

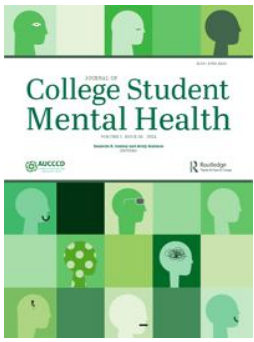
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Can Mindfulness and Self-Compassion Protect from Relational Aggression and Victimization in College?

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ABSTRACT

Despite the importance of peer relationships in college, limited research has explored factors protecting students from the development of relational aggression and victimization, despite evidence of the manifestation of these phenomena. This study explored associations between negative emotional states, mindfulness and self-compassion, and relational aggression and victimization in a sample of college students. It was hypothesized that facets of mindfulness and self-compassion would predict lesser relational aggression/victimization and mediate the relationship between negative emotional states and relational aggression/victimization. A total of 389 university students were recruited from United Kingdom tertiary education institutions completing measures on relational aggression and victimization, mindfulness and self-compassion, and negative emotional states. Using regression analyses, results indicated that mindfulness facets of acting with awareness and nonjudgement negatively predicted relational aggression, while acting with awareness and reverse self-isolation negatively predicted relational victimization. The findings supported the hypothesis that mindfulness facets mediated the relationship between negative emotional states and relational aggression/victimization suggesting that these processes may operate protectively. The study considers research and practice implications in colleges.

KEYWORDS

College students; mindfulness; relational aggression; relational victimization; self-compassion

College years come with developmental, academic, and psychological challenges (Holm-Hadulla & Koutsoukou-Argyaki, 2015; Xiao et al., 2017). Inclusion in peer groups is important in creating supportive social networks (Chapell et al., 2004; LaBrie et al., 2007; Schulenberg et al., 2001; Sparkman et al., 2012). Moreover, interpersonal difficulties have been found to be associated with depression and anxiety in tertiary education (Acharya et al., 2018; Coiro et al., 2017; Fernández-González et al., 2015). Social difficulties in college may manifest in various forms, two of them being the experiences of

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relational aggression (RA) and victimization (RV) (Chapell et al., 2004; Thomas, 2019).

RA reflects behaviors that intend on causing social harm through manipulating social relationships and damaging others' social standing and sense of inclusiveness (Crick & Grotpeter, 1995). It includes spreading rumors, gossip, peer social exclusion, or public embarrassment (Crick & Grotpeter, 1995). Conversely, RV refers to being on the receiving end of RA, that is, being threatened with the removal of social relationships or social ridicule (Ostrov & Kamper, 2015). Although the spread of these phenomena in college is not widely researched, US studies describe a high prevalence (up to 43%) of bullying victimization (a related construct) in college freshmen (Krueger et al., 2011; Nansel et al., 2003; Rospenda et al., 2013) which is equivalent to reported European prevalence findings (up to 46% for perceived RV; Aizpurua et al., 2021). Moreover, these phenomena were found to increase for males after high school (Leadbeater et al., 2014), were reported as more frequent than physical victimization in college (Lento, 2006) and appeared in various contexts (Aizpurua et al., 2021; Murray-Close et al., 2007) such as in roommate conflict, in sharing romantic interests or disagreements on one's lifestyle choices (Miller-Ott & Kelly, 2013).

Both RA and RV were found to have important and negative psychological correlates during college especially in the form of internalizing symptoms such as higher levels of depression (Dahlén et al., 2013; Holterman et al., 2016; Werner & Crick, 1999), anxiety, stress (Dahlén et al., 2013; Gros et al., 2009), psychosocial maladjustment (Ellis et al., 2009; Werner & Crick, 1999) and loneliness (Dahlén et al., 2013). These findings are evident among friendly and romantic relationships (Dahlén et al., 2013; Goldstein et al., 2008). Given the impact of RAs and RVs on relationship formation, maintenance, and quality in college (Goldstein et al., 2008; N. L. Hayes et al., 2021; Lento-Zwolinski, 2007; Linder et al., 2002), more research needs to focus on identifying factors protecting against these phenomena.

Although a limited number of studies have examined the association of negative emotional states with RA and RV in college, even fewer studies have explored the role of other risk or protection variables. These studies have revealed positive associations of RA with egocentricity (Werner & Crick, 1999), emotion dysregulation (Hicks, 2018) and impulsivity (Chen et al., 2012; Miller-Ott & Kelly, 2013). Then again, studies focusing on RV have been rare, with evidence from the adolescent literature indicating that emotion regulation capacities positively mediate the relationship between internalizing symptoms and RV (Adrian et al., 2019; Ladd et al., 2018). Similarly, in a study with college students, Holterman et al. (2016) found that the capacity to regulate stress moderated the relationship between RV experiences and the development of depression. Consistent with these findings, to prevent the emergence of RA and RV, it is important to identify variables that directly

or indirectly (i.e., via regulation of negative emotional states) protect against their development.

