

**IMPACT OF EMOTIONAL REACTIVITY ON RELATIONSHIP
SATISFACTION IN ADULTS WITH ADHD SYMPTOMS: MEDIATING
ROLE OF SELF ESTEEM AND MODERATING ROLE OF EMOTION
REGULATION STRATEGIES**



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MS THESIS**IMPACT OF EMOTIONAL REACTIVITY ON RELATIONSHIP
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REGULATION STRATEGIES**

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DEPARTMENT OF PSYCHOLOGY
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2025

**Impact of Emotional Reactivity on Relationship Satisfaction in Adults with ADHD Symptoms;
Mediating Role of Self-Esteem and Moderating Role of Emotion Regulation Strategies**

By

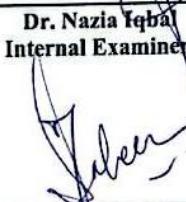
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RESEARCH COMPLETION CERTIFICATE

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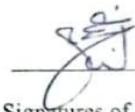
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DECLARATION

I, Ms. **HINA KHALIL**, Registration No. **499-FSS/MSCP/F23** student of **MS** in the subject of Clinical Psychology, session **2023-2025**, hereby declare that the matter printed in the thesis titled: **Impact of emotional reactivity on relationship satisfaction in adults with ADHD symptoms; Mediating role of self-esteem and moderating role of emotion regulation strategies** is my own work and has not been printed, published and submitted as research work, thesis or publication in any form in any University, Research Institution etc. in Pakistan or abroad.



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ABSTRACT

The present study investigates the association of emotional reactivity with relationship satisfaction in adults with ADHD symptoms. Also, it examines the moderating role of emotion regulation strategies along with the mediating role of self-esteem between the relationship of emotional reactivity and relationship satisfaction in adults with ADHD symptoms. Intense reactions are characteristic of emotional reactivity and have a negative effect on relationship satisfaction. Adults with ADHD symptoms also experience difficulties in regulating their emotions, which further adversely affect their relationships. This research examines the mediating role of self-esteem in the relationship between emotional reactivity and relationship satisfaction. The study further investigates the moderating role of emotion regulation strategies in the association between emotional reactivity and relationship satisfaction. Data was obtained from 90 adults with ADHD symptoms using a non-probability purposive sampling method. Data were collected from the general population, including university students, office employees, clinic patients, and members of online ADHD support groups. Standardized self-report measures were employed for collection of data, including the Adult ADHD Self-Report Screening Scale for DSM-5 (Ustun et al., 2017), Relationship Assessment Scale (Vaughn & Baier, 1999), Perth Emotional Reactivity Scale–Short Form (Preece et al., 2018), Rosenberg Self-Esteem Scale (Rosenberg, 2006), and the Emotion Regulation Questionnaire (Gross & John, 2003). Findings revealed a significant correlation between emotional reactivity and relationship satisfaction among adults with ADHD symptoms. The analysis further indicated that self-esteem did not serve as a mediator in this relationship, and emotion regulation strategies did not function as moderators. Gender differences were also noted, with women reporting greater emotional and relationship difficulties compared to men. The findings indicate that emotional reactivity can be crucial for relationship satisfaction in adults exhibiting ADHD symptoms, whereas underlying processes involving self-esteem and emotion control

are complex. This underscores that there may be additional psychological processes that may explain the association with relationship outcomes and that highlights the need for further research to explain these phenomena. The present study contributes to the limited body of literature on adult ADHD with specific reference to Pakistan and provides important insight for developing interventions and techniques that are more culturally appropriate for enhancing emotional and relational well-being.

Keywords: *ADHD symptoms, emotional reactivity, relationship satisfaction, self-esteem, emotion regulation strategies, Pakistani adults*

Chapter 1

Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD) in adults is a neurodevelopmental condition characterized by persistent patterns of inattention, impulsivity, and restlessness that originate in childhood and continue into adulthood. Unlike in children, where hyperactivity is more overt, adult ADHD frequently manifests as challenges with sustained attention, disorganization, forgetfulness, emotional regulation, and difficulties in managing daily responsibilities (American Psychiatric Association, 2013). These symptoms frequently cause impairments in social, academic, and occupational functioning, making adult ADHD a significant area of clinical concern. Attention Deficit Hyperactivity Disorder is frequently under-diagnosed and inadequately treated in adults, frequently along with additional health conditions. Symptoms persist into adulthood, but many remain undiagnosed or untreated (Ginsberg et al., 2014). The attention-deficit/hyperactivity disorder (ADHD) diagnostic criteria were originally developed with children in mind, but research has now clearly established the prevalence, impact, and treatment responsiveness of ADHD in adults (Lahey et al., 1994). Numerous studies have shown that symptoms related to hyperactivity and impulsivity tend to decrease with age, though they may persist in some individuals and sometimes remain the primary concerns in adult ADHD. Its adult form has only recently received the proper clinical attention, despite the fact that its symptoms were first reported in children over a century ago. (Hashmi et al., 2017).

About 10 million adults have been estimated to have ADHD, which is now known to affect people of all ages. Disorders like anxiety or depression sometimes coexist with ADHD, which can mask or intensify symptoms of ADHD, many adults are unable to get a correct diagnosis in their childhood and learn about it later. In Pakistan, the prevalence of ADHD varies

between 2.2% and 16.1% in both clinical and community cohorts, with a frequency of 34% in clinical settings. Early identification and intervention are crucial, but most adults with ADHD are undiagnosed, untreated, and unaware. There is a lack of index literature on ADHD prevalence in Pakistan, and most studies focus on children's ADHD (Haqqi, 2005; Jawaid et al., 2009; Sarwat, 2012; Syed & Hussein, 2010). Therefore, the present study aims to focus on adult ADHD, an area that has received far less attention compared to childhood ADHD.

Emotional Reactivity

Emotional reactivity refers to individual differences in the intensity of emotional responses, how easily they are triggered, and the length of time it takes to return to baseline after arousal (Mettler, Cho, Stern, & Heath, 2023). These reactions tend to be stronger and more rapidly triggered in adults with ADHD compared to individuals without ADHD. Although ADHD is associated with issues of hyperactivity and attention difficulties, still it shows up in a variety of signs and symptoms that can change over time. (Koziol et al., 2013). Current diagnostic systems, such as the DSM, have been criticized for giving a limited view of the problems adults with ADHD face (Barkley et al., 2008). Importantly, emotional reactivity and relationship problems are often overlooked in traditional diagnostic criteria. According to recent studies, in order to fully understand ADHD in adults, emotional challenges should be considered together with inattention, hyperactivity, and impulsivity. (Retz et al., 2012).

Relationships can be greatly impacted by emotional reactivity because people with ADHD may find it difficult to control their strong emotions, which can result in frequently arguing and miscommunications. Emotional control can be extremely difficult for people with ADHD symptoms. Impulse control issues in emotional regulation can lead to emotional reactivity, which is the ability to respond more strongly or without thinking to emotional stimuli. This can lead to increased emotional reactions, trouble calming down, and an enhanced

tendency to act impulsively as a coping mechanism for strong emotions in adult with ADHD symptoms (Skirrow et al., 2014a).

Relationship Satisfaction

Relationship satisfaction generally refers to how content and fulfilled individuals feel within their relationships. Higher levels of satisfaction are often linked with greater stability and well-being in relationships (Meltzer, 2018). For individuals with ADHD symptoms, relationship difficulties like conflicts or emotional distance are often more intense, making it harder to maintain healthy and fulfilling relationships. As a result, their psychological well-being can be affected, leading to further emotional distress. Previous research has shown that emotional difficulties in adults with ADHD play a crucial role in their relationship outcomes. For example, Bruner, Kuryluk, and Whitton (2015) found that higher ADHD symptom levels were associated with poorer romantic relationship quality, largely due to difficulties in emotional regulation and increased conflict behaviors. Similarly, Bodalski, Knouse, and Kovalev (2019) reported that deficits in emotion regulation mediated the link between ADHD symptoms and lower relationship satisfaction, with maladaptive coping strategies such as avoidance further worsening these outcomes. Additionally, it must have some effect on everyone involved to interact closely and frequently with adult individuals with ADHD, and especially to be in a relationship with a person who has ADHD. As Barkley (2017) notes, the relationship with a person with ADHD and the negative consequences they may encounter have a significant impact on the family and friends of that adult. The emotional consequences of ADHD are likely to be felt by anyone who happens to be in the lives of an adult with ADHD. In terms of people's emotional and psychological health, relationships are important. Many positive effects of relationship satisfaction have been shown by research, including improved physical and mental health as well as life satisfaction. (Proulx, Helms, & Buehler, 2007; Robles, Slatcher, Trombello, & McGinn, 2014).

