Cutting oneself off from difficult emotions in the face of danger. The role of self- compassion and experiential avoidance in the link between the perceived threat of Covid-19 and the severity of adjustment disorder symptoms

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Abstract

The COVID-19 pandemic led to a major health crisis associated with adverse mental health consequences. The present study evaluated the link between the perceived threat of COVID-19 pandemic and adjustment disorder (AjD) severity and assessed if self-compassion (SC) and experiential avoidance (EA), previously indicated as protective factors for mental health, function as moderators of this relationship. Participants (N = 308) with the symptoms of AjD filled out questionnaires assessing the severity of depression, anxiety, and AjD, and scales evaluating experiential avoidance (EA), self-compassion (SC), and perceived health and life risk of COVID-19. We found a moderating effect of SC and EA on the association between the perceived threat of COVID-19 and AjD severity. Participants scoring high in EA showed a lack of the link between those variables, similar to those who were low in SC. Cluster analysis, however, revealed that individuals characterized by a high level of EA and a low level of SC had higher AjD, depression, and anxiety symptoms compared with those in the cluster with the opposite pattern. Current results point to the importance of being compassionate toward one's own psychological experiences, in spite of the tendency to shut from the emotional meaning of worrying.

Introduction

Adjustment disorder (AjD) - a maladaptive reaction, which usually emerges within one month of a significant life stressor and is marked by preoccupation with a stressor or its consequences, and failure to adapt (Maercker et al., 2013) - is one of the most frequently diagnosed mental health conditions in clinical practice (Evans et al., 2013). In spite of that, to date, AjD remains still relatively neglected in research (Brewin et al., 2017). There was an increase in research interest after the release of the 11th edition of the International Classification of Diseases (ICD-11) which specified clear diagnostic criteria for AjD (Zelviene, Kazlauskas, & Maercker, 2020*).*

The life stressor that triggers emotional reaction often tends to be a non-traumatic but stressful event such as illness, disability, or socioeconomic difficulties (Bahem, Maecker, 2016). The advent of the COVID-19 pandemic in March 2020 caused a major health crisis associated with a variety of adverse mental health consequences (Pierce et al, 2021). Studies conducted during the pandemic documented an increased prevalence of AjD (Juszczyk, Dragan, Grajewski, Holas, 2021; Rossi et al., 2020). Exposure to self-isolation, quarantine, job loss, and perceived risk of contracting COVID-19 were found to be the key risk factors for experiencing AjD (Lotzin et al., 2020).

One of the characteristics of the pandemic was the sense of the threat to the lives and safety of oneself and loved ones (Zhang, Ma, 2020). Studies showed that a high level of pandemic threat was related to poorer mental health (Perez-Fuentes et al., 2020) and was associated with higher symptoms of anxiety and depression (Gambin et al., 2021; Koppehele-Gossel et al., 2022). Because a high level of perceived threat is associated with distress symptoms and negatively affects the ability to deal with stressors (Braun-Lewensohn and Al-Sayed, 2018), it is also a prime candidate for AjD predictors. Importantly, little

is known about the factors that moderate the association between the perception of threat due to the COVID-19 pandemic and psychopathology including AjD symptoms.

Therefore, the aim of the current research was twofold. First, we aimed to establish the link between perceived health and life risk of COVID-19 and AjD severity; and then to evaluate if self-compassion (SC) and experiential avoidance (EA), previously found to have an important role in emotional regulation, and considered to be a key protective factors for mental health (e.g. Seppala et al., 2017), functioned as moderators of this relationship.

Self-compassion is an attitude of openness to one's own suffering, with an accepting stance towards one's own failures and imperfections, and treating oneself with kindness and care (Neff, 2003). Research shows that self-compassion is related to resilience and well-being (Brion, Leary, Drabkin, 2014), is a protective factor in high-stress situations (Gilbert, Procter, 2006), and may function as moderator of the relationship between stressors, adjustment to stressors and well-being (e.g. Stutts, Leary, Zeveney, Hufnagle, 2018). Importantly, a recent study conducted during the pandemic evidenced that SC buffered the association between COVID-19 threat and psychological distress (HiPo Lau, Lai Wan Chan, Ng, 2020).

Experiential avoidance (EA) can be defined as an unwillingness to be in contact with distressing thoughts, feelings, and memories, even though doing so makes it more harmful in a long-term perspective (Hayes, Wilson, 1999), and is one of the key components of psychological inflexibility (Hayes et al., 2012).
EA was found to be related to poorer psychological functioning following adverse life events (Plumb, Orsillo, Luterek, 2004), and to different kinds of psychopathology, including depression and anxiety (e.g. Stabbe et al., 2019). Research showed that EA mediates the relationship between exposure to stressors and adverse mental health effects (internalizing symptoms, psychological distress, posttraumatic stress symptoms, and risky behaviors, e.g. Kroska, Miller, Roche, Kroska, O'Hara, 2018).

Self-compassion and experiential avoidance have rarely been studied together. They are interrelated processes and have been found to be strongly and negatively associated (Marshall & Brockman, 2016) which raises the possibility that the two processes may interact.

Both SC and EA are known to be important process-based measures implicated in the mediation of therapy for emotional distress (Hayes, Ciarrochi, Hofmann, Chin, & Sahdra, 2022). More studied are needed to understand their interplay and role, however. To this end, in the current study we evaluate if both process together attenuate the relationship between perceived threat of COVID-19 and severity of adjustment disorder symptoms. To the best of our knowledge, no previous studies examined SC and EA as protective factors of adjustment disorder.

