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Mind Over Matter: Investigating Self-Esteem and Growth Mindset as Predictors of Stress Among Canadian University Students

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Abstract

The purpose of this study was to examine self-esteem and growth mindset as predictors of stress among Canadian university students. The sample comprised of 127 participants, and their levels of self-esteem, growth mindset, and perceived stress were assessed. Consistent with previous findings, through hierarchical multiple regression analyses, this study supported our hypotheses that lower levels of self-esteem and lower levels of growth mindset predict higher levels of stress. Independently, self-esteem significantly accounted for 44% of the variance in stress, while growth mindset significantly accounted for 10% of the variance in stress. However, results did not support our third hypothesis, as growth mindset was not statistically significant after accounting for self-esteem. Implications include a discussion of available interventions that can benefit most people through increasing self-esteem, particularly those in high-stress environments, followed by suggestions for future studies.

Keywords: stress, self-esteem, growth mindset, mindset, Canadian university students

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Is it possible to imagine life without stress? Stress is integrated into almost all aspects of daily life; therefore, it is natural to shift into a state of worry in response to stimuli (World Health Organization [WHO], 2023). According to the WHO (2023), it is inconceivable that an individual goes through life without facing some sort of stress. Specifically, 21.8% of Canadians 12 years and over reported experiencing extreme stress most days (Statistics Canada, 2022). Stress has been a known predictor of many negative consequences, including but not limited to, damage to relationship dynamics, complex long-term health issues, and overall life dissatisfaction (Serpa-Barrientos et al., 2023). While stress can be detrimental to mental health and well-being, research has also found that stress can fuel positive changes in certain situations. For example, Serpa-Barrientos et al. (2023) noted that stress was linked to increased resilience and growth in Peruvian university students. While it is important to continue exploring what stress can predict and its potential positive effects, in order to prevent or lessen the negative effects and leverage the positive effects, it is also essential to understand what can predict stress. Thus, this study contributes to the current pool of research on stress by exploring self-esteem and growth mindset as possible predictors.

Stress

Stress is defined as mental tension or worry (WHO, 2023). It has always been a part of people's lives but was never examined until Selye's studies in 1956 (Viner, 1999). The concept of stress was merely an abstract experience until Selye (1956) defined it as a response of the body to stimuli simultaneously disturbing homeostasis. Selye's studies allowed researchers to view stress as something measurable and controllable. Since then, the research has expanded to include different types of stress, such as acute stress, stress in different contexts, such as work-related or academic stress, and many other manifestations of stress that have varying responses (Schneiderman et al., 2005).

Multiple approaches have been found to measure different kinds of stress and their responses. Stress can be studied by looking at exposure to stressful events, through questionnaires on major events across life and accessing the extension of possible stressors under different contexts (Crosswell & Lockwood, 2020). A way to

operationalize stress in those situations is to look at the amount and severity of identified stressors, such as divorce, sickness, or becoming a caregiver. Crosswell and Lockwood (2020) note that another way to study stress is to look at the responses that derive from those stressful events, which can take biological, cognitive, and emotional forms. Researchers may look at certain emotional or physiological reactions, such as heart rate or cortisol levels, and analyze the existence of stress by copying behavioral patterns, such as smoking. Furthermore, a more accessible operationalization of stress is the self-report of perceived stress, which is a person's psychological evaluation of their stress levels and how they will handle it (Liu et al., 2021). Although it is a subjective measurement of stress and relies highly on an individual's ability to analyze their psychological state, it has been used widely in research, has high reliability and validity, and is suitable for online surveys (Cohen et al., 1983). Research indicates that a person's response to stress can vary depending on the time in their life, the situation, or even factors such as a change in their values and beliefs (Luo & Willlroth, 2024). Therefore, many studies have been conducted to explore self-esteem as a possible predictor of perceived stress or perceived severity of stress in different populations (e.g., Ifantopoulou et al., 2015; Juth et al., 2008; Sarfika et al., 2023).

