



Negative, but Not Positive, Self-Compassion Explains Additional Variance in Academic Stress Over and Above Adversity Among Tertiary Students

Jia Hua PAN✉, Siu Hei WU, Ka Tung CHEUNG, and Larry AUYEUNG

Tung Wah College, HKSAR, China

✉21006676@twc.edu.hk

Abstract. Mental health issues among tertiary students have become increasingly prominent, emerging as a significant public health concern. Academic stress is associated with various mental health issues. When compounded by adverse life events, it may further exacerbate the negative impact of academic stress on students, potentially increasing the risk of mental health conditions. While self-compassion is widely recognized as a protective factor for mental health, whether the differential role of its positive and negative dimensions explain additional variance in academic stress beyond the effects of life adversity remains unclear. This study examines the differential roles of positive and negative self-compassion in the associations between academic stress and adverse life events among tertiary students. Cross-sectional survey data was collected from 113 full-time tertiary students in Hong Kong. The questionnaire included sociodemographic and relevant measures included academic stress (ESSA), Self-Compassion (SCS-Y) and adverse life events (ASLEC). Hierarchical multiple regression was performed. The results indicate that neither gender nor self-rated academic performance had a potential impact on academic stress. However, adverse life event was positively correlated with academic stress ($\beta = .406, p = .006$). In the third step, regarding self-compassion, only its negative components of self-compassion was associated with lower academic stress ($\beta = -.524, p < .001$), but not the positive aspect ($\beta = -.067, p = .637$). Findings suggest that reducing the negative components of self-compassion may be more effective than fostering the positive aspects in reducing academic stress among students.

Keywords. Academic stress, Adverse life events, Self-Compassion.

1 Introduction

Over the past few years, mental health issues among tertiary students have become increasingly prominent, emerging as a significant public health concern (Sheldon et al., 2021). According to Lipson and colleagues (2022), during the 2020–2021 academic year, over 60% of tertiary students met the diagnostic criteria for at least one mental health disorder, representing a 50% increase from baseline data in 2013. The prevalence rates of these issues among students vary to different degrees across cultural contexts. For example, in Bangladesh, 25 - 75% of tertiary students have experienced from moderate to severe stress-related disorders, depression, and anxiety (Kamruzzaman et al., 2024), while in China, the corresponding rates among tertiary students reach

approximately 35% for depression, 38-43% for anxiety, and 20-30% for stress, all exceeding normative population thresholds (Liu et al., 2019). Further, research also found that female students are more susceptible to stress-related mental health risks (Ge et al., 2024; Garrett et al., 2017; Kroshus et al., 2021). Regarding these concerns, stress may be a key contributing factor to affecting tertiary students' mental health (Slimmen et al., 2022).

2 Literature Review

2.1 Academic Stress

Academic stress (or educational stress) is described as psychological distress that occurs when learning-related expectations or demands surpass an individual's coping capacity (Dubczak, 2019). A systematic review found that 48 out of 52 studies identified academic stress as a predictor has contributed to at least one adverse mental health outcome (Steara et al., 2023). Specifically, elevated academic stress is correlated with heightened anxiety and depression (Barbayannis et al., 2022; Zhu et al., 2021), mental health deterioration (Córdova Olivera et al., 2023), and even suicidal thoughts (Okechukwu et al., 2022). The impacts of academic stress extend beyond mental health, significantly affecting individuals' academic performance through reduced academic achievement, decreased learning motivation, and increased dropout risk (Wunsch et al., 2021; Pascoe et al., 2019). These adverse effects likely arise because tertiary students often encounter multifaceted stressors, including exams, excessive assignment workloads, difficulties adapting to new environments, high academic expectations, and challenges maintaining a work-life balance (Akhtar & Akhtar, 2024; Khavarzamani & Habibikaleybar, 2023; Pérez-Jorge et al., 2025). When exposed to stressors, students may experience higher stress levels compared to other periods, thereby elevating the risk of negative consequences. For example, exam periods may result in increased academic stress, often accompanied by heightened negative emotions and poorer sleep quality (Garrett et al., 2017). Without timely interventions, these issues may consolidate into persistent maladaptive patterns, further worsening psychological well-being and academic outcomes.

