

Self-Compassion, Intolerance of Uncertainty, and Psychological Distress: Emotion Dysregulation as a Shared Mediating Mechanism Among Young Adults

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ABSTRACT

The experiences of psychological distress in emerging adulthood depend on various psychological protective mechanisms and cognitive vulnerability indicators. Specifically, self-compassion might play a role in decreasing psychological distress by helping an individual form a better relationship with their difficulties, while intolerance of uncertainty can increase such distress through an increase in the perceived threats and risks in unclear situations. The present study examined emotion dysregulation as a shared mediating mechanism linking self-compassion and intolerance of uncertainty with psychological distress. A cross-sectional correlational design was used. The final sample consist of 249 participants, predominantly young adults, recruited through purposive sampling. Participants completed measures of self-compassion, intolerance of uncertainty, emotion dysregulation, mindfulness, and psychological distress. Pearson correlations and mediation analyses using Hayes' PROCESS macro were conducted. Self-compassion was negatively related to emotion dysregulation and psychological distress, whereas intolerance of uncertainty was positively related with both emotion dysregulation and psychological distress. Emotion dysregulation showed the strongest association with psychological distress. Mediation analyses indicated that emotion dysregulation significantly mediated the relationship between self-compassion and psychological distress after controlling for intolerance of uncertainty. The relationship between intolerance of uncertainty and psychological distress was significantly mediated by emotion dysregulation after controlling for self-compassion. The direct effect of self-compassion remained significant, suggesting partial mediation, whereas the direct effect of intolerance of uncertainty became non-significant after emotion dysregulation was included. Above findings suggest that emotion dysregulation is a central psychological pathway through which both protective and vulnerability-related factors are associated with psychological distress. Interventions aimed at reducing distress among young adults may benefit from strengthening self-compassion, improving tolerance of uncertainty, and targeting difficulties in emotion regulation.

Keywords: self-compassion; intolerance of uncertainty; emotion dysregulation; psychological distress; young adults

INTRODUCTION

Psychological distress among young adults has become an increasingly important concern in contemporary mental health research, as this developmental period is often marked by identity exploration, academic and occupational uncertainty, changing interpersonal roles, and increasing responsibility for independent decision-making (Arnett, 2000; Arnett et al., 2014; Bottesi, 2024; Nekić, 2023). Emerging adulthood is a period of transition marked by continued developmental tasks in education, work, relationships, autonomy, and planning for the future, rendering young people especially

vulnerable to stress, anxiety, and issues associated with uncertainty (Arnett, 2023; Bottesi, 2024; Nekić, 2023; Qiang et al., 2024). Young adults who do not have adequate emotional and cognitive resources to cope with these uncertain and taxing transitions might be at higher risk for psychological distress including symptoms of depression, anxiety and stress. (Okayama et al., 2024; Regnoli et al., 2024; Riaz et al., 2021).

Psychological distress is not only a clinical problem but also a functional problem, because symptoms of distress can interfere with academic functioning, interpersonal adjustment, self-regulation, and future planning. Research conducted during and after the COVID-19 pandemic has shown that young adults tend to experience more levels of anxiety, depression, stress, and uncertainty than older adults, suggesting that young people may be particularly vulnerable during times of social upheaval and unpredictable life situations. (Glowacz & Schmits, 2020; Okayama et al., 2024; Regnoli et al., 2024). A large study during the pandemic COVID-19 found that young adults reported more anxiety, depression and uncertainty than older participants and that intolerance of uncertainty was linked to psychological distress. Recent work on young adults has also found that constructs related to uncertainty are strongly associated with stress, anxiety, depression and broader mental health outcomes. (Nekić, 2023; Regnoli et al., 2024).

In this broader context, self-compassion has been known as an important protective psychological resource. Self-compassion is responding to suffering, shortcomings or failures with self-kindness, a sense of shared humanity and balanced awareness rather than self-criticism, isolation or over-identification with distress (Neff, 2003; Neff & Germer, 2013). Those who score highly on measures of self-compassion are more likely to face painful experiences with acceptance and emotional balance, which may in turn reduce the tendency to engage in self-blame, rumination, avoidance, and threat-based responding. A great deal of research connects self-compassion with lower depression, anxiety, stress, and psychopathology and higher well-being and resilience. (MacBeth & Gumley, 2012; Neff, 2003; Zessin et al., 2015). Recent research also highlights that self-compassion may support mental health by enhancing emotion regulation, reducing avoidance, and helping individuals respond to distressing experiences with greater psychological flexibility. (Deniz, 2021; Kaçar-Başaran & Gökdağ, 2025; Yousefi Afrashteh & Hasani, 2022).