Self-Esteem and Stress

Self-esteem refers to an individual's overall attitude, thoughts, and feelings, towards themselves, ranging from positive to negative (Rosenberg, 2015). A person's level of self-esteem is essentially an evaluation of their value, and it makes up a key part of their self-concept. There is an established relationship between self-esteem and stress, whereby self-esteem reflects individuals' perceived ability to cope with both negative and positive life events (Saleh et al., 2017). Sarfika et al. (2023) studied perceived stress among Indonesian nursing students and found it was linked to self-esteem and coping strategies. Self-esteem is crucial in coping with stress because individuals with solid self-esteem are confident and believe in themselves to have the ability to handle stressful experiences. Therefore, students with higher self-esteem were found to have lower perceived stress levels (Sarfika et al., 2023). Moreover, a study with young LGBT Tunisians found that individuals with high self-esteem are less susceptible to internalizing negative experiences, such as discrimination, and instead, see them as external challenges

that can be overcome (Mahjoubi et al., 2024). Kupcewicz et al. (2024) found that Polish students with high self-esteem had more active coping strategies, i.e., active coping, planning, positive revalidation, seeking emotional support, and acceptance.

Studies on the relationship between stress in students and self-esteem have also been conducted in North America. The findings are consistent with other countries that there is a negative relationship between stress and self-esteem (Friedlander et al., 2007; Hubbs et al., 2012; Hatun & Türk Kurtça, 2025). Individuals with high self-esteem tend to believe in their self-worth, respect themselves, and are confident in their abilities to handle stressful experiences; thus, they tend to have lower levels of stress (e.g., Kupcewicz et al., 2024). A study by Hubbs et al. (2012) found that higher perceived stress was associated with lower self-esteem. Moreover, research shows that college students are particularly vulnerable to high levels of stress, especially academic stress, which was also linked to worse mental well-being among the students (Barbayannis et al., 2022). Therefore, continuous research on the relationship between stress and self-esteem among college students is important.

Theoretically, the relationship between stress and self-esteem can be explained by stress appraisal theory, which states that stress does not only depend on an external stimulus but on the person's interpretation of it (Lazarus & Folkman, 1984). Therefore, cognitive appraisal is considered an essential variable when examining the relationship between an event itself and stress responses. It also includes two processes: a primary appraisal, where the person decides whether the event is relevant, benign-positive, or stressful, and a secondary appraisal, where the person evaluates the resources to cope with the stressful situation and assesses one's options (Karademas & Kalantzi-Azizi, 2004). The latter includes managing and regulating distressing situations and one's own emotions, as well as undertaking actions for positive change. People with high self-esteem are more confident in their abilities to cope, manage their emotions, and overcome challenges (Li et al., 2023).

Another theory that can help explain this relationship is the conservation of resources theory. A stress theory developed by Hobfoll (1989) presents a model stating that people strive to gain and protect resources, prevent the loss of these resources, and thereby avoid distress caused by this threat. One type of resource is personal, which

includes self-esteem, a highly valued characteristic that helps individuals achieve more resources, feel stronger in coping with and utilizing already available resources, and perceive the loss of some resources as less threatening, resulting in less stress over these resources (Sonnentag & Meier, 2024).

The trend in research on the relationship between stress and self-esteem is based on one's belief in their capabilities to handle difficult situations and negative experiences, and whether they view them as external challenges they can overcome or not. This view can be influenced by an individual's mindset regarding their beliefs in their intelligence. It appears that the way a person thinks of themselves and approaches the world, accordingly, may also affect stress.