Present Research

The aim of the present study was to first evaluate the association between perceived COVID-19 threat and AjD severity, and secondly to evaluate if self-compassion and experiential avoidance would moderate this relationship. We hypothesized that:

- The perceived level of COVID-19 threat would be related to the severity of AjD and depression and generalized anxiety symptoms.
- EA and SC would have a moderating effect on these relationships. We expect that both factors would cause a buffering effect, that is they would weaken the association between COVID-19 threat and psychopathology.
- Lastly, clusters of participants characterized by a high level of EA and low level of SC would exhibit significantly higher symptoms of AjD, depression, and anxiety in comparison to the cluster with the opposite pattern (low EA and high SC).

Materials And Methods

Ethics Statement

This research was conducted in accordance with the Helsinki Declaration (1989) and was approved by the Ethics Committee of the Faculty of Psychology at the University of Warsaw. All subjects were informed about the study and provided informed consent.

Recruitment

The study was conducted in June 2020. It was a part of a larger project aimed at the evaluation of the effectiveness of online mindfulness therapeutic intervention for people experiencing adjustment disorder due to the COVID-19 pandemic. During the current study assessment, Poland had passed through the first wave of COVID-19 and restrictions were being loosened.

Participants were recruited via the Internet. Advertisements were posted on Facebook's psychological support groups, psychological fan pages promoting well-being, students' groups, Instagram's lifestyle, and psychological accounts, and in addition, the invitation to the study was sent in some university newsletters.

On the dedicated platform www.covid.stress-less.pl, as well as in the advertisements, it was explained that the study is designed for people experiencing emotional difficulties related to the COVID-19 pandemic and its consequences and that registering for the study didn't guarantee participation in the intervention since an individual may not fulfil inclusion criteria. Acceptance of informed consent was mandatory to take part in the study.

Participants

The webpage initially registered 790 people; 564 participants of whom filled in all the obligatory screening questionnaires. Participants were selected if they met the inclusion criteria: diagnosis of AjD (higher than cut-off score (47,5) in ADNM-20 (Lorenz, Bachem & Maercker, 2016)) and they met criteria of emotional disorder (a cutoff score of ≥ 8 for both scales (anxiety and depression) in HADS, Zigmond &

Snaith, 1983). These criteria led to a final sample of 308 participants. Characteristics of the sample are shown in Table 1.

—insert table 1—

Measures

Background information of participants. Participants answered questions about their birth year, sex, education level, their professional and financial situation, marital status, the current level of their socioeconomic status related to the COVID-19 pandemic, and any indication of the use of therapeutic/pharmacological methods in the past or present.

Adjustment disorder (The Adjustment Disorder New Module – 20, ADNM-20; Lorenz, Bachem & Maercker, 2016). The ADNM-20 questionnaire is used to assess adjustment disorder. It consists of two parts – a stressor list (which includes a range of acute and chronic life events of the past two years) and an item list (which evaluates the symptoms in response to the most distressing events). Taking into consideration the aim of this research, we added an extra item to a standard list of stressors: the COVID-19 pandemic. Participants responded on a Likert-type scale about how often they have experienced adjustment disorder symptoms in the past two weeks (from 0 – never to 3 – often). The ADNM-20 questionnaire consists of six subscales (preoccupation, failure to adapt, avoidance, depressive mood, anxiety, and impulse disturbance), with preoccupation and failure to adapt as core symptoms, and avoidance, depressive mood, anxiety, and impulse disturbance as accessory symptoms of adjustment disorder diagnosis.

The internal consistency of this questionnaire is high (Cronbach's α = 0.94), as well as the core symptoms summed in one scale (Cronbach's α = 0.90) and separately (Cronbach's α = 0.88 for preoccupation and Cronbach's α = 0.80 for failure to adapt). The subscale for accessory symptoms also showed a high internal consistency (Cronbach's α = 0.89).

Depression (Patient Health Questionnaire-9; PHQ-9; Kroenke et al., 2001; Polish adaptation - Kokoszka, A., Jastrzębski, A., & Obrębski, M., 2016). PHQ-9 is used to assess the level of depressive symptoms. It consists of 9 statements derived from the DSM-IV criteria of depressive disorder and an additional statement regarding the severity of existing symptoms in daily life. We also added an extra question: "To what extent these behaviors and feelings are related to the COVID-19 epidemic?". In case participants indicated any of the symptoms, they had to answer this question on a scale from 1 (definitely not related) to 5 (definitely related). The PHQ-9 in the current study showed a good internal consistency (Cronbach's α = 0.83).

Anxiety (Generalized Anxiety Disorder Scale-7, GAD-7; Spitzer, Kroenke, Williams Williams, et al., 2006). GAD-7 is a measure used to assess the level of anxiety symptoms in generalized anxiety disorder (GAD) defined by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV). It is a scale that contains 7 items that relate to characteristics of GAD (feeling anxious, worrying too much, having difficulties relaxing etc.). The psychometric properties of this questionnaire are strong. The

internal consistency of this scale was found to be very good (Cronbach α = .92), as well as test-retest reliability (intraclass correlation = 0.83).