Mindfulness, negative emotional states, and RA/RV

Mindfulness as a trait and trainable skill has received support in improving negative emotional states (Bowlin & Baer, 2012; Carpenter et al., 2019; Eberth & Sedlmeier, 2012; Ostafin et al., 2015; Tomlinson et al., 2017), enhancing emotion regulation capacities (i.e., the process of effectively managing one's emotional states; Berking & Whitley, 2014) and improving college students' psychological wellness (Felver et al., 2018; Vidic & Cherup, 2019). Mindfulness consists of five processes (Carmody et al., 2009) two of which are found to be consistently associated with reduced psychological distress: acting with awareness (i.e., being attentive to present-moment experience and not operating automatically) and nonjudgement (i.e., being accepting and not critical of one's thoughts and feelings) (Barcaccia et al., 2019; Carpenter et al., 2019).

Studies examining the association of mindfulness with RA in college students are scarce, with a study by Yang and Yang (2021) focusing on romantic relationships reporting that dispositional mindfulness was antagonistic to RA. College studies have, however, reported a negative association of trait mindfulness with other types of aggression, including verbal, physical, and hostility (Fresnics & Borders, 2016; Gao et al., 2016; Heppner et al., 2008). Mindfulness facets that have been found to be consistently associated with types of aggression are nonjudgement and acting with awareness (Garofalo et al., 2020a; Hesse et al., 2021; Peters et al., 2015) and less frequently, non-reactivity (Eisenlohr-Moul et al., 2016; Shorey et al., 2014). Notably, these are the same mindfulness facets found to be strongly related to enhanced mental health outcomes.

RV and its relationship to mindfulness has yet to be studied in college students although the adolescent literature has given attention to mindfulness and related victimization constructs (e.g., bullying, peer, sexual victimization), with certain studies supporting mindfulness' protective role (Georgiou et al., 2021; Lavell et al., 2018; Toomey & Anhalt, 2016; Zhou et al., 2017) and other studies not replicating the finding (Clear et al., 2020).

Why might mindfulness be important for RA and RV? Shapiro et al. (2006) stated that mindfulness synthesizes a shift in perspective, coined *reperceiving*, which supports psychological mechanisms including emotional self-regulation. Mindful individuals are less automatic and less dependent on their ongoing cognitive and emotional experience. They attend to the here and now with openness and nonjudgmentally without overattachment to the concept of self, thus experiencing less relational threat. For individuals who are not mindful, interpersonal feedback could be perceived as risky to their identity eliciting a victimization experience or prompting RA to gain

temporary emotional relief (Kelley & Lambert, 2012). Indeed, the inability to regulate negative affect has been associated with aggressive responding (Bell & Naugle, 2008; Gross & Jazaieri, 2014; McLaughlin et al., 2011) and increased perceived victimization (Kliewer, 2015). With evidence that mindfulness improves emotion regulation skills and enhances conflict resolution capacities (Borders et al., 2010; Gillions et al., 2019), it can be a candidate protective factor against RA and RV in college.

Self-compassion and RA/RV

Self-compassion is an affiliate, albeit a different construct to mindfulness, in that it focuses on the way one relates to themselves when experiencing suffering (Neff, 2003; Neff & Dahm, 2015). When an individual is self-compassionate, they are more able to (a) express kindness toward themselves, (b) see human suffering as a universal experience and (c) employ mindfulness (Neff, 2003). Although there have been no studies on the relationship between self-compassion and RA and RV, lower self-compassion (measured as a composite construct) is predictive of anger and aggression (Coskun, 2016; Djajadisastra, 2017; Wu et al., 2018) and is negatively associated with concern for others and interpersonal effectiveness (Murphy et al., 2005).

Moreover, studies with adolescents found a protective effect of self-compassion on peer victimization (Hatchel et al., 2019; Játiva & Cerezo, 2014; Jiang et al., 2010; Liu et al., 2020), although little is known about effects on college students and even less about the differing impact of self-compassion's subcomponents on these relational outcomes, despite calls for studying the construct's sub-facets separately (Brenner et al., 2017; Neff et al., 2017; Williams et al., 2014).

One of the three theoretically distinct dimensions of self-compassion consists of common humanity versus isolation which captures one's ability to realize that imperfections and mistakes are part of the human experience rather than experience separation within one's perceived failures (Raes, 2011). Self-compassion is construed to include a concern for others through the common realization that all humans suffer and hence all are "worthy of compassion" (Neff, 2003, p. 141). For example, Neff (2016) likened isolation to egocentricity, which has been found to be related to increased aggression in adolescents (McDougall, 2019) and increased RA in college students (Werner & Crick, 1999). It is conceivable that these two dimensions of self-compassion are related to the processes of RA and RV given their social dimension, although no prior studies have directly explored this assumption.

