying in the three minute breathing space within this framework. The session concludes with the discussion, a question and answer segment, and home practice that integrates body scan, mindful movement and informal thought awareness.

Session 4

Participants review experiences with mindful movement, body scan, and thought awareness. The facilitator introduces the stress reaction cycle, explaining its physical and mental impacts, before guiding a 30-minute breath-and-body awareness meditation for grounding during stress. Group reflections explore stress triggers and mindful coping. After the break, participants brainstorm ways to bring mindfulness into daily and challenging situations, reinforce quick mindfulness through the Three-Minute Breathing Space, and engage in Q&A. Home practice involves alternating breath/body awareness meditations with mindfulness in one challenging daily activity.

Session 5

The focus shifts to understanding the difference between reacting and responding to stress, supported by real-life examples. A 30-minute guided mindfulness of emotions practice helps participants notice, name, and allow emotions without suppression or over-identification. Group discussions explore emotional triggers and insights, followed by brainstorming strategies for applying emotional awareness in everyday situations. The Three-Minute Breathing Space is adapted to working with emotions, and Q&A provides further clarity. Home practice includes formal emotion-focused mindfulness and informal awareness during emotional situations.

Session 6

The session opens with reflections on using the Three-Minute Breathing Space and mindfulness in daily activities. Participants learn about mindful communication, then practice mindful listening and speaking in partner exercises to enhance presence and empathy. Group discussion explores challenges and takeaways, leading into a segment on self-care as the foundation for healthy relationships. A guided loving-kindness meditation fosters compassion toward self and others. The session closes with Q&A and a home practice assignment incorporating loving-kindness, breath awareness, and mindful communication in at least one real-life interaction.

Session 7

Participants reflect on experiences with loving-kindness meditation and mindful communication, then discuss ways to embed mindfulness in daily activities like eating, walking, and working. They practice mindful walking to develop sensory awareness and grounding, followed by reflection on differences between automatic and mindful

movement. The session shifts to creating strategies for sustaining practice beyond the program, reinforced by the Three-Minute Breathing Space. A final discussion and Q&A lead into a home practice assignment integrating mindfulness into at least three daily activities.

Session 8

The final session reviews home practice and consolidates learning from all eight weeks, with participants sharing long-term benefits and insights. It is then followed by personal contemplation and, should one wish, group reporting of perceived changes. In another period, the trainees come up with workable plans of maintaining the practice. It is recommended to re-engage with the Three-Minute Breathing Space and the session ends with a gratitude circle. The complete program culminates in the recommendation to continue to incorporate both formal and informal mindfulness into everyday life and suggestions on additional readings and learning.

CHAPTER 4

RESULTS

The current study evaluated the effect of Mindfulness-Based Stress Reduction (MBSR) on the Quality of Life (QoL) of young adult participants aged 18-25 years who experienced Adverse Childhood Experiences (ACEs). The analysis of data was based on SPSS version 21; the preliminary actions included the review of descriptive data in order to calculate the mean and the standard deviation of the demographic variables. Thereafter, reliability analysis was performed to establish the inter-item correlations and consistency among items in the measurement scales. Paired t-tests were used to compare QoL scores obtained before and after the intervention, thus allowing the researchers to assess whether the obtained changes were statistically significant. The table below displays the descriptive values and inferential statistics for every variable. Statistical package for social science (SPSS) version 21 was used for different statistics. The results of present study or research are given below.

Table 4. 1

Frequency Distribution of Demographic Variables (N=20)

Variable	**Category**	*f*	%
Gender	Male	6	30.0
	Female	14	70.0
Family System	Nuclear	11	55.0
	Joint	9	45.0

Variable	**Category**	*f*	%
Monthly Income	30–50k	8	40.0
	50–150k	12	60.0
Number of Siblings	1–3	4	20.0
	4–6	11	55.0
	7–9	5	25.0
Father's Education	Illiterate	5	25.0
	Under matric	1	5.0
	Above matric	14	70.0
Mother's Education	Illiterate	7	35.0
	Under matric	4	20.0
	Above matric	9	45.0
Residence	Urban	9	45.0
	Rural	11	55.0
Father's Occupation	Government	9	45.0
	Private	6	30.0
	Business	5	25.0
Education Level	Intermediate	6	30.0
	Graduate	14	70.0

Note. Values represent frequency (N) and percentage (%) within each group. Percentages for Total are based on the full sample (N = 20).

The demographic characteristics of the participants (N = 20) revealed a predominance of females (70%), with males making up only 30% of the sample. Family structure showed a slightly higher proportion of nuclear families (55%) compared to joint families (45%), suggesting a modest shift toward smaller household units.

Socioeconomic indicators reflected a relatively well-off sample, with most participants (60%) belonging to families earning between 50,000–150,000 PKR per month, while the remainder (40%) reported incomes between 30,000–50,000 PKR. In terms of family size, over half of the respondents (55%) had between four and six siblings, while 25% had large families with seven to nine siblings, and only 20% reported having one to three siblings.

Parental education patterns indicated a higher educational attainment for fathers than mothers. The majority of fathers (70%) had studied above the matric level, with only 25% being illiterate and a small minority (5%) under matric. In contrast, mothers' education was comparatively lower: 45% had education above matric, 20% under matric, and 35% were illiterate. Occupationally, fathers were most often employed in government jobs (45%), followed by private sector employment (30%) and business ownership (25%).

Residence data showed a slightly greater representation from rural areas (55%) than urban areas (45%), offering a mix of geographic backgrounds. Regarding the participants' own education level, most were graduates (70%), while 30% were at the intermediate level, suggesting a relatively well-educated sample overall.

Table 4.2

Descriptive Statistics for Study Variables (N = 20)

Variable	M	SD	Min	Max
PreQoL	44.45	4.95	35.00	52.00
PostQoL	46.75	4.46	38.00	54.00
ACETotal	5.55	0.94	4.00	8.00

Note. PreQoL = Pre-intervention Quality of Life; PostQoL = Post-intervention Quality of Life; ACETotal = Adverse Childhood Experiences total score. M=Mean, SD=Standard Deviation

Descriptive statistics for the study variables are presented in Table 4.2 for the pre-intervention Quality of Life (PreQoL) scores, participants (N = 20) had a mean score of 44.45 (SD = 4.95), with scores ranging from 35.00 to 52.00. Post-intervention Quality of Life (PostQoL) scores were slightly higher, with a mean of 46.75 (SD = 4.46) and a range of 38.00 to 54.00, indicating an overall improvement after the intervention. Accuracy total scores (ACETotal) had a mean of 5.55 (SD = 0.94), with observed scores ranging from 4.00 to 8.00. These results suggest a modest increase in Quality of Life (QoL) from pre- to post-measurement, accompanied by relatively high accuracy scores.

Table 4.3

Reliability Coefficient of the Scales of Study Variables N (20)

Variables	k	Cronbach's α
QoL	26	.725

Note: k= no. of items

The reliability analysis demonstrated that the Quality of Life (QoL) scale, which comprises 26 items, yielded a Cronbach's alpha of .73, reflecting acceptable internal consistency according to commonly cited thresholds in social science research .This indicates that the QoL scale items are reasonably homogeneous and reliably assess the intended construct.

Table 4.4

Paired sample t-test of Study Variables N (20)

Variables	Pre-test		Post-test		df	t	p	Cohen's d
	M	SD	M	SD				
QoL	44.45	4.946	46.750	4.458	19	-5.877	.000	1.750

Note. M = mean; SD = standard deviation; df= degree of freedom t = independent samples t-test value; p = significance value; limit of the 95% confidence interval; d = Cohen's d effect size.

A paired sample t-test was conducted to compare the Quality of Life (QoL) of participants before and after the intervention of Mindfulness Based Stress Reduction (MBSR). Results indicated a statistically significant increase in QoL from pre-test (M = 44.45, SD = 4.95) to post-test (M = 46.75, SD = 4.46), t (19) = –5.88, p < .001, two-tailed. The effect size was large (d=1.575), suggesting that MBSR program has a significant positive effect on Quality of Life of participants.

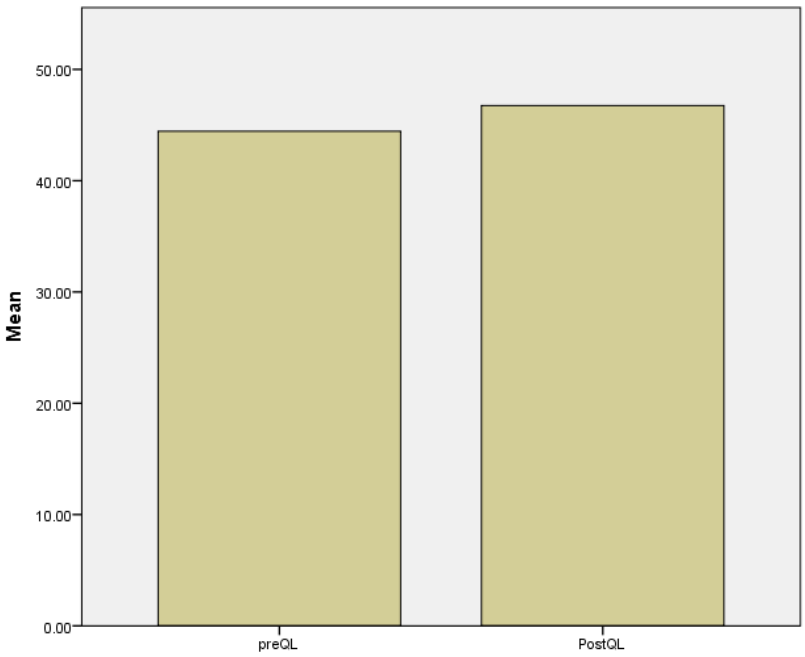


Figure 1. ***The Quality of Life of participants before and after the intervention of Mindfulness Based Stress Reduction (MBSR).***

CHAPTER 5

DISCUSSION

Prior to the discussion of the findings, it is important to state that this study aimed at determining how Mindfulness-Based Stress Reduction (MBSR) can be used to enhance the overall Quality of Life (QoL) in young adults who have experienced Adverse Childhood Experiences (ACEs). The notion of QoL in the study featured four domains as outlined by the WHOQoL-BREF scale: physical health, psychological well-being, social relationships, and environmental satisfaction. These domains were chosen because they apply to the specific set of challenges that individuals exposed to ACEs during young adulthood experience in this developmental period, which is characterized by many important developmental transitions.