Mindset

Mindset refers to a set of beliefs or attitudes individuals hold about their abilities, intelligence, talents, or other personal attributes, which significantly influence how they approach challenges, effort, learning, and growth (Dweck & Yeager, 2019). Carol Dweck popularized this concept in her research, particularly distinguishing between two types of mindsets. She called this distinguishing theory the "Implicit Theories of Intelligence". Originally, the implicit theories were referred to as "Entity" and "Incremental", but later studies referred to them as "fixed mindset" and "growth mindset", respectively (Dweck & Yeager, 2019). Individuals with a fixed mindset believe intelligence cannot be developed and view it more as a fixed trait, while individuals with a growth mindset believe intelligence can be developed through experiences of personal effort and learning strategies (Dweck & Yeager, 2019; Troche & Kunz, 2020). Those who embrace a growth mindset view personal attributes of intelligence including personality and emotions, as malleable and controllable (Hu et al., 2025). Conversely, individuals with a fixed mindset tend to perceive these attributes as unchangeable traits.

A meta-analysis conducted in 2020 explored the relationship between growth mindset and psychological distress (Burnette et al., 2020). They found that growth mindset negatively correlated with psychological distress and positively correlated with treatment value and active coping. These results support the idea that growth mindset is not only relevant for achievement outcomes but also have implications for emotional well-being and stress reduction. Additionally, a recent study determined how growth

mindset and self-efficacy contribute to life and job satisfaction, especially in stressed white-collar employees (Kondratowicz & Godlewska-Werner, 2023). Results showed that both growth mindset and self-efficacy were negatively related to perceived stress (Kondratowicz & Godlewska-Werner, 2023), reiterating the negative correlation growth mindset has with stress. In other words, growth mindset could have positive implications for individuals coping with stress; however, it has not been as thoroughly researched as the relationship between self-esteem and stress.

Individuals with a growth mindset reported having greater self-esteem (Wang et al., 2023). Harbouring a growth mindset allows an individual to have more willingness to learn and grow, and thus, it is beneficial for coping with challenging situations. A correlation between reasoning ability and growth mindset was found among Chinese adolescents with high self-esteem. Wang et al. (2023) revealed a significant correlation between growth mindset and reasoning ability, as well as a positive correlation between self-esteem and both growth mindset and reasoning ability. This finding, along with others, suggests that individuals who endorse a growth mindset and have high self-esteem, are more capable of problem-solving and more likely to attribute their hardships to external challenges that they believe they can overcome. Put together, this can decrease the level of perceived stress in an individual.

While self-esteem has been established as a predictor of stress, less is known about mindset as a predictor, especially with the considerations of fixed and growth mindsets together. Given the well-documented role of self-esteem in predicting stress, and the theoretical link between mindset and self-esteem, it is important to examine the predictive power of growth mindset to stress above and beyond self-esteem.

Focus of the Present Study

The purpose of the present study was to further expand knowledge surrounding predictors of stress among university students by investigating the relationship between stress, self-esteem, and growth mindset. In 2019, 46% of Canadian undergraduates reported experiencing heightened stress levels at one point or another during their education (Howard et al., 2021). This statistic alone showed us the need for our study because, as stated earlier, it is a constant in our life that often results in negative outcomes; therefore, we need a better understanding and knowledge of stress to reduce

and prevent it. Previous research has shown that self-esteem is a well-established predictor of stress, in which individuals with low self-esteem report higher levels of stress. Furthermore, there is good theoretical support for the relationship between stress and growth mindset, in which individuals who score lower on the growth mindset scale report higher levels of stress. However, to our knowledge, no study has looked at the direct relationship between stress and growth mindset. It has only been looked at where growth mindset is a mediator or moderator, or specific characteristics that encapsulate growth mindset rather than looking at the whole concept. Lastly, the present study explores self-esteem and growth mindset together as predictors of stress, specifically focusing on how much additional predictive power growth mindset provides beyond self-esteem.

We attempted to address the literature gaps with the following hypotheses: Hypothesis 1: Lower levels of self-esteem will be associated with higher levels of stress. Hypothesis 2: Lower levels on growth mindset scale will predict higher levels of stress. Hypothesis 3: Growth mindset will significantly predict stress, even after accounting for the

variance explained by self-esteem.