Despite Stosny's (1995) statement that self-compassion is "incompatible with antisocial behavior" (p. 82) the pathway of this effect is less studied. Self-compassion may affect RA and RV by enhancing one's acknowledgment of the shared humanity of psychological pain, leading to reduced interpersonal

reactivity and perceived victimhood (Desbordes et al., 2012; Hölzel et al., 2011; Morley, 2015; Neff et al., 2007). Processes such as common humanity and reverse isolation may instill awareness of one's connection to others (i.e., perceived overlap between oneself and others has been found to attenuate aggression after perceived threat; Konrath et al., 2006). Relevant to the present study, a more compassionate stance and specifically a perceived connection to other humans through suffering could buffer against perpetrating RA and experiencing RV.

Present study

The purpose of this study was to study the relationships between negative emotional states, mindfulness, and self-compassion with RA and RV among college students. It focused on mindfulness facets, previously found to predict aggression such as nonjudgement, acting with awareness, and nonreactivity and self-compassion facets believed to be reflective of social dimensions such as common humanity and isolation. Consistent with the theoretical assumption that mindfulness supports emotion regulation capacities, it also studied whether mindfulness mediated the relationship between negative emotional states (measured by depression, anxiety, and stress) and RA and RV. Although mindfulness is not the same as emotion regulation (Dixon et al., 2017; Wheeler et al., 2017), it is suggested that it captures important self-regulation capacities.

We hypothesized that (1) lower trait mindfulness (specifically, the facets of present moment awareness and nonjudgement) and lower self-compassion (specifically, common humanity and isolation) would predict higher RA (2) lower trait mindfulness (specifically, the facets of acting with awareness and nonjudgement) and lower self-compassion (specifically, common humanity and isolation) would predict higher RV and (3) that mindfulness facets would mediate the relationship between negative emotional states and RA/RV.

Method

Participants

Participants were 389 students enrolled in UK tertiary educational institutions aged 18–63 years ($M = 23,42$, $SD = 7,05$); 64,5% of them were 18–22 years old, 16,5% were 23–27 years old, 6,4% were 28–32 years old, 5,1% were 33–37 years old, 3,9% were 38–42 years old, and another 3,1% were over 48 years old. 72,8% of the participants identified with the female sex and 27,2% with the male sex. Participants were mostly undergraduate students (80%) with 12% describing themselves as postgraduate students, 6% being on associate degrees and 1,5% on professional degrees. Most participants were in their first year of study (57%), with 23% of them being in the second, 10% in the third and

another 10% in the fourth year of study. Most of the participants ($n = 281$, 72%) were studying a psychology-related undergraduate or postgraduate course, while the rest of the participants came from various courses (i.e., computing, electrical engineering, English, management, and tourism studies, among other courses). Participants described their relationship status as single (49%), in a partnership (32%), marital (8%), open (1%), and non-response (3%). Given the international sample of students at UK universities, participants were asked what language was spoken at their home, with $n = 326$ (84%) reporting English and the remaining $n = 63$ (16%) reporting a mixture of languages including Arabic, Bengali, Greek, Bulgarian, Russian, Urdu, Mandarin, Spanish, Punjabi, French, Italian, Polish, Swedish, and Macedonian. Participants described their ethnicity as White British (55%), White Other (22%), British Asian (6,5%), Black and Black British (4%), Asian (3,5%), mixed race (3%), and 6% of other ethnicities.

Procedure

The study was approved by the local National Bioethics Committee serving the Branch of the University of Central Lancashire, Cyprus (EEBK EPI 2020.01.17). Participants were recruited online via the use of the university's Sona systems software and through social media sites dedicated to promoting research participation (e.g., Survey Circle). Students enrolled in British universities were invited to take part in a study investigating the relationships between facets of mindfulness and compassion and relational communication. The survey was published on an online survey platform (Qualtrics) and included an information letter outlining the aims, including data protection information, and seeking informed consent. Participants then proceeded with completing the questionnaire, which contained demographic details and self-report scales. The completion of the survey took approximately 30 min. Data collection occurred between January 2020 and July 2021.

Measures

DASS21 (Lovibond & Lovibond, 1995)

DASS21 scales were used for measuring participants' stress, depression, and anxiety levels. Each subscale consists of seven items. Example questions capturing stress included *"I found it hard to wind down,"* anxiety *"I was aware of dryness of my mouth,"* and depression *"I couldn't seem to experience any positive feeling at all."* Responses were scored on a 4-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). Participants were asked to answer based on how they felt over the past week, with higher scores indicating higher distress. The validity of the scale has been replicated with college student samples (Beiter et al., 2014;

Kia-Keating et al., 2018). In this study, Cronbach's alpha for the Stress with Anxiety scale composite was .87 and for the Depression scale .92.