The results of the study showed that MBSR program had significant improvements in general QoL as indicated by post-intervention scores in these domains. The purpose of the intervention was to develop mindfulness skills that would have a positive effect on physical and mental health of the participants, their ability to connect with others, and their satisfaction with their surroundings. The program was implemented in eight weeks, starting with the basic principles of mindfulness and gradually involving such practices as body scan meditation, mindful breathing, and gentle yoga. The baseline scores were moderate in terms of QoL, which improved greatly after the intervention, implying the effectiveness of the program in enhancing well-being in young adults with a traumatic history.

This study was conducted to determine the effectiveness of an 8-week Mindfulness-Based Stress Reduction (MBSR) program on the Quality of Life (QoL) improvement in young adults aged 18-25 years with a history of Adverse Childhood Experiences (ACEs).

It was hypothesized that the overall QoL participants would show significant improvements after taking part in the MBSR program.

The results for this hypothesis. Paired-sample t-test analysis revealed a statistically significant increase in QoL scores from pre-intervention ($M = 44.45$, $SD = 4.95$) to post-intervention ($M = 46.75$, $SD = 4.46$), $t(19) = -5.88$, $p < .001$, with a large effect size (Cohen's $d = 1.75$). This indicates that MBSR produced a substantial improvement in participant's perception of their physical health, psychological well-being, social relationships and environmental satisfaction, consistent with findings from earlier research in Western context (Robin et al., 2011).

The magnitude of the effect in this study is notable, especially given the small sample size and the cultural context. Young adults with ACEs often exhibit persistent psychological distress, impaired emotional regulation and reduced QoL (Huang et al., 2021).The observed improvement aligns with theoretical models suggesting that mindfulness practices facilitates non-judgmental present-moment awareness, cognitive flexibility and improved emotion regulation, which together contribute to better quality of life.

The improvement in QoL scores also demonstrates that MBSR is feasible and effective for trauma-exposed young adults in a low-resource, non-Western setting. This supports the notion that mindfulness interventions can transcend cultural boundaries if appropriately adapted.

5.1 Implications of the Study

5.1.1 Theoretical implications

The findings extend existing theories of mindfulness as a protective factor against the negative effects of ACEs. Consistent with psychological mediation models (Keng et al., 2012), the observed improvements in QoL may be explained by enhanced metacognitive awareness, reduced reactivity, and improved emotion regulation. The results also contribute to resilience theory by highlighting mindfulness as a skill set that can buffer the detrimental effects of early adversity on later well-being. Furthermore, this study offers culturally specific evidence that supports incorporating cultural and religious values into mindfulness-based frameworks, potentially increasing receptivity and engagement in non-Western populations.

5.1.2 Practical implications

The significant gains in QoL post-intervention suggest that MBSR can be a cost-effective, scalable, and non-invasive mental health intervention for young adults with ACEs in Pakistan. The program requires minimal infrastructure and can be implemented in educational institutions, community centers, and healthcare settings. Considering the dearth of qualified mental health specialists in low- and middle-income nations, MBSR offers a practical means to address psychological distress through group-based delivery models. Additionally, the skills learned during MBSR (e.g., body scan, mindful breathing, gentle yoga) can be self-practiced, promoting long-term sustainability of benefits.

5.1.3 Policy implications

This study provides empirical evidence that can inform mental health policy in Pakistan and similar contexts. Policymakers could consider integrating mindfulness-based programs into youth mental health initiatives, particularly for populations at risk due to childhood adversity. Incorporating MBSR into school and university well-being programs could contribute to early intervention strategies, potentially reducing the long-term social and economic burden of ACE-related mental health issues. Moreover, standardizing culturally adapted mindfulness curricula and training facilitators could help ensure quality and accessibility across regions.

5.2 Limitations of the Study

The existing body of research on Mindfulness-Based Interventions (MBSR) presents several limitations that need to be addressed to strengthen future findings.

- First, the sample size was small (N = 20), which may limit generalizability.
- Second, purposive sampling was used, potentially introducing selection bias toward participants already open to mindfulness practices.
- Third, the ACEs scale demonstrated poor reliability in this context, limiting its utility for further correlational or regression analyses.
- Fourth, self-report measures—which are prone to recall and social desirability biases—were used in the study.

- Finally, the absence of a control group prevents ruling out alternative explanations, such as placebo effects, concurrent life changes, or social support from group participation.
- Another limitation is the lack of extensive longitudinal follow-up in many studies. Without longer-term tracking, it remains unclear how consistent engagement—or lapses in practice—affect the durability of outcomes.
- Finally, cultural context remains a significant gap in the literature. This misalignment raises questions about the direct applicability of findings to young adults in Pakistan, as cultural attitudes toward mindfulness, stress management, and mental health may influence both participation and results.

5.3 Future Recommendations

- To support causal inferences, future research should use randomized controlled trial designs and strive for bigger, more varied sample sizes.
- There is also a need to culturally adapt and validate the ACE-Q for Pakistani populations to improve measurement reliability.
- Longitudinal research could assess the sustainability of MBSR benefits over time and identify factors that predict long-term adherence to mindfulness practice.
- Exploring the integration of culturally congruent elements such as Islamic contemplative traditions into MBSR could further enhance relevance and acceptance.
- Additionally, investigating the effects of MBSR on specific QoL domains (psychological, social, physical, environmental) could provide nuanced insights into its mechanisms of action.

- Future studies might concentrate on creating MBSR interventions that are sensitive to cultural differences that align with local religious and cultural values, conducting population-specific studies for groups such as students, professionals, and rural communities, and examining its effectiveness for trauma recovery and related mental health outcomes.

5.4 Conclusion

This study was designed to elevate the effectiveness of Mindfulness Based Stress Reduction (MBSR) in improving the overall Quality of Life (QoL) among Young adults aged 18-25 years with the history of Adverse Childhood Experiences (ACEs) in Pakistan. The QoL framework used in this study encompassed four core domains: physical health, psychological well-being, social relationships, and environmental satisfaction, captured through the WHOQoL-BREF instrument. This research addressed a clear gap in the literature, as few empirical studies in non-Western contexts have examined how mindfulness interventions impact QoL among ACE-exposed youth, particularly within the socio-cultural realities of Pakistan.

The statistical analyses revealed a significant improvement in participants' QoL following the eight-week MBSR intervention, with a large effect size indicating substantial practical significance. These results affirm the study's hypothesis and align with existing evidence from Western research showing that mindfulness can enhance well-being, emotional regulation, and adaptive coping. The structured program, which incorporated mindfulness meditation, body scan, mindful breathing, and gentle yoga, appeared to empower participants to manage stress, cultivate present-moment awareness, and respond to challenges with greater psychological flexibility. The improvements seen across

multiple QoL domains underscore the potential for MBSR to address the complex needs of young adults burdened by the long-term impacts of early adversity.

The implications of these findings are multi-faceted. Theoretically, this research reinforces the conceptualization of mindfulness as both a protective and restorative factor for individuals with histories of trauma. It supports resilience theory by demonstrating how deliberate mindfulness practice can help buffer against the detrimental effects of ACEs, potentially interrupting cycles of stress reactivity and emotional dysregulation. Practically, the results suggest that MBSR can serve as a low-cost, accessible, and sustainable intervention for improving QoL in resource-limited settings. Given the shortage of mental health professionals in Pakistan, the group-based, skill-oriented nature of MBSR makes it an appealing option for community-level implementation. On a policy level, the findings present a compelling case for integrating culturally adapted mindfulness programs into educational institutions, youth mental health services, and public health initiatives targeting at-risk populations.

However, the study's conclusions should be interpreted with caution due to certain limitations. The small sample size (N = 20) limits the generalizability of the findings, and the purposive sampling method may have introduced selection bias by including participants already open to mindfulness practices. The poor reliability of the ACEs is in this sample also suggest the need for culturally validated tools to assess childhood adversity in Pakistan. Furthermore, the absence of a control group restricts the ability to draw definitive causal conclusions, as improvement could partially be attributed to external factors of placebo effects. Self-report measures, while valuable for capturing subjective experiences, may have been influenced by social desirability or recall basis.

Despite these limitations, the study makes an important contribution to the contributing of growing body of the literature on mindfulness based intervention in non-western settings. It offers empirical evidence that MBSR can be effective for a particularly vulnerable segment of the population; young adults grappling with the enduring psychological, social and environmental effects of ACEs. The significant gains in Quality of Life (QoL) observed in this research have promising and highlight the adaptability of MBSR to different cultural contexts. With appropriate cultural tailoring, mindfulness based programs could become an integral part of Pakistan's mental health strategy, offering youth the tools to build resilience, enhance well-being and navigate the demands of adulthood more effectively.

In conclusion this research study provides strong preliminary evidence that Mindfulness Based Stress Reduction (MBSR) can significantly improve the Quality of Life (QoL) of young adults with the Adverse Childhood Experiences in Pakistan. It validates mindfulness as the feasible and impactful approach for trauma focus exposed population, capable of fostering positive changes across multiple life domains. Further research should focus on larger, more diverse samples, employ a randomized control designs and explore the integration of culturally relevant relevant contemplative practices. By doing so, researchers and practitioners can further optimize the delivery of mindfulness based intervention and ensure their long-term sustainability. The findings of this study not only contribute to academic understanding but also hold practical relevance for policy makers, educators, mental health professionals and communities seeking effective and culturally responsive strategies to support a young adults in overcoming the lasting effects of childhood adversity.