2.2 Adverse Life Events and Academic Stress

The interplay between academic stress and concurrent life adversity may complicate student's mental health outcomes, as psychological distress among tertiary students is often associated with adverse life events (Zhang et al., 2016; Zou et al., 2018). Adverse life events refer to any adversity that may threaten an individual's psychological balance and hinder personal development (Gonçalves et al., 2017). A cross-national longitudinal study found that 93.7% of tertiary students encountered at least one life event (including family, economic, health, romantic relationships, or interpersonal relationships), with the severity in each domain significantly correlating with the risk of developing at least one mental disorder (Karyotaki et al., 2020). However, among all kinds of stressors, most students perceive academic-related stress as their primary stressors, followed by interpersonal stress and personal internal factors (Sailo &

Varghese, 2024), and further analysis reported that sociodemographic such as paternal educational level, family socioeconomic status, school type, educational period and gender are also associated with academic stress. When academic stress is combined with other adversities, it may create a cumulative risk of mental health deterioration. Specifically, economic stress not only hinders students' academic success but also impacts their social life and well-being (Moore, 2021). In terms of interpersonal relationships, severe betrayal in intimate relationships, intense arguments or breakups with family members or close friends, and academic stress are associated with depression risk (Mall et al., 2018). Family stress and academic stress may contribute to depression in students and adversely impact their academic performance (Deng et al., 2022; Martínez-Cuevas et al., 2024). School bullying exposure alongside academic stress may trigger depression or anxiety, thereby further heightening vulnerability to self-harm (Chen et al., 2023). These findings collectively underscore the critical need for protective mechanisms against cumulative adversity.

2.3 Self-compassion

Facing such interconnected adversities, self-compassion, as a widely recognized effective protective factor for mental health, has been shown to foster wisdom and resilience in adversities (Bluth et al., 2022). It refers to the attitude of offering oneself support and kindness during experiences of failure, inadequacy, or suffering (Neff, 2003a), it is a multidimensional construct consisting of six distinct, but interrelated components organized within three core domains, each representing contrasting approaches to suffering or adversity (Neff, 2003a; Neff, 2023). Within affective domain, constructive self-kindness opposes destructive self-judgement. In the cognitive domain, adaptive recognition of shared humanity contrasts with maladaptive isolation. Regarding the attentional domain, mindful awareness counterbalance unhealthy over-identification (Neff, 2003a; Neff, 2023). The research further indicates that these components can be typically divided into positive and negative dimensions. The negative components include over-identification, self-judgment, and isolation, while the positive components include mindfulness, self-kindness, and common humanity. Despite the complexity of self-compassion, it functions as an integrated framework that simultaneously enhances positive components while reducing negative ones, collectively working together to mitigate one's suffering (Neff, 2023).

Empirical evidence consistently links self-compassion to various adaptive outcomes. For instance, Interventions targeting self-compassion or mindfulness can reduce anxiety and improve sleep quality (Luo et al., 2024). while highly self-compassionate individuals often develop greater capacity to detach from past adverse events, potentially lessening the intensity of negative emotional responses (Miyagawa & Taniguchi, 2020). Beyond emotional regulation, it cultivates constructive attitudes toward challenges and failures (Neff et al., 2005; Verma et al., 2020). As Fung and colleagues (2021) found that positive self-compassion predicted lower anxiety and depression levels alongside elevated subjective well-being among Hong Kong students. Furthermore, researchers have observed differential effects among self-compassion components. According to Muris and Petrocchi (2017), the positive components correlate inversely with psychological pathology, whereas the negative components show positive correlations. Subsequent research further supported this finding,

revealing that the negative components of self-compassion play a more predominant role than the positive aspects in predicting mental distress (Chio et al., 2021). These findings suggest that self-compassion seems to demonstrate a dual-pathway model or distinct mechanism underscoring the complex relationship with mental health.