Methodology

Participants

A total of 170 individuals accessed the study, and of those, 147 completed the demographics questionnaire. However, the final sample was comprised of 127 participants after excluding 43 participants during data cleaning due to participants not giving consent, not meeting inclusion criteria, or not completing the survey in full. Participants were recruited via convenience sampling from Kwantlen Polytechnic University's psychology research pool on SONA and via snowball sampling through social media (Instagram, Rednote, and Reddit) posting of a recruitment poster/message with a link to the survey on Qualtrics. Each post also included a request to share this study with others that fall under the inclusion criteria: 17 years of age or older and currently attending a Canadian higher education institution. The study was considered minimal risk.

Materials and Measures

Demographic Information

Participants were asked to respond to a four-item questionnaire regarding their gender, age, ethnicity/ethnic background, and years of post-secondary education. Gender options included man, woman, nonbinary/third gender, and prefer not to say. Age was categorized into 17–24, 25–34, 35–44, and 45+. Ethnicity encompassed multiple categories, including White/Caucasian, Black/African Canadian, East Asian, South Asian, Indigenous, and others. Years of post-secondary education ranged from less than one year to 5+ years. Demographic information about participants can be found in Table 1.

Rosenberg Self-Esteem Scale (RSES)

The RSES is a 10-item ordinal scale used to measure self-esteem. While originally designed as a Guttman scale, it is most used and scored as a Likert scale (Department of Sociology, 2025). The scale instructs participants to indicate their level of agreement with questions pertaining to their level of self-esteem on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The final total summed score ranges from 10 to 40, with 40 indicating the highest score possible. Higher scores indicate greater self-esteem while lower scores indicate lower self-esteem. Five questions were reverse-coded before totaling the score. The scale has high reliability: a Guttman scale coefficient of reproducibility of .92 indicating high internal consistency and test-retest correlations over two weeks reveal a range of .85 to .88, indicating excellent stability (Rosenberg, 2006). The RSES demonstrates concurrent, predictive and construct validity, correlating significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory (Rosenberg, 2006). In the present study, the RSES produced Cronbach's alpha of $\alpha = 0.89$.

Carol Dweck's Growth vs Fixed Mindset Assessment

This 20-item scale is a revised version of Dweck's Implicit Theories of Intelligence Scale (ITIS) which is only available through limited access (Dweck, 2006). Both scales imply a unidimensional construct, but the theories are measured as two distinct constructs (Troche & Kunz, 2020). The scale instructs respondents to indicate the extent to which they agree or disagree with questions pertaining to their level of growth mindset (10 items) and fixed mindset (10 items) on a 4-point Likert scale ranging from 1

(*strongly disagree*) to 4 (*strongly agree*). Scores can range from 20 to 80, where the lower end indicates a lesser level of growth mindset (e.g., fixed mindset), and the higher end indicates a greater level of a growth mindset. During the analysis of the data, all the questions based on fixed mindset were reverse-coded before totaling to align with the lowest scores and became indicative of a fixed mindset. Various previous assessments of this measure have demonstrated the validity and reliability of the ITIS and Carol Dweck's Growth vs Fixed Mindset Assessment. Cronbach's alpha in the present study was $\alpha = 0.80$.

Perceived Stress Scale (PSS)

Developed in 1983, the PSS contains 10 items that assess participants' feelings regarding their stress levels (Cohen et al., 1983). The scale uses a 5-point Likert scale ranging from 1 (*never*) to 5 (*very often*), where participants are asked to reflect over the past month and respond to how often they felt or thought in a particular way. Scores can range from 10 to 50, where lower scores indicate low levels of perceived stress, and higher scores indicate high levels of perceived stress. During the analysis of the data, questions 4, 5, 7, and 8 were reverse-coded before being totaled. Multiple studies revealed high internal consistency reliability where Cronbach's alpha was all greater than .77 and test-retest reliability was greater than .70 (Du et al., 2023; Baik et al., 2017; Lee, 2012; Mozumdeer, 2022). According to Du et al. (2023) and Baik et al. (2017), the scale was found to demonstrate criterion and construct validity. In the present study, PSS produced Cronbach's alpha of $\alpha = 0.89$.