Young adults may find self-compassion especially relevant as this life stage often entails comparison, pressure to perform, anxiety about the future, and recurrent exposure to personal uncertainty. In such cases, a self-critical response to adversity may exacerbate discomfort while a compassionate self-response may offer emotional containment and reduce maladaptive responses. This protective role is supported by empirical evidence. For instance, Deniz (2021) found that self-compassion was favorably connected with well-being and adversely associated with intolerance of uncertainty and fear of COVID-19 in a serial mediation model. Similarly, Kaçar-Başaran and Gökdağ (2025) showed a negative relationship between self-compassion and intolerance of uncertainty and obsessive-compulsive symptoms, with intolerance of uncertainty mediating the association between self-compassion and psychological symptoms. These results imply that self-compassion may be a protective factor for mental health directly and may also serve as a protective factor indirectly by affecting the way individuals interpret and respond to ambiguous or stressful circumstances.

Conversely, intolerance of uncertainty is a cognitive vulnerability factor. The concept refers to a dispositional tendency to see ambiguous, unclear or unpredictable events as dangerous, unpleasant or difficult to cope with (Buhr & Dugas, 2002; Carleton, 2016; Dugas et al., 2004). People who score high on intolerance of uncertainty may experience more emotional reactivity, concern, avoidance, reassurance-seeking and cognitive rigidity when faced with unknown outcomes. This tendency is conceptualized broadly as a transdiagnostic risk factor since it is associated with various forms of psychological distress, such as anxiety, depression, obsessive-compulsive symptoms, worry, and stress-related problems (Carleton, 2016; McEvoy et al., 2019; Okayama et al., 2024). Recent work has also pointed out that

intolerance of uncertainty is particularly prominent in adolescence and emerging adulthood, as they are progressively organized around change, ambiguity and future-oriented decision-making. (Bottesi, 2024; Nekić, 2023).

There is a growing corpus of empirical evidence for the link between intolerance of ambiguity and psychological suffering in young adults. Nekić (2023) found that intolerance of uncertainty and mindfulness were significantly linked to stress and anxiety in emerging adults. Regnoli et al. (2024) showed that intolerance of uncertainty mediated the relationship between fear of war and psychological distress among Italian young adults, while related work also identified intolerance of uncertainty as a mediating mechanism linking climate change worry and future anxiety with distress outcomes (Regnoli et al., 2024). Other recent evidence indicates that intolerance of uncertainty predicts worry in young adults and is associated with poorer mental health across developmental stages (Okayama et al., 2024; Yağar Kalaycı & Aydın, 2025). Together, these findings support the view that difficulty tolerating uncertainty is a meaningful vulnerability process in young adult distress.

Although self-compassion and intolerance of uncertainty are often examined separately, emerging evidence suggests that they may be meaningfully integrated in the same model. Self-compassion may reduce the perceived threat of uncertain situations by helping individuals respond to discomfort with acceptance rather than avoidance, self-blame, or catastrophic interpretation. Conversely, low self-compassion may leave individuals more vulnerable to uncertainty-related distress because they may interpret ambiguity as personal failure, loss of control, or evidence of inadequacy. Recent studies have begun to examine these constructs together. Yildiz (2023) found that self-compassion and intolerance of uncertainty played mediating roles in the association between self-differentiation and self-concealment among university students. Qiang et al. (2024) found that intolerance of uncertainty predicted academic burnout among university students, whereas self-compassion served as a protective factor that moderated the negative impact of uncertainty-related strain. These findings indicate that self-compassion and intolerance of uncertainty may represent opposing psychological processes: one protective and self-regulatory, the other vulnerability-oriented and threat-based.

Emotion dysregulation provides a theoretically coherent mechanism through which both self-compassion and intolerance of uncertainty may be associated with psychological distress. Emotion regulation is defined as a process by which people observe, appraise, and change their emotional reactions in the service of their goals and the demands of the situation (Gross, 1998, 2015). Emotion dysregulation, on the other hand, is characterized by problems in emotional awareness, emotional clarity, acceptance of emotional responses, impulse control, goal-directed behavior under distress, and access to effective regulation strategies. (Gratz & Roemer, 2004). These difficulties have been strongly linked to a range of internalizing symptoms, including depression, anxiety, and stress (Aldao et al., 2010; Gratz & Roemer, 2004; Gross, 2015). From this perspective, distress is not only understood in terms of presence of negative emotions, but also by how individuals respond to, analyze, and regulate those emotions.