Self-Esteem

Self-esteem generally refers to the way individuals evaluate their own worth and value. It reflects how people feel about themselves, influencing their confidence, decision-making, and ability to cope with challenges (Rosenberg, 1965; Orth & Robins, 2014). In the context of the present study, self-esteem is considered an important factor that may influence how emotional reactivity affects relationship satisfaction in adults with ADHD symptoms. Low self-esteem in adults with ADHD may make it more difficult for them to maintain healthy relationships, and it can worsen their already existing emotional difficulties which in turn reduce relationship satisfaction. In both childhood and adulthood, ADHD is linked to low self-esteem (Çelebi & Ünal, 2021; Cook et al., 2014; Kooij et al., 2010). The intricate connection between ADHD and self-esteem may be exacerbated by stigmatization of those who have the problem. The stigmatization of people with ADHD may exacerbate the complicated link between ADHD and self-esteem. A recent study found that children and young adults with ADHD exhibit lower levels of self-esteem than people without ADHD, particularly in the intellectual, social, and cultural domains. (Betancourt et al., 2024)

Emotion Regulation Strategies

Emotion regulation strategies are the different ways individuals manage and respond to their emotional experiences. These strategies can be adaptive, such as reappraising a situation in a more positive light, or maladaptive, such as suppressing emotions or avoiding them altogether. According to Gross and John (2003), cognitive reappraisal is an adaptive technique that aids people in reinterpreting stressful events in less upsetting ways, thereby fostering emotional well-being. Emotional suppression, on the other hand, is a less effective strategy that entails preventing feelings from surfacing and can result in social difficulties and elevated stress (Gross & John, 2003). By either reducing or escalating emotional difficulties, research indicates that emotion regulation techniques can mitigate the influence of emotional

reactivity upon relationship satisfaction (Aldao et al., 2010). The use of particular strategies strongly influences emotional well-being and relationship quality, as effective regulation helps maintain balance, while poor regulation can lead to heightened stress and conflict (Gross, 1998; Aldao, Nolen-Hoeksema, & Schweizer, 2010). In the present study, emotion regulation strategies are considered important because the ways adults with ADHD symptoms manage their emotions may influence whether emotional reactivity weakens or strengthens relationship satisfaction.

Theoretical Framework

To explain the complex relationships between study variables, this research draws upon two interrelated theoretical perspectives: Self-Regulation Theory and Attachment Theory. Together, these theories offer a comprehensive understanding of how ADHD symptoms may influence emotional processes, self-perceptions, and interpersonal outcomes in adult relationships.

Self-Regulation Theory. One of the most understudied topics in the ADHD literature is the function of self-regulation in day-to-day living for individuals with ADHD (Mitchell et al., 2012; Richard Lepouriel, 2016; Shaw et al., 2014). Self-regulation is the deliberate or intentional control of one's behaviour that allows one to modify or change how one reacts to a specific circumstance or occurrence. (Retz et al., 2012; Targum & Adler, 2014). It is significant because it makes it possible for someone to react to circumstances and occurrences in a way that is socially acceptable and promotes favourable results. Self-control over one's emotions is helpful in avoiding impulsive actions that could have unfavourable consequences in different areas of life including relationships. When these adaptive processes are compromised, emotional dysregulation results, which causes behavioural reactions that are inconsistent with objectives (Shaw et al., 2014).

Emotional dysregulation has been long associated with symptoms of ADHD; however, the current diagnostic criteria for ADHD do not include emotional dysregulation as a measure (Shaw et al., 2014; Skirrow & Asherson, 2013). Relationship and self-concept issues can arise from people with emotional dysregulation's inability to handle intense emotional situations (Rawana et al., 2014). Individuals with ADHD are inadequate in self-regulation, which has been connected with low frustration tolerance, mood instability or lability, and emotional overactivity, leading to decreased relationship satisfaction (Surman et al., 2013).

Individuals having ADHD sometimes experience notable deficiencies in self-regulatory processes, particularly in managing attention, impulse control, and emotional responses. Emotional reactivity is seen as a direct consequence of impaired self-regulation. Moreover, these self-regulatory failures can affect one's internal self-evaluations, potentially leading to lowered self-esteem. Also, in relationships, self-regulation is critical for maintaining emotional balance, resolving conflict, and demonstrating empathy. When self-regulation is compromised, as is often the case in individuals with ADHD symptoms, emotional dysregulation may create tension and dissatisfaction within the relationship. Thus, Self-Regulation Theory provides a logical foundation for understanding how ADHD symptoms indirectly influence relationship satisfaction through emotional and intrapersonal mechanisms. Self-regulation should be incorporated within the paradigm of ADHD because it affects deficits and is present throughout life. The identification of self-regulation as a diagnostic characteristic of ADHD by clinicians may lead to further therapeutic interventions and treatments for those with this disorder (Barnett, 2019).

Self-Regulation Theory explains that the ability to manage one's emotions can change how strongly emotional reactivity impacts relationship satisfaction, suggesting that effective emotion regulation strategies may lessen negative outcomes while poor regulation may intensify them in adults with ADHD symptoms. Taken together, Self-Regulation Theory

supports examining how emotion regulation strategies may moderate the link between emotional reactivity and relationship satisfaction in adults with ADHD symptoms.

Attachment Theory. Attachment Theory complements Self-Regulation Theory by emphasizing the developmental roots of emotional reactivity and self-esteem. According to this theory, Internal working models of the self and others are shaped by early interactions with caregivers. Individuals who develop insecure attachment styles—common among those with ADHD symptoms—may exhibit greater emotional reactivity, heightened sensitivity to interpersonal rejection, and lower self-worth (Bowlby, 1969; Mikulincer & Shaver, 2007).

According to attachment theory, early relationships with caregivers influence how people view themselves and other people. When these bonds are secure, people tend to feel confident, manage emotions well, and form healthy relationships. Children with ADHD, however, have more needs than those without. The ability of caregivers to address the needs of their children may be impacted by this. When caregivers are inconsistent or emotionally distant and not fulfilling those specific needs of children with ADHD, the child exhibit insecure attachment which can lead to poor emotional control, low self-worth, and struggles in adult relationships. Additionally, impulsivity, emotional dysregulation, and trouble focusing are some of the symptoms of ADHD that can lead to feelings of uneasiness and anxiety in adult relationships. When managing their ADHD symptoms, people with insecure-anxious/ambivalent attachment may feel more stressed and uncertain, which makes it difficult for them to establish and sustain positive interpersonal relationships. Indeed, studies have shown that persons with ADHD were significantly more likely than the general population to have an insecure attachment style (Mikulincer & Shaver, 2007; Clarke et al., 2002).

People who grew up with secure attachments usually feel good about themselves. Those with insecure attachments may struggle with self-worth and confidence. Low self-esteem can lead to more emotional problems and lower relationship satisfaction (Rosenberg, 1965;

Mikulincer & Shaver, 2007). In this study, self-esteem is seen as mediator, meaning it helps to describe the connection between ADHD symptoms and relationship satisfaction

Attachment Theory provides another lens for understanding emotional reactivity and relationship satisfaction in adults with ADHD symptoms. Insecure attachment, often linked to inconsistent caregiving and heightened needs in childhood, can result in poor emotional regulation, low self-esteem, and greater relational difficulties (Bowlby, 1969; Mikulincer & Shaver, 2007; Clarke et al., 2002). This framework supports the role of self-esteem as a mediator between ADHD symptoms and relationship satisfaction.

Attachment Theory highlights how insecure attachment can foster low self-esteem, which in turn mediates the link between ADHD symptoms and relationship satisfaction by shaping how individuals perceive themselves within close relationships.

Literature Review

Adult ADHD Symptoms

ADHD is prevalent in childhood, but its symptoms may decline with age. However, people may experience its symptoms in adulthood. The literature points out that ADHD is a disorder, affecting socio-occupational functioning and often comorbid with other psychiatric disorders. It requires proper research and Awareness across the lifespan for effective management (Prakash et al., 2021).

Researchers evaluated the general incidence of ADHD using a retrospective analysis in adults and uncover demographic connections. The results showed a 2.5% aggregate prevalence and a strong connection between age and gender. The percentage of participants with ADHD declined with age, even though both genders were equally represented. However, the frequency of adult ADHD may be underestimated due to imprecise DSM-IV diagnostic criteria (Simon et al., 2009). Another thorough investigation to look at the prevalence ADHD,

revealed that persistent and symptomatic ADHD decreases when getting older, with persistent the prevalence is about 2.58% and symptomatic ADHD is around 6.76. This provides an estimate of the global prevalence, However, more investigation is required to properly diagnose and comprehend the prevalence of ADHD (Song et al., 2021).

Investigating data from previous subsequent researches of ADHD found that the rate of persistence is low when defining ADHD as ‘persistent ADHD’, around 15% at age 25. However, the prevalence is much higher—roughly 65%—when individuals in partial remission are included. According to the study, the prevalence of ADHD declines with age, but more investigation is required to ascertain if this is because the diagnostic criteria are not sensitive to developmental stages (Faraone et al., 2006).

According to Biederman et al. (1993), a study was conducted with 84 adults with childhood onset ADHD that they were similar to children with ADHD disorder but with more impaired and disturbed. The study revealed that the cognition, functioning patterns and psychopathology of adults with ADHD disorder were similar to children ADHD disorder. Since the results correlate with the children, it provides support to the validity of Diagnosis in adults (Biederman et al., 1993)

Cortese et al, (2016), conducted another study and looked at the clinical appearance of people with ADHD in male and female. Findings revealed that males are more inclined to lifetime ADHD than persistent. The subtypes of ADHD, anxiety, mental health impairment and risky behaviours were similar in females with persistent ADHD as compared to males. Results indicate that women with ADHD should receive equal care and attention because they have similar rates of ADHD and related risky behaviours, while having different comorbidities and symptoms profile (Cortese et al., 2016).