REFERENCES

Alhowaymel, F. M., Kalmakis, K. A., Chiodo, L. M., Kent, N. M., & Almuneef, M. (2023). Adverse childhood experiences and chronic diseases: Identifying a cut-point for ACE scores. *International Journal of Environmental Research and Public Health, 20*(2), 1651. https://doi.org/10.3390/ijerph20021651

Andonian, C., Ewert, P., Beckmann, J., Pieper, L., Neidenbach, R. C., Kaemmerer, H., Biber, S., Freilinger, S., & Oberhoffer, R. (2018). Current research status on the psychological situation of adults with congenital heart disease. *Cardiovascular Diagnosis and Therapy*, *8*(6), 799–804. https://doi.org/10.21037/cdt.2018.12.06

Arnett, J. J., Kloep, M., Hendry, L. B., & Tanner, J. L. (2011). *Debating emerging adulthood*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199757176.001.0001

Barlett, C. P., Chalk, H. M., & Barlett, N. D. (2018). Transitioning through emerging adulthood and physical health implications. *Emerging Adulthood*, *8*(4), 297–305. https://doi.org/10.1177/2167696818814642

Beltramo, R., Pasino, G., Peira, G., & Bonadonna, A. (2024). Quality of life in rural areas: A set of indicators for improving wellbeing. *Sustainability, 16*(5), 1804. https://doi.org/10.3390/su16051804

Bowling, A., Banister, D., Sutton, S., Evans, O., & Windsor, J. (2002). A multidimensional model of the quality of life in older age. *Aging & Mental Health*, *6*(4), 355–371. https://doi.org/10.1080/1360786021000006983

Calderone, A., Latella, D., Impellizzeri, F., De Pasquale, P., Famà, F., Quartarone, A., & Calabrò, R. S. (2024). Neurobiological changes induced by mindfulness and meditation: A systematic review. *Biomedicines, 12*(11), 2613. https://doi.org/10.3390/biomedicines12112613

Cascales-Pérez, M. L., Cabañero-Martínez, M. J., Ferrer-Cascales, R., & Fernández-Alcántara, M. (2020). Effects of a mindfulness-based programme on the health- and work-related quality of life of healthcare professionals. *Scandinavian Journal of Caring Sciences, 35*(3), 881–891. https://doi.org/10.1111/scs.12905

Ceccarelli, C., Purgato, M., Singh, R., Sorsdhal, K., Barker, E., Barbui, C., Muneghina, O., Acarturk, C., Jordans, M., Cuijpers, P., Miller, K., Lund, C., & Prina, E. (2022). Adverse childhood experiences and global mental health: Avenues to reduce the burden of child and adolescent mental disorders. *Epidemiology and Psychiatric Sciences, 31*, e58. https://doi.org/10.1017/s2045796022000580

Chamberlain, S. R., & Grant, J. E. (2018). Relationship between quality of life in young adults and impulsivity/compulsivity☆. *Psychiatry Research, 271*(44), 253–258. https://doi.org/10.1016/j.psychres.2018.11.059

Chan, M., Tsai, K. M., & Fuligni, A. J. (2014). Changes in religiosity across the transition to young adulthood. *Journal of Youth and Adolescence, 44*(8), 1555–1566. https://doi.org/10.1007/s10964-014-0157-0

Chanlongbutra, A., Singh, G. K., & Mueller, C. D. (2018). Adverse childhood experiences, health-related quality of life, and chronic disease risks in rural areas of the United States. *Journal of Environmental and Public Health, 2018*, 7151297. https://doi.org/10.1155/2018/7151297

Chaudhary, V., Devi, N. K., Walia, G. K., Shekhawat, L. S., & Saraswathy, K. N. (2023). Adverse childhood experiences in mental health of young adults: An exploratory study from Delhi-NCR, India. *International Journal of Social Psychiatry, 70*(3), 445–456. https://doi.org/10.1177/00207640231214986

Cheak-Zamora, N. C., Randolph, J. K., O'Connor, K. V., Maurer-Batjer, A., & Teti, M. (2019). Sexual and relationship interest, knowledge, and experiences among adolescents and young adults with autism spectrum disorder. *Archives of Sexual Behavior, 48*(8), 2605–2615. https://doi.org/10.1007/s10508-019-1445-2

Chi, X., Bo, A., Liu, T., Zhang, P., & Chi, I. (2018). Effects of mindfulness-based stress reduction on depression in adolescents and young adults: A systematic review and meta-analysis. *Frontiers in Psychology, 9,* 1034. https://doi.org/10.3389/fpsyg.2018.01034

Chipalo, E. (2024). Adverse childhood experiences and mental distress among adolescents and youth in Zimbabwe. *Journal of Interpersonal Violence, 39*(21–22), 4329–4355. https://doi.org/10.1177/08862605241234660

Cprek, S. E., Williams, C. M., Brase, R., Mcdaniel, H., & Williamson, L. H. (2019). Adverse childhood experiences (ACEs) and risk of childhood delays in children ages 1–5. *Child and Adolescent Social Work Journal, 37*(1), 15–24. https://doi.org/10.1007/s10560-019-00622-x

Craner, J. R., Lake, E. S., O'Neill, M., Barr, A. C., & Kirby, K. E. (2022). Childhood adversity among adults with chronic pain: Prevalence and association with pain-related outcomes. *The Clinical Journal of Pain, 38*(9), 551–561. https://doi.org/10.1097/ajp.0000000000001054

Davies, E., Read, J., & Shevlin, M. (2021). The impact of adverse childhood experiences and recent life events on anxiety and quality of life in university students. *Higher Education, 84*(1), 211–228. https://doi.org/10.1007/s10734-021-00774-9

Dovey-Pearce, G., Doherty, Y., Walker, C., Hurrell, R., & May, C. (2005). Young adults' (16–25 years) suggestions for providing developmentally appropriate diabetes services: A qualitative study. *Health and Social Care in the Community, 13*(5), 409–419. https://doi.org/10.1111/j.1365-2524.2005.00577.x

Greeson, J. M., Webber, D. M., Wolever, R. Q., Smoski, M. J., Ekblad, A. G., Brantley, J. G., & Suarez, E. C. (2011). Changes in spirituality partly explain health-related quality of life outcomes after mindfulness-based stress reduction. *Journal of Behavioral Medicine, 34*(6), 508–518. https://doi.org/10.1007/s10865-011-9332-x

Hartas, D. (2019). Assessing the foundational studies on adverse childhood experiences. *Social Policy and Society, 18*(3), 435–443. https://doi.org/10.1017/s1474746419000034

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (2011). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). Guilford Press.

Headey, B., Kelley, J., & Wearing, A. (1993). Dimensions of mental health: Life satisfaction, positive affect, anxiety and depression. *Social Indicators Research, 29*(1), 63–82. https://doi.org/10.1007/bf01136197

Herman, J. L. (1992). *Trauma and recovery: The aftermath of violence—from domestic abuse to political terror*. Basic Books.

Hirsch, A., Volmer, T., & Bartholomae, C. (2000). Dimensions of quality of life in people with non-insulin-dependent diabetes. *Quality of Life Research, 9*(2), 207–218. https://doi.org/10.1023/a:1008959810698

Hjeltnes, A., Moltu, C., Molde, H., Lillebostad Svendsen, J., Binder, P., Vøllestad, J., & Schanche, E. (2016). An open trial of mindfulness-based stress reduction for young adults with social anxiety disorder. *Scandinavian Journal of Psychology, 58*(1), 80–90. https://doi.org/10.1111/sjop.12342

Hjeltnes, A., Moltu, C., Schanche, E., Jansen, Y., & Binder, P.-E. (2016). Both sides of the story: Exploring how improved and less-improved participants experience mindfulness-based stress reduction for social anxiety disorder. *Psychotherapy Research*, *28*(1), 106–122. https://doi.org/10.1080/10503307.2016.1169330

Hoerger, M. (2010). Participant dropout as a function of survey length in internet-mediated university studies: Implications for study design and voluntary participation in psychological research. *Cyberpsychology, Behavior, and Social Networking, 13*(6), 697–700. https://doi.org/10.1089/cyber.2009.0445

Insabella, G., Tamborlane, W., Knafl, G., & Grey, M. (2007). The transition to young adulthood in youth with type 1 diabetes on intensive treatment. *Pediatric Diabetes, 8*(4), 228–234. https://doi.org/10.1111/j.1399-5448.2007.00266.x

Johnson, A. H., & Cook, B. G. (2019). Preregistration in single-case design research. *Exceptional Children, 86*(1), 95–112. https://doi.org/10.1177/0014402919868529

Jones, M. S., Chapple, C. L., & Pierce, H. (2021). Early adverse childhood experiences and self-control development among youth in fragile families. *Youth & Society, 54*(5), 806–832. https://doi.org/10.1177/0044118x21996378

Joss, D., Teicher, M. H., & Lazar, S. W. (2024). Temporal dynamics and long-term effects of a mindfulness-based intervention for young adults with adverse childhood experiences. *Mindfulness, 15*(9), 2245–2261. https://doi.org/10.1007/s12671-024-02439-x

Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*(2), 144–156. https://doi.org/10.1093/clipsy.bpg016

Kelly-Irving, M., & Delpierre, C. (2019). A critique of the adverse childhood experiences framework in epidemiology and public health: Uses and misuses. *Social Policy and Society, 18*(3), 445–456. https://doi.org/10.1017/s1474746419000101

Keng, S.-L., Ekblad, A. G., Smoski, M. J., Brantley, J. G., & Robins, C. J. (2012). Mechanisms of change in mindfulness-based stress reduction: Self-compassion and mindfulness as mediators of intervention outcomes. *Journal of Cognitive Psychotherapy, 26*(3), 270–280. https://doi.org/10.1891/0889-8391.26.3.270

Khan, M. N., Waqas, A., Ijaz, S., & Akhtar, P. (2021). Prevalence of depressive symptoms among university students in Pakistan: A systematic review and meta-analysis. *Frontiers in Public Health, 8*, 603357. https://doi.org/10.3389/fpubh.2020.603357

Khrapatina, I., & Berman, P. (2016). The impact of adverse childhood experiences on health in college students. *Journal of Child & Adolescent Trauma, 10*(3), 275–287. https://doi.org/10.1007/s40653-016-0093-0