Self-Report of Aggression and Social Behavior (SRASBM) (Linder et al., 2002)

SRASBM is a self-report scale consisting of 56 items covering facets of relational aggression, physical aggression, relational and physical victimization, and prosocial behavior. This study focused on reactive and proactive facets of peer RA (10 items) and peer RV (4 items) excluding physical manifestations of violence. Proactive facets reflected RA that was purposeful, while reactive captured impulsive and defensive elements. Example questions capturing RA included *"When someone does something that makes me angry, I try to embarrass that person or make them look stupid in front of his/her friends,"* while an example of RV item was *"A friend of mine has gone 'behind my back' and shared private information about me with other people."* Responses were scored on a 7-point Likert scale ranging from 1 (Not at all true) to 7 (Very true), and participants were asked to respond based on their experiences in the past year. Higher scores indicated higher levels of RA and RV. The validity of the scale has been supported in prior studies with college students (Goldstein et al., 2008; Holterman et al., 2016). In this study, the Cronbach alpha for peer RA subscale was .87 and for peer RV was .75.

Self-Compassion Scale (SCS) (Neff, 2003)

SCS is a self-report scale with a total of 26 items which was used to measure the dimensions of self-compassion, including common humanity and isolation. Common humanity is defined as one's ability to view their own errors as a reflection of the human condition, while isolation reflects viewing oneself as different and separate to others' experience of suffering. These subscales consist of four items each. Example questions included *"when things are going badly for me, I see the difficulties as part of life that everyone goes through"* (common humanity) and *"when I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world"* (isolation). Responses are scored on a 5-point Likert scale ranging from 1 (almost never) to 5 (almost always), and participants are asked to answer questions based on how they typically act toward themselves in difficult situations. The scale was scored so that higher scores indicated higher compassion. The validity of the scale has been confirmed in prior studies with students (Neff, 2003; Wei et al., 2011). In this study, Cronbach's alpha was .84 for isolation and .74 for common humanity.

Five Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2008)

FFMQ is a measure of dispositional mindfulness, and it includes 39 items covering five distinct facets of mindfulness including observing, describing, and the three facets of interest in this study, acting with awareness, non-

judging, and nonreactivity. The acting with an awareness facet captures the quality of our responses after attending to information pertaining to the present moment (i.e., impulsivity and mechanistic responding). The nonjudgement facet captures the ability to view our own inner experience in a non-critical manner and captures self and other acceptance, while the nonreactivity facet reflects the ability to detach from negative internal content and choose to refrain from reacting to it. An example item from the acting with awareness facet included “*When I do things, my mind wanders off and I’m easily distracted,*” an example from the non-judgment facet included “*I tell myself I shouldn’t be feeling the way I’m feeling*” and from the nonreactivity facet “*I perceive my feelings and emotions without having to react to them*”. For this study, we initially used each facet as a unique subscale as we were interested in the differing effects of mindfulness components on the dependent variables. Responses were scored on a 5-point Likert scale ranging from 1 (never or very rarely true) to 5 (very often or always true), and participants were asked to answer questions based on “what was generally true for them.” Higher scores indicated higher levels of mindfulness skills. The scale’s validity is well supported in past studies with student samples (de Bruin et al., 2012). In this study, Cronbach’s alphas for the three facets were as follows: Acting with awareness .87, non-judgment .91 and nonreactivity .78.

Statistical analyses

Data analyses were computed in SPSS version 28 (IBM Corp, 2021). A check for missing data was conducted and 118 of the initial pool of 506 participants who consented to completing the study were excluded due to either having an excess of missing data or due to nonengagement. Data were screened for outliers using Cook’s Distance, which was <1 , suggesting no influential data points (Pallant, 2020). A missing values analysis indicated that the missing data were minimal (i.e., less than 1%) and random (MCAR), $\chi^2(381, N = 389) = 413.96, p = .12$ and were imputed using the EM data imputation procedure in SPSS V28 (Musil et al., 2002).

This procedure was followed by checking the data for normality of distribution, conducted by an inspection of histograms and QQ plots and perusal of skewness and kurtosis statistics for values between -2 and $+2$ (George & Mallery, 2022). Variables are normally distributed, except for the items measuring peer relational aggression which presented with a positive skew and a heavy tail, indicating low overall levels of RA in this sample. These items were treated with a two-step transformation (Templeton, 2011) resulting in an acceptable skewness and kurtosis index (Weston & Gore, 2006) except for one item (27) which was dropped.

Bivariate correlations were followed by hierarchical, simple, and stepwise multiple regression analyses to investigate the independent and unique

contributions of negative emotional states, mindfulness, and self-compassion facets on RA/RV. Collinearity statistics were among the accepted range (Pallant, 2020) although to best manage highly correlated variables, DASS Stress and Anxiety were summed up into a composite scale (Gregorich et al., 2021) and variables were mean centered (Aiken & West, 1991). The hypothesized mediating effect of mindfulness facets was investigated using the SPSS macro-PROCESS 4.1 with 95% confidence intervals and 5000 bootstrap samples (A. F. Hayes, 2021).