Procedure

Participants accessed the study through SONA, or a link from social media, where they were directed to Qualtrics, an anonymous online survey site, and were presented with site content in the same order. Study information and consent were presented first, followed by questions to ensure participants met the inclusion criteria. Those who did not consent or did not meet the inclusion criteria were redirected to the debriefing statement and excluded from the study. Participants who consented and met the inclusion criteria were presented with demographics, perceived stress scale, self-esteem scale, and growth vs. fixed mindset assessment in fixed order. A debriefing statement was presented last. Participants from SONA completed the survey in exchange for 0.5 course credit in

qualifying psychology classes. Participants from social media were not provided incentive to participate. This study took participants approximately 15 minutes to complete.

Results

On average, participants reported moderate levels of stress (M = 31.65, SD = 7.23), and relatively high self-esteem (M = 27.74, SD = 5.62) and growth mindset (M = 58.1, SD = 6.69). Self-esteem and growth mindset were positively correlated, $r(125)$ = .44, $p < .001$. The assumption of independence of residuals was met as indicated by the Durbin-Watson test. Furthermore, the assumption of homoscedasticity was met as indicated by scatter plots. Tolerance scores were greater than .20, and VIF scores were below 10 for all predictors. Lastly, Cook's and Mahalanobis test indicated that there were no multivariate outliers that were of concern.

H1 and H2 were tested via bivariate correlations, where the Pearson Correlation revealed a significant negative relationship between self-esteem and stress (H1), r = -.66, $p < .001$, as well as a negative correlation between growth mindset and stress (H2) at r = -.32, $p < .001$. To test whether growth mindset significantly predicted stress, even after accounting for the variance explained by self-esteem (H3), a hierarchical multiple regression was employed. In the first step, self-esteem was included as a well-known predictor, and during the second step, growth mindset was added. In the first step of the analysis, self-esteem accounted for significant 44% of the variance in perceived stress, $F(1, 125) = 96.9$, $p < .001$. On the final step however, the model still accounted for 44% of the total variance, $F(2, 124) = 48.2$, $p < .001$. The contribution of growth mindset was not statistically significant ($R^2\Delta$ = .001, p = .66) above and beyond that entered in the first step of the model. The only significant predictor was self-esteem, β = -0.65, $p < .001$. The results of these analyses are presented in Table 2.

Discussion

The purpose of this study was to expand the knowledge of predictors of stress by looking at self-esteem and growth mindset, specifically looking at growth mindset as a predictor above and beyond self-esteem. Our results were consistent with previous research where both self-esteem and growth mindset as independent variables significantly predict stress. Individuals with higher self-esteem, in terms of one's beliefs

in their capabilities to handle difficult situations and negative emotions, are found to have lower perceived stress levels (Sarfika et al., 2023). Additionally, having high self-esteem is linked with coping strategies, such as planning, positive revalidation, and acceptance, which is found to decrease stress (Kupcewicz et al., 2024). Through extensive research done on self-esteem, it is classified as a known predictor of stress; however, growth mindset has not been as deeply studied when pertaining to its prediction of stress. Individuals with a growth mindset tend to have higher self-esteem and put together, this can decrease levels of stress (Wang et al., 2023). Our findings strengthen the concept that growth mindset predicts stress, as briefly implied by some previous research.