Kobrinsky, V., & Siedlecki, K. L. (2022). Mediators of the relationship between adverse childhood experiences (ACEs) and symptoms of anxiety, depression, and suicidality among adults. *Journal of Child & Adolescent Trauma, 16*(2), 233–246. https://doi.org/10.1007/s40653-022-00510-0

Kuipers, E. (2006). Cognitive, emotional, and social processes in psychosis: Refining cognitive behavioral therapy for persistent positive symptoms. *Schizophrenia Bulletin, 32*(Suppl. 1), S24–S31. https://doi.org/10.1093/schbul/sbl014

Larkin, H., Felitti, V. J., & Anda, R. F. (2013). Social work and adverse childhood experiences research: Implications for practice and health policy. *Social Work in Public Health, 29*(1), 1–16. https://doi.org/10.1080/19371918.2011.619433

Li, S. Y. H., & Bressington, D. (2019). The effects of mindfulness-based stress reduction on depression, anxiety, and stress in older adults: A systematic review and meta-analysis. *International Journal of Mental Health Nursing, 28*(3), 635–656. https://doi.org/10.1111/inm.12568

Logan-Greene, P., Green, S., Nurius, P. S., & Longhi, D. (2014). Distinct contributions of adverse childhood experiences and resilience resources: A cohort analysis of adult physical and mental health. *Social Work in Health Care, 53*(8), 776–797. https://doi.org/10.1080/00981389.2014.944251

Macků, K., Caha, J., Pászto, V., & Tuček, P. (2020). Subjective or objective? How objective measures relate to subjective life satisfaction in Europe. *ISPRS International Journal of Geo-Information, 9*(5), 320. https://doi.org/10.3390/ijgi9050320

McCormick, W. H., Carroll, T. D., Sims, B. M., & Currier, J. (2017). Adverse childhood experiences, religious/spiritual struggles, and mental health symptoms: Examination of mediation models. *Mental Health, Religion & Culture, 20*(10), 1042–1054. https://doi.org/10.1080/13674676.2018.1440544

McDougall, J., Baldwin, P., & Evans, J. (2009). The importance of self-determination to perceived quality of life for youth and young adults with chronic conditions and disabilities. *Remedial and Special Education, 31*(4), 252–260. https://doi.org/10.1177/0741932509355989

Mei, S., Qin, Z., Tong, Q., Ren, H., Gao, T., Cao, R., Hu, Y., Yang, Y., Li, C., & Liang, L. (2020). Influence of life satisfaction on quality of life: Mediating roles of depression and anxiety among cardiovascular disease patients. *Clinical Nursing Research, 30*(2), 215–224. https://doi.org/10.1177/1054773820947984

Michalos, A. C. (2003). *Essays on the quality of life*. Springer Netherlands. https://doi.org/10.1007/978-94-017-0389-5

Miller, A. L., Williams, L. M., & Silberstein, S. M. (2018). Found my place: The importance of faculty relationships for seniors' sense of belonging. *Higher Education Research & Development, 38*(3), 594–608. https://doi.org/10.1080/07294360.2018.1551333

Moore, K. A., & Ramirez, A. N. (2015). Adverse childhood experience and adolescent well-being: Do protective factors matter? *Child Indicators Research, 9*(2), 299–316. https://doi.org/10.1007/s12187-015-9324-4

Murphy, A., Dube, S. R., Steele, M., Allman, B., Steele, H., & Kastner, T. (2016). The clinical adverse childhood experiences (ACEs) questionnaire: Implications for trauma-informed behavioral healthcare (pp. 7–16). Springer. https://doi.org/10.1007/978-3-319-31815-8_2

Navalta, C. P., McGee, L., & Underwood, J. (2018). Adverse childhood experiences, brain development, and mental health: A call for neurocounseling. *Journal of Mental Health Counseling, 40*(3), 266–278. https://doi.org/10.17744/mehc.40.3.07

Neff, K. D. (2003). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*(2), 85–101. https://doi.org/10.1080/15298860309032

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology, 69*(1), 28–44. https://doi.org/10.1002/jclp.21923

Nelson, S. M., Kashikar-Zuck, S., & Cunningham, N. R. (2017). A conceptual framework for understanding the role of adverse childhood experiences in pediatric chronic pain. *The Clinical Journal of Pain, 33*(3), 264–270. https://doi.org/10.1097/ajp.0000000000000397

Olsen, E. L., April-Sanders, A. K., Bird, H. R., Suglia, S. F., Duarte, C. S., & Canino, G. J. (2024). Adverse childhood experiences and sleep disturbances among Puerto Rican young adults. *JAMA Network Open, 7*(4), e247532. https://doi.org/10.1001/jamanetworkopen.2024.7532

Oral, R., Walz, A., Nakada, S., Ramirez, M., Kuntz, A., Benoit, J., Peek-Asa, C., & Coohey, C. (2015). Adverse childhood experiences and trauma informed care: The future of health care. *Pediatric Research, 79*(1–2), 227–233. https://doi.org/10.1038/pr.2015.197

Ortiz, R., & Sibinga, E. M. (2017). The role of mindfulness in reducing the adverse effects of childhood stress and trauma. *Children, 4*(3), 16. https://doi.org/10.3390/children4030016

Papi, S., & Cheraghi, M. (2021). Relationship between life satisfaction and sleep quality and its dimensions among older adults in City of Qom, Iran. *Social Work in Public Health, 36*(4), 526–535. https://doi.org/10.1080/19371918.2021.1917466

Payne, S., Rolls, L., Field, D., Hawker, S., & Kerr, C. (2007). Case study research methods in end-of-life care: Reflections on three studies. *Journal of Advanced Nursing, 58*(3), 236–245. https://doi.org/10.1111/j.1365-2648.2007.04215.x

Portwood, S. G., Lawler, M. J., & Roberts, M. C. (2021). Science, practice, and policy related to adverse childhood experiences: Framing the conversation. *American Psychologist, 76*(2), 181–187. https://doi.org/10.1037/amp0000809

Ridout, K. K., Khan, M., & Ridout, S. J. (2018). Adverse childhood experiences run deep: Toxic early life stress, telomeres, and mitochondrial DNA copy number, the biological markers of cumulative stress. *BioEssays, 40*(9), 1800077. https://doi.org/10.1002/bies.201800077

Rieder, A. D., Musyimi, C., Mutiso, V., Gonzalez, A., Hall, G. B., Roth, S. L., Ndetei, D., & Sassi, R. B. (2019). Impact of maternal adverse childhood experiences on child socioemotional function in rural Kenya: Mediating role of maternal mental health. *Developmental Science, 22*(5), e12833. https://doi.org/10.1111/desc.12833

Sachs-Ericsson, N. J., Rushing, N. C., Stanley, I. H., & Sheffler, J. (2015). In my end is my beginning: Developmental trajectories of adverse childhood experiences to late-life suicide. *Aging & Mental Health, 20*(2), 139–165. https://doi.org/10.1080/13607863.2015.1063107

Santisi, G., Zarbo, R., Lodi, E., Magnano, P., & Zammitti, A. (2020). Relationship between psychological capital and quality of life: The role of courage. *Sustainability, 12*(13), 5238. https://doi.org/10.3390/su12135238

Scardera, S., Perret, L. C., Gariépy, G., Tremblay, R. E., Boivin, M., Juster, R.-P., Côté, S., Ouellet-Morin, I., Turecki, G., & Geoffroy, M.-C. (2020). Association of social

support during adolescence with depression, anxiety, and suicidal ideation in young adults. *JAMA Network Open, 3*(12), e2027491. https://doi.org/10.1001/jamanetworkopen.2020.27491

Schneider, F. D., Scherrer, J., Loveland Cook, C. A., Burge, S. K., Salas, J., & Cleveland, I. N. (2017). Childhood trauma, social networks, and the mental health of adult survivors. *Journal of Interpersonal Violence, 35*(5–6), 1492–1514. https://doi.org/10.1177/0886260517696855

Schweitzer, S., & Sonnentag, T. L. (2023). Role of the sibling relationship to reduce the negative impact of adverse childhood experiences (ACEs) on wellbeing in adulthood. *The Journal of Genetic Psychology, 185*(4), 256–271. https://doi.org/10.1080/00221325.2023.2284900

Shulman, S., & Ben-Artzi, E. (2003). Age-related differences in the transition from adolescence to adulthood and links with family relationships. *Journal of Adult Development, 10*(4), 217–226. https://doi.org/10.1023/a:1026006025155

Silva, C., Lopes, S., Moreira, D., Rodrigues, A., & Moreira, D. (2024). Impact of adverse childhood experiences in young adults and adults: A systematic literature review. *Pediatric Reports, 16*(2), 461–481. https://doi.org/10.3390/pediatric16020040

Singh, N. N., Winton, A. S. W., Wahler, R. G., Singh, J., & Lancioni, G. E. (2008). Mindfulness approaches in cognitive behavior therapy. *Behavioural and Cognitive Psychotherapy, 36*(6), 659–666. https://doi.org/10.1017/s1352465808004827

Sodergren, S. C., Husson, O., Robinson, J., Rohde, G. E., Tomaszewska, I. M., Vivat, B., Dyar, R., Darlington, A.-S., & Group, E. (2017). Systematic review of the health-related quality of life issues facing adolescents and young adults with cancer. *Quality of Life Research, 26*(7), 1659–1672. https://doi.org/10.1007/s11136-017-1520-x

Straatmann, V. S., Lai, E., Law, C., Whitehead, M., Strandberg-Larsen, K., & Taylor-Robinson, D. (2020). How do early-life adverse childhood experiences mediate the relationship between childhood socioeconomic conditions and adolescent health outcomes in the UK? *Journal of Epidemiology and Community Health, 74*(11), 969–975. https://doi.org/10.1136/jech-2020-213817

Su, S., Wang, X., Kapuku, G. K., Pollock, D. M., Treiber, F. A., Pollock, J. S., Harshfield, G. A., & Mccall, W. V. (2014). Adverse childhood experiences are associated with detrimental hemodynamics and elevated circulating endothelin-1 in adolescents and young adults. *Hypertension, 64*(1), 201–207. https://doi.org/10.1161/hypertensionaha.113.02755