Anxiety and depression (Hospital Anxiety and Depression Scale; HADS; Zigmond, Snaith, 1983; Polish adaptation Nezlek, Rusanowska, Holas, Krejtz, 2021). HADS is a self-report measure used to assess depressive and anxiety symptoms. The questionnaire is built up of 14 items, 7 related to anxiety, e.g. “I feel tense or wound up” and 7 related to depression, e.g. „I look forward with enjoyment to things”. Factor analyses of the two subscales show a two-factor solution in good correspondence with the HADS subscales for Anxiety (HADS-A) and Depression (HADS-D), respectively. Cronbach's alpha for HADS-A varies from .68 to .93 (mean .83) and for HADS-D from .67 to .90 (mean .82).

Self-compassion (Self-Compassion Scale Short Form, SCS-SF; Raes et al., 2010; P olish adaptation Holas et al., accepted). Self-Compassion Scale consists of 26 items, which are grouped into six subscales: self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. The internal consistency of the questionnaire is high (Cronbach α = .92.), and test-retest validity is adequate (with a correlation of .93 for the SCS overall score).

Perceived Health and Life Risk of COVID-19 scale (PHLRC, Gambin et al., 2021). The scale consists of six questions assessing the subjective risk of covid-19 infection, serious adverse health effects and complications due to a coronavirus infection, and a threat to life as a result of an infection. Each of these areas was assessed using two items - one relating to oneself and a second one to loved ones. The six items were rated on a five-point scale from 1 - very low to 5 - very high. Cronbach's alpha was α = 0.92.

Experiential avoidance (The Acceptance and Action Questionnaire, AAQ-II, Bond, et al., 2011). AAQ-II is the most widely used measure of psychological inflexibility and experiential avoidance. Lower scores of AAQ-II are also indicators of psychological flexibility. AAQ-II consists of 7 items (e.g., “I am afraid of my feelings”, “I worry about not being able to control my worries and feelings”) rated from 0 (never true) to 7 (always true) on an 8-point Likert scale. Developed originally as a measure of psychological inflexibility, its items tend to emphasize experiential avoidance and some have suggested that it be interpreted that way (Tyndall et al., 2019). In the current study Cronbach's alpha was α =0.90.

Statistical Analyses

The first step of the statistical analysis was to generate descriptive statistics and to conduct a Pearson correlation analysis between the analysed variables. Next a moderation analysis was performed in which experiential avoidance and self-compassion were analysed as moderators of the relationship between PHLRC and ADNM-20. The moderation was analysed with the use of Hayes macro Process 3.5.3 in the model no.1 (Hayes, 2017). The sample in the current study was equal to 308 participants. Assuming statistical power to be .8 and planning to perform moderation analysis with one moderator and one explaining variable in a single statistical model one needs to encounter the interaction effect equal to at least .03 in terms of Cohen's f2 effect size measure to detect it as statistically significant. According to Cohen (1988) effect size of f2=.02 is to be considered small. Therefore, the sample in the present study is

not sensitive enough to detect it. The moderation effect needs to be a bit stronger. As a result of limited statistical power, we formulated hypotheses of the attenuation effect instead of the buffering effect. The possible interaction between the two moderators was assessed in the model no. 3. Johnson-Neyman procedure was applied to interpret the acquired interactions. Further, cluster analysis based on k-means method was performed to extract groups of participants with different profiles of AAQ and self-compassion (IBM SPSS Statistics 28.0). A four cluster solution was used in order to allow for extracting four possible combinations of AAQ and self-compassion, i.e. low levels of both, high levels of both, low level of AAQ and high level of SC, high level of AAQ and low level of SC. In addition, a four cluster solution led to the extraction of four groups that were balanced regarding the number of participants. The extracted subgroups were then compared in terms of ADNM, GAD and PHQ with the use of one-way ANOVA followed by Games-Howell post-hoc test.

Results

Descriptive statistics and Pearson correlation coefficients between analysed variables can be found in Table 2.

Table 1
Sociodemographic characteristics of the sample

Gender	
Woman	281 (91.2%)
Man	21 (6.8%)
Other gender	6 (1.9%)
Age	18–61
Mean age	32.04 (SD = 9,40)
Education	
Elementary education	1 (.3%)
Vocational education	1 (.3%)
Secondary education	41 (13.3%)
Post-secondary education	50 (16.2%)
Higher education	215 (53.2%)

Table 2

Descriptive statistics and Pearson correlation coefficients between analysed variables

	M	*SD*	1.	2.	3.	4.	5.	6.
1. PHLRC	19.11	4.54	-	-	-	-	-	-
2. ANDM-20	63.06	20.90	.081	-	-	-	-	-
3. PHQ-9	15.02	5.34	.125*	.489**	-	-	-	-
4. GAD-7	13.05	4.49	.150**	.452**	.642**	-	-	-
5. HADS	21.70	7.00	.105	.656**	.579**	.545**	-	-
6. AAQ-II	34.29	9.01	.045	.342**	.405**	.399**	.406**	-
7. SCS_SF	2.19	0.60	− .003	− .253**	− .386**	− .351**	− .368**	− .568**

Note. * $p < .05$; ** $p < .01$; *M* – mean value; *SD* – standard deviation

–– insert Table 2 ––

ADNM-20 correlated positively with the symptoms intensity scales, i.e. PHQ-9, GAD-7, HADS, and with AAQ-II, but also negatively with SCS-SF. The symptoms intensity scales correlated positively with each other. Also, AAQ-II correlated positively with all of the symptom intensity scales. SCS-SF correlated with all of the symptom intensity scales and AAQ-II negatively. PHLRC correlated positively with PHQ-9 and GAD-7.