Results

Descriptive statistics and Pearson zero-order correlations are reported in Table 1. Bivariate correlations were within expected directions except for the nonreactivity facet of the FFMQ and the common-humanity facet of the SCS scale which were not significantly correlated to either RA or RV and were subsequently dropped.

Relational aggression

Two hierarchical linear regressions (Table 2) were calculated for RA from Anxiety/Stress and Depression, respectively. Age and gender were included in the first block of each analysis as controls, and neither were found to be predictors of RA at step 1 ($p > .05$). Anxiety/Stress emerged as a significant predictor of RA, alongside sex, which emerged as borderline significant at step 1 accounting for 8% of the variation of RA. Depression also emerged as a significant predictor in its respective model, accounting for 4% of the variation of RA.

Two simple regression models were calculated (Table 3) indicating that acting with awareness and nonjudgement separately predicted 5% of the variance of RA, so that higher levels of acting with awareness and nonjudgement led to less RA perpetration. A simple regression model

Table 1. Descriptive statistics and correlations for the variables of interest ($N = 389$).

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
(1) Relational Aggression (RA)	21.58	7.90									
(2) Relational Victimization (RV)	11.57	5.03	.50**								
(3) Acting with Awareness	23.04	6.46	-.20**	-.29**							
(4) Nonjudgement	23.08	7.44	-.21**	-.30**	.59**						
(5) Nonreactivity	19.22	4.89	.02	-.01	.07	.24**					
(6) Common humanity	11.74	3.53	.02	.03	.07	.14**	.42**				
(7) Isolation	10.98	4.13	-.21**	-.31**	.54**	.64**	.28**	.16**			
(8) Anxiety/Stress	14.16	4.64	.27**	.37**	-.50	-.60	-.20	-.58	-.58	.77	
(9) Depression	14.48	5.78	.22**	.34**	-.52**	-.60**	-.25**	-.16**	-.66**	.78**	

$p < .05$. ** $p < .01$.

Table 2. Hierarchical regression analyses – predictors of RA and RV ($N=389$).

Factor	R	R ²	β	t	P	F	ΔR^2
Model 1 (DV = RA)	.07	.01			.35	1.05	.01
Age			-.03	-.54	.59		
Sex			.07	1.42	.16		
Model 2a (DV =RA)	.28	.08			>.001	10.61	.07**
Age			-.01	-.16	.88		
Sex			.10	1.94	.05		
Anxiety/Stress			.27	5.44	>.001		
Model 2b (DV =RA)	.23	.05			.35	1.05	.04**
Age			-.04	-.08	.93		
Sex			.08	1.49	.14		
Depression			.22	4.32	>.001		
Model 1 (DV = RV)	.07	.01			.36	1.02	.01
Age			.02	-.07	-1.42		
Sex			-.07	.02	.46		
Model 2a (DV =RV)	.36	.13			>.001	19.38	.12
Age			-.05	-.96	.34		
Sex			.06	1.14	.26		
Anxiety/Stress			.34	7.47	>.001		
Model 2b (DV =RV)	.33	.11			>.001	15.84	.10
Age			-.04	-.77	.44		
Sex			.03	.54	.59		
Depression			.33	6.73	>.001		

Note. DV = Dependent Variable; RA =Relational Aggression; RV = Relational Victimization.

* $p < .05$. ** $p < .01$.

Table 3. Simple regression analyses – predictors of RA and RV ($N=389$).

Factor	Beta	SE	t	95% CI		B	R ²	p
				LL	UL			
DV = RA								
Anxiety/Stress	.27	.08	5.44	.28	.56	.44	.07	<.001
Depression	.22	.07	4.43	.16	.42	.29	.05	<.001
Acting with awareness	-.22	.06	-4.46	-.38	-.15	-.26	.05	<.001
Non-Judgement	-.23	.05	-4.61	-.33	-.13	-.23	.05	<.001
Self-isolation	-.21	.09	-4.22	-.57	-.21	-.39	.04	<.001
DV = RV								
Anxiety/Stress	.37	.05	7.71	.39	.50	.40	.13	<.001
Depression	.34	.04	7.01	.21	.37	.29	.11	<.001
Acting with awareness	-.29	.04	-5.92	-.30	-.15	-.22	.08	<.001
Nonjudgement	-.30	.03	-6.19	-.28	-.14	-.20	.09	<.001
Self-isolation	-.31	.06	-6.42	-.49	-.26	-.38	.10	<.001

Note. DV = Dependent Variable; RA =Relational Aggression; RV = Relational Victimization.