Subramaniam, M., Abdin, E., Seow, E., Vaingankar, J. A., Shafie, S., Shahwan, S., Lim, M., Fung, D., James, L., Verma, S., & Chong, S. A. (2020). Prevalence, socio-demographic correlates and associations of adverse childhood experiences with mental illnesses: Results from the Singapore Mental Health Study. *Child Abuse & Neglect, 103*, 104447. https://doi.org/10.1016/j.chiabu.2020.104447

Taghavi, I., & Kia-Keating, M. (2024). Adverse childhood experiences and yoga as "a practice of liberation." *Psychological Trauma: Theory, Research, Practice, and Policy, 16*(Suppl 1), S265–S273. https://doi.org/10.1037/tra0001412

Tate, D. G., & Forchheimer, M. (2002). Quality of life, life satisfaction, and spirituality: Comparing outcomes between rehabilitation and cancer patients. *American Journal of Physical Medicine & Rehabilitation, 81*(6), 400–410. https://doi.org/10.1097/00002060-200206000-00002

Tidmarsh, L. V., Ravindran, D., Matthews, S. L., Finlay, K. A., & Harrison, R. (2022). The influence of adverse childhood experiences in pain management: Mechanisms, processes, and trauma-informed care. *Frontiers in Pain Research, 3*(Suppl 1). https://doi.org/10.3389/fpain.2022.923866

Treat, A. E., Sheffield-Morris, A., Williamson, A. C., & Hays-Grudo, J. (2019). Adverse childhood experiences and young children's social and emotional development: The role of maternal depression, self-efficacy, and social support. *Early Child Development and Care, 190*(15), 2422–2436. https://doi.org/10.1080/03004430.2019.1578220

Trivedi, G. Y., Pillai, N., & Trivedi, R. G. (2021). Adverse childhood experiences & mental health – The urgent need for public health intervention in India. *Journal of Preventive Medicine and Hygiene, 62*(3), E728–E735. https://doi.org/10.15167/2421-4248/jpmh2021.62.3.1785

Turan, E., Aras, O., & Yanardag, M. (2012). Functional independence, quality of life, and level of mobility of elderly people living at home and nursing home. *Topics in Geriatric Rehabilitation, 28*(3), 201–207. https://doi.org/10.1097/tgr.0b013e31825eb924

Tyrone, R. S., Fletcher, L. M., Walker, C. S., Compretta, C., Burns, P., & Reneker, J. C. (2023). Adverse childhood experiences and academic performance among U.S. students: A systematic review and meta-analysis. *Journal of Education, 204*(4), 748–773. https://doi.org/10.1177/00220574231222940

Van Den Broeck, E., Poels, K., & Walrave, M. (2015). Older and wiser? Facebook use, privacy concern, and privacy protection in the life stages of emerging, young, and middle adulthood. *Social Media + Society, 1*(2), 205630511561614. https://doi.org/10.1177/2056305115616149

Van Vliet, K. J., Foskett, A. J., Vohra, S., Dolcos, F., Singhal, A., & Williams, J. L. (2016). Impact of a mindfulness-based stress reduction program from the perspective of adolescents with serious mental health concerns. *Child and Adolescent Mental Health, 22*(1), 16–22. https://doi.org/10.1111/camh.12170

Vidart D'Egurbide Bagazgoïtia, N., Ehlinger, V., Duffaut, C., Fauconnier, J., Schmidt-Schuchert, S., Thyen, U., Himmelmann, K., Marcelli, M., & Arnaud, C. (2021).

Quality of life in young adults with cerebral palsy: A longitudinal analysis of the SPARCLE study. *Frontiers in Neurology, 12,* 733978. https://doi.org/10.3389/fneur.2021.733978

Wade, R., Rubin, D., Wood, J., & Shea, J. A. (2014). Adverse childhood experiences of low-income urban youth. *Pediatrics, 134*(1), e13–e20. https://doi.org/10.1542/peds.2013-2475

Wang, X., & Maguire-Jack, K. (2018). Family and environmental influences on child behavioral health: The role of neighborhood disorder and adverse childhood experiences. *Journal of Developmental & Behavioral Pediatrics, 39*(1), 28–36. https://doi.org/10.1097/dbp.0000000000000506

Webster, E. M. (2022). The impact of adverse childhood experiences on health and development in young children. *Global Pediatric Health, 9,* 2333794X2210787. https://doi.org/10.1177/2333794x221078708

White, B. M., Prasad, R., Ammar, N., Yaun, J. A., & Shaban-Nejad, A. (2024). Digital health innovations for screening and mitigating mental health impacts of adverse childhood experiences: Narrative review. *JMIR Pediatrics and Parenting, 7*(10), e58403. https://doi.org/10.2196/58403

Williams, J. M. G., Teasdale, J. D., Segal, Z. V., & Kabat-Zinn, J. (2007). *The mindful way through depression: Freeing yourself from chronic unhappiness.* Guilford Press.

Wong, T. K. Y., & Hamza, C. A. (2023). Longitudinal associations among identity processes and mental health in young adulthood: The mediating role of social support. *Journal of Youth and Adolescence, 53*(4), 814–832. https://doi.org/10.1007/s10964-023-01883-7

Xin, Z. (2023). The association between social support provision, psychological capital, subjective well-being and sense of indebtedness among undergraduates with low

socioeconomic status. *BMC Psychology*, *11*(1). https://doi.org/10.1186/s40359-023-01325-w

Young-Wolff, K. C., Sarovar, V., Sterling, S. A., Leibowitz, A., Mccaw, B., Hare, C. B., Silverberg, M. J., & Satre, D. D. (2019). Adverse childhood experiences, mental health, substance use, and HIV-related outcomes among persons with HIV. *AIDS Care*, *31*(10), 1241–1249. https://doi.org/10.1080/09540121.2019.1587372

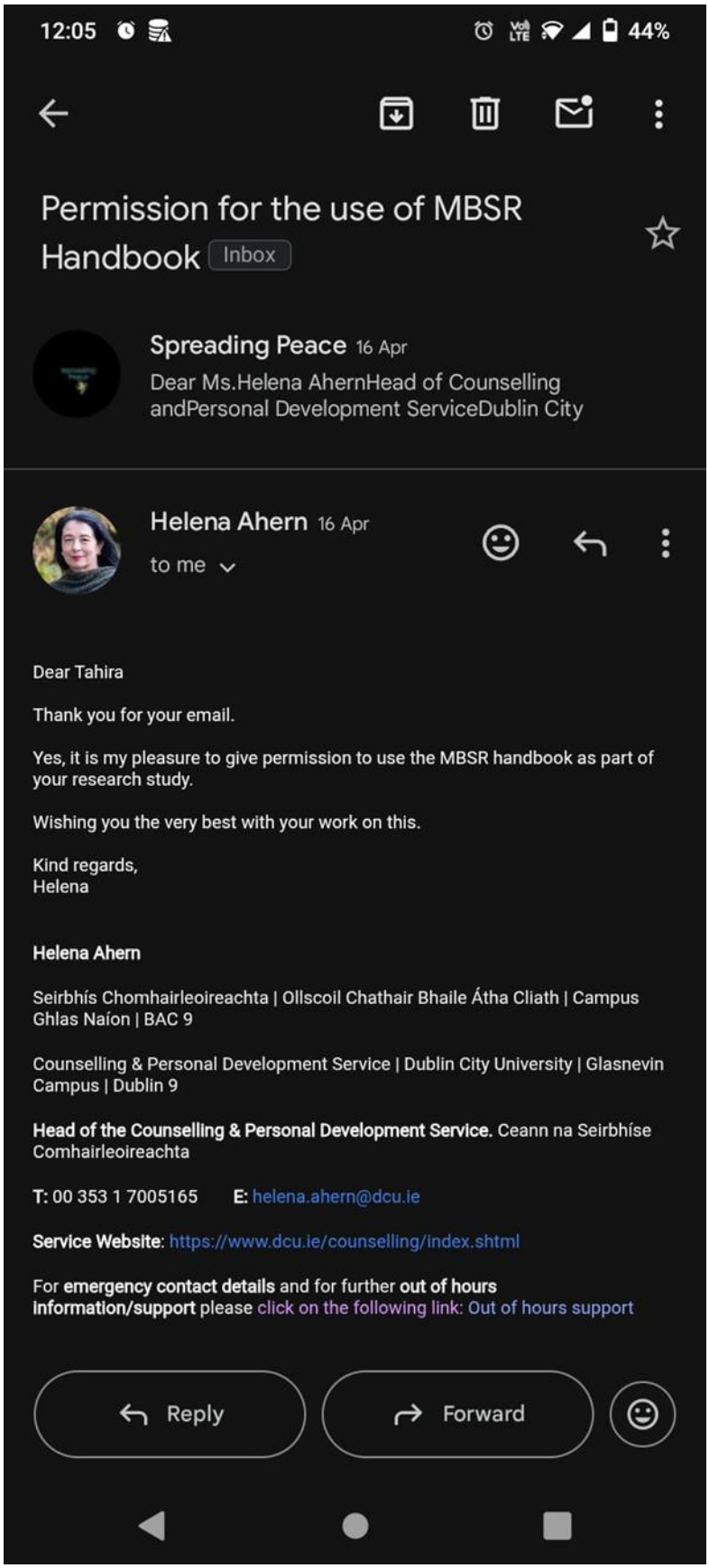
Zanotti, D. C., Vanasse, R., Davis, J. L., Kaier, E., Strunk, K. C., & Cromer, L. D. (2018). An examination of the test-retest reliability of the ACE-SQ in a sample of college athletes. *Psychological Trauma: Theory, Research, Practice, and Policy*, *10*(5), 559–562. https://doi.org/10.1037/tra0000299

Zukauskas, R. (Ed.). (2014). *The Oxford handbook of emerging adulthood.* Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199795574.001.0001