The literature on the diagnosis of ADHD in adults and its impact on society emphasizes how important cultural elements are to comprehend the disorder. Social and cultural perspective on culture have significant impact on diagnosis and acceptance. Adults with ADHD reduce their symptoms and change their lifestyle. ADHD has a very negative impact on Work, everyday activities, relationships, and general well-being of adults. The condition is linked to higher accidents, decreased productivity and drug misuse. Adult ADHD's societal impact addresses the need for increased awareness and better understanding of the condition (Asherson et al., 2012).

Emotional Reactivity in Adults with ADHD Symptoms

Patients with ADHD often experience emotional symptoms, which can significantly affect their functioning. Emotional dysregulation (ED) is a major symptom of ADHD and it impacts the overall functioning, disorder severity and prognosis. The criteria for diagnosis for ADHD do not include impairments such as emotion regulation deficiencies, even though they are present in 34 to 70% of adults with this disorder. According to a study, two distinct elements of adult ADHD are negative affect and a failure to use appropriate emotion management techniques. Two clusters were found using a person-centered approach, with high ERD linked to psychological distress, depressed mood and negative effect. Women were over represented in this cluster (Hirsch et al., 2019).

According to a study on adult emotional regulation that included 41 males with ADHD and 47 healthy participants, people with ADHD reported with more frequent negative experiences, higher levels of annoyance and irritation, and greater intense rage. Moreover, the findings of the study reveal weak to moderate correlation between the ALS-SF and the instability and intensity of negative emotions. Two components of EL in ADHD are indicated by the findings: an endogenous component that is independent of unpleasant everyday

occurrences and a reactive component that is responsive to negative events (Skirrow et al., 2014).

According to Martz et al. (2023), another research was conducted to discover the many ED tendencies in individuals with ADHD. A group of recently diagnosed 460 people filled out 20 self-report- questionnaire. Findings reveal that ED was present in 67.52% of sample in two of the five clusters by factor analysis method. Childhood maltreatment and impulsivity was declared a major predictor of ED, which lead to functional impairment. Findings of the study conclude that ED in ADHD is characterized by impulsivity and emotional instability, but it may also be defined by functional qualities like creativity.(Martz et al., 2023).

Adults with ADHD had significantly increased levels of general emotion dysregulation than healthy controls revealed by meta-analysis of 12 studies. Emotional ability, emotion recognition and negative emotional response were the most significant impacts of ED. General ED and symptoms severity were highly correlated while negative emotional responses were closely associated with emotional ability and ADHD symptom severity. The findings validate emotional dysregulation symptoms as a key component of the psychopathology of ADHD, with emotional ability and negative emotional responses playing significant role (Beheshti et al., 2020).

The neurological network of emotional reactivity within adults with ADHD was investigated in another research. It discovered that inadequate working memory processing could contribute to poor emotional reactivity. The study also discovered that no impairment in neural mechanism correlates with working memory in adults. However, addressing working memory may be useful with significant ER impairments, because the ADHD population is largely unimpaired and the control group is well-matched (Kaiser et al., 2022).

The study discovered that adults with ADHD have lower responsiveness to positive visual stimuli due to dysfunctions in the motivational-reward system. It assessed event-related

potentials for negative, positive and neutral pictures and contained the sample of 32 adults with ADHD and 32 control subjects. According to the findings, ADHD individuals may respond less to positive visual stimuli (Herrmann et al., 2009).

Emotional Reactivity and Relationship Satisfaction in Adults with ADHD Symptoms

Researchers discovered a structural model to investigate the effect of emotional reactivity on the relationship health of 736 premarital couples. The model was expected to predict partners' emotional reactivity, relationship satisfaction and dispute resolution. Researcher found that the model suited the data well despite gender differences (Gardner et al., 2007).

There is evidence to show that men have higher levels of emotional reactivity (ER) and emotional cut off (EC) than women, which negatively affects sexual desire and relationship contentment. Women had higher levels of ER. There were no relationships detected between ER and outcome factors, emphasizes the necessity of emotional engagement even in relational conflicts (Price et al., 2020).

Another study shows how perceived partner responsiveness influenced the connection between marriage quality and emotional reactivity in Chinese couples. The survey sample contain 550 couples from 28 provinces. The findings revealed that husbands had higher scores than wives, and emotional reactivity was adversely connected with perceived partner responsiveness and marital quality. The Actor-Partner Interdependence Model discovered that emotional reactivity was a strong negative predictor of marriage quality. The study helps to understand how emotional reactivity affects marriage quality and has implications for increasing marital quality (Yuan et al., 2022).

The study focusses on how married couples react to marital disagreements and find that wives are more emotionally reactive than husbands. Based on 166 daily questionnaires, the study discovered that marital trust, extraversion, being in a first marriage, and the

percentage of total family income of wives explain emotional reactivity, whereas husbands' reactivity is influenced by the frequency of support from relatives, and life events and arguments (Almeida et al., 2002).

A study that examined the impact of individual weaknesses on emotional reactivity in adolescents from family to peers found that young adults with a greater incidence of social anxiety or managing efficacy issues were more inclined to transfer emotional reactivity from close relatives to close companions, while adolescents with elevated symptoms of self-criticism and depression-related symptoms seemed more prone to transfer emotional reactivity from friendships to close relationships (E. C. Cook et al., 2018).

Relationship Satisfaction in Adults with ADHD Symptoms

Research conducted on determining the relationship between symptoms of ADHD and poorer romantic relationship quality and the mediating role of difficulty controlling emotions, perceived tension, and antagonistic interpersonal conflict. Results indicated that relationship quality was poorer for individuals with substantial levels of ADHD symptoms than those without ADHD symptoms while difficulty controlling emotions and antagonistic interpersonal conflict mediate this relationship indicating that adult relationships are negatively impacted by ADHD (Bruner et al., 2015). Also, researchers investigated the marital relationship patterns between healthy couples and those with one ADHD-diagnosed partner. Results revealed that ADHD-affected couples experienced higher conflict, poorer marital adjustment, and less effective conflict resolution compared to healthy couples. The findings suggest that untreated ADHD can lead to marital dissolution (KAHVECİ ÖNCÜ & TUTAREL KİŞLAK, 2022).

An in-depth study explored ADHD symptoms and relationship dynamics in two phases: a nonclinical sample (n=172) and a clinical ADHD sample (n=39) of young adults. Participants addressed their ADHD symptoms; activities related to relationship maintenance

and nature of relationships. Results showed ADHD symptoms were linked to troubles with relationships, with Hyperactivity-impulsivity was linked to unfavourable results, but inattention was linked to curiosity in alternatives and inadequate reactions to partner behaviours (VanderDrift et al., 2019).

In a different research, 33 married people with ADHD and their spouses were compared to 26 control participants without ADHD in terms of marital adaptation and interpersonal relationships. The findings indicated that persons with ADHD had higher family problems and worse overall adjustment in marriage. Spouses of persons with ADHD reported higher levels of disruption and more unfavourable views of marital and family health. (Eakin et al., 2004).

The degree to which ADHD symptoms modify the association underlying emotional intelligence (EI) and satisfaction with relationships was investigated in a cross-sectional study. The results showed that higher EI was linked to better relationship satisfaction for people with more symptoms of ADHD, compared to those with less symptoms, highlighting the importance of EI in the relationships of individuals with ADHD traits. (Pollock et al., 2017).

Researchers have aimed to evaluate the impact of having a partner with ADHD on the dynamics of marriage, focusing on the moderating role of intimacy. Spouses of people with ADHD reported much lower degrees of affection and satisfaction in marriage than the partners of healthy people without ADHD (Ben-Naim et al., 2017).

Gender stereotypes and the impact of adult ADHD on relationship were examined in another study. 62 heterosexual couples took part, measuring gender roles with the Gender Roles Attitude Scale and evaluating the effects of ADHD with the Marital Impact Checklist. Results showed that female partners of individuals with ADHD felt more unloved and reported more negative effect on their relationship than male partners. Additionally, certain aspects of gender

roles for both partners mediated how ADHD affected their marriage, stressing the significance of gender roles and sex in this situation (Ersoy & Topçu Ersoy, 2019).

The literature on the effects of adult ADHD on romantic relationships and the possible compounding effects of associated mood or substance use disorders was examined by researchers. It also examines the literature on integrative therapy for couples with at least one partner struggling with ADHD (Anh-Luu T & Sara, 2022).

Self-Esteem in Adults with ADHD Symptoms

ADHD individuals often face negative self-esteem in adulthood, leading to adverse outcomes. This review explores the relationship between ADHD in adulthood and self-esteem, highlighting needs and opportunities for service provision. Although having a limited research, evidence reports that self-esteem is negatively correlated with adult ADHD (J. Cook et al., 2014a).

A systematic search of 11 studies found strong evidence that ADHD and adults' poor self-esteem are related. Participants with ADHD had poorer self-esteem in five of the studies, and there was a negative correlation between self-esteem and ADHD symptoms.(Pedersen et al., 2024a). An empirical study looked into the co-occurrence of test anxiety (TA)and adult ADHD among young adults. The results shows that ADHD participants have elevated TA on the cognitive blockage, social derogation, and tenseness subscales, as well as worse self-esteem. It influences the relationship between ADHD and TA, but not tenseness TA. The results indicate that therapies for ADHD should minimize (Dan & Raz, 2015a).

A research project analyzed the connection between ADHD symptoms and procrastination in college students. It was shown that the association between procrastination and ADHD symptoms was partially explained by issues with emotion control and self-esteem. This implies that enhancing self-esteem and emotion management abilities in ADHD students

has to be a top goal for treatment. To gain a deeper understanding of the temporal relationships between these variables, more longitudinal study is required.(Bodalski et al., 2023).