The relevance of emotion dysregulation to the present model is supported by both theoretical and empirical work. Self-compassion may reduce emotion dysregulation by allowing individuals to acknowledge painful emotional states without excessive self-criticism, avoidance, or over-identification. In this way, self-compassion can promote emotional acceptance and flexible responding. Yousefi Afrashteh and Hasani (2022) found that mindfulness was indirectly linked with psychological well-being through self-compassion, emotional dysregulation, and cognitive flexibility, suggesting that adaptive self-related processes and emotion regulation jointly contribute to well-being. In contrast, intolerance of uncertainty may heighten emotion dysregulation because uncertain situations are interpreted as threatening, uncontrollable, and emotionally overwhelming. Such responses may increase worry, avoidance, impulsive attempts to reduce distress, or difficulty engaging in goal-directed behavior. Recent

studies have shown that intolerance of uncertainty is associated with self-regulatory fatigue, worry, anxiety, and broader distress outcomes, further supporting its regulatory burden (Qiang et al., 2024; Regnoli et al., 2024; Yağar Kalaycı & Aydın, 2025).

Evidence from Pakistan further supports the importance of regulatory mechanisms in psychological distress. Qasim and Rana (2022) discovered that mindfulness and emotion regulation were adversely related to depression, anxiety, and stress in Pakistani medical students and these variables strongly predicted psychological distress outcomes. Riaz et al. (2021) found that cognitive emotion control significantly affected psychological issues among the general population in Pakistan during the COVID-19 pandemic, accounting for 21% of the variance in psychological disorders. Similarly, a study among Pakistani undergraduates revealed the predictive value of emotion regulation mechanisms on psychological distress, indicating the significance of emotion regulatory processes in the local university environments. These findings are interesting given that most of the study on self-compassion, intolerance of ambiguity and emotion dysregulation has been carried out in western or non-Pakistani environments. There is a lack of evidence from Pakistan, while it is probable that young adults in this setting are subject to many academic, social, economic and family-related pressures.

Despite a growing body of evidence associating self-compassion, intolerance of uncertainty, emotion control, and psychological suffering, significant gaps still exist. First, a lot of studies look at self-compassion as a protective factor, or intolerance of ambiguity as a vulnerability factor, in distinct models instead of putting the two into one common explanatory framework. Second, although emotion dysregulation has been widely implicated in psychological symptoms, fewer studies have tested whether it functions as a common pathway through which both protective and vulnerability-related processes are associated with distress. Third, limited evidence is available from Pakistani young adult samples, where uncertainty, academic pressure, family expectations, and limited mental health resources may shape the ways individuals experience and regulate distress. Addressing these gaps is important as an integrated model may provide a more accurate understanding of the contribution of both strengths and vulnerabilities to the shaping of young adults' distress. The present study examined whether emotion dysregulation explains how self-compassion and intolerance of uncertainty are linked with psychological distress in young adults. It was expected that self-compassion would relate to lower emotion dysregulation and distress, while intolerance of uncertainty would relate to higher emotion dysregulation and distress. Emotion dysregulation was also expected to mediate both relationships.

METHOD

Research Design

The current study employed a cross-sectional correlational design to measure the relationships between self-compassion, intolerance of uncertainty, emotion dysregulation, mindfulness, and psychological distress. The primary objective of the article-level analysis was to test whether emotion dysregulation served as a shared mediating mechanism linking self-compassion and intolerance of uncertainty with psychological distress. The results are interpreted in terms of statistical associations rather than causal effects because the data were gathered at a single point in time.

Participants

The final analytic sample comprised 249 participants recruited through purposive sampling. Participant's concentration ranged in age from 18 to 29 years ($M = 22.67$, $SD = 3.94$). Although the eligibility criterion allowed adults aged 18 years and above, the sample was predominantly composed of young adults; therefore, the findings are interpreted primarily in relation to a young adult sample. The sample included

144 males (57.8%) and 105 females (42.2%). Most participants were single (87.6%), while 11.6% were married and 0.8% were divorced or separated. In terms of education, 5.6% had matric-level education, 16.5% had intermediate-level education, 68.3% were undergraduates, 8.8% were postgraduates, and 0.8% were enrolled in or had completed PhD-level education. Most participants identified as Muslim (97.6%), and the majority reported no diagnosed mental health condition (84.7%) and no chronic physical illness (88.0%). The thesis document also reports the final sample as 249 participants and provides the same demographic structure.

Measures

The Self-Compassion Scale–Short Form (SCS-SF; Raes et al., 2011), which was created from Neff's original Self-Compassion Scale (Neff, 2003), was used to measure self-compassion. The SCS-SF, which has 12 questions with a 5-point rating system, evaluates both negatively phrased elements like self-judgment, isolation, and over-identification as well as fundamental aspects of self-compassion like self-kindness, shared humanity, and conscious awareness. Before calculating the overall score, negatively phrased questions were reverse-scored; higher scores indicated more self-compassion. The scale showed satisfactory internal consistency in the current research, with $\alpha = .72$.