AAQ and self-compassion as moderators of the relationship between PHRLC and ANDM

Table 3 presents the results of moderation analysis. AAQ and self-compassion were analysed as moderators of the relationship between PHLRC and ADNM-20.

Table 3

Results of moderation analysis between PHLRC and ADNM-20

Moderator	**Predictors**	**95% *B***	***p***	***R^2***
AAQ	PHLRC	− .01; .16	0.051	.14
	AAQ	.17; .32	0.001	
	PHLRC x AAQ	− .18; − .02	0.017	
Self-compassion	PHLRC	.02; .18	0.017	.09
	Self-compassion	− .26; − .10	0.001	
	PHLRC x Self-compassion	.01; .17	0.025	

Note. 95%B – 95% confidence interval for standardized regression coefficient; *p* – statistical significance; R^2 – determination coefficient

—insert Table 3—

Both interaction effects were statistically significant, which indicates moderation effects. The three-way interaction was not statistically significant, *B*=[-.09; .07], *p* > .05. To interpret the acquired interactions further, a Johnson-Neyman procedure was applied. The results are presented in Table 4.

Table 4

The strength of the relationship between PHLRC and ADNM-20 depending on the values of moderators

AAQ *z*-score	*B*	*t*	*p*	SCS *z*-score	*B*	*t*	*p*
-2.92	.36	2.75	.006	-1.99	− .08	− .99	.323
-2.69	.34	2.76	.006	-1.70	− .05	− .74	.458
-2.46	.32	2.78	.006	-1.41	− .02	− .41	.683
-2.23	.30	2.80	.006	-1.11	.00	.05	.964
-2.01	.27	2.82	.005	− .82	.03	.64	.523
-1.78	.25	2.83	.005	− .53	.05	1.34	.183
-1.55	.23	2.85	.005	− .25	.08	1.97	.050
-1.32	.21	2.86	.005	− .24	.08	2.00	.047
-1.10	.18	2.85	.005	.06	.11	2.48	.014
− .87	.16	2.82	.005	.35	.13	2.74	.007
− .64	.14	2.74	.007	.64	.16	2.85	.005
− .41	.12	2.58	.010	.94	.18	2.87	.004
− .19	.10	2.30	.022	1.23	.21	2.86	.005
.00	.08	1.97	.050	1.52	.24	2.83	.005
.04	.07	1.87	.062	1.82	.26	2.80	.006
.27	.05	1.31	.190	2.11	.29	2.76	.006
.50	.03	.71	.479	2.40	.31	2.73	.007
.72	.01	.15	.878	2.69	.34	2.70	.007
.95	− .02	− .31	.761	2.99	.37	2.68	.008
1.18	− .04	− .66	.507	3.28	.39	2.65	.008
1.41	− .06	− .94	.348	3.57	.42	2.63	.009
1.63	− .08	-1.15	.250	3.87	.44	2.61	.010

Note. z-score – standardized value of moderator; *B* – standardized regression coefficient for the relationship between PHLRC and ADNM; *t* – the value of the statistical test for regression coefficient; *p* – statistical significance

—insert Table 4—

The results showed that a positive relationship between PHLRC and ADNM was statistically significant if AAQ level (below mean) was low (see Fig. 1) and the SCS level was high (above the mean); See Fig. 2.

—insert Figs. 1 and 2—

Profiles of AAQ and self-compassion and their relationships with psychological symptoms intensity

We also wanted to investigate potential relationships between profiles of AAQ and self-compassion and the intensity of ADNM, PHQ and GAD. In order to do so, participants' scores on AAQ and SCS-SF were also analyzed with the use of k-means cluster analysis. In accord with the rationale provided earlier, four clusters were extracted. A one-way ANOVA showed that the clusters differed regarding both the AAQ, $F(3,304)=313.53$, $p<.001$, and SCS-SF, $F(3,304)=264.54$, $p<.001$. The first cluster ($n=40$) was characterized by a low level of AAQ and a high level of SCS-SF (see Figure 3). The second cluster ($n=93$) was characterized by average levels of both, AAQ and SCS-SF. The third cluster ($n=77$) was characterized by lower levels of both, AAQ and SCS-SF. The fourth cluster ($n=98$) was characterized by a high level of AAQ and a low level of SCS-SF.

—insert figure 3—

In the next step, the extracted clusters were compared in terms of PHQ, GAD and ADNM intensity. Table 5 presents mean values of PHQ, GAD and ADNM intensity in the extracted clusters with the values of one-way analysis of variance. In addition, to make it more comprehensible, we supplement this table with the figure 4.

—insert table 5—

Table 5

Mean values of PHQ, GAD, and ADNM intensity in the extracted clusters

	Cluster										
	Low EA, High SC		Average EA & SC		Low EA & SC		High EA, Low SC				
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*df*	*p*
ADNM	63,00	13,13	72,88	14,56	69,40	11,78	77,89	16,46	11,57	3,304	0,001
GAD	10,80	5,05	12,74	4,10	11,91	3,88	15,24	4,15	14,81	3,202	0,001
PHQ	11,70	5,41	14,23	4,67	14,31	4,93	17,82	5,01	17,75	3,303	0,001

Note. *M* – mean value; *SD* – standard deviation; *F* – analysis of variance statistics; *df* – degrees of freedom; *p* – statistical significance

—insert figure 4—

There were statistically significant differences between the extracted clusters regarding AjD (ADNM-10), GAD (GAD-7), and depressive (PHQ-9) symptoms intensity. According to the values of Games-Howell post-hoc test ADNM intensity in cluster no. 4 was significantly higher than in cluster no. 1, $p<.001$, and no. 3, $p<.001$. Also, AjD intensity was significantly higher in the cluster no. 2 than in cluster no, 1, $p<.01$. The intensity of GAD symptoms in cluster no. 4 was significantly higher than in clusters no. 1, $p<.001$, no. 2, $p<.001$, and no. 3, $p<.001$. The intensity of depressive symptoms in cluster no. 4 was also significantly higher in cluster no. 4 than in cluster no. 1, $p<.001$, no. 2, $p<.001$, and no. 3, $p<.001$.