APPENDICES

APPENDIX A, B, C

(Permission from the Authors of Scale)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Thank you for your email.
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Wishing you the very best with your work on this.
Kind regards,
Helena
Helena Ahern
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Counselling & Personal Development Service | Dublin City University | Glasnevin Campus | Dublin 9
Head of the Counselling & Personal Development Service. Ceann na Seirbhíse Comhairleoireachta
T: 00 353 1 7005165 E: helena.ahern@dcu.ie
Service Website: https://www.dcu.ie/counselling/index.shtml
For emergency contact details and for further out of hours information/support please click on the following link: Out of hours support
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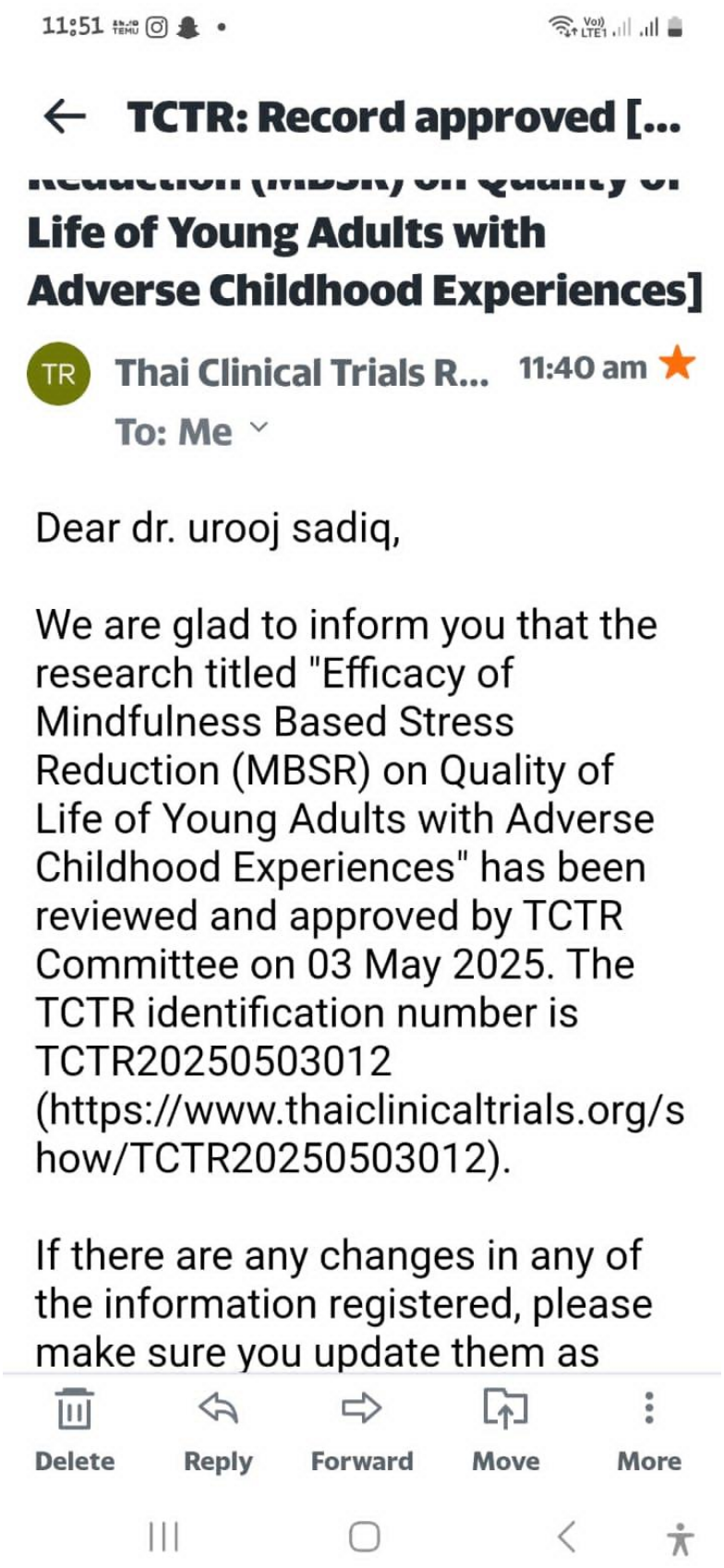

11:51

TCTR: Record approved [... Life of Young Adults with Adverse Childhood Experiences]

TR Thai Clinical Trials R... 11:40 am

To: Me

Dear dr. urooj sadiq,

We are glad to inform you that the research titled "Efficacy of Mindfulness Based Stress Reduction (MBSR) on Quality of Life of Young Adults with Adverse Childhood Experiences" has been reviewed and approved by TCTR Committee on 03 May 2025. The TCTR identification number is TCTR20250503012 (https://www.thaiclinicaltrials.org/show/TCTR20250503012).

If there are any changes in any of the information registered, please make sure you update them as