Another study compares persons with ADHD with another healthy control group to look at therapy-relevant characteristics. The findings show that compared to the control group, adults with ADHD exhibit a decreased degree of self-esteem and confidence. Adults with ADHD have fewer resources, which suggests that they require specialized treatment. The study suggests that therapy programs should contain resource-oriented modules to increase self-efficacy, strengths and self-esteem (Newark et al., 2016).

The study looked at how early teenage self-esteem and self-perception were affected by signs of ODD and ADHD. The findings showed that while hyperactive-impulsive symptoms affected self-perception, severe inattentive symptoms decreased self-esteem. Severe depression was caused by low self-esteem, but ODD symptoms had a direct impact on depression without the help of self-esteem. Severe ODD symptoms were directly linked to depressed symptoms (Kita & Inoue, 2017).

The association between Internet addiction (IA) and symptoms of depression, anxiety, as well as self-esteem in teenagers with ADHD was examined in this study. The findings indicated that adolescents with ADHD had considerably higher IAS total scores than did healthy controls. The ADHD group scored higher on the depression measure and lower on the self-esteem scale. According to the study's findings, ADHD is a separate risk factor for anxiety, sadness, and low self-esteem, and consequently for IA. The findings suggest that ADHD may be a significant factor in internet addiction (Kahraman & Demirci, 2018).

The study looks at how adolescents' attention issues and anxiety/depression symptoms are influenced by their overall sense of self-worth. The findings indicate that, after controlling for variables including gender, therapy, and medication, having a high level of self-esteem at baseline predicts decreased signs of anxiety/depression and attention issues three years later.

This emphasizes how crucial global self-esteem is to clinical treatment, especially when treating emotional and attentional issues.(Henriksen et al., 2017).

Self-Esteem and Relationship Satisfaction in Adults with ADHD Symptoms

Self-esteem promotes relationship quality through mediators, rather than exerting a direct effect. One partner's self-esteem creates a causal chain of mechanisms (including trust and reciprocating behaviours between couples), which eventually influences each partner's satisfaction with the relationship through mediators, such as trust and reciprocated behaviors (Wood et al., 2024).

The study addressed the relationship between self-esteem, satisfaction and perceived regard in dating relationships. It hypothesizes that self-esteem affects self-perceptions and partners point of views, and perceived regard predicts relationship satisfaction. Results show high self-esteem leads to self-enhancement, while low self-esteem leads to self-deprecation (Sciangula & Morry, 2009).

One study assessed that self-esteem predicts both an individual's and their partner's relationship satisfaction, irrespective of gender, age, or relationship length. Low attachment-related avoidance and anxiety are indicators of a secure attachment to the partner, and they independently minimize the effect of self-esteem on both (Erol & Orth, 2013).

A study focused on determining the dynamic relationship between relationship satisfaction and self-esteem and specific aspects contain relationship quality, revealing a same developmental dynamic. The findings indicate that self-esteem is important for the development of many relationship features, but it is also influenced by these factors. The study discovered that self-esteem and the three components of relationship quality are dynamically connected with changes in one domain predicting later changes in the other (Mund et al., 2015).

An article explores the relationship between self-esteem and romantic relationships, focusing on theoretical perspectives, evidence, and psychological mechanisms. It suggests that

high self-esteem is beneficial in romantic relationships, positively impacting partner happiness. However, self-esteem similarity doesn't affect relationship satisfaction. The article suggests that self-esteem is beneficial due to perceived regard and secure attachment, but further research is needed to understand its mechanisms (Yasemin Erol & Orth, 2016).

Another study views the effect of self-esteem development on relationship satisfaction in couples. Results revealed that self-esteem development is a couple-level process, with initial self-esteem predicting common relationship satisfaction. Change in satisfaction predicted change in self-esteem. These effects were consistent across genders and controlling factors like age, relationship length, health, and employment status. Self-esteem similarity did not affect relationship satisfaction (Erol & Orth, 2014).

The study examines the relationship between self-esteem, its interaction with couples and relationship satisfaction. Using data from 731 Dutch heterosexual couples, it found that both actor and partner self-esteem positively affect relationship satisfaction. However, self-esteem plays a more important role in relationship perceptions than self-esteem in partners, an actor superiority effect was examined. The study sheds insights into self-esteem patterns present in couples relate to relationship wellbeing (Jiang et al., 2024).

Emotional Regulation Strategies in Adults with ADHD Symptoms

ADHD, a developmental disorder, affects 3 to 5% of adults. Current studies suggest an important symptom that affects social, intellectual, and professional life and is associated with emotional information processing. An analysis of 22 studies revealed that non-adaptive emotion control techniques are more common in people with ADHD and are linked to executive performance, psychiatric comorbidities, criminal conviction, and symptom severity. Adults with and without ADHD showed distinct patterns of brain activity, indicating that behavioral therapy and psychopharmacological treatments may be helpful strategies for addressing emotional challenges in adults with ADHD (Soler-Gutiérrez et al., 2023).

A prospective longitudinal study discovered that moms with indications of ADHD struggle to control their emotions and have parenting deficiencies, which may affect their capacity to parenting. While harsh parenting and mother distress reactions were positively correlated with maternal ADHD symptoms, positive parenting responses to adolescents' negative emotions were adversely correlated with these symptoms. After adjusting for adolescent ADHD and disruptive behavior symptoms, maternal ER mediated the association between harsh parental behaviors and ADHD symptoms (Mazursky-Horowitz et al., 2015).

The study was conducted to investigate the mediating effect of interpersonal issues in the link between ADHD symptoms and emotional regulation in young adults. A cross-sectional study of 1190 university students in Lahore found A considerable positive association exists between issues with emotion regulation and interpersonal problems, as well as interpersonal problems and attention deficit hyperactivity symptoms. The study presents empirical evidence that interpersonal connection issues are partially mediating this association (Mushtaq et al., 2022).

The study investigates the neurological correlates of reappraisal in adult ADHD patients. There were no significant variations in activity in the neural reappraisal network between ADHD patients and controls. Patients with ADHD demonstrated significantly higher activations in the dorsal and ventral anterior cingulate cortex (ACC) when viewing negative > neutral images., correlated with habitual use of reappraisal. This suggests that although emotional dysregulation is a basic symptom of ADHD, explicit reappraisal is not impeded (Materna et al., 2019).

This study examines at the impact of sex and emotion management issues on depression in young adults with and without ADHD. It found significant correlations between ADHD, emotional insight and behavioral responses to emotion. Sex reduced the association between ADHD and emotional awareness, goal-directed behavior, and restricted access to

emotion regulations strategies. Women had limited emotion regulation awareness, while men had greater difficulties in goal-directed behavior and limited access to emotion regulation strategies(Welkie et al., 2020).

The study investigates the relationship between symptoms of depression and anxiety and adult individuals with ADHD symptoms using emotion regulation and cognitive attention deficit. Results show significant direct and indirect relations between depression and anxiety symptoms; maladaptive emotion regulation and cognitive attention deficiency mediate the link. The findings show that deficiencies in cognitive attention and inappropriate emotion management mechanisms, along with depressed and anxiety symptoms, may explain ADHD in adults (Ajourloo et al., 2021).

This study reveals that adults with ADHD are greater risk of developing co-morbid depression. One possible risk factor is poor emotion management, which is a prevalent problem among teenagers. According to the study, the degree of depressive symptoms in ADHD patients was correlated with their employment of more maladaptive and less adaptive emotion regulation techniques. These findings suggest that alterations in emotion regulation strategies may be a risk factor for ADHD-depression comorbidity (Mayer et al., 2022).

Rationale

Adult ADHD is increasingly recognized as a condition that extends beyond childhood and has profound effects on emotional and relational functioning. International research has suggested that adults with ADHD symptoms often face difficulties in managing emotions and maintaining healthy relationships, (e.g. Shaw *et al.*, 2014; Barkley, 2015) however there is limited empirical evidence from Pakistan. Emotional reactivity, which frequently manifests as intense or exaggerated emotional responses, can create tension and dissatisfaction within interpersonal relationships. This becomes even more complex when paired with challenges in self-esteem and emotion regulation, both of which are central to psychological well-being.

In Pakistan, most of the available research on Attention-Deficit/Hyperactivity Disorder (ADHD) has primarily focused on children and adolescents, often exploring prevalence, academic difficulties, behavioral issues, and family-related challenges (Khan & Hayat, 2020; Haqqi, 2005; Jawaid et al., 2009; Sarwat, 2012; Syed & Hussein, 2010; Yahya. F., 2012; Sabir et al., 2024., Mushtaq et al., 2024; Khan & Jameel. 2018; Batool et al., 2022). While these studies have provided valuable insights into early developmental stages, very little attention has been given to how ADHD symptoms manifest and affect individuals in adulthood, particularly in terms of their interpersonal relationships and emotional well-being. Therefore, the present study aims to fill this gap by examining how emotional reactivity influences relationship satisfaction among adults with ADHD symptoms, and how self-esteem mediate this relationship and emotion regulation strategies play its role as a moderator.