Intolerance of uncertainty was measured using the Intolerance of Uncertainty Scale–Short Form (IUS-12; Carleton et al., 2007). A 12-item measure of negative views and emotional reactions to ambiguous or unexpected circumstances is called the IUS-12. Higher scores on a 5-point rating system indicate a greater intolerance of uncertainty. For the current sample, the scale's dependability is excellent ($\alpha = .81$). The Difficulties in Emotion Regulation Scale–16 (DERS-16; Bjureberg et al., 2016), a condensed version of the original Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004), was used to measure emotion regulation difficulties. This scale, which is a condensed version of the original DERS, consists of 16 items that measure key aspects of emotion dysregulation, including the inability to control impulses, the inability to be emotionally clear, the inability to accept emotional responses, the inability to engage in goal-directed behavior, and the inability to access emotion regulation skills. Items will be rated by participants on a scale of 1 to 5. 1 is nearly never. 5 is almost usually. The larger the overall score, the more difficult it is to manage one's emotions. According to reports, reliability is .93.

The Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003) was used to measure mindfulness. The MAAS is a 15-item test of dispositional mindfulness that focuses on awareness and present-moment attention in daily situations. Higher levels of mindfulness are indicated by higher scores on the 6-point rating scale. This 15-item, one-dimensional scale is intended to assess dispositional mindfulness, especially the presence or absence of awareness and attention to present-moment events. On a scale of 1 to 6, where 1 represents nearly usually and 6 represents practically seldom, participants will provide their responses. The thoughtless items are inverted such that the degree of attentiveness increases with the overall score. The scale's reliability in the current sample was excellent ($\alpha = .89$). The Depression Anxiety Stress Scales–21 (DASS-21; Lovibond & Lovibond, 1995) was used to quantify psychological discomfort. This is a 21-item survey with three subscales: stress, anxiety, and depression, each with seven questions. Each statement will be given a score between 1 and 4 by the participants. On a scale of 0 (this was not the case with me at all) to 3 (this was the situation with me most of the time), the participants would evaluate the statements in respect to themselves. The final scores are calculated by averaging the subscale scores and multiplying the result by two. High psychological anguish is indicated by high scores. With $\alpha = .93$, the overall scale's internal consistency in this research was outstanding.

Procedure

Data were acquired using online and in-person administration of the survey. Data collection was carried out online using Google Forms, and the URL to the survey was shared through social media platforms, academic networks, and WhatsApp groups. Participants were recruited in person from university settings. Before filling out the questionnaires, the participants were told about the goal of the study, the fact that their participation is optional, confidentiality and anonymity. Participants provided informed consent before to participation. Participants next filled out the demographic information sheet and then the standardized self-report measures. The completed replies were reviewed prior to analysis and the final data set included 249 legitimate cases.

Ethical Considerations

The recognized ethical standards for psychological research were followed in conducting the study. Participants were informed that they might leave the research at any time and that participation was completely voluntary. Anonymity and confidentiality were guaranteed for the whole study and the data was utilized solely for academic and research reasons. The thesis further shows that during the research procedure, informed consent, voluntary participation, confidentiality, anonymity and safe data handling was guaranteed.

Data Analysis

IBM SPSS Statistics and Hayes' PROCESS macro were used to examine the data (Hayes, 2022). Preliminary analyses consisted of data screening, calculation of total score of scale, descriptive statistics, reliability estimations using Cronbach's alpha, and Pearson product-moment correlations among the study variables. The main analyses evaluated emotion dysregulation as a shared mediator of the associations between self-compassion, intolerance of ambiguity, and psychological suffering. We performed two mediation studies using PROCESS Model 4 with 5,000 bootstrap samples. In the initial model, self-compassion was included as the predictor, emotion dysregulation as the mediator, psychological distress as the outcome and intolerance of uncertainty as a covariate. In the second model, the predictor was entered as intolerance of uncertainty, the mediator as emotion dysregulation, the outcome as psychological distress, and the covariate as self-compassion. Indirect effects were deemed significant if the 95% bootstrap confidence interval excluded zero. In the first descriptive and correlational analyses, mindfulness was kept; however, it was not included in the final mediation model, as it was not substantially associated with the primary research variables.

RESULTS

The final analytic sample included 249 people. The dataset was filtered before to hypothesis testing. Higher scores indicated increased levels of self-compassion, intolerance of uncertainty, emotion dysregulation, mindfulness, and psychological distress, respectively. Internal consistency estimates across the study measures ranged from good to outstanding. 249 participants of mean age 22.67, (SD = 3.94) were included in the sample. Most participants were male (57.8%), single (87.6%), and educated at the undergraduate level (68.3%). The majority identified as Muslim (97.6%) and reported no diagnosed mental health condition (84.7%) or chronic physical illness (88.0%). Although the study was open to adults, the age distribution indicates that the findings are most appropriately interpreted in relation to a predominantly young adult sample.