* $p < .05$. ** $p < .01$.

for SCS isolation was also significant so that feeling less isolated led to lesser RA perpetration, explaining 4% of the total variance. The variables (acting with awareness, non-judgment, and isolation) were then entered into a stepwise multiple regression analysis to investigate their independent and unique contribution to RA (Table 4) resulting in the best model being inclusive of acting with awareness and nonjudgement as significant predictors, explaining 6% of the model's variance and excluding self-isolation.

Table 4. Stepwise multiple regression analyses – predictors of RA and RV ($N=389$).

Factor	Beta	SE	<i>t</i>	95% CI		<i>B</i>	<i>F</i>	<i>R</i> ²	<i>p</i>
				<i>LL</i>	<i>UL</i>				
<i>DV = RA</i>									
Model (Acting with awareness + Nonjudgement)							13.10	.06	.03
Acting with awareness	−.13	.07	−2.18	−.30	−.02	−.16			.03
Nonjudgement	−.15	.06	−2.18	−.28	−.03	−.15			.02
Self-isolation	−.07		−1.16						.25
<i>DV = RV</i>									
Model (Acting with awareness + self-isolation)							25.58	.12	>.001
Acting with awareness	−.17	.04	−3.01	−.22	−.05	−.13			.00
Self-isolation	−.22	.07	−3.86	−.40	−.13	−.27			<.001
Nonjudgement	−.12		−1.74	−	−	−			.084

Relational victimization

Two hierarchical regression analyses (Table 2) including sex and age at block 1 and Anxiety/Stress and Depression at block 2 respectively, revealed that neither age nor sex were significant predictors of RV but that both Anxiety/Stress and Depression predicted relational victimization with 13% and 10% variances explained, respectively.

Simple regression models for acting with awareness and nonjudgement on relational victimization were also significant, explaining 8% and 9% of the model's variance, respectively, so that higher levels of these mindfulness facets led to lesser RV. In another simple regression, SCS isolation emerged as a statistically significant predictor, indicating that feeling less isolated from other predicts lesser RV experience, explaining 10% of the variance. All three variables were entered into a stepwise multiple regression analysis to investigate their unique contribution to the model (Table 4), resulting in the best model explaining 12% of the variance and being inclusive of self-awareness and SCS social isolation as unique predictors and excluding nonjudgement.

Mediation

Mediation outcomes are summarized in Table 5. To study the possible mediation effects of the mindfulness facets on RA, given the high intercorrelation between acting with awareness and non-judgment, the two facets were summed up into a composite scale and entered in a mediation analysis with Anxiety/Stress as a predictor and RA as the dependent variable, resulting in a significant total model of $F(1,387)=29.63$, $p<.001$, $R^2=.07$ and a partial indirect effect explaining 32% of the total model. A second mediation analysis was conducted with Depression as a predictor and relational aggression as the dependent variable, resulting in a significant total model of $F(1,387)=19.64$, $p<.001$, $R^2=.05$ and a partial indirect effect of acting with awareness/nonjudgement explaining 54% of the variance of the total model. Acting with awareness

Table 5. Mediation coefficients with negative emotional states as predictors and RA and RV as dependent variables.

Mediation model	a path (SE)	b path (SE)	c path (SE)	c' path (SE) [CI: LL-UL]
Anxiety/Stress → Acting with awareness/nonjudgement → Relational aggression	-.81(.05)**	-.18(.08)*	.24(.08)**	.14(.06) [.02-.26]
Depression → Acting with awareness/nonjudgement → Relational aggression (DV)	-.67(.04)**	-.23(.07)**	.29(.06)**	.16(.05) [.05-.26]
Anxiety/Stress → Acting with awareness → Relational victimization	-.67(.06)**	-.10(.04)**	.40(.05)**	.08(.03) [.02-.14].
Depression → Acting with awareness → Relational victimization	-.60(.05)**	-.12(.04)**	.29(.04)**	.11(.03) [.04-.17]
Anxiety/Stress → Self-isolation → Relational victimization	-.52(.04)	-.18(.07)**	.29(.04)**	.07(.03) [.02-.12]
Depression → Self-isolation → Relational victimization	-.47(.03)**	-.19(.08) NS	.29(.04)**	.09(.04) [.02-.16]

also partially mediated the relationship between Anxiety/Stress and RV, explaining 23.85% of the variance of the total effect model, $F(1,387)=33.57$, $p<.001$, $R^2=.15$. Similarly, acting with awareness partially mediated the relationship between Depression and RV, explaining 31.70% of the total effect model, $F(1,387)=28.92$, $p<.001$, $R^2=.13$.