By exploring these factors, the present study can give important insights to mental health professionals in Pakistan, where adult ADHD has not received much attention. The results may help in creating strategies and interventions that focus on building self-esteem, improving emotional control, and supporting healthier relationships for adults with ADHD symptoms. These findings can also guide psychologists and counsellors in developing practical programs such as counselling sessions, awareness campaigns, and skills training to better address the needs of this group. In addition, the study may help reduce stigma and encourage more people to seek support, leading to stronger relationships and better emotional well-being. In this way, the research not only fills a gap in the literature but also has practical value for improving the lives of adults with ADHD symptoms in Pakistan.

Objectives of the Study

Objectives of the study are:

1. To study the relationship of emotional reactivity, relationship satisfaction, self-esteem and emotion regulation strategies in adults with ADHD symptoms.
2. To examine the effect of emotional reactivity on relationship satisfaction among individuals with symptoms of ADHD.
3. To investigate the mediating role of self-esteem in the association between relationship satisfaction and emotional reactivity in adults with ADHD symptoms.
4. To test the moderating role of emotion regulation strategies in the relationship between emotional reactivity and relationship satisfaction.
5. To assess the impact of demographic factors on the study variables.

Hypotheses

- There will be negative relationship between emotional reactivity and relationship satisfaction in adults with ADHD symptoms.
- Self-esteem will mediate the relationship between emotional reactivity and relationship satisfaction in adults with ADHD symptoms.
- Emotion regulation strategies will moderate the relationship between emotional reactivity and relationship satisfaction in adults with ADHD symptoms.
- Females having ADHD symptoms will report higher emotional reactivity and lower relationship satisfaction as compared to males.

Conceptual Framework

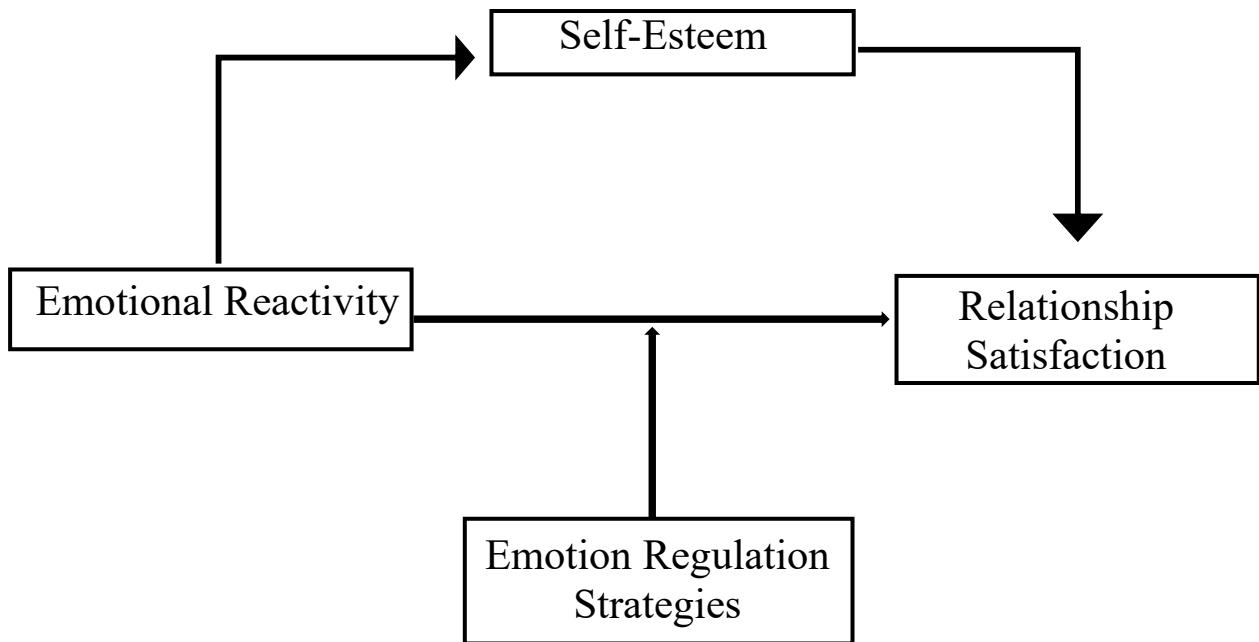


Figure 1.1 The hypothesized model showing the association of emotional reactivity with relationship satisfaction, mediated by self-esteem and moderated by emotion regulation strategies.

Chapter 2

Method

Research Design

A cross-sectional research design was employed, and the approach was quantitative in nature.

Sample

The sample consisted of 90 participants (n=42 males, n=48 females) having ADHD symptoms with the age range of 18 to 35 years. The data was collected from general population including students of different universities, employees working in different sectors such as education, healthcare, and corporate offices, patients visiting clinics and community settings specifically from members of online ADHD support groups by employing purposive sampling technique. The participants included individuals having intermediate, undergraduate, and postgraduate education levels. In the initial phase, a five-item screening checklist was used to identify ADHD symptoms, and only those participants were selected as sample, who showed symptoms of ADHD.

Inclusion Criteria. Adults between the age range of 18 to 35 with education above intermediate level who exhibited ADHD symptoms were included in the study. A five-item screening checklist was used in the initial phase to identify the presence of symptoms. Only those who indicated the presence of ADHD symptoms on the screening tool were further included as sample of the present study.

Exclusion Criteria. Individuals diagnosed with psychiatric conditions other than ADHD and participants who did not show ADHD symptoms on the screening checklist were excluded from the sample of the study.

Operational Definition

Adult ADHD. “Adult attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental condition characterized by persistent patterns of inattention and/or hyperactivity-impulsivity that interfere with a person’s functioning and ability to perform daily activities, including at school or work.”(De Schipper et al., 2015).

For the present study Adult ADHD is evaluated by the Adult ADHD Self-Report Screening Scale (2017). Presence of symptoms is denoted by high score on Screening Scale and absence of symptoms is denoted by a low score on Adult ADHD Self-Report Screening Scale.

Emotional Reactivity. According to Nock, Wedig, Holmberg, and Hooley (2008), “It involves a person’s sensitivity to emotional stimuli and the magnitude of their response. Persons with higher emotional reactivity often experience higher emotional responses that can interfere with their ability to manage stress or maintain relationships” (Nock et al., 2008).

For the present study, it is measured using the Perth Emotional Reactivity Scale-Short Form (2019). High emotional reactivity is represented by a high score on the Perth Emotional Reactivity Scale-Short Form, whereas low emotional reactivity is represented by a low score on the same scale.

Relationship Satisfaction. It is defined as "The subjective assessment of one's relationship is known as relationship satisfaction." (Keizer, 2014).

Relationship satisfaction is measured by Relationship Assessment Scale (1988) for the present study. High satisfaction in relationship is denoted by high score on Relationship Assessment Scale and low satisfaction in relationship is denoted by low score on Relationship Assessment Scale.

Self-Esteem. It describes self-esteem as the “totality of the individual’s thoughts and feelings with reference to himself as an object.”

For the present study self-esteem is evaluated by Rosenberg self-esteem scale (1965). The score on the Rosenberg self-esteem scale shows high self-esteem, whereas a lower number indicates poor self-esteem.

Emotion Regulation. “It addresses the conscious or unconscious processes of monitoring, analysing, controlling, and regulating emotional experiences and expression in terms of the strength, shape, and duration of emotions as well as physiological states and actions associated with emotions.” (Kok, 2020).

For the current study, it is measured by Emotion Regulation Questionnaire (2003). High emotion regulation ability is denoted by a high score on the ERQ, indicating effective regulation strategies such as cognitive reappraisal. Low emotion regulation ability is denoted by a low score on the ERQ, which may reflect greater reliance on less adaptive strategies like emotional suppression.

Instruments

Following instruments have been used to gather data for this study.

Demographic Data Sheet. A demographic data sheet consisting of variables like age, gender, education, marital status and employment status was used in the present study.

ADHD Screening Checklist. A screening checklist consisting of five items related to the presence of ADHD symptoms was developed on the basis of DSM-5 diagnostic criteria of ADHD for the present study. The purpose of this checklist was to identify the presence of ADHD-related symptoms among participants. Only individuals who showed the presence of ADHD symptoms on the screening checklist were included into the sample of the present study.

Adult ADHD Self-Report Screening Scale for DSM-5 (ASRS-5). In order to measure attention deficit hyperactivity disorder (ADHD) symptoms in adults (18 years of age and older), the Adult ADHD Self-Report screening test for DSM-5 has been used. It is 6-item self-report questionnaire showing high test accuracy (Sensitivity=0.83 [0.67–0.92], Specificity=0.87 [0.93–0.8], AUC=0.92, I2=8.6–12.3 %) (Ganzenmüller et al., 2024).

Relationship Assessment Scale (RAS). It is a tool used to assess general relationship satisfaction. Developed by Susan Hendrick in 1988, this scale is versatile and designed to measure satisfaction in various types of relationships, including romantic, family, and friendship contexts. It has seven items that assess different dimensions of relationship satisfaction and is frequently used in both research and clinical settings. RAS has high reliability with coefficient alpha .91, and interitem correlations ranging from .35 to .80 (Vaughn & Baier, 1999).