H1 was supported as results showed that participants who scored low on self-esteem reported higher levels of perceived stress. Further, H2 was also supported, as we found that participants who scored lower on the growth mindset scale, indicating endorsement of a fixed mindset, also reported higher levels of perceived stress. However, H3 was not supported as we did not find that growth mindset significantly predicts stress above and beyond self-esteem. From the results, participants with low self-esteem report higher levels of perceived stress; however, participants with low self-esteem and who leaned toward a fixed mindset, did not report higher levels of perceived stress than those with only low self-esteem.

Methodologically, since both predictors have a substantial overlap in variance, it is unnecessary for the two to be used simultaneously when predicting stress. According to Wang et al. (2023), people with growth mindsets have been reported to have high self-esteem, however we theorize that individuals with growth mindset are more apparent to have high self-esteem but those who have a high self-esteem do not necessarily have a growth mindset. As previously mentioned, a positive correlation was found between self-esteem and growth mindset while studying their impacts on resining abilities among Chinese adolescents (Wang et al., 2023). The significant positive correlation found in this study done by Wang et al. (2023; $r = .43$), is consistent with the correlation found in the present study. Given this evidence of the overlapping variance in the present study and previous literature, it can be theorized that either self-esteem provides pathways for one to develop a growth mindset or self-esteem appears to be a common factor found in someone with a growth mindset, which drives the negative correlation with stress levels.

Implications

The results of this study can be applied to multiple aspects of life, most necessarily in learning environments and work environments. High stress work settings such as healthcare, social work, education, law, finance, and emergency can implement workshops and interventions directed towards fostering higher self-esteem or growth mindset to help aid in workplace stress levels. Similarly, school systems could implement such interventions in classrooms to foster better self-esteem and growth mindset within children to help them better navigate challenges and hardships they may face in life. Stress levels can be decreased if individuals are sure of themselves and their capabilities and have an open mind to change and grow. Therefore, there is a high need for evidence-based interventions that focus on increasing self-esteem, which can be applied not only within high-stress environments but also in regular workspaces or school systems that can benefit from it. Currently, there are multiple options available that target different aspects of self-esteem and address varying causes. Cognitive behavioral therapy (CBT) focuses on identifying dysfunctional self-schemata and decreasing the patterns of negative affective evaluation of the self (Niveau et al., 2021). Similarly, reminiscence-based interventions are used to change the cognitive aspect of the negative thinking cycle through positive memory recollection (Niveau et al., 2021). However, these options are not as widely available and can be costly if done individually. Mindfulness and relaxation practices, or support groups may be more accessible in formats to implement within organizations. However, their effectiveness is not as clear as the other interventions. According to Niveau and colleagues (2021), in their meta-analysis, they found a lack of clarity around effect sizes in studies around mindfulness/relaxation interventions and a susceptibility to publication bias.

Limitations and Directions for Future Research

As the study was conducted online through a survey that relied on participants' self-reporting, it was vulnerable to social desirability bias and response bias. Further, the methodology of our study could have contributed to these biases as participants were not forced to answer all the questions and there was a lack of comprehension check questions. In addition, while the sample size for the present study was met, the results are limited in terms of generalizability due to a high percentage of participants being 17 to 24

years old at 75.6%, 74% identifying as woman and 48.8% identifying as South Asian. South Asian cultures are largely collectivist, accompanied by high-context communication norms, where open disagreement or the expression of personal difficulties can be seen as damaging to family honor which is mainly upheld by the women in the community (Hofstede, 2011; Shariff, 2009). As a result, individuals within the South Asian women demographic often display a higher level of stress, leaving a gap in the generalizability of the study to various other cultures in different contexts and stress levels.

Additionally, as our primary sampling method was convenience sampling, the bulk of our participants came from KPU's research pool of psychology students. This created a lack of diverse participants as most psychology students are women and is only representative of one sample of university students in the West Coast of Canada. As most participants were likely psychology students, they may share similar mannerisms, further limiting the generalizability of the results. Moreover, due to a lack of variability in our study, we were unable to observe whether demographics of participants played a role as confounding variables.