2.4 Self-compassion and Academic Stress

Within academic settings, the beneficial outcome of self-compassion also plays a crucial role in motivation and stress adaptation. Research has found that reducing self-criticism tendencies while cultivating self-compassion facilitates the internalization of extrinsic motivation and can effectively promote autonomous learning engagement (Kotera et al., 2023). Moreover, self-compassion functions as a protective factor or adaptive mechanism that helps to against academic stress. Such as students who with higher levels of self-compassion tend to reduce perception of academic stress (Nazari et al., 2025; Shirmohammadi et al., 2021), buffer the adverse impact of academic stress on well-being (Poots & Cassidy, 2020), foster adaptive coping by reducing perceived threat and enhancing perceived controllability over stress events (Chishima et al., 2018), as well as decrease academic burnout (Farisandy et al., 2023). Although highly self-compassionate students may remain susceptible to academic stressors, they demonstrate significantly lower vulnerability to maladaptive outcomes such as academic burnout and depression (Lee & Lee, 2022). These findings collectively highlight that cultivating self-compassion involves both developing positive components while mitigating negative tendencies, thereby providing a comprehensive approach to enhance psychological resilience.

2.5 Current Study and Research Gap

Previous studies have primarily examined the effects of self-compassion on adverse life events or academic stress in separate contexts, with limited research exploring whether self-compassion mitigates the impact of life adversity on academic stress. Additionally, Salinger and Whisman (2021) argue that focusing solely on total self-compassion scores, while overlooking the distinct influences of its subcomponents, may lead to an overestimation of its association with mental health symptoms.

Thus, further investigation into the differential relationships between positive and negative self-compassion in research is crucial. Despite many research demonstrating the positive influence of self-compassion on students' mental health in academic settings, there are exceptions, for examples, studies have found that self-compassion neither mitigates the negative effects of chronic stress (Kroshus et al., 2021), nor buffer the association between depressive symptoms and adverse life events (Salinger & Whisman, 2021). Further studies are thus necessary to deepen the understanding of the differential effects of the positive and negative components of self-compassion on academic stress. Moreover, very few studies have accounted for gender, life adversity, together with self-rated academic performance as control variables when examining these differential effects.

Given these research gaps, the present study examines the differential roles of positive and negative self-compassion in the association between academic stress with adverse life events entered as covariates among tertiary students and hypothesizes that

positive and negative self-compassion can predict additional variance in academic stress among tertiary students beyond adversity.

2.6 Hypotheses

H₁: Female students would predict higher academic stress among tertiary students.

H₂: Self-rated academic performance would positively predict higher academic stress among tertiary students.

H₃: Higher positive components of self-compassion would predict lower academic stress after controlling for adverse life events.

H₄: Lower negative components of self-compassion (i.e., lower self-guilt and hatred) would predict lower academic stress after controlling for adverse life events.

3 Methods

3.1 Participants and Procedures

This study involved 113 full-time tertiary students in Hong Kong (32.7% males and 67.3% females). It adopted a quantitative cross-sectional survey research design using secondary data collected by Professor Alex Chan and his team. Ethical approval had been sought from the Hong Kong Shue Yan Tertiary. Upon provision of informed consent, full-time students in tertiary schools were invited to complete a self-administered online questionnaire, which included sociodemographic and all relevant measures such as the Educational Stress Scale for Adolescents (ESSA; Sun et al., 2011), the Self-Compassion Scale for Youth (SCS-Y; Neff et al., 2020), and the Adolescent Self-Rating Life Events Checklist (ASLEC; Liu et al., 2000).

3.2 Measures

Academic Stress. Academic stress was assessed using the Educational Stress Scale for Adolescents (ESSA; Sun et al., 2011), which measures academic stress experienced by young people in relation to their academic performance and learning outcomes. The 16-item scale consists of five factors: (a) despondency (3 items), (b) self-expectation (3 items), (c) worry about grades (3 items), (d) workload (3 items), and (e) pressure from study (4 items). Participants rated each item on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) with lower scores indicating lower pressure. The ESSA is a useful instrument that demonstrated good reliability and validity in Chinese populations, with previous Cronbach's alpha for the full scale was .82 (Sun et al., 2011). In the current study, the scale exhibited a great internal consistency; the Cronbach's alpha for the total educational stress was .892, and for its 5 subscales, Cronbach's alpha of despondency was .712, self-expectation was .718, worry about grades was .752, workload was .838, and pressure from study was .759.