Perth Emotional Reactivity Scale-Short Form (PERS-S). It is a self-report assessment of people's trait levels of emotional reactivity that consists of 18 items and is a condensed version of the 30-item PERS. Most importantly, the PERS measures the average duration, intensity, and ease of activation of a person's emotional reactions, evaluating negative and positive emotions separately. The PERS and PERS-S, found high internal consistency reliability and valid factor structures as measures of emotional reactivity. Both scales showed expected correlations with measures of psychopathology and emotion regulation, indicating their relevance in capturing emotional profiles. The PERS scale exhibited slightly higher reliability, making it preferable for clinical decisions, while the PERS-S remains suitable for research purpose (Preece et al., 2019).

Rosenberg Self-Esteem Scale. It is developed by Morris Rosenberg in 1965, uses ten statements—five positive and five negatives—to gauge a person's sense of self-worth. With correlations of .85 and .88, the RSE exhibits outstanding internal consistency and test-retest

reliability. Additionally, it exhibits construct, concurrent, and predictive validity and is connected with self-esteem, depression, and anxiety measures (Rosenberg, 2006).

Emotion Regulation Questionnaire (ERQ). is developed by Gross & John in 2003. The ERQ is a 10-item self-report test used to evaluate individual variations in the routine application of expressive suppression and cognitive reappraisal, two emotion regulation strategies. The ERQ showed excellent reliability with Cronbach's alpha ranging from .89 to .90 on cognitive reappraisal and .76 to .80 on expressive suppression. Its validity was supported by expected correlations with psychological distress and alexithymia across all samples (Preece et al., 2020).

Ethical Consideration

Ethical approval for this study has been obtained from the Ethical Review Board of the Department of Psychology, IIUI. Prior to data collection, informed consent was obtained from all participants, who were fully informed about the purpose, procedures, potential risks, and benefits of the study. Participants were assured that their participation is voluntary and that they have the right to withdraw at any time without any negative consequences. Furthermore, strict measures were taken to ensure the privacy and confidentiality of all data, and personal information was anonymized and securely stored. All information gathered was utilised only for research, guaranteeing compliance with ethical guidelines in line with guidelines of institutional review board (IRB) - IIUI.

Procedure

For the current study, data was collected through the survey method in the form of questionnaires. The scales were administered in their original English version. Participants were recruited from general population including universities, clinics, online support groups for people with ADHD symptoms and community settings, and data were gathered both in

person and via online surveys. Before the collection of data, permission was obtained from the concerned authorities. After the brief introduction about the study, informed consent was obtained from the respondents. Every confusion regarding the process was made clear before filling out the questionnaire. First, a five-item screening checklist was administered to identify individuals exhibiting ADHD symptoms. Only those who showed the presence of ADHD symptoms were then requested to take part in the present study. Data was collected by using Adult ADHD Self-Report Screening Scale for DSM-5 (Ustun et al., 2017), Relationship Assessment Scale (Vaughn & Baier, 1999), Perth Emotional Reactivity Scale—Short Form (Preece et al., 2018), Rosenberg Self-Esteem Scale (Rosenberg, 2006), and the Emotion Regulation Questionnaire (Gross & John, 2003) Participants were requested to be honest when they provide the answer and at the end, they were thanked for their cooperation.

Results

Table 1

Frequencies and percentages of Demographic Variables under Study (N=90)

Variable	Category	F	Percentage
Gender	Male	42	46.7%
	Female	48	53.3%
Age	18-25	42	46.7%
	26-35	48	53.3%
Relationship	Single	40	44.4%
	Engaged	34	37.8%
	Married	16	17.8%
Education	Undergraduate	37	41.1%
	Postgraduate	53	58.9%
Job	Employed	43	47.8%
	Unemployed	47	52.2%

Above Table shows frequency and percentage of demographic variables of the study which are gender, age, relationship, education and job. There are 46.7% male and 53.3% female participants in the sample. 46.7% of sample belongs to age range 18-25 and 53.3% from range 26-35. There are 44.4% single participants, 37.8% engaged and 17.8% are married. Participants have different level of education. 41.1% participants are undergraduate and, 58.9% are from

postgraduate level. There are 47.8% employed participants and 52.2% of the participants are unemployed.

Table 2

Descriptive Statistics and Reliability Coefficients of Emotional Reactivity, Relationship Satisfaction, Self-Esteem, and Emotion Regulation Strategies in Adults with ADHD Symptoms (N=90)

Variables	K	α	M(SD)	Range	Skewness	Kurtosis
Adult ADHD	6	.74	16.09(3.6)	6-24	.16	.25
Emotional Reactivity	18	.85	53.13(13.04)	33-86	.43	-.38
Relationship Satisfaction	07	.71	26.03(7.08)	2-41	-1.14	2.01
Self-esteem	10	.71	20.53(4.0)	14-29	.17	-1.12
Emotional regulation strategies	10	.88	39(11)	20-58	-.18	-1.21

Table 2 shows mean, standard deviation, alpha reliability coefficient and descriptive statistics of Emotional Reactivity, Relationship Satisfaction, Self-Esteem, and Emotion Regulation Strategies in Adults with ADHD Symptoms. Adult ADHD scale showed a reliability of .61 for all 6 items, which improved to .73 after removing item 2. Emotional Reactivity scale had a reliability of .85, Relationship Satisfaction scale had .71, Self-esteem scale had .71, and Emotional Regulation Strategies scale had .88, indicating high internal consistency for Emotional Reactivity and Emotional Regulation Strategies, and acceptable

internal consistency for Relationship Satisfaction, Self-esteem, and Adult ADHD. The skewness and kurtosis values for all variables were within satisfactory limits, suggesting no major deviations from normality.

Table 3

Correlation between emotional reactivity, relationship satisfaction, Self-esteem and emotion regulation strategies in adults with ADHD symptoms(N=90)

Variables	1	2	3	4	5
Adult ADHD	-	.428**	-.27**	-.491**	.050
Emotional Reactivity	-	-	-.497**	-.697**	.041
Relationship Satisfaction	-	-	-	.355**	-.126*
Self-esteem	-	-	-	-	-.057
Emotion regulation strategies	-	-	-	-	-

Note. * $P < .01$ and *** $P < .001$

Table 3 shows the correlations between Adult ADHD, Emotional Reactivity, Relationship Satisfaction, Self-esteem, and Emotion Regulation Strategies. Adult ADHD had a significant positive correlation with Emotional Reactivity ($r = .428$) and significant negative correlations with Relationship Satisfaction ($r = -.270$) and Self-esteem ($r = -.491$), while its correlation with Emotion Regulation Strategies was nonsignificant ($r = .050$). Relationship satisfaction and Emotional Reactivity were significantly correlated negatively ($r = -.497**$)

and with Self-esteem ($r = -.697^{**}$), and a nonsignificant correlation with Emotion Regulation Strategies ($r = .041$). Self-esteem and Relationship Satisfaction had a strong positive correlation ($r = .355^{**}$), while Emotion Regulation Strategies and Relationship Satisfaction had a weak but significant positive correlation ($r = .126^*$). There was a nonsignificant negative correlation of Self-esteem with Emotion Regulation Strategies ($r = -.057$).

Table 4

Simple linear regression showing emotional reactivity as a predictor of relationship satisfaction among adults with ADHD symptoms. (N=90).

	B	SEB	β	t	P
Constant	40.38	2.75	-	14.70	.00
Emotional Reactivity	-.27	.05	-.50	-5.38	.00
R	.50 ^a	-	-	-	-
R^2	.25	-	-	-	-
ΔF	28.90	-	-	-	.000

Table 4 demonstrates the effect of emotional reactivity on relationship satisfaction in adults with ADHD symptoms. The predictor variable explained 25% of the variance in the outcome variable, according to the R^2 value of .25 ($F = 28.90$, $p < .000$). The results showed that relationship satisfaction was negatively predicted with emotional reactivity ($B = -.50$, $p < .000$).

Table 5

Self-Esteem as a Mediator between Emotional Reactivity and Relationship Satisfaction (N = 90)

Self Esteem			
	B	SE B	B
	[95% CI]		
Step I			
Constant	31.92**		1.28
	[29.36, 34.46]		
Emotional Reactivity	-0.21**	.02	-0.70
	[-0.26, -0.17]		
$R = .70, R^2 = .49, F(1, 88) = 83.31, p < .001$			
Step II			
Constant.	39.46**		7.82
	[23.90, 55.00]		
Emotional Reactivity	-.26**	.07	-.50**
	[-0.40, -0.12]		
Self Esteem	.30	.23	.02
	[-.427, .485]		
$R = .50, R^2 = .247, F(2, 87) = 14.30, p < .001$			

Table 5 presents the results of the mediation analysis examining whether self-esteem mediates the relationship between emotional reactivity and relationship satisfaction in individuals with ADHD symptoms. In Step I, negative emotional reactivity significantly predicted self-esteem ($B = -0.21$, $p < .001$), explaining 49% of the variance. In Step II, self-esteem did not significantly predict relationship satisfaction ($B = 0.03$, $p > .05$), while negative emotional reactivity continued to be a significant predictor ($B = -0.26$, $p < .001$). The indirect effect of self-esteem was non-significant ($B = -0.006$, 95% CI [-0.09, 0.10]), suggesting that the association between relationship satisfaction and negative emotional reactivity was not mediated by self-esteem.