Discussion

As predicted, our results revealed a statistically significant positive association between perceived threat and depression, and anxiety. This finding is in line with previous studies conducted during the Covid-19 pandemic that found a link between increased levels of the pandemic threat and psychopathology, including anxiety, depression, and negative affect (e.g. Gambin et al., 2021; Perez-Fuentes et al., 2020). Broadly speaking, it is also congruent with the general view, that it is not an objective threat, but its subjective perception, that is related to mental well-being (Koppehele-Gossel et al., 2022).

Following establishing the positive association between COVID-19 threat and psychopathological symptoms, we turned to evaluate if SC and EA were moderators of the relationship between perceived COVID-19 threat and AjD severity. We expected they would be so, and that those people with a high level of SC and a low level of EA (in other words higher psychological flexibility) would exhibit a buffering

effect reflected in turning off the significance of this relationship. Unexpectedly, we found the contrary results; for those who had low SC and high EA, there was no statistical correlation between perceived threat and symptoms of AjD. This finding seems to suggest that high levels of concern about the adverse outcomes of the COVID-19 pandemic do not translate into AjD symptoms in those who are uncompassionate to themselves and experientially avoiding any mental events causing discomfort.

We believe these results could be interpreted in the light of experiential avoidance theory (Hayes et al., 1996). It states that in the face of danger, experiential avoidance can reduce temporarily the level of experienced distress even if its longer time impact might be negative. This hypothesis has been confirmed in some previous studies. For example, it was found, that among people characterized by high anxiety sensitivity and a high level of experiential avoidance, after experiencing the emotional evocative task, the impact of this experience on negative affect is much lower than among people who have the willingness to experience distress (Bardeen, 2015). Note, that the moderating effect tells us nothing about the actual level of the dependent measure, in our case AjD symptoms level and that participants in the present study were selected on the basis of fulfilment of AjD diagnostic criteria (ADNM-20) and elevated emotional distress (anxiety and depression) in HADS. It is possible that they tended to disconnect from their own emotional experiences and were harsh instead of compassionate toward their own difficulties in order to prevent negative emotional distress to arise in the face of worrying thoughts about their own and their close one's health and life. It seems, therefore, that EA and a lack of SC precluded examined individuals from emotionally elaborating worries related to the pandemic, thus it helped them, perhaps temporarily, to reduce adverse emotional effects of the perception of COVID-19 related threat. In the short term, this strategy might have “protected” them from the higher intensity of AjD symptoms while they were worrying about Pandemic threats.

An important question, however, is whether this strategy protected people from psychopathology or increased levels of emotional dysregulation. In other words, would those having high EA and low SC exhibit reduced levels of depression, anxiety, and AjD symptoms in comparison to individuals with the opposite characteristics (low EA and high SC) much as was shown with regard to the impact on COVID-19 concerns? To be able to address this question, we conducted cluster analyses that intended at distinguishing profiles of participants on the basis of SCS-SF and AAQ scores matrix, and in the next stage we compared those profiles. The results of the comparisons were straightforward. Those with high psychological flexibility and high SC had significantly less AjD, and fewer depressive and anxiety symptoms when compared with those with the high EA and low SC. This result seems to indicate that the strategy of not elaborating emotionally perceived threats and being uncompassionate towards own painful emotional experiences, in fact brought about increased emotional distress instead of protection from it. In other words, while these strategies temporarily protected persons from difficult emotions related to perceived threat, it actually had the opposite effect on the individuals in the form of increased emotional distress. Non-human animals are motivated to avoid negative affect by avoiding situations that produce it; humans also tend to avoid aversive private experiences (Chawla & Ostafin, 2007), but since cognitive access to distressing situations is ever present this strategy has wide spread and pathological consequences over time.

Generally, our findings suggest, that while individuals may engage in the emotional avoidance strategy combined with harsh stance toward themselves to decrease distress and shut down the emotional meaning of worrying thoughts, these efforts may have the opposite effects. This possibility is strengthened by the known role of SC and EA in explaining the impact of experimental studies on psychopathology (Hayes et al., 2022). Our findings, broadly speaking, seem also to be congruent with the common observation made by psychotherapists, that individuals with low self-reflection and low emotional insight tend to report higher levels of psychiatric symptoms together with poor awareness of potential causes and poor emotional awareness (e.g. Thirioux et al., 2020).