Discussion

This study investigated the association of mindfulness and compassion with RA and RV. It also examined the mediational role of mindfulness in the relationship between negative emotional states (Anxiety/Stress and Depression) and RA and RV. Research on affective and dispositional factors associated with variants of aggressive responding and victimization is important in developing targeted preventative programs in colleges for RA and RV (e.g., Thomas, 2019). This is important given the detrimental effect of relational maladjustment in collect and the emergence of preventative programs including mindfulness and self-compassion elements pending sufficient evidence (Bensimon, 2017; Gao et al., 2016; Yang & Yang, 2021).

The results of this study largely supported the predictions. Acting with awareness and nonjudgement uniquely predicted reduced RA and mediated the relationship between negative emotional states and RA. Additionally, acting with awareness and reversed isolation uniquely predicted less RV, while acting with awareness also mediated the relationship between negative emotional states and RV. The findings point to theoretical and practical considerations.

Consistent with previous studies, higher levels of negative emotional states were significantly associated with RA and RV (Dahlén et al., 2013; Werner & Crick, 1999) although explaining a small percentage of the variance of RA (5–7%). This small effect was replicated from previous studies (Dahlén et al., 2013; Gros et al., 2009) suggesting that only a small percentage of students use RA to manage anxious and depressive emotional experiences. Negative emotional states were found to be more potent in predicting RV (13% and 11% of the variance) indicating that they may be more influential in creating a vulnerability to being relationally targeted in college. Although research on RV in college is limited, the findings correspond to childhood and adolescent literature highlighting the association of RV and internalizing symptoms (Casper & Card, 2017; Crick & Grotpeter, 1995; Crick et al., 2006; Desjardins & Leadbeater, 2010; Liao et al., 2022; Reijntjes et al., 2010). The present study considered concurrent associations and therefore cannot define the directionality of these effects. Nonetheless, consistent with rationale from the childhood literature (Casper & Card, 2017), individuals who experience negative emotional symptoms may be more vulnerable to RV. Moreover, the opposite direction to these findings is also possible in that long-term experiences of RV may trigger negative emotional states (Ethridge et al., 2018).

This study also examined whether specific facets of mindfulness and self-compassion protect against the emergence of RA and RV. Demonstrating that acting with awareness and nonjudgement were associated with RA was in line with the general aggression literature including other types of aggression (Borders et al., 2010; Eisenlohr-Moul et al., 2016; Garofalo et al., 2020b; Kim et al., 2022). This association has been consistently reported for other non-physical types of aggression such as hostility (Borders et al., 2010; Kim et al., 2022), though this is the first study reporting this finding for relational aggression. Considering the association of acting with awareness with RA, it is possible that becoming more aware of one's internal (feelings and thoughts) and external environment is crucial in regulating interpersonal responding and choosing actions consistent with one's needs and values (Ryan & Deci, 2000). Additionally, nonjudgement may lead to students being less engaged with critical thoughts in relation to self and others leading to lesser RA. This hypothesis is consistent with findings that the association of nonjudgement to proactive and reactive aggression was mediated by aggressive rumination (Kim et al., 2022). In exploring the hypothesized mediational effect of acting with awareness and nonjudgement (as a composite scale) between negative emotional states and RA, the study revealed significant partial indirect effects indicating that these processes contribute toward downregulating negative emotions that could trigger aggressive responding.

The strength of the association of acting with awareness and nonjudgement was small for RA, consistent with prior studies, with college students examining mindfulness and types of aggression (Hesse et al., 2021; Kim

et al., 2022). Findings suggest that RA in college may not be a wholly mindless response. Alternatively, this may be indicative of instrumental motivation. In a longitudinal study, Ojanen and Kiefer (2013) tracked the development of RA in adolescents, noting increases in instrumental RA and decreases in reactive RA overtime. Thus, it is possible that the minimal association found presently could be better understood when accounting for the effects of other important variables such as motivation (e.g., social status; Pronk & Zimmer-Gembeck, 2010) or hostile attribution styles (Heppner et al., 2008).

Contrary to our expectations on self-compassion facets, only isolation predicted RA, though it did not uniquely contribute to a multiple regression model beyond the two mindfulness processes. It was presumed that a shared acknowledgment of one's humanness and a sense of being socially interconnected would be a motivator for compassionate rather than relationally aggressive behavior (Wayment & O'Mara, 2008). A possible explanation for the current findings may be that mindfulness and self-compassion facets of interest are highly correlated (e.g., $r = .54-.64$) and it may be difficult to factor out their unique contributions without losing essential information. Alternatively, it is possible that previous findings associating self-compassion as a composite variable to reduced aggression may have been reflective of variance loading on the mindfulness facets of the self-compassion construct.