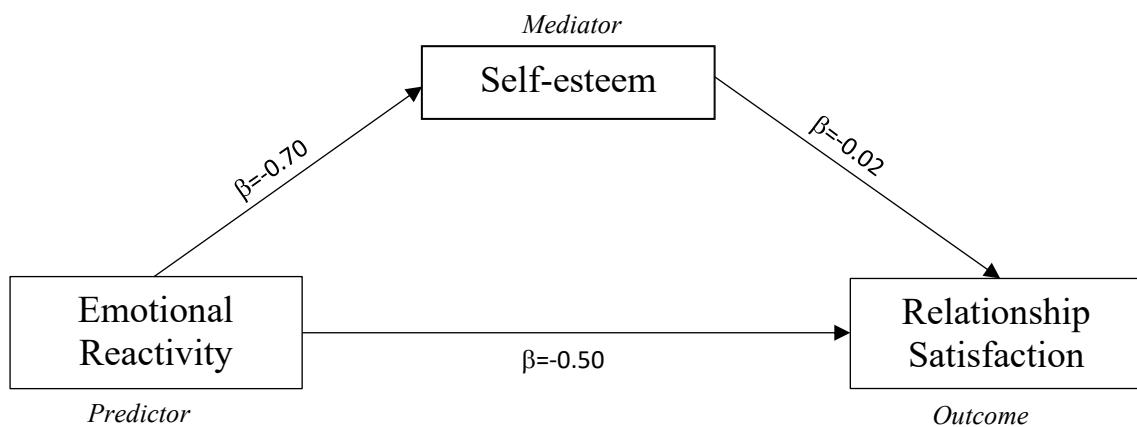


Figure II. The path diagram illustrates self-esteem plays a mediating role in the link between emotional reactivity and relationship satisfaction. The results shows that emotional reactivity negatively predicted self-esteem ($\beta = -0.70$, $p < .01$). However, self-esteem did not significantly predict relationship satisfaction ($\beta = 0.02$). The direct path from emotional reactivity to relationship satisfaction remained significant ($\beta = -0.50$, $p < .01$), recommending that self-esteem did not mediate this relationship.

Table 6

Moderating role of Emotion Regulation Strategies in the relationship between Emotional Reactivity and Relationship Satisfaction (N = 90)

	<i>B</i>	<i>SEB</i>	<i>t</i>	<i>p</i>	<i>LL</i>	<i>UL</i>	<i>95%CI</i>
Constant	26.07	0.65	40.21	.000	24.78	27.36	
Emotional Reactivity	-0.27	0.05	-5.31	.000	-0.37	-0.17	
Emotional regulation strategies	-0.06	0.06	-0.92	.362	-0.17	0.06	
Emotional Reactivity *	-0.006	0.005	-1.27	.208	-0.02	0.003	
Emotional regulation strategies							

Primary Outcome of the Predictor. There was a substantial inverse association at the mean value of emotion regulation strategies between Emotional Reactivity and Relationship Satisfaction, $\beta = -0.27$, $t = -5.31$, $p < .001$, 95% CI (-0.37, -0.17).

Primary Outcome of the Predictor. There was a substantial inverse association at the mean value of emotion regulation strategies between Emotion regulation strategies and Relationship Satisfaction $\beta = -0.06$, $t = -0.92$, $p > .05$, 95% CI (-0.17, 0.06).

Interaction. In predicting relationship satisfaction, there was no statistically significant interaction between emotional reactivity and emotion regulation strategies, $\beta = -0.006$, $t = -1.27$, $p > .05$, 95% CI (-0.02, 0.003). This indicates that the relationship between

Emotional Reactivity and Relationship Satisfaction was not conditional upon Emotion regulation strategies.

Slope Analysis of Moderation. Since the interaction term was non-significant, slope analysis results do not provide evidence for a conditional effect of Emotional Reactivity on Relationship Satisfaction at different levels of Emotion regulation strategies.

Table 7

Mean, Standard Deviation and t-value of Male and Female adults with ADHD symptoms on Emotional Reactivity, Relationship Satisfaction, Self-Esteem, and Emotion Regulation (N=90).

Variables	Male		Female		t	P	CL	
	(n=42)		(n=48)				LL	UL
ADHD Symptoms	16.33	3.65	15.88	3.55	.60	.99	-1.05	1.97
Emotional Reactivity	47.43	8.47	58.13	14.31	-4.23	.002	-15.71	-5.67
Relationship Satisfaction	27.52	3.84	24.73	8.85	1.90	.000	-1.36	5.72
Self esteem	22.24	3.71	19.4	3.67	4.10	.098	1.65	4.75
Emotion Regulation Strategies	37.88	10.76	39.90	11.24	-.87	.97	-6.64	2.61

Table 7 shows the differences between male and female participants on ADHD Symptoms, Emotional Reactivity, Relationship Satisfaction, Self-esteem, and Emotion

Regulation Strategies. There were no significant differences between males and females on ADHD Symptoms and Emotion Regulation Strategies. Females scored substantially higher than males on emotional reactivity, and males scored much higher than on Relationship Satisfaction and Self-esteem.

Chapter 4

Discussion

The current study intended to measure the association of emotional reactivity with relationship satisfaction in adults with ADHD symptoms, while studying the mediating role of self-esteem and the moderating role of emotion regulation strategies. The findings provide meaningful insights into the complex dynamics between ADHD symptoms, emotional processes, and interpersonal functioning in adulthood.

The first hypothesis of this study was to examine whether there would be a negative relationship between emotional reactivity and relationship satisfaction among adults with ADHD symptoms. The current study's findings are consistent with previous studies (Bruner, Whittaker, & Lammers, 2015; Wymbs, 2021; Knies, 2018) suggesting that ADHD symptoms are connected with reduced relationship satisfaction. For example, adults with major ADHD symptoms reported lower quality romantic relationships than without symptoms, (Bruner et al., 2015). Importantly, their results also demonstrated that this relationship was mediated by hostile conflict tendencies and issues with emotion regulation, further highlighting how heightened emotional reactivity and regulation difficulties can impair relationship satisfaction. This supports the argument that greater emotional reactivity, often present in adults with ADHD symptoms, can negatively impact the quality of intimate relationships (Bruner et al., 2015).

Findings of the present study shows that self -esteem did not mediate the association between emotional reactivity and relationship satisfaction, which is consistent with the mixed findings in the literature. A systematic evaluation of self-esteem in adults with ADHD found that the majority of studies reported decreased self-esteem in this population compared to healthy controls, and that self-esteem often plays a role in negative outcomes linked to ADHD

(Chamberlain et al., 2017; Dan & Raz, 2015b; Pedersen et al., 2024b; Turel & Bechara, 2016). However, the review also emphasized several methodological limitations and inconsistencies across studies, which make it hard to draw conclusions about the mediating role of self-esteem (J. Cook et al., 2014b). For example, while some studies investigate that self-esteem mediated the connection between ADHD and outcomes such as depression, test anxiety, and social anxiety (Dan & Raz, 2015b; Evren et al., 2021; Michielsen et al., 2014) other findings suggest that this role may be domain-specific rather than universal. Importantly, the review also highlighted that demographic factors, ADHD symptom severity, and comorbidities can strongly influence self-esteem, making the relationship more complex (Bae et al., 2019; Evren et al., 2021). Taken together, this supports the idea that self-esteem does not consistently act as a mediator, which is consistent with the results of current study.

Third hypothesis of the present study predicted emotion regulation strategies would moderate the association between relationship satisfaction and emotional reactivity in adults having ADHD symptoms. However, this expectation was not facilitated by the results. This aligns with previous studies showing that not all emotion regulation strategies are helpful in relationships (Wu et al., 2024). For example, a study by Walker et al (2023) found that strategies like reappraisal, direct action, expressive repression, and distraction did not significantly predict relationship satisfaction, even though others like humor and valuing did. Findings suggest that the regulation strategies depend on context, type of strategy, and the partner's perception. (Walker et al., 2023). Another study found that expressive suppression was strongly related to stress symptoms in trauma-exposed adults, but not in undergraduates, while reappraisal only showed weak protective effects. The authors concluded that suppression and reappraisal are independent strategies, and their effects depend on context (Moore et al., 2008). Therefore, it might be possible that in the present study emotion regulation strategies

do not consistently buffer the negative effects of emotional reactivity in adults with ADHD symptoms.

The fourth hypothesis suggested that females with ADHD symptoms would report higher emotional reactivity and lower relationship satisfaction compared to males with ADHD symptoms. Findings of the present study supported this assumption, showing that females reported higher levels of emotional reactivity and faced more difficulties in maintaining relationship satisfaction than men. These results are in line with earlier research which shows that women with ADHD often experience more intense emotions and greater challenges with regulation than men (Faheem et al., 2022). Another study reported that women with ADHD were more impaired than men on ADHD symptom measures and also showed higher levels of emotional dysregulation (temper control problems, mood swings, and emotional over reactivity). The study also suggested that women experience greater emotional difficulties, which may affect how they regulate their emotions and how satisfied they feel in relationships.(Robison et al., 2008). The gender differences observed in emotional reactivity and regulation may be partially explained by sociocultural norms in Pakistan, where emotional expression is often more accepted for women and restricted for men (Ahmad & Anwar, 2018; Khan & Kamal, 2017). These findings align with cross-cultural literature suggesting that emotion expression and regulation are shaped by cultural expectations. The observed gender differences in emotional reactivity and regulation reflect sociocultural norms in Pakistan, where women are generally encouraged to express emotions more openly, while men are socialized to suppress emotional expression. (Mesquita & Walker, 2003). Together, these findings suggest that women with ADHD symptoms not only struggle more with emotional regulation but also report lower satisfaction in their relationships, supporting the hypothesis of the current study.