Self-Compassion. The Self-Compassion Scale for Youth (SCS-Y; Neff et al., 2020) was adopted to measure the participants' empathetic attitude towards their own suffering and failures. This 17-item scale was modified from the initial 36-item Self-

Compassion Scale (SCS; Neff, 2003b), using simpler and more understandable language to better suit the youth populations, consists six different subscales categorized into: (a) negative components - over-identification (2 items), self-judgment (3 items), and isolation (3 items); and (b) positive components - mindfulness (3 items), self-kindness (3 items), and common humanity (3 items). Items rated on a 5-point Likert scale ranging from 1 (Almost Never) to 5 (Almost Always). Lower scores on positive components indicate lower self-compassion. Negative components were reverse-coded such that higher scores reflect lower level of these traits (i.e., less self-criticism). The SCS-Y is a valid and reliable measurement tool for assessing young people across different cultural contexts (Cheung et al., 2023; Neff, 2023; Neff & Tóth-Király, 2022). In the current study, the scale showed a high level of internal consistency (Cronbach's alpha for total SCS-Y was .833, for its subscales, Cronbach's alpha for positive self-compassion was .875, and negative self-compassion was .824).

Adverse Life Events. The Adolescent Self-Rating Life Events Checklist (ASLEC; Liu et al., 2000) was used to assess the severity of life pressures experienced by adolescents during the past year. The 27-item scale covers six domains of the adverse life events: (a) Interpersonal (5 items), (b) Academic stress (5 items), (c) Punishment (7 items), (d) Loss (3 items), (e) Health adaptation (4 items), and (f) Others (4 items). Items rated on a 5-point Likert scale, ranging from 1 (Not at all) to 5 (Extremely severe), with lower total scores indicating lower stress severity. The ASLEC has demonstrated good validity and reliability in previous research (Cronbach's alpha of .85; Liu et al., 2000). In the current study, the scale showed a good internal consistency (Cronbach's $\alpha = .927$).

3.3 Data Analysis

IBM SPSS Statistics (Version 30.0) was used to explore the associations among all the study variables through zero-order correlations. Subsequently, Hierarchical multiple regression was employed to test the hypotheses of the study. In the first model, educational stress served as the dependent variable, with gender and self-rated academic performance as the predictors. In the second step, the adverse life events variable was also included as the predictor variable. In the final step, both positive and negative self-compassion were included in the model. A significant change in model fit indicated the added variables' ability to explain additional variance in the outcome variable.

4 Results

4.1 The Neuroscience of Metaverse

The sociodemographic characteristic of the study sample is presented in Table 1. The sample consisted of 113 tertiary students in Hong Kong, with 37 (32.7%) males and 76 (67.3%) females. A total of 33.6% of participants lived in public housing, and 77.9% did not apply for textbook assistance. Regarding study environments, 73.5% of participants reported having a dedicated desk at home, while 79.6% of participants

owned fewer than 100 books (including e-books). In terms of parental education level, 59.3% of fathers and 63.7% of mothers had attained a senior high school education or higher. Academically, 62.9% of participants self-rated their performance to be above average in their cohort.