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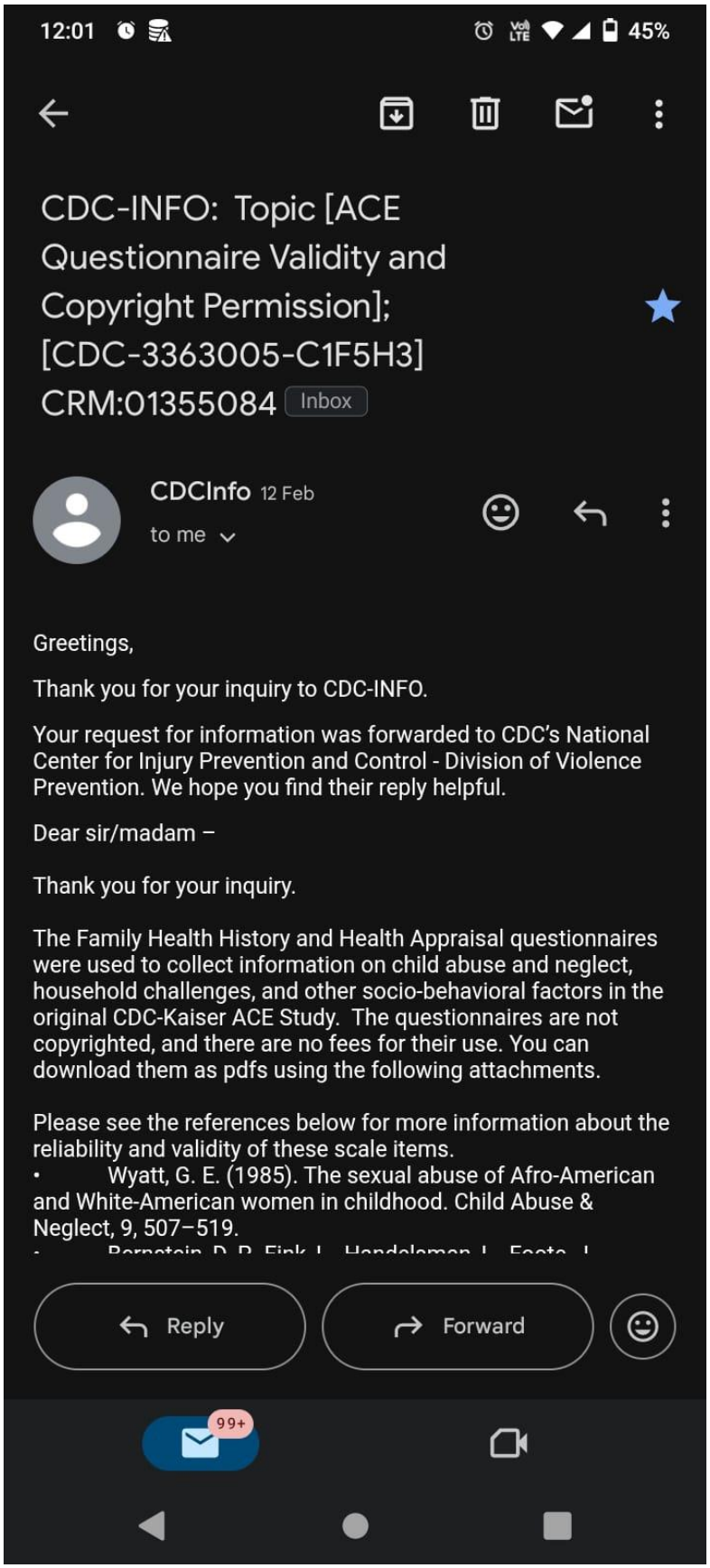
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to me
Greetings,
Thank you for your inquiry to CDC-INFO.
Your request for information was forwarded to CDC's National Center for Injury Prevention and Control - Division of Violence Prevention. We hope you find their reply helpful.
Dear sir/madam –
Thank you for your inquiry.
The Family Health History and Health Appraisal questionnaires were used to collect information on child abuse and neglect, household challenges, and other socio-behavioral factors in the original CDC-Kaiser ACE Study. The questionnaires are not copyrighted, and there are no fees for their use. You can download them as pdfs using the following attachments.
Please see the references below for more information about the reliability and validity of these scale items.
• Wyatt, G. E. (1985). The sexual abuse of Afro-American and White-American women in childhood. Child Abuse & Neglect, 9, 507–519.
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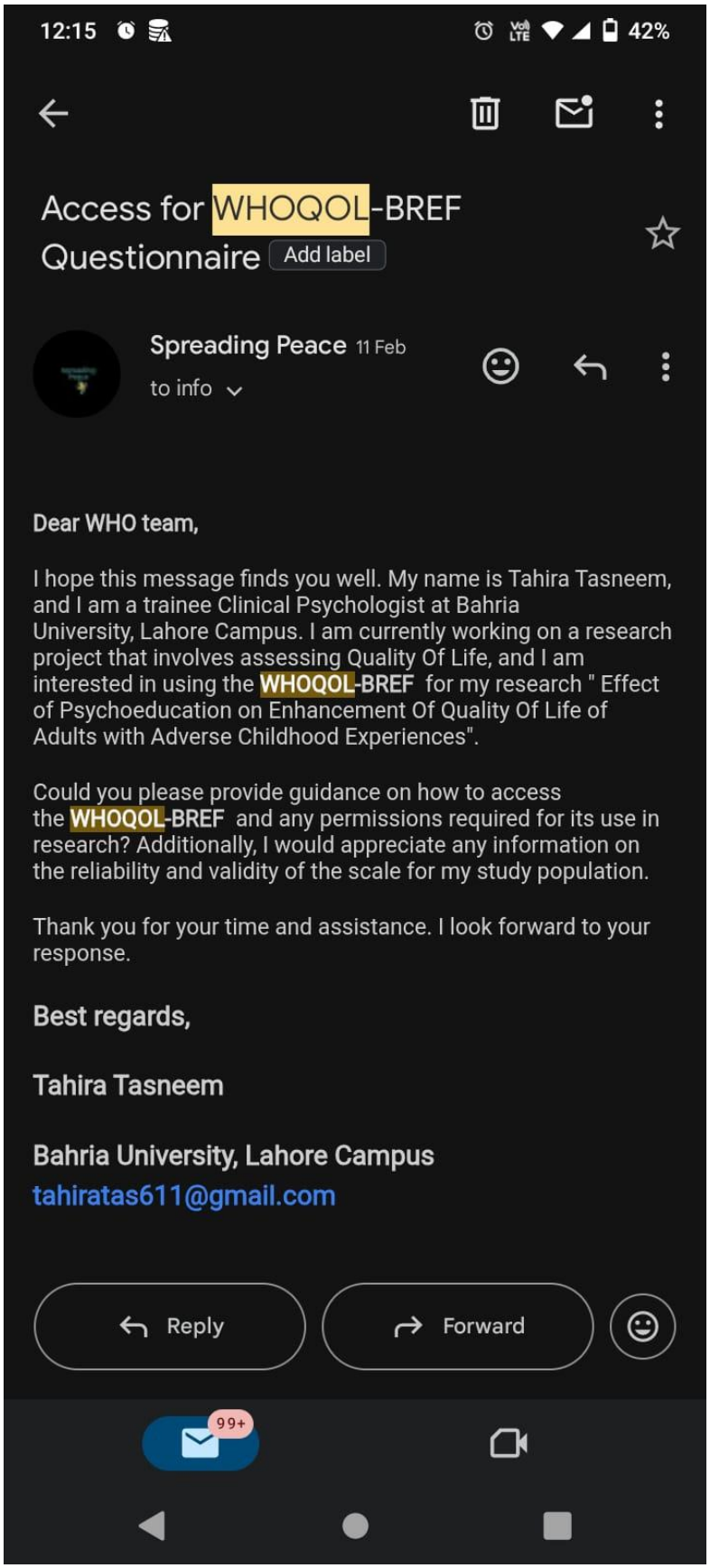
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Dear WHO team,
I hope this message finds you well. My name is Tahira Tasneem, and I am a trainee Clinical Psychologist at Bahria University, Lahore Campus. I am currently working on a research project that involves assessing Quality Of Life, and I am interested in using the WHOQOL-BREF for my research " Effect of Psychoeducation on Enhancement Of Quality Of Life of Adults with Adverse Childhood Experiences".
Could you please provide guidance on how to access the WHOQOL-BREF and any permissions required for its use in research? Additionally, I would appreciate any information on the reliability and validity of the scale for my study population.
Thank you for your time and assistance. I look forward to your response.
Best regards,
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Bahria University, Lahore Campus
tahiratas611@gmail.com
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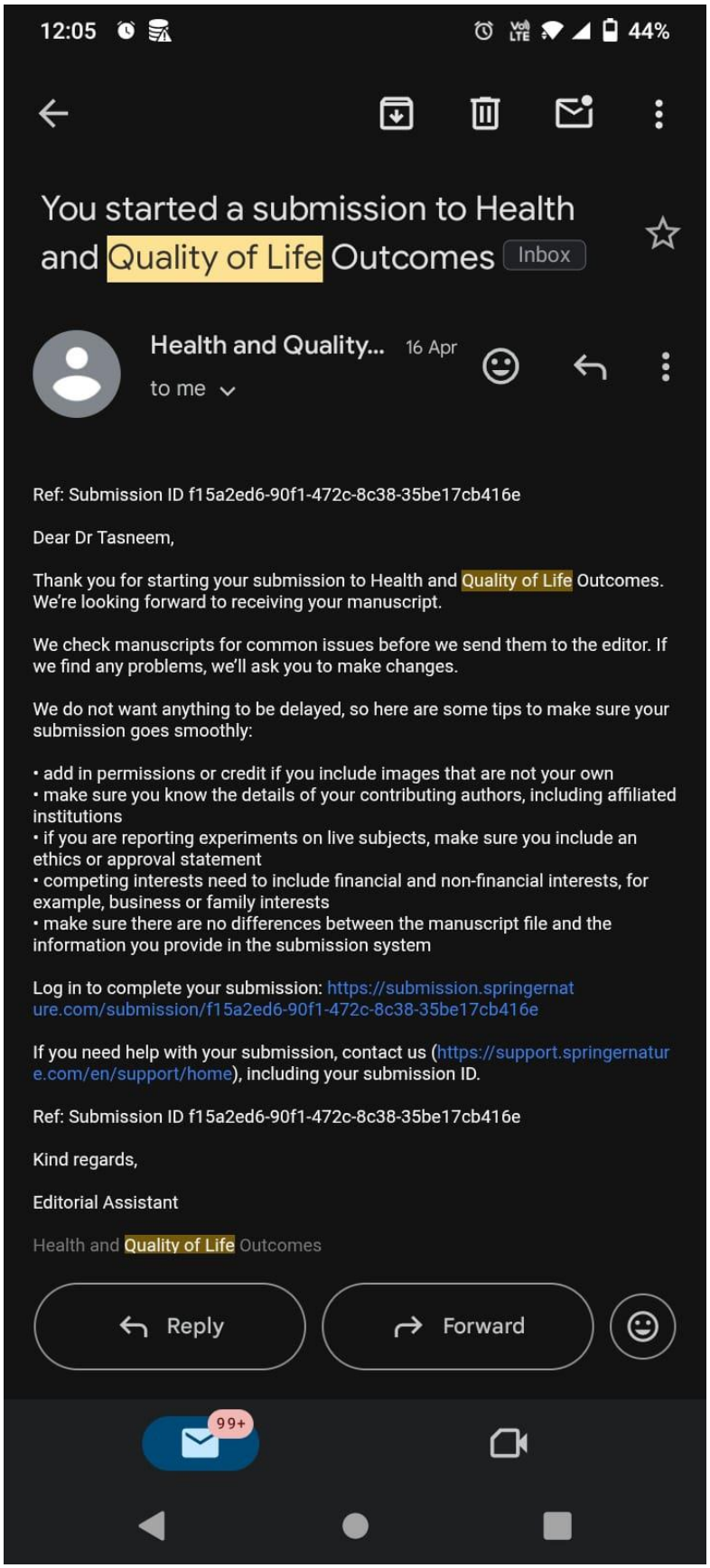
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Ref: Submission ID f15a2ed6-90f1-472c-8c38-35be17cb416e
Dear Dr Tasneem,
Thank you for starting your submission to Health and Quality of Life Outcomes. We're looking forward to receiving your manuscript.
We check manuscripts for common issues before we send them to the editor. If we find any problems, we'll ask you to make changes.
We do not want anything to be delayed, so here are some tips to make sure your submission goes smoothly:
• add in permissions or credit if you include images that are not your own
• make sure you know the details of your contributing authors, including affiliated institutions
• if you are reporting experiments on live subjects, make sure you include an ethics or approval statement
• competing interests need to include financial and non-financial interests, for example, business or family interests
• make sure there are no differences between the manuscript file and the information you provide in the submission system
Log in to complete your submission: https://submission.springernature.com/submission/f15a2ed6-90f1-472c-8c38-35be17cb416e
If you need help with your submission, contact us (https://support.springernature.com/en/support/home), including your submission ID.
Ref: Submission ID f15a2ed6-90f1-472c-8c38-35be17cb416e
Kind regards,
Editorial Assistant
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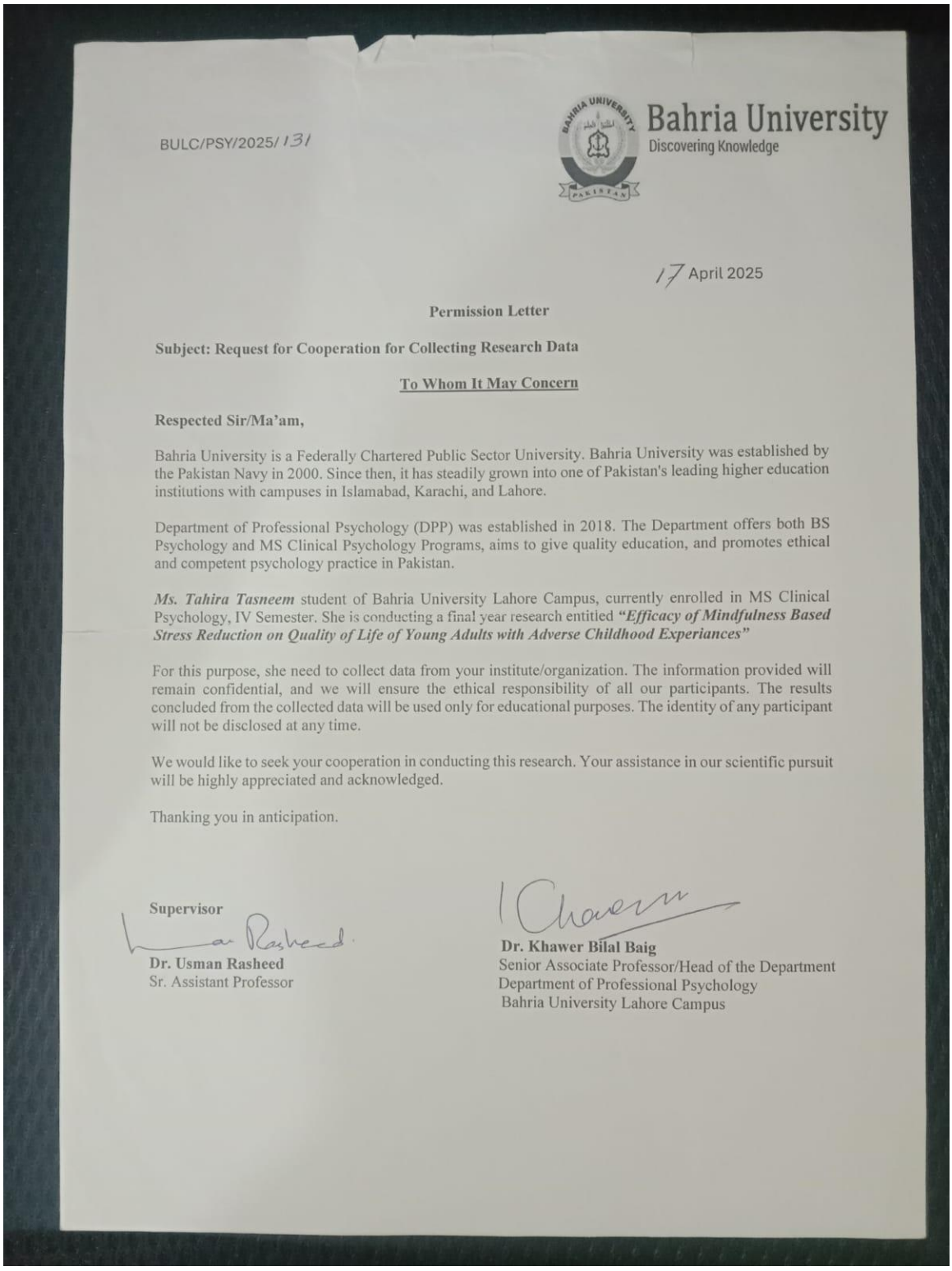
APPENDIX D