The current results initially seemed to contradict empirical research indicating that psychological flexibility and self-compassion are protective factors for mental health (e.g., Takahashi et al., 2019) but more detailed data analysis showed results in line with these assumptions. It is worth noting that Matos et al. (2022) found that self-compassion had a moderating effect on the relationship between Covid-19 threat and emotional disorders symptoms, but there are methodological differences between that study and the present one. We invited people who experienced AjD and emotional distress symptoms due to Covid – 19 pandemic, whereas Matos at al. recruited individuals from the general population. In addition, both studies differed in terms of questionnaires used for the assessment of perceived threat, emotional distress, and self-compassion, which basically preclude from direct comparison of both.

Our results broadly confirm the theoretical stance of third wave of cognitive-behavioral therapy, in which psychological resilience is thought to be fostered by more open awareness of our own emotional states, abilities to observe them without necessarily trying to changing anything, and kindness towards oneself (Hayes et.al, 1996). In line with that view, studies conducted during the COVID-19 pandemic found that mindfulness and acceptance-based interventions improved well-being and attenuated the negative impact of experienced stress related to pandemic (e.g., Dillard, Meier, 2021; Holas, et al., 2022).

Limitations

Several limitations need to be taken into consideration when interpreting present findings. First of all, a recruitment announcement for the study was targeted at people seeking help for emotional distress related to COVID-19 pandemic. Our results, therefore, may reflect characteristics of people willing to seek help, but not the general population. Also, the sample size that was not enough to detect a moderation effect of small size is a limitation. It also made the precise estimation of the moderation effect size difficult. A larger sample size would allow for analysing both moderators in a single multivariate statistical model. However, typical sample sizes in research projects evaluating adjustment disorder rarely exceed 300 people. In future research with a larger sample of participants, it would be worth running one model with two moderators in order to compare the strength of the moderation effects, and in addition to assess the possibility that one is the moderator of the moderation of the other. Secondly, our study had a cross-sectional design, therefore, we don`t know how investigated constructs changed over time nor what are the temporal and causal relations between variables may be.

Future studies need to conduct longitudinal and experimental design that would allow for the investigation of causality effects. Finally investigated variables were measured with self-reported scales that are subjective and vulnerable to biases such as social desirability or the need for social enhancement (Wojcik et al., 2015).

Conclusions

Our research provides some new knowledge about adjustment disorder and emotional distress related to COVID-19 pandemic, as well as mechanisms involved in their maintenance. The current results suggest that although cutting oneself off from difficult emotions in the face of danger may appear to be self-soothing, it is related to the increased likelihood of experiencing psychopathology and emotional distress. Our results point to the importance of being mindful and compassionate toward one's own experiences, and suggest that interventions that focus on the increasing ability to observe and accept one's emotional experiences and being kind to oneself can be helpful for alleviating AjD and emotional distress symptoms, but more studies are needed.

Declarations

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Ethics approval: Approval was obtained from the ethics committee of University of Warsaw. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Data Availability

Data are publicly available on the Open Science Framework at the following link (https://osf.io/zrxfe/files/osfstorage)

Informed Consent

All participants gave informed consent prior to enrolling in the studies herein.

Declaration of Interest

The authors declare no competing interests.

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Figures

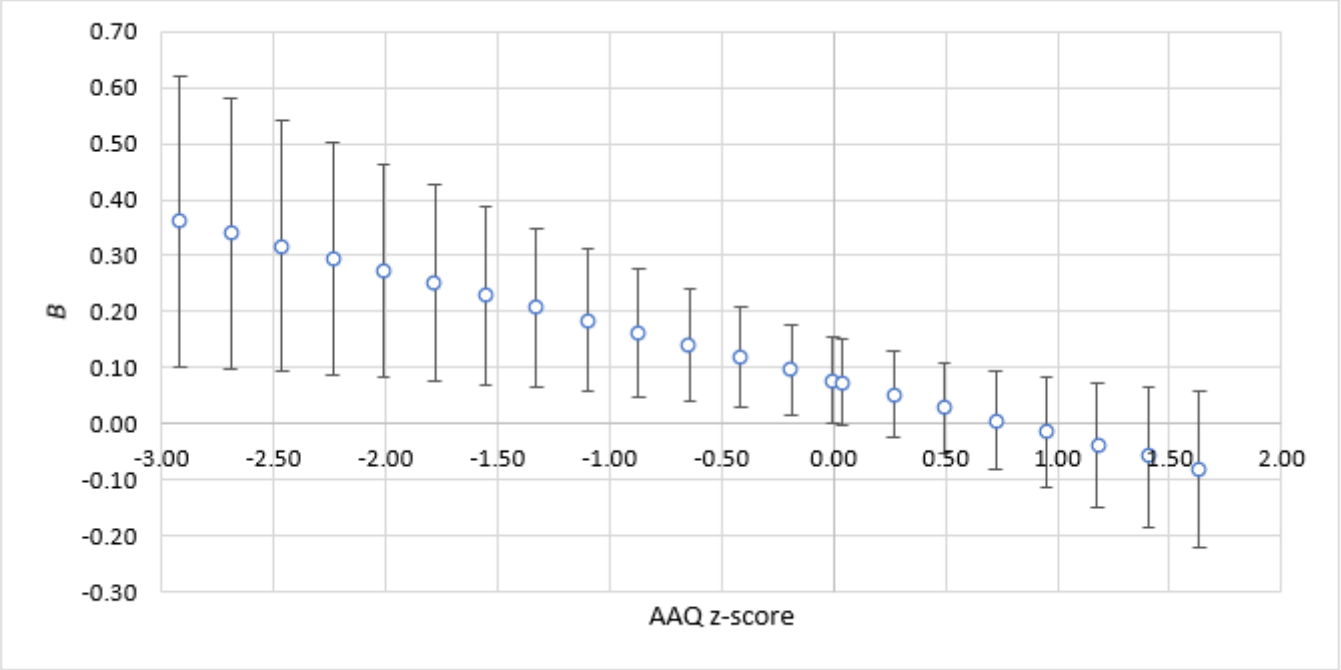

Figure 1

The strength of the relationship between PHLRC and ADNM-20 depending on the values of AAQ-II.