Table 1: Sociodemographic Characteristics of Participants (N = 113)

Variables		n	%
Gender	Males	37	32.7
	Females	76	67.3
Housing Type	Private Housing (Self-funded)	28	24.8
	Private Housing (Rented)	19	16.8
	Public Housing	38	33.6
	Home Ownership Scheme (HOS)	23	20.4
	Unsure	3	2.7
	Other	2	1.8
Dedicated Desk at Home	Yes	83	73.5
	No	14	12.4
	Share with Family Members	16	14.2
Number of Book/E-Books at Home	Fewer than 21	31	27.4
	21 - 50	42	37.2
	51 - 100	17	15.0
	100 - 150	10	8.8
	151 - 200	5	4.4
	More than 200	8	7.1
Textbook Assistance Status	No	88	77.9
	Yes, received full subsidy	13	11.5
	Yes, received partial subsidy	1	.9
	Yes, but not approved	3	2.7
	Yes, under review	1	.9
	Unsure	7	6.2
Paternal Education Level	No formal education	3	2.7
	Primary school	12	10.6
	Junior high school (Form 1 -3)	26	23.0
	Senior high school / Matriculation (Form 4 - 7)	49	43.4
	Post-secondary (non- degree)	10	8.8
	Bachelor's degree	13	11.5
	Master's degree or above	0	0
	Other	0	0

Maternal Education Level			
	No formal education	1	.9
	Primary school	11	9.7
	Junior high school (Form 1 -3)	34	30.1
	Senior high school / Matriculation (Form 4 - 7)	46	40.7
	Post-secondary (non- degree)	10	8.8
	Bachelor's degree	8	7.1
	Master's degree or above	3	2.7
	Other	0	0
Self-rated Academic Performance			
	Top 10%	5	4.4
	11% -25%	32	28.3
	26% - 50%	36	31.9
	51% - 75%	33	29.2
	76% - 90%	4	3.5
	Bottom 10%	3	2.7

4.2 Correlation Analysis

The descriptive statistics and zero-order correlations were performed to illustrate the performance and the correlation coefficients among all the study variables for tertiary students in Table 2. The analysis revealed that the total educational stress showed a significant positive correlation with all its subscales, demonstrating particularly strong associations with ‘pressure from study’ ($r = .89, p < .001$), followed by ‘Worry about grades’ ($r = .76, p < .001$), ‘Despondency’ ($r = .75, p < .001$), ‘Workload’ ($r = .72, p < .001$), and ‘Self-expectation’ ($r = .71, p < .001$). Regarding self-compassion dimensions, negative components of self-compassion (reverse-coded, wherein higher scores indicate lower levels of these traits) exhibited significant negative correlations with all educational stress variables. This suggests that students who adopt less self-critical tendencies (reflected by higher reverse-scored values) experience lower stress levels. Conversely, positive aspects showed no significant associations with any study variables. Adverse life events were positively correlated with most educational stress components, except for self-expectation, where no significant relationship emerged.

4.3 Hierarchical Multiple Regression Analyses

Hierarchical multiple regression analyses were employed to test the hypotheses of the study. In the first model, gender and self-rated academic performance had no potential impact on academic stress with adjusted R-square = .011. ANOVA showed a statistically non-significant model [$F(2, 42) = 1.234; p = .301$]. In the second model, after the inclusion of the adversity variables, the model significantly improved at 16.1% ($p = .006$) with adjusted R-square = .160. The ANOVA of the second model was statistically significant [$F(3, 41) = 3.786; p = .017$]. The analysis revealed that life adversity event, which was positively predicted academic stress ($\beta = .406, p = .006$). In

the third model, after the inclusion of the positive and negative components of self-compassion, the model significantly improved at 27.3% ($p < 0.001$) with adjusted R-square = .424. The ANOVA of the second model was statistically significant [$F(5, 39) = 7.480; p < .001$]. Interestingly, the analysis revealed that only the negative components of self-compassion, which was correlated with lower academic stress ($\beta = -.524, p < .001$), but not the positive aspect ($\beta = -.067, p = .637$). (see Table 3).