Table 1: Demographic Characteristics of Participants (N = 249)

Characteristic	Category	<i>n</i>	%
Gender	Male	144	57.8
	Female	105	42.2
Education	Matric	14	5.6
	Intermediate	41	16.5
	Undergraduate	170	68.3
	Postgraduate	22	8.8
	PhD	2	0.8
Marital status	Single	218	87.6
	Married	29	11.6
	Divorced/Separated	2	0.8
Residential background	Urban	107	43.0
	Semi-urban	86	34.5
	Rural	56	22.5
Religion	Islam	243	97.6
	Other	6	2.4
Mental health condition	No diagnosis	211	84.7
	Previously diagnosed	32	12.9
	Currently receiving treatment	6	2.4
Physical illness	Yes	30	12.0
	No	219	88.0

Note. Percentages are based on the total sample size ($N = 249$). The sample was predominantly young, unmarried, and educated at the undergraduate level. Most participants were male, Muslim, and reported no diagnosed mental health condition or chronic physical illness.

The descriptive statistics and reliability estimates indicated acceptable to excellent internal consistency across the study measures. Self-compassion showed acceptable reliability ($\alpha = .72$), while intolerance of uncertainty demonstrated good reliability ($\alpha = .81$). Emotion dysregulation ($\alpha = .93$), mindfulness ($\alpha = .89$), and psychological distress ($\alpha = .93$) showed strong internal consistency. The mean scores were 37.06 ($SD = 5.44$) for self-compassion, 32.38 ($SD = 8.30$) for intolerance of uncertainty, 43.28 ($SD = 14.52$) for emotion dysregulation, 49.93 ($SD = 14.91$) for mindfulness, and 27.26 ($SD = 12.11$) for psychological distress.

Table 2: Descriptive Statistics and Reliability Estimates for Study Variables (N = 249)

Variable	No. of items	<i>M</i>	<i>SD</i>	Minimum	Maximum	alpha
Self-compassion	12	37.06	5.44	17	51	.72
Intolerance of uncertainty	12	32.38	8.30	12	60	.81
Emotion dysregulation	16	43.28	14.52	16	80	.93
Mindfulness	15	49.93	14.91	15	90	.89
Psychological distress	21	27.26	12.11	1	63	.93

Note. Higher scores reflect higher levels of each construct. α = Cronbach's alpha.

As presented in Table 3, the correlation pattern supported the proposed conceptual model. Self-compassion was significantly and negatively linked with intolerance of uncertainty ($r = -.303, p < .001$),

emotion dysregulation ($r = -.444, p < .001$), and psychological distress ($r = -.363, p < .001$). Intolerance of uncertainty was positively linked with emotion dysregulation ($r = .647, p < .001$) and psychological distress ($r = .383, p < .001$). Emotion dysregulation showed the strongest association with psychological distress ($r = .555, p < .001$), providing preliminary support for its role as a mediating mechanism. Mindfulness was not significantly associated with the main variables and was therefore not retained in the final mediation model.

Table 3: Correlations Among Study Variables (N = 249)

Variable	1	2	3	4	5
1. Self-compassion	—				
2. Intolerance of uncertainty	-.303***	—			
3. Emotion dysregulation	-.444***	.647***	—		
4. Mindfulness	.099	.040	-.027	—	
5. Psychological distress	-.363***	.383***	.555***	-.109	—

Note. *** $p < .001$.

The mediation model supported emotion dysregulation as a shared explanatory mechanism linking both self-compassion and intolerance of uncertainty with psychological distress. In the mediator model, self-compassion was a negative predictor of emotion dysregulation ($B = -0.718, SE = 0.128, p < 0.001$) and intolerance of uncertainty was a positive predictor of emotion dysregulation ($B = 0.995, SE = 0.084, p < 0.001$). Together, these predictors explained 48.7% of the variance in emotion dysregulation, $R^2 = .487, F(2, 246) = 117.00, p < .001$. Results of the outcome model indicated that emotion dysregulation was a significant predictor of psychological distress ($B = 0.389, SE = 0.061, p < .001$), controlling for self-compassion and intolerance of uncertainty. Self-compassion also remained significantly negatively linked with psychological distress ($B = -.321, SE = .130, p = .014$) and the direct effect of intolerance of uncertainty became non-significant ($B = .055, SE = .101, p = .584$). The overall outcome model explained 32.6% of the variance in psychological distress, $R^2 = .326, F(3, 245) = 39.54, p < .001$. Bootstrapped indirect effects further confirmed the mediating role of emotion dysregulation. The indirect effect of self-compassion on psychological distress through emotion dysregulation was significant ($B = -0.279, BootSE = 0.073, 95\% CI [-0.436, -0.151]$), indicating partial mediation. The indirect effect of intolerance of uncertainty was also significant ($B = 0.387, BootSE = 0.077, 95\% CI [0.254, 0.555]$), suggesting that the association between intolerance of uncertainty and psychological distress operated primarily through emotion dysregulation.