Note. z-score – standardized value of moderator; B – standardized regression coefficient for the relationship between PHLRC and ADNM. The bars show 95%CI for standardized regression coefficient.

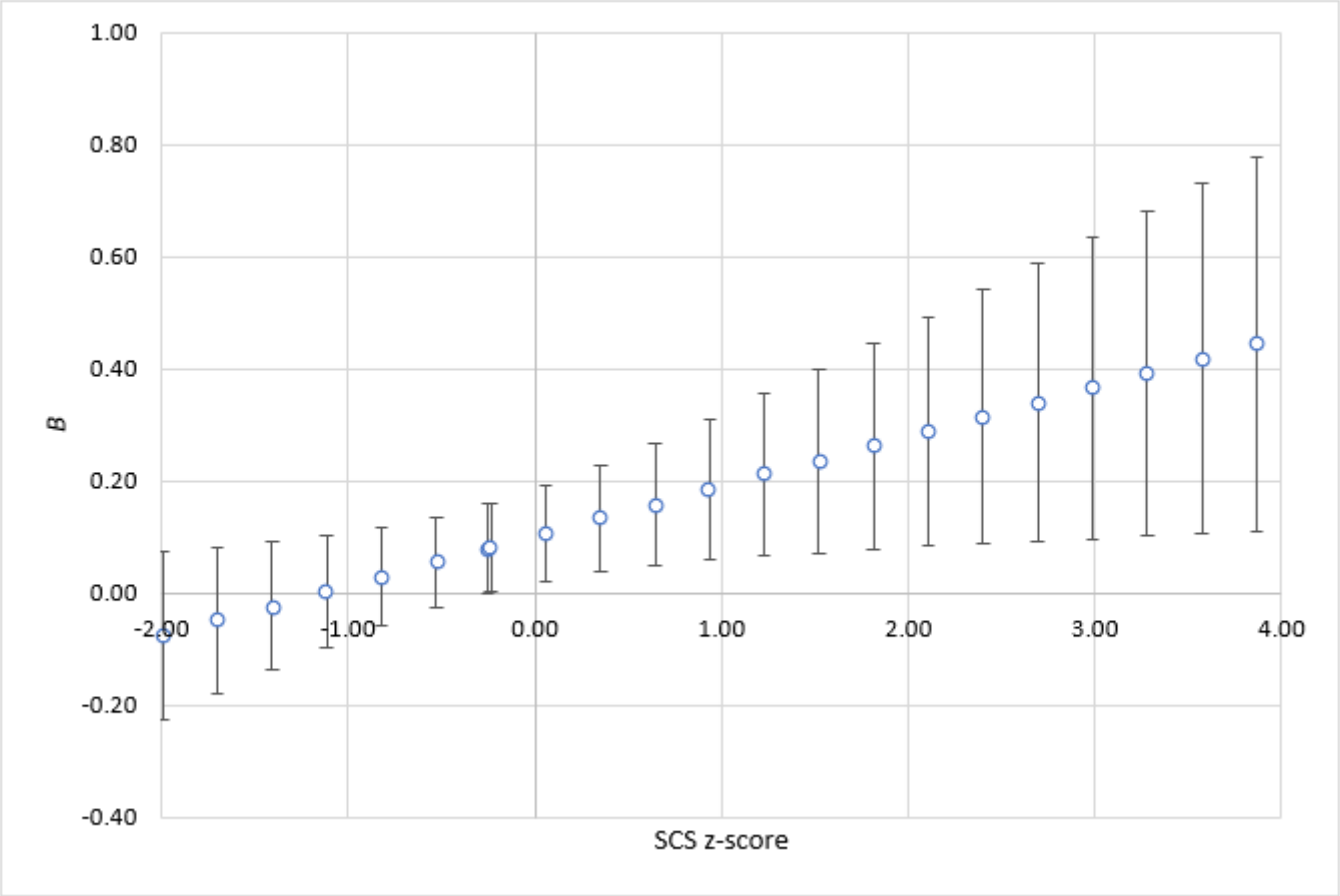

Figure 2

The strength of the relationship between PHLRC and ADNM-20 depending on the values of SCS.

Note. z-score – standardized value of moderator; B – standardized regression coefficient for the relationship between PHLRC and ADNM. The bars show 95%CI for standardized regression coefficient