Table 2. Descriptive Statistics and Zero-order Correlations

	<i>M (SD)</i>	1	2	3	4	5	6	7	8	9
1. ES	3.23 (.65)	1								
2. PS	3.16 (.80)	.885**	1							
3. W	2.92 (.84)	.715**	.596**	1						
4. WG	3.07 (.95)	.756**	.576**	.324**	1					
5. SE	3.76 (.79)	.709**	.527**	.294**	.581**	1				
6. D	3.11 (.84)	.753**	.606**	.507**	.428**	.356**	1			
7. PSC	3.15 (.66)	-.072	-.002	-.038	.061	-.100	-.140	1		
8. NSC	2.88 (.62)	-.649**	-.483**	-.351**	-.453**	-.614**	-.533**	.147	1	
9. ASL	1.97 (.57)	.452**	.350**	.268*	.408**	.173	.413**	-.043	-.305*	1

Note. * $p < .05$. ** $p < .01$; ES= Total Educational Stress Scale for Adolescents; PS= Pressure from study; W= Workload; WG= Worry about grades; SE= Self-expectation; D= Despondency; PSC= positive components of self-compassion; NSC= negative components of self-compassion. ASL= adverse life event.

Table 3. Summary of Hierarchical Multiple Regression Analyses

Variables	Model 1			Model 2			Model 3		
	B	SE	β	B	SE	β	B	SE	β
Gender	.147	.221	.100	.082	.205	.056	-.062	.174	-.042
Self-rated academic performance	.108	.080	.205	.089	.074	.169	.036	.062	.069
Adverse life event				.452	.156	.406**	.301	.135	.270*
Positive components of self-compassion							-.069	.146	-.067
Negative components of self-compassion							-.531	.147	-.524**
R^2	.056			.217			.490		
R^2_{adj}	.011			.160			.424		
ΔR^2	.056			.161			.273		
ΔF	1.234			8.452**			10.414***		

Note. * $p < .05$. ** $p < .01$. *** $p < .001$; Gender (dummy-coded): Male= 1, Female= 2; Self-rated academic performance (dummy-coded): top 10%= 1, 11% -25%= 2; 26% - 50%= 3; 51% - 75%= 4; 76% - 90%= 5, Bottom 10%= 6; $F(df)$ in ANOVA: Model 1 = 1.234 (2, 42), Model 2 = 3.786* (3, 41), Model 3= 7.480*** (5, 39)

5 Discussion

The present study investigated the differential roles of positive and negative self-compassion in the association between academic stress with adverse life events (entered as covariates) among tertiary students. Four hypotheses were examined: (1) Female students would positively predict higher academic stress; (2) Self-rated academic performance would positively predict higher academic stress among tertiary students; (3) Higher positive components of self-compassion would predict lower academic stress after controlling for adverse life events; and (4) Lower negative components of self-compassion (i.e., lower self-guilt, and hatred) would predict lower academic stress after controlling for adverse life events.

This study employed hierarchical multiple regression analysis to test these hypotheses. Key findings revealed that neither gender nor self-rated academic performance significantly predicted academic stress. However, Adverse life events were positively predicted academic stress. Additionally, only the negative components of self-compassion were associated with lower academic stress, but not the positive aspects.

The research findings were mostly inconsistent with expectations. Regarding Hypothesis 1, the result contrary to expectation that failed to predict any influence in academic stress perception and also contrast with prior research in which female students typically perceive greater stress levels than their males counterparts (Garett et al., 2017; Kroshus et al., 2021). This discrepancy could be due to regional differences, an imbalance in gender distribution within the sample, or an insufficient sample size.

Regarding Hypothesis 2, self-rated academic performance also failed to predict higher academic stress among tertiary students. This may be due to the reason that self-rated academic performance is subjective, and it may not align with actual performance, and is easily influenced by other factors at the time (e.g., transient mood or external comparisons), leading to self-perception bias. Another possible explanation is that single-item measures (such as self-rated academic performance) may lack validity and reliability when compared to multi-item scales, except under specific conditions (Diamantopoulos et al., 2012).

Regarding the hypotheses for self-compassion. The results revealed differential patterns for positive and negative components of self-compassion. Contrary to hypothesis 3, which predicted that higher positive components would be associated with lower academic stress, no significant effect emerged ($\beta = -.067, p = .637$). The finding contrasts with previous research which has shown various positive outcomes associated with these components, even in the context of academic stress (Fung et al., 2021; Nazari et al., 2025; Shirmohammadi et al., 2021), though it partially aligns with some prior research suggesting that self-compassion may not mitigate chronic stress or buffer against depression and adversity (Kroshus et al., 2021; Salinger & Whisman, 2021).