Limitations & Suggestions

Although the study offers insightful information, it should be noted that it has some limitations as well. The cross-sectional design prevents causal conclusions, as relationships between variables may be bidirectional. The sample was limited in size and diversity, reducing the generalizability of findings to the wider population. Self-report measures may also be influenced by biases such as social desirability or underreporting. Additionally, the study did not include clinical interviews or longitudinal tracking, which could have strengthened the findings.

Future research should adopt experimental or longitudinal designs to better build causality between emotional reactivity, self-esteem, and relationship satisfaction. Larger and more diverse samples, including clinical populations, would help clarify gender differences and cultural factors in ADHD. It would also be beneficial to explore additional mediators and moderators, such as social support, coping mechanisms, or attachment styles, which may better explain the link between emotional reactivity and relationship satisfaction. Future research should consider assessing and controlling for comorbid conditions such as anxiety and depression, as these factors may influence emotional reactivity and relationship satisfaction. Including these variables in future analyses would help clarify the unique contribution of ADHD symptoms and enhance the accuracy and interpretability of the findings. Finally, future interventions could test the effectiveness of emotion regulation and self-esteem enhancement programs in improving relational outcomes among adults with ADHD symptoms in Pakistan.

Implications

The study's conclusions have numerous significant implications. For clinical practice, they highlight the need to focus not only on core ADHD symptoms but also on the emotional and relational challenges faced by adults with ADHD, particularly in Pakistan where such issues

are often overlooked. Interventions should incorporate emotion regulation skills training, relationship counselling, and gender-sensitive approaches to better support individuals struggling with heightened emotional reactivity.

On a research level, the lack of mediation and moderation effects suggests that other factors, such as attachment styles, coping mechanisms, and social support, may play a stronger role in explaining how emotional reactivity affects relationship satisfaction. This opens new directions for researchers to explore broader psychological models. At the societal level, the study underscores the importance of reducing stigma around adult ADHD and promoting awareness that the disorder extends beyond childhood. By acknowledging the emotional and relational struggles of adults with ADHD, policymakers and professionals in mental health can work together to design programs that foster healthier relationships and improved quality of life.

Conclusion

This study examined how emotional reactivity influences relationship satisfaction in adults ADHD symptoms by focusing on the mediating role of self-esteem and the moderating role of emotion regulation strategies. Conducted in Pakistan, research addressed the lack of studies in this cultural and clinical context, where adult ADHD remains underexplored compared to childhood ADHD. Using standardized scales, data were collected from adults reporting ADHD symptoms to assess their emotional, relational, and psychological functioning.

The findings revealed that emotional reactivity has negative association with relationship satisfaction, showing that individuals with higher emotional reactivity tend to struggle more in maintaining fulfilling relationships. The present study found non-significant role of self-esteem as mediator and also non-significant moderating role of emotion regulation strategies between the association of emotional reactivity and relationship satisfaction in adults with ADHD symptoms. Gender differences were significant, with women reporting higher emotional

reactivity and lower relationship satisfaction as compared to men. These findings highlight the complex interplay between, emotional functioning, relationship quality and ADHD symptoms, while pointing to the importance of gender-specific challenges.

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Appendices

Appendix A

CONSENT FORM

Respected Respondent, I am a student of Ms. Psychology from International Islamic University Islamabad. The present research is the part of ongoing research conducted at Department of Psychology, International Islamic University Islamabad. This present research consists of the attached questionnaires.

Therefore, it is requested to fill the attached questionnaires on the basis of your experience and personal view. While the information provided by you will be kept confidential and completely anonymous and will be solely used for the research purpose. The consent form also allows you the privilege of right to withdraw from the process at any point where you don't want to participate any further. However, I will be grateful if you fill this questionnaire till the end. In case you counter any sort of difficulty regarding questionnaire's items you can contact the researcher. Regards.

Email: hinakhali1921@gmail.com

Appendix B**DEMOGRAPHIC SHEET****DEMOGRAPHIC DETAILS:**

Gender:	Male <input type="checkbox"/>	Female <input type="checkbox"/>		
Relationship Status:	Single <input type="checkbox"/>	Committed <input type="checkbox"/>	Married <input type="checkbox"/>	Divorced <input type="checkbox"/>
Education:	Undergraduate <input type="checkbox"/>	Postgraduate <input type="checkbox"/>		
Employed:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Any physical health issue:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Any mental health issues:	Yes <input type="checkbox"/>	No <input type="checkbox"/>		

Age: _____

Birth Order: _____

No. of siblings: _____

Socio economic status: _____

Department/Faculty: _____

Appendix C

SCALE-A

Instructions: Please indicate the presence or absence of following symptoms during the past 6 months.

	Statements	YES	NO
1.	I often have difficulty sustaining attention during tasks or activities.		
2.	I frequently find myself being easily distracted by external stimuli or unrelated thoughts.		
3.	I tend to start tasks but have trouble finishing them because I lose focus or become disorganized.		
4.	I often act impulsively or make decisions without fully thinking them through.		
5.	I find it difficult to sit still or stay calm, often feeling restless or fidgety.		

Appendix D

SCALE-B

Instructions: Please answer the questions below, checking the box that best describes how you have felt and conducted yourself over the past 6 months.

	Statements	Never	Rarely	Sometimes	Often	Very Often
1.	How often do you have difficulty concentrating on what people are saying to you even when they are speaking to you directly?					
2.	How often do you leave your seat in meetings or other situations in which you are expected to remain seated?					
3.	How often do you have difficulty unwinding and relaxing when you have time to yourself?					
4.	When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to before they can finish them themselves?					
5.	How often do you put things off until the last minute?					
6.	How often do you depend on others to keep your life in order and attend to details?					

Appendix E

SCALE-C

Instructions: Place an (x) in the box to the right of each category that best describes the amount of satisfaction you feel in your closest relationship.

	Statements	Very Dissatisfied	Moderately Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Moderately Satisfied	Very Satisfied
1.	Communication and Openness							
2.	Resolving conflicts and arguments							
3.	Degree of affection and caring							
4.	Intimacy and closeness							
5.	Satisfaction with your role in the relationship							
6.	Satisfaction with the other person's role							
7.	Overall satisfaction with your relationship							

Note: Although this test assesses your marriage or most intimate relationship, you can also respond to it according to your relationship with a friend, family member, or colleague. If you do not have any intimate relationships at this time, you can simply think of people in general when you take the test.

Appendix F

SCALE-D

Instructions: This questionnaire is designed to measure different aspects of how you typically react to experiencing emotional events. Please score the following statements according to how much they apply or do not apply to you on a typical day. Circle one answer for each question.

	Statements	Very Unlike me	Somewhat unlike me	Neither like or unlike me	Somewhat like	Very like me
1.	I tend to get happy very easily.					
2.	I tend to get upset very easily.					
3.	When I'm happy, the feeling stays with me for quite a while.					
4.	When I'm upset, it takes me quite a while to snap out of it.					
5.	When I am joyful, I tend to feel it very deeply.					
6.	If I'm upset, I feel it more intensely than everyone else.					
7.	I feel good about positive things in an instant.					
8.	I tend to get disappointed very easily.					
9.	When I'm feeling positive, I can stay like that for a good part of the day.					
10.	It's hard for me to recover from frustration.					
11.	I experience positive mood very strongly.					
12.	Normally, when I'm unhappy I feel it very strongly.					
13.	I react to good news very quickly					
14.	I tend to get pessimistic about negative things very quickly.					
15.	I can remain enthusiastic for quite a while.					
16.	Once in a negative mood, it's hard to snap out of it.					
17.	When I'm enthusiastic about something, I feel it very powerfully.					
18.	My negative feelings feel very intense.					

Appendix G

SCALE-E

Instructions: Please read each statement. Then circle the letter indicating how much you agree or disagree with the statement.

	Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	I feel that I am a person of worth, at least on an equal plane with others.				
2.	I feel that I have a number of good qualities.				
3.	All in all, I am inclined to feel that I am a failure.				
4.	I am able to do things as well as most other people.				
5.	I feel I do not have much to be proud of.				
6.	I take a positive attitude toward myself.				
7.	On the whole, I am satisfied with myself.				
8.	I wish I could have more respect for myself.				
9.	I certainly feel useless at times.				
10.	At times I think I am no good at all.				

Appendix H

SCALE-F

Instructions: We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

1-----	2-----	3-----	4-----	5-----	6-----	7-----
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree

	Statements	1	2	3	4	5	6	7
1.	When I want to feel more <i>positive</i> emotion (such as joy or amusement), I <i>change what I'm thinking about</i> .							
2.	I keep my emotions to myself.							
3.	When I want to feel less <i>negative</i> emotion (such as sadness or anger), I <i>change what I'm thinking about</i>							
4.	When I am feeling <i>positive</i> emotions, I am careful not to express them							
5.	When I'm faced with a stressful situation, I make myself <i>think about it</i> in a way that helps me stay calm.							
6.	I control my emotions by <i>not expressing them</i>							
7.	When I want to feel more <i>positive</i> emotion, I <i>change the way I'm thinking about</i> the situation.							
8.	I control my emotions by <i>changing the way I think about</i> the situation I'm in.							
9.	When I am feeling <i>negative</i> emotions, I make sure not to express them.							
10.	When I want to feel less <i>negative</i> emotion, I <i>change the way I'm thinking about</i> the situation							