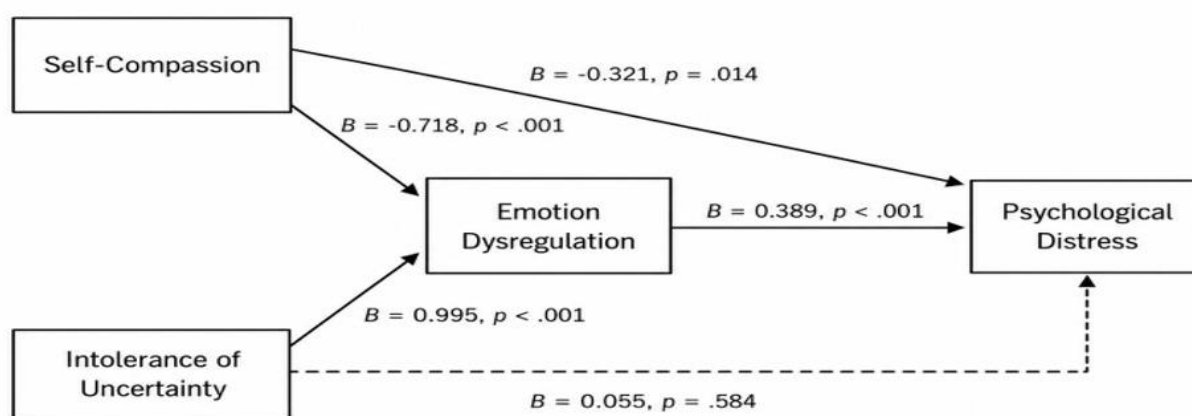
Table 4: Integrated Mediation Model Predicting Psychological Distress Through Emotion Dysregulation

Model and path	B/Effect	SE/BootSE	beta	t	p	95% CI
Mediator model: Outcome = emotion dysregulation						
Self-compassion -> emotion dysregulation	-0.718	0.128	-.269	-5.60	< .001	[-0.970, -0.465]
Intolerance of uncertainty -> emotion dysregulation	0.995	0.084	.567	11.81	< .001	[0.829, 1.161]
Outcome model: Outcome = psychological distress						
Self-compassion -> psychological distress	-0.321	0.130	-.144	-2.46	.014	[-0.578, -0.064]
Intolerance of uncertainty -> psychological distress	0.055	0.101	.038	0.55	.584	[-0.144, 0.254]

Emotion dysregulation -> psychological distress	0.389	0.061	.467	6.37	< .001	[0.269, 0.510]
Indirect effects						
Self-compassion -> emotion dysregulation -> psychological distress	-0.279	0.073	-.125	—	—	[-0.436, -0.151]
Intolerance of uncertainty -> emotion dysregulation -> psychological distress	0.387	0.077	.265	—	—	[0.254, 0.555]

Note. Bootstrap confidence intervals were based on 5,000 samples. Each indirect effect controlled for the alternate predictor. For indirect effects, β represents the completely standardized indirect effect. Confidence intervals excluding zero indicate significant mediation.

Overall, the findings supported the proposed integrated model. Self-compassion is described as a protective factor, whereas intolerance of uncertainty emerged as a cognitive vulnerability factor. Emotion dysregulation functioned as a shared explanatory mechanism linking both predictors with psychological distress. Specifically, self-compassion was linked with lower psychological distress partly because it predicted fewer difficulties in emotion regulation. In contrast, intolerance of uncertainty was linked with greater psychological distress primarily because it predicted higher emotion dysregulation.



Note. B = unstandardized coefficient. Dashed path indicates a non-significant direct effect.

Figure 1. Statistical model showing emotion dysregulation as a shared mediator between self-compassion, intolerance of uncertainty, and psychological distress.

DISCUSSION

The study examined emotion dysregulation as a shared mediating mechanism linking self-compassion and intolerance of uncertainty with psychological distress among a predominantly young adult sample. The findings supported the proposed model and indicated that self-compassion and intolerance of uncertainty were associated with psychological distress in theoretically consistent but opposing directions. Self-compassion was negatively associated with emotion dysregulation and psychological distress, whereas intolerance of uncertainty was positively linked with both variables. Emotion dysregulation showed the strongest association with psychological distress and emerged as a significant mediating pathway for both self-compassion and intolerance of uncertainty. These findings are consistent with transdiagnostic perspectives and suggest that psychological distress is shaped not only by vulnerability or protective characteristics, but also by how individuals understand, tolerate, and regulate difficult emotional states. (Aldao et al., 2010; Gratz & Roemer, 2004; Gross, 2015).