In contrast to other hypotheses, only Hypothesis 4 aligned with the study's findings. After reverse-coding, higher scores on negative components of self-compassion (reflecting lower levels of negative components) significantly predicted lower academic stress ($\beta = -.524, p < .001$), accounting for additional variance beyond adversity. This finding was partially consistent with Neff's (2003a, 2023) theoretical framework, which emphasizes the combined benefits of cultivating positive

components while reducing negative ones. However, the findings for the present study specifically highlight that only the negative components of self-compassion uniquely contributed to the prediction of academic stress after accounting for adversity. Even after controlling for adverse life events, negative components of self-compassion remained significant in predicting the impact of academic stress (i.e., lower self-guilt, and hatred would significantly predict lower academic stress). The positive aspect, however, did not show any effect on academic stress. This discrepancy may be explained by the psychological principle that “bad is more powerful than good” (Baumeister et al., 2001), as individuals tend to prioritize threats (e.g., self-criticism under stress) over positive factors (e.g., self-kindness). More specifically, when experiencing stress, individuals may exhibit a tendency to amplify their own negative traits, thereby intensifying adverse psychological effects. This heightened focus on negativity may weaken their tendency to objectively assess their own competencies, including those positive traits (e.g., self-kindness) that could help them cope with challenges. Furthermore, the results support earlier findings that negative self-compassion is more associated with psychological distress (Chio et al., 2021), suggesting that reducing negative self-compassion may be more effective in alleviating such distress.

6 Limitations and Future Directions

Several limitations should be noted. First, gender imbalance in the sample (32.7% males and 67.3% females) may have concealed potential gender differences in the prediction effects of academic stress. Combined with the modest sample size (113), and the exclusive focus on tertiary students, these factors limit the generalizability of the findings. Future research should employ larger, more gender-balanced samples encompassing participants from different age groups to enhance the generalizability of these findings. Second, the measurement limitations may affect results. The single-item measures (e.g., self-rated academic performance) may introduce bias, as subjective self-assessments may not align with objective performance. Similarly, the use of self-report questionnaires on adverse life events may be subject to response biases and individual interpretations of the same questions. Diverse measurement methods (e.g., structured interviews) would be considered in strengthen future studies. Finally, the present study used a cross-sectional design, which makes it difficult to establish a causal relationship between self-compassion, adversity and academic stress. Therefore, future studies are recommended to adopt a longitudinal design to track changes in variables over time, providing clearer insight into the directionality and causality of these relationships. Additionally, future research should test interaction effects between adverse life events and negative self-compassion components to clarify potential buffering mechanisms.

7 Significance of This Study

Despite these limitations, this study succeeded in making several important contributions to understanding how self-compassion functions under stress.

The findings provided evidence that only negative (but not the positive) aspects of self-compassion predict lower academic stress. This challenges the widely held view that positive self-compassion is generally protective since most previous research measures self-compassion as a whole variable. Moreover, the findings support two-factor models of self-compassion, where positive and negative components of self-compassion operate independently, rather than in a unidimensional model.

These findings also offer novel insights for the Hong Kong context, as it is a high-pressure academic culture, reducing self-criticism appears to be more urgent than promoting self-kindness. Schools are recommended to rearrange resources from general self-compassion training to target negative self-compassion reduction, as well as integrating negative self-compassion screening into student mental health programs.

8 Conclusion

This study demonstrates the critical role of negative self-compassion components (i.e., reduced self-judgment and isolation) in mitigating academic stress among tertiary students. Crucially, while adverse life events contribute to stress, only lower levels of negative components (not positive ones) uniquely predict reduced stress. This supports a two-factor model of self-compassion and suggests that interventions should prioritize reducing self-criticism over promoting self-kindness. Future longitudinal research should test whether targeting these negative components prevents stress escalation and examine their buffering effects against life adversity.

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