Future studies can employ a stratified sampling technique to ensure that age and culture do not skew the results. Expanding the sample to recruit a broader population beyond university students or even focus on other more specific groups, such as healthcare professionals, who often report exceptionally high levels of stress, can also be beneficial when looking at predictors of stress (Strauss et al., 2021). Healthcare workers report notably low levels of self-esteem, which has been shown to be associated with high levels of burnout (Johnson et al., 2020). Additionally, as previously mentioned, a growth mindset can help navigate challenges and hardships. Everyone, especially children and families, can benefit from allowing the implications of growth mindset traits (Harris & Tadros, 2021). Future research can conduct both quantitative and qualitative studies to validate the integration of this theory as it could be educational and helpful for those struggling to navigate through stress (Harris & Tadros, 2021).

Based off our results that growth mindset predicts stress at a similarly significant level as self-esteem, future studies can employ a new methodology to study this relationship. A moderation correlational study could be beneficial in understanding the

relationship of self-esteem and growth mindset on perceived stress, where growth mindset is the moderator. This could further explain the relationship between both predictor variables and their effects on stress. Research on the impacts of cumulative family risk on depressive symptoms were studied on Chinese adolescents, where it was mediated by perceived stress and moderated by growth mindset (Jiang et al., 2024). The protective role of growth mindset was found, in that despite the limited buffering capacity of growth mindset under high-risk family conditions, it still plays a significant role as a moderator in depressive symptoms by altering the effects of perceived stress (Jiang et al., 2024). Future researchers could attempt an experimental approach by considering implementing self-esteem or growth mindset interventions in university or workspace environments to observe potential changes in stress levels and general well-being. This direction is especially valuable in learning how to control negative consequences of stress and increase the possible positive outcomes, which are linked to resiliency and psychological growth (Barrientos et al., 2023).

Conclusion

Stress is inevitable. It is universal and natural, and, while our findings add to the existing pool of studies with valuable information, many questions remain unanswered and future directions wait to be explored (WHO, 2023). In this study, we found that lower levels of growth mindset predicted higher levels of stress but did not do so above and beyond self-esteem. Moreover, self-esteem remains a stronger predictor of stress than a growth mindset. We have discussed the application of these findings, including existing self-esteem interventions, how such practices may be beneficial in high-stress environments, and the need for more evidence-based research on such practices. While self-esteem was found to be a good predictor, it still did not account for even half of the variance. Stress is complex and has great variability, which necessitates further examination. As stress is such an inherent part of people's lives, we hope that future research continues investigating predictors of stress, as well as other potential relationships with self-esteem and growth mindset.

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Tables

Table 1

Demographic characteristics of the sample

Sample characteristics	*n*	%
Age		
17-24	96	75.6
25-34	27	21.3
35-44	2	1.6
45+	2	1.6
Gender		
Man	32	25.2
Woman	94	74
Non-binary/Third gender	1	0.8
Ethnicity		
Caucasian	27	21.3
Slavic	3	2.4
Black	2	1.6
East Asian	10	7.9
South Asian	62	48.8
Southeast Asian	10	7.9
Middle Eastern	3	2.4
Hispanic	1	0.8
Mixed/Other	9	7.1

Years of post-secondary education		
Less than 1 year	16	12.6
1 year	9	7.1
2 years	27	21.3
3 years	33	26
4 years	29	22.8
5+ years	13	10.2

Table 2

Summary of hierarchical regression model focusing on self-esteem for the prediction of stress

Predictor variables	*β*	*t*	*P*	95% CI *B*		R^2	ΔR^2
				Lower	Upper		
Step 1						0.437	0.437
Self-esteem	-.66	-9.85	.001	-1.02	-.68		
Step 2						0.438	0.001
Self-esteem	-.66	-8.60	.001	-1.02	-.64		
Growth mindset	-0.03	-.44	.65	-.20	.13		

Notes. $N = 127$.