(Permission letter from Institute of Professional Psychology)



BULC/PSY/2025/131

Bahria University
Discovering Knowledge

17 April 2025

Permission Letter

Subject: Request for Cooperation for Collecting Research Data

To Whom It May Concern

Respected Sir/Ma'am,

Bahria University is a Federally Chartered Public Sector University. Bahria University was established by the Pakistan Navy in 2000. Since then, it has steadily grown into one of Pakistan's leading higher education institutions with campuses in Islamabad, Karachi, and Lahore.

Department of Professional Psychology (DPP) was established in 2018. The Department offers both BS Psychology and MS Clinical Psychology Programs, aims to give quality education, and promotes ethical and competent psychology practice in Pakistan.

Ms. Tahira Tasneem student of Bahria University Lahore Campus, currently enrolled in MS Clinical Psychology, IV Semester. She is conducting a final year research entitled ***"Efficacy of Mindfulness Based Stress Reduction on Quality of Life of Young Adults with Adverse Childhood Experiances"***

For this purpose, she need to collect data from your institute/organization. The information provided will remain confidential, and we will ensure the ethical responsibility of all our participants. The results concluded from the collected data will be used only for educational purposes. The identity of any participant will not be disclosed at any time.

We would like to seek your cooperation in conducting this research. Your assistance in our scientific pursuit will be highly appreciated and acknowledged.

Thanking you in anticipation.

Supervisor

Dr. Usman Rasheed
Sr. Assistant Professor

Dr. Khawer Bilal Baig
Senior Associate Professor/Head of the Department
Department of Professional Psychology
Bahria University Lahore Campus

APPENDIX E

(Informed Consent)

DEPARTMENT OF PROFESSIONAL PSYCHOLOGY
Bahria University, Lahore Campus
Informed Consent Form

I am student of MS Clinical Psychology in Bahria University, Lahore Campus, conducting an intervention based research to investigate **''Efficacy of Mindfulness Based Stress Reduction (MBSR) on Quality of Life of Young Adults with Adverse Childhood Experiences"** under the supervision of Dr.Usman Rasheed Chaudhry.

The research is

- Aimed at assessment and enhancement of Quality of Life of young adults, by using Mindfulness Based Stress Reduction (MBSR).
- This study through the application of manual will provide participant with ways of healthy coping mechanisms, resilience, emotional regulation and stress management.

I request you to corporate with me in my research work or project. You will be required to fill some questionnaire used in the study and has to participate in the total session of intervention. Participants will participate on a volunteer basis and can withdraw from the research procedure anytime.

I assure you that information given by you will be treated as strictly confidential and will be used only for research purpose. Your support and honest participation will be highly appreciated.

All of my queries regarding this research are answered by the researcher, I voluntary participate in the study.

Signature: _____

Thank you for your participation in the research.

Tahira Tasneem
zehnisehatclinic@gmail.com

APPENDIX F

(Questionnaires)

Demographic Information

Name: _____

Gender: Male /Female

Age: Below 18 / 18-25 / 25 Above

Education: Intermediate/ Graduate

Residential status: Rural/Urban.

Socio- Economic Status: Low/Moderate/ High

Family System: Joint/ Nuclear.

Marital Status: Married/ Unmarried/ Widowed

Siblings: 1-3/ 4-6/ 7-9

Birth order: First/ Middle/ last

Father's education: Illetrate /under Matric / Above Matric

Mother's education: Illetrate /under Matric / Above Matric

Father's occupation: Job / Bussiness / Farming

Income range: 30k-50k / 50k-150k / 2 lac –onward

Physiological Disorder/History of any psychological Problem: Yes/No

Contact Number:

ACEs

Mark under Yes or No according to your personal experiences prior to your 18th birthday:

		Yes	No
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?		
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?		
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?		
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		
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?		
6.	Was a biological parent ever lost to you through divorced, abandonment, or other reason?		
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?		
8.	Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?		

9.	Was a household member depressed or mentally ill? Or Did a household member attempt suicide?		
10.	Did a household member go to prison?		

QoL

Instructions: This assessment asks how you feel about your quality of life, health, or other areas of your life. Please answer all the questions. If you are unsure about which response to give to a question, please choose the one that appears most appropriate. Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last two weeks. Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

Sr.		**Very poor**	**Poor**	**Neither poor nor good**	**Good**	**Very good**
1	How would you rate your quality of life?	1	2	3	4	5

Sr.		**Very Dissatisfied**	**Dissatisfied**	**Neither Dissatisfied nor satisfied**	**satisfied**	**Very satisfied**
2	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about how much you have experienced certain things in the last two weeks.

Sr.		**Not at all**	**A little**	**A moderate amount**	**Very much**	**An extreme amount**

3.	To what extent do you feel that (physical) pain prevents you from doing what you need to do?	1	2	3	4	5
4.	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
5.	How much do you enjoy life?	1	2	3	4	5
6.	To what extent do you feel your life to be meaningful?	1	2	3	4	5
7.	How well are you able to concentrate?	1	2	3	4	5
8.	How safe do you feel in your daily life?	1	2	3	4	5
9.	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

Sr.		**Not at all**	**A little**	**Moderately**	**Mostly**	**Completely**
10.	Do you have enough energy for everyday life?	1	2	3	4	5
11.	Are you able to accept your bodily appearance?	1	2	3	4	5
12.	Have you enough money to meet your needs?	1	2	3	4	5
13.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
14.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

Sr.		**Very poor**	**Poor**	**Neither poor nor good**	**Good**	**Very good**
15.	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks.

Sr.		**Very Dissatisfied**	**Dissatisfied**	**Neither Dissatisfied nor satisfied**	**satisfied**	**Very satisfied**
16.	How satisfied are you with your sleep?	1	2	3	4	5
17.	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
18.	How satisfied are you with your capacity for work?	1	2	3	4	5
19.	How satisfied are you with yourself?	1	2	3	4	5
20.	How satisfied are you with your personal relationships?	1	2	3	4	5
21.	How satisfied are you with your sex life?	1	2	3	4	5
22.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
23.	How satisfied are you with the conditions of your living place?	1	2	3	4	5

24.	How satisfied are you with your access to health services?	1	2	3	4	5
25.	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last two weeks.

Sr.		**Never**	**Seldom**	**Quite Often**	**Very Often**	**Always**
26.	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did someone help you to fill out this form?

How long did it take to fill this form out?

APPENDIX G

(Ethical Review Form)

BULC/PSY/2025/143

BAHRIA UNIVERSITY
Discovery Knowledge
Lahore Campus

24th April 2025

Ethical Review Letter

The Members of the Ethical Review Committee (ERC), Bahria University Lahore Campus, have thoroughly evaluated the research proposal titled **"Efficacy of Mindfulness Based Stress Reduction on Quality of Life of Young Adults with Adverse Childhood Experiences"** submitted by **Tahira Tasneem** (Department of Professional Psychology, Bahria University Lahore Campus), under the supervision of Dr. Usman Rasheed Chaudhry Bahria University Lahore Campus. After a detailed review, the committee has concluded that the research proposal meets the ethical standards set forth by the university and relevant ethical guidelines. The Committee believes that the likelihood and degree of discomfort or harm to human subjects involved in the study will not exceed those typically encountered in daily life or during routine physical examination or psychological assessments. The risks associated with participation are minimal and manageable, ensuring that the well-being of the participants will be safeguarded throughout the study. Given the study's design, the ethical review has found it to be both scientifically valuable and ethically sound. Considering the above, the ERC has granted approval for the study to proceed.

Dr. Khawer Bilal Baig
President ERC
Sr. Associate Professor/ HOD
Department of Professional Psychology

Dr. Muhammad Sajid
Associate Professor/ HOD
Department of Management Sciences

Dr. Urooj Sadiq
Sr. Associate Professor
Department of Professional Psychology

APPENDIX H

(Plagiarism Report)

Efficacy of Mindfulness Based Stress Reduction (MBSR) on Quality of Life of Young Adults with Adverse Childhood Experiences

ORIGINALITY REPORT

10%	9%	4%	1%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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Tahira Tasneem

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What does 'qualifying text' mean?
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Non-qualifying text, such as bullet points, annotated bibliographies, etc., will not be processed and can create disparity between the submission highlights and the percentage shown.