The results for RV had a slightly different pattern. Isolation emerged as a significant predictor of RV and uniquely contributed to reduced victimization alongside acting with awareness. That is, being able to acknowledge one's suffering as part of the human experience may be a protective factor on RV. The importance of social isolation in types of victimizations has also been noted in the child and adolescent literature, with studies indicating that peer victimization is associated with loneliness (Kochenderfer & Ladd, 1996; Ladd et al., 2018; Storch & Masia-Warner, 2004; Storch et al., 2003) and social alienation (Rudolph et al., 2014). This may happen either due to individuals approaching aggressors in a less defensive communicational frame (i.e., you are a human being, and you struggle like me) or due to their ability to remain accepting and gentle toward their own distress (i.e., struggling is part of being human). This positing is consistent with a, albeit debated, symptom driven model of the development of victimization (Juvonen & Graham, 2014). That is, students who experience more internalizing symptoms may render themselves as easier targets for relational attacks or tend to interpret ambiguous situations as threatening (Carthy et al., 2010; Forbes-Mewett, 2019). Reduced social isolation may be an indicator of one's competent social integration and communal connection, acting as a protective factor. Consistently, acting with awareness

mediated the relationship between negative emotional symptoms and relational victimization suggesting that present moment awareness may help regulate one's internalizing symptoms to a lesser victimization experience.

This study's main motivation was to explore whether mindfulness and self-compassion processes could emerge as protective factors in the management of negative emotional symptoms and the prevention of RA and RV experiences in college (DeSteno et al., 2017; Liang et al., 2018; Wupperman et al., 2012). The present findings indicated that mindfulness and self-compassion facets were of borderline effect on RA, although they emerged as more promising in managing RV. In line with prior studies, the present findings highlight the importance of studying the types of aggression, populations, and contexts for which mindfulness and self-compassion processes and interventions may be beneficial (Gillions et al., 2019).

Limitations

This was a cross-sectional study limiting our understanding of causality and directionality of findings. Although our findings are consistent with the interpretation that negative emotional symptoms impact on RA and RV, the opposite direction is also possible. That is, RV and RA experiences may result in negative emotional symptoms, given one's lack of emotion regulation capacities. Longitudinal designs may delineate the directionality of these effects, although both pathways could be valid depending on developmental trajectories of aggression and victimization experiences (Reijntjes et al., 2010).

A second limitation was that the study was implemented during the COVID-19 pandemic and was, on specific months, affected by university closures. This may have resulted in students having less on-campus experiences of RA and RV and could explain the low observed rates of these phenomena and the small effects found in the study. Another limitation was the high intercorrelation found between mindfulness and self-compassion facets. Although multicollinearity was within appropriate limits, the shared variance may have prevented the effects of individual facets to emerge. To account for this, mindfulness and negative emotional state facets were summed up in composite scales on certain analyses, although a careful interpretation of results is still needed (Vatcheva et al., 2016). Finally, this study may suffer from participant self-selection bias, given the rate of attrition (23%) which is a common challenge in online survey studies (Keiding & Louis, 2018). Future studies will benefit from considering the targeted recruitment of a representative sample of the student population of interest as this would also resolve additional challenges related to the high rate of psychology students represented in the sample.

Implications for research and practice

Enhancing the understanding of RA and RV in college as well as improving preventative programs is important for college counseling services. The current study provides a starting point in understanding the role of mindfulness and self-compassion as protective factors, although the role of additional factors also needs to be understood for designing effective campus prevention programs. Future research studies would benefit from studying the role of instrumental use of RA (i.e., to acquire social status or benefits), the use of RA to regulate externalizing emotions such as anger and hostility, and explore the association of RA and RV with academic adjustment and success. Longitudinal studies could also allow for the clarification of the directionality of these effects and provide further insight on other vulnerability factors that could be included in screening programs in college campuses.

The present findings indicate that college students who are low in the mindfulness facets of acting with awareness and nonjudgement and high in their experience of self-isolation may benefit more from a preventive program on RA/RV. Preventative programs could introduce skills focused on nonjudgement (e.g., observing judgments, understanding the conditioning supporting judgmental cognitions, and recognizing the value of diversity), acting with awareness (e.g., emotional awareness, present moment attention, and doing one thing at a time) and social connectedness (e.g., compassionate friend and giving and receiving compassion). Understanding the role of these processes may also encourage college counseling services to consider the culture within college settings and the role of contextual factors (e.g., clubs, sororities, and academic climate) in promoting values that support nonjudgement and comradery in distress.

Conclusions

Mindfulness and self-compassion processes of acting with awareness, nonjudgement and reverse isolation appear to have some limited protective effect on RV (and less so on RA) in college. In answering the question of whether mindfulness and self-compassion components could be included in preventative programs in college campuses, this study indicates that acting with awareness, nonjudgement and reverse social-isolation could be beneficial add-ons to campus-based programs but not the sole focus of these curricula. Although the effect is stronger for RV, common programs could also be considered for RA given a moderate to large correlation found between RA and RV, indicating that a role-reversal is likely.

Disclosure statement

We have no known conflict of interest to disclose.

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