The negative relationship of self-compassion with psychological distress is in line with a substantial body of research on self-compassion as a protective psychological resource (MacBeth & Gumley, 2012; Neff, 2003; Zessin et al., 2015). Handling personal problems with empathy, common humanity, and balanced awareness might help one avoid getting stuck in negative emotions, loneliness, brooding or harsh self-judgment. In the present study, higher self-compassion was linked with lower psychological distress. Young adulthood is a period characterized by academic pressure, interpersonal uncertainty, and future concerns (Arnett et al. 2014; Bottesi 2024; Nekić 2023). This suggests that a self-compassionate response might serve as a buffer for distress in this time. This finding matches with recent studies suggesting that self-compassion is linked with more adaptive responses to uncertainty and emotional distress, which in turn are linked to greater well-being and fewer psychological. (Deniz, 2021; Kaçar-Başaran & Gökdağ, 2025; Qiang et al., 2024).

The results also highlight that self-compassion was negatively linked with emotion dysregulation. This finding is theoretically meaningful because self-compassion is not a positive attitude to the self but an adaptive way of relating to painful internal experiences. A compassionate stance toward the self can help people acknowledge distressing emotions instead of suppressing, exaggerating, or judging them. So self-compassion might foster emotional awareness, acceptance and flexible regulation. Previous findings have also suggested that self-compassion promotes psychological adjustment by decreasing maladaptive emotional responding and facilitating more balanced engagement with distress (Diedrich et al., 2017; Inwood & Ferrari, 2018; Yousefi Afrashteh & Hasani, 2022). The present findings build on this work by demonstrating that lower emotion dysregulation accounts for a portion of the connection between self-compassion and lower psychological distress.

Mediation analysis further clarified this mechanism. Emotion dysregulation significantly mediated the effect of self-compassion on psychological distress. The direct effect of self-compassion was also significant. This pattern suggests partial mediation. In other words, self-compassion appears to protect against psychological distress partly by reducing difficulties in emotion regulation, but it may also operate through other processes not tested in the present model. These may include lower self-criticism, reduced shame, greater psychological flexibility, lower rumination, and increased perceived coping ability (MacBeth & Gumley, 2012; Neff, 2003; Zessin et al., 2015). The continued presence of a large direct effect suggests that self-compassion may play a more general protective role than emotion regulation alone. The ability to be kind and perspective towards one's own inadequacy or uncertainty can alleviate distress even in the face of emotional challenges for young adults.

The positive relationship between intolerance of uncertainty and psychological distress is also consistent with existing literature conceptualizing intolerance of uncertainty as a transdiagnostic vulnerability factor (Carleton, 2016; McEvoy et al., 2019; Okayama et al., 2024). Individuals who perceive uncertainty as threatening or unacceptable may experience heightened worry, anticipatory anxiety, avoidance, and difficulty tolerating ambiguous outcomes. These responses can worsen symptoms of depression, anxiety and stress, especially during life phases where future direction, identity, employment and relationships are still being formed. Recent research with young adults further indicated the relationship of intolerance of uncertainty with stress, anxiety, worry, burnout and more general psychological distress (Bottesi, 2024; Nekić, 2023; Regnoli et al., 2024; Yağar Kalaycı & Aydın, 2025). These present findings lend support to this literature and suggest that intolerance of uncertainty is relevant to psychological distress in a Pakistani young adult context as well.

Importantly, we found a strong positive relationship between intolerance of uncertainty and emotion dysregulation. These findings suggest that uncertainty can be distressing not only because it is cognitively appraised as threatening, but because it disrupts an individual's ability to regulate emotional responses. When people appraise uncertain situations as uncontrollable or unsafe, they may struggle to remain goal-

directed or tolerate emotional arousal, access effective regulation strategies, or accept negative emotions. This interpretation is in agreement with theoretical models proposing that intolerance of uncertainty comprises cognitive, emotional and behavioral responses to ambiguity (Buhr & Dugas, 2002; Carleton, 2016; Dugas et al., 2004). It is also consistent with recent evidence linking intolerance of uncertainty with regulatory burden, self-regulatory fatigue, worry and distress (Qiang et al., 2024; Regnoli et al., 2024).

The association between psychological distress and intolerance of uncertainty was found to be significantly mediated by emotion dysregulation, according to mediation analysis. Crucially, adding emotion dysregulation to the model eliminated the direct effect of intolerance of uncertainty. This pattern implies that emotional regulation issues were a major mediating factor in the relationship between psychological distress and intolerance of uncertainty. In real life, young adults who experience difficulty with uncertainty tolerance may not be more distressed simply because uncertainty is present; distress levels may increase when uncertainty is greater than the ability to understand, accept and regulate emotional responses. This result emphasizes emotion dysregulation as a key mechanism by which psychological distress may be exacerbated by uncertainty-related vulnerability.