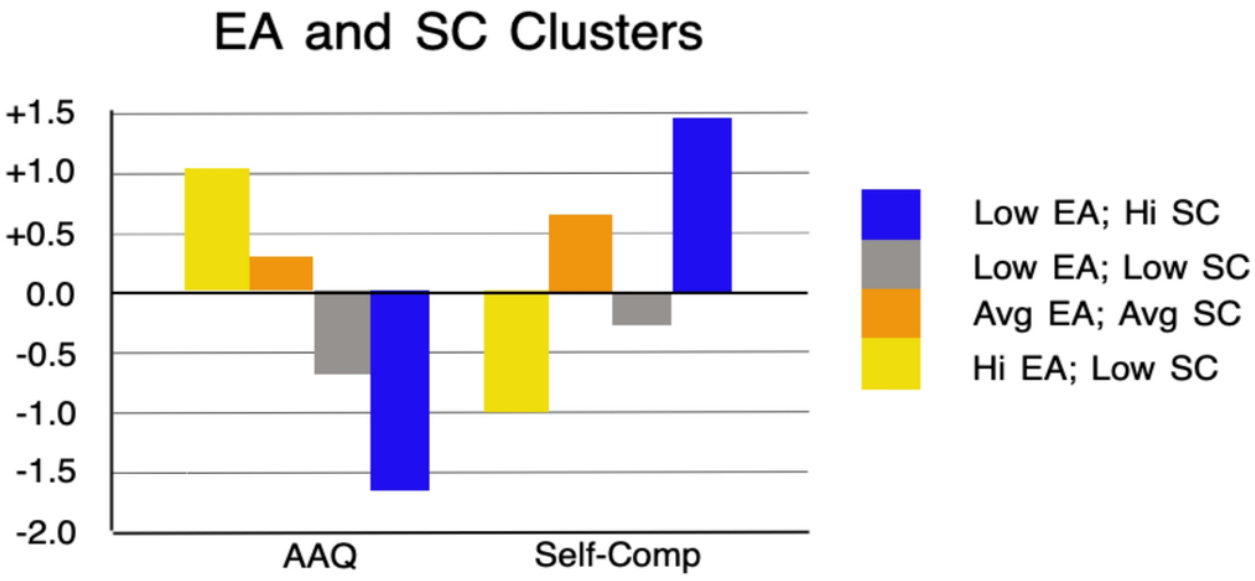

Figure 3

Final cluster centers, arithmetic means for standardized values of AAQ (EA), and self-compassion (SC) in the extracted clusters.

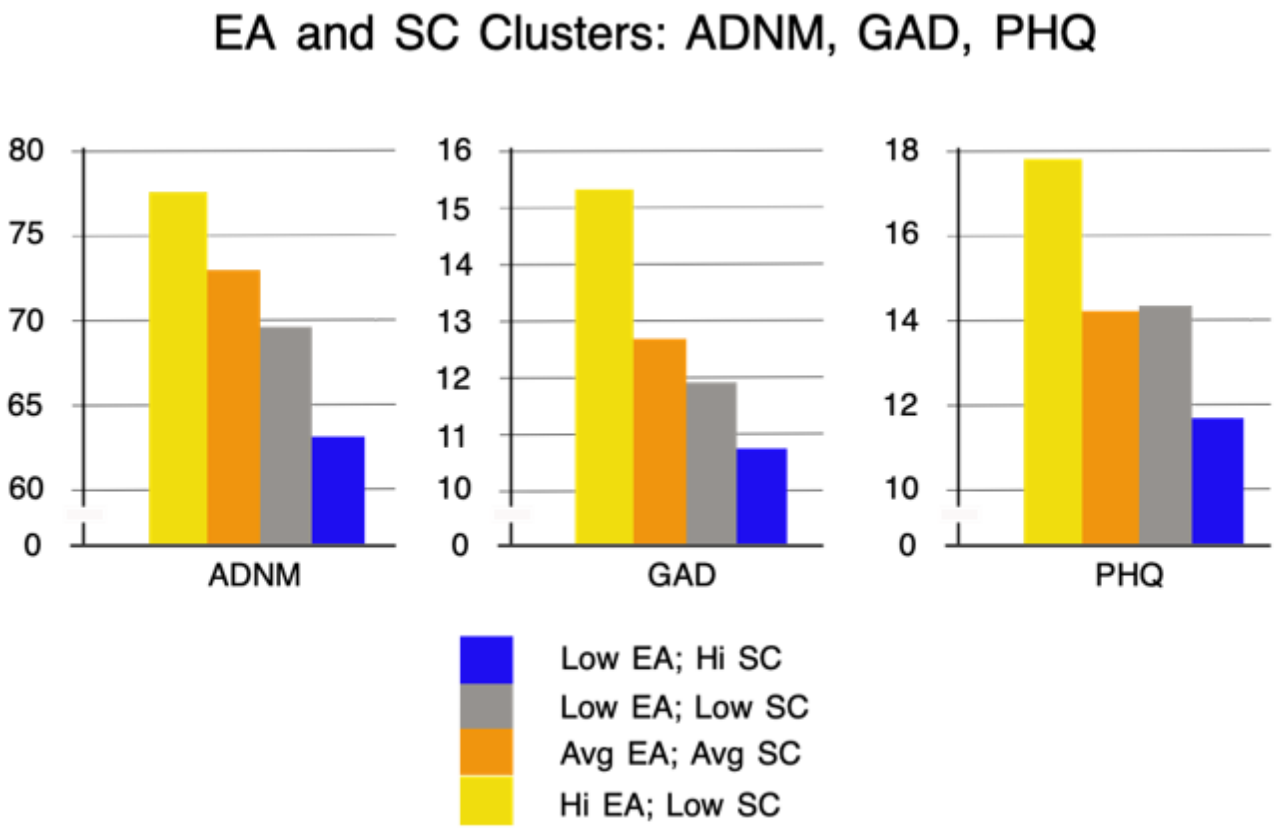

Figure 4

Mean values of PHQ, GAD, and ADNM intensity in the extracted 4 clusters