The prominence of emotion dysregulation in the current study is consistent with broader emotion regulation theory and transdiagnostic models of psychopathology. Difficulties in regulating emotions have been linked to depression, anxiety, stress, and other psychological symptoms across clinical and non-clinical populations (Aldao et al., 2010; Gratz & Roemer, 2004; Gross, 1998, 2015). The findings add to this literature by showing that emotion dysregulation functions as a shared mechanism for both a protective construct and a vulnerability construct. Self-compassion was associated with lower distress partly through reduced emotion dysregulation, whereas intolerance of uncertainty was associated with greater distress primarily through increased emotion dysregulation. This dual pathway provides a more integrated understanding of psychological distress by showing how positive and negative psychological processes may converge through the same regulatory mechanism. The non-significant association of mindfulness with psychological distress and other main variables was somewhat unexpected, given previous research linking mindfulness with lower distress and better emotion regulation (Brown & Ryan, 2003; Khoury et al., 2013; Qasim & Rana, 2022). However, this finding may indicate that mindfulness, as measured in the present study, was not the most salient protective factor in this sample once self-compassion, intolerance of uncertainty, and emotion dysregulation were considered. It is also possible that the particular mindfulness measure used in the study was more reflective of present-moment attention and awareness, while self-compassion captured a more emotionally responsive and self-soothing orientation toward distress. Previous research has demonstrated that mindfulness and self-compassion are related but distinct constructs and self-compassion may be particularly relevant when individuals are dealing with self-criticism, failure, uncertainty, or emotional pain (Neff, 2003; Neff & Germer, 2013). While theoretically important, the current findings suggest that self-compassion and emotion dysregulation may be more directly relevant to psychological distress within this dataset.

The findings are also contextually relevant. Young adults in Pakistan frequently face academic pressures, family expectations and financial instability, coupled with limited access to formal psychological support. Existing Pakistani research found emotion regulation and self-regulation processes as important correlates of depression, anxiety, stress and more general psychological problems (Fatima et al., 2022; Qasim & Rana, 2022; Riaz et al., 2021). The present study extends this local literature by integrating self-compassion and intolerance of uncertainty into a single model and identifying emotion dysregulation as a shared explanatory pathway. This is important because an exclusive concentration on external stressors may not be sufficient to capture psychological distress in young adults. Internal regulatory processes also appear to influence whether young people are able to adaptively cope with uncertainty and emotional discomfort.

Numerous constraints must be acknowledged while analyzing the results. First, the cross-sectional nature of the design is not allowing conclusions about temporal or causal relationships among self-compassion, intolerance of uncertainty, emotion dysregulation and psychological distress. Although the mediation model was theoretically based, longitudinal and experimental research is needed to determine whether changes in self-compassion and intolerance of uncertainty predict subsequent changes in emotion dysregulation and distress. Second, the study used self-report measures, which may heighten the likelihood of response bias, shared-method variance, and socially desirable responding. Future research might include clinician-rated assessments, behavioral indices of emotion regulation, or experience-sampling designs to capture emotional processes in everyday life. Third, although adults were represented in the study, the sample was heavily weighted towards young adults and the findings should be interpreted in relation to this developmental group. Future studies should replicate the model in clinical and community samples with greater age diversity.

These results include significant implications for preventative and intervention strategies. Emotion dysregulation was found to be a fundamental mechanism linking both self-compassion and intolerance of uncertainty to psychological distress, suggesting that treatments of young adults should target for improving emotion regulation skills as well as symptom reduction. Programs that promote emotional awareness, emotional acceptance, distress tolerance and goal-directed behavior in the face of stress may be particularly helpful. Self-compassion-based approaches may also decrease harsh self-criticism and encourage a kinder, more balanced response to personal difficulty. Uncertainty-based strategies may also assist young adults to tolerate ambiguity without excessive worry, avoidance, or emotional overwhelm. Future research should examine whether self-compassion moderates the effect of intolerance of uncertainty on emotion dysregulation. Compassionate self-responding may buffer emotional impact of uncertainty.

CONCLUSION

The current study identifies emotion dysregulation as a common mechanism that relates self-compassion and intolerance of uncertainty to psychological distress in a predominantly young adult sample. Self-compassion was linked with lower distress partly through the effect of lower emotion dysregulation. Intolerance of uncertainty was linked with greater distress mainly through the effect of greater emotion dysregulation. These findings indicate that psychological distress is more interpretable when protective and vulnerability-related processes are considered jointly rather than separately. Interventions to enhance compassionate self-responding, tolerance of uncertainty, and positive emotion regulation skills may be helpful for young adults.

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