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Can Gratitude Lists Mitigate Burnout In First-Year College Students?

Catherine Jones

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CATHERINE JONES

(Under the Direction of Joshua L. Williams)

ABSTRACT

In recent years there has been a significant uptick in people expressing feelings of being burnt out. Many studies have looked at burnout in other students, such as college athletes, but none have looked at the true freshman first-year student. This study applied this intervention to a group of first-year college students to examine the impact of making gratitude lists on feelings of burnout. When comparing a control group that did not engage in gratitude list making, there was no statistically significant difference in feelings of burnout. However, correlation analyses revealed connections between gratitude and burnout variables that may lay a foundation for future research.

INDEX WORDS: Gratitude, Burnout, First-Year college students, Gratitude list

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DEDICATION

I want to dedicate my thesis to my family. To my grandparents, Vernon and Polly Vaughan, and Olan and Ann Jones. These four people have given me so much. They are the foundation on which my family was built. I am forever grateful for the love they all gave me and the drive for higher education. To my parents, Ted and Melissa Jones, I am so honored to be called your daughter. Thank you both for everything you've done for me and for all the love and support throughout my life. Thank you both for being my loudest cheerleaders and the first to correct me when needed. Thank you both for teaching me to stay the course, never give up, and trust in the Lord. For that, I will never be able to repay you both.

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CHAPTER 1

INTRODUCTION

Gratitude can be difficult to define. Emmons and McCullough (2003) stated that gratitude could be many things, such as an emotion, a personality trait, or a response to help a person cope with life. Gratitude can also be a person's response toward someone who has done kindness towards or for them (McCullough et al., 2002). Another way to understand gratitude is that it can be very brief, like an emotion, it can often fluctuate from day to day like a mood state, and it can also be more long-lasting over someone's life, like a trait or disposition of someone's personality (Cherry, 2021). Overall, gratitude puts a person into a positive emotional state by reflecting on what is good in their lives (Ackerman, 2022). Gratitude is linked with improved emotional well-being, helps maintain healthy relationships, and enhances prosocial behaviors (Jans-Beken et al., 2020). Having gratitude also has shown some potential health benefits. Some of these benefits include blood pressure reduction (Jackowska et al., 2016), self-reported symptoms of health and loneliness (Bartlett & Arpin, 2019), and reduced dissatisfaction with one's body (Wolfe & Patterson, 2017). Another study conducted during the Covid-19 pandemic showed that people who had higher levels of gratitude before the pandemic displayed less severe symptoms of anxiety and depression during the pandemic (Kumar et al., 2022). The results of this study also showed that those with more grateful attitudes tended to have a less pessimistic outlook on life, and they talked about positive experiences from the pandemic. Different religions also use gratitude as a basis for many of their principles. One study showed that older people who attended church more often and were more grateful tended to not be as depressed by their economic struggles (Krause, 2009). Since gratitude seems to place people in a more positive emotional state, has health benefits, and connections to religion, could gratitude, and more specifically gratitude interventions, be a way to alleviate other negative feelings, such as burnout?

What is Burnout?

       Burnout is physical, mental, or emotional exhaustion followed by decreased motivation (Maslach & Leiter, 2016). Burnout can occur in the workplace, in relationships, and even in higher education. Within higher education, burnout is not isolated to college students in North America; it seems to be an issue for many students worldwide (Rosales-Ricardo et al., 2021). In recent years, burnout has risen at the collegiate level and has had a significant uptick since the Covid-19 pandemic. A survey conducted at Ohio State University in 2021 showed a substantial increase in burnout among students, from 40% in April 2020 to 71% in April 2021 (Sanchez, 2021). Burnout seems to be plaguing many undergraduate and graduate students (Rosales-Ricardo et al., 2021; Warlick et al., 2021), and can affect a student's academic performance. Lin and Huang (2014) studied how stressors in a student's life can predict academic burnout. They had participants answer two questionnaires about life stress as an undergraduate and academic burnout. Results of this study showed some differences among gender of students and the year they were in college. Stress about their futures was the highest predictor of life stress. Other results from this study showed that self and interpersonal stress, stress about the future, and academic stress seemed to predict academic burnout. Cushman and West (2006) also conducted a study to understand what other influences could lead to student burnout. Their results indicated that the amount of work given in a class, outside-the-classroom issues, lack of motivation on their part, as well as the instructors' behavior and attitude all could lead to potential burnout in college students. A literature review conducted by Pamungkas and Nurlaili (2021) uncovered some factors associated with academic burnout during the Covid-19 pandemic. College students experienced more burnout than those in high school during the pandemic. Also, first-year college students tended to be more exhausted and cynical than other years of students. From Pamunkis and Nurlali's (2021) work, it seems that burnout has had a differentially problematic impact on first-year students. Thus, it is crucial to determine strategies to mitigate burnout in this population.

First-Year College Students and Transitioning to College

Many studies have examined burnout rates in undergraduate students, graduate students, first-year medical students, and even professional clinicians (Jordan et al., 2020; Madigan & Curran, 2021; Rosales-Ricardo et al., 2021; Warlick et al., 2021). However, finding literature focusing on first-year college students is not easy. This population could also include those who are enrolled while still attending high school. Focusing on the first-year college student population is essential for several reasons. First, many in this group are dealing with significant life changes. Transitioning from a high school setting to a college can be complex, with novel social and academic challenges that new first-year students will encounter (Hicks & Heastie, 2008). Many also leave their childhood homes for the first time to live independently, whether on college campuses or off campus. This could lead to a feeling of being homesick. English et al. (2017) found that 94% of students in their study reported being homesick during their first term in college. They also found that being homesick could lead to adjustment problems, with lower overall adjustment to college and novel social relationships made while at school. Many students are unprepared, or not as prepared as they should be, for these changes and challenges (Cleary et al., 2011). All these changes lead to the potential for the emergence of stress, anxiety, and depression, even placing individuals at greater risk for psychiatric disorders (Cleary et al., 2011).

Previous Research about Gratitude and Burnout

As previously mentioned, the first-year college student population is a population that is going through significant transitions during this time in their lives. Only a handful of previous studies specifically mentioned first-year college students and burnout. Some dealt with stress and other symptoms that could lead to burnout, but not burnout specifically. Given the lack of research on burnout among first-year students, the literature has a clear gap. Further, and more specifically, not much research has been conducted to investigate strategies for alleviating burnout in first-year students. There is, however, much research into the use of interventions, specifically gratitude interventions, to improve individuals' health.

Boggiss et al. (2020) systematically reviewed recent gratitude interventions and their effects on individuals' health. Of the 19 studies reviewed, a wide range of intervention types and lengths existed. The types of interventions included listing things for which the participants were grateful, journaling their positive experiences and gratitude training. Within these interventions, there were even more variations as the intervention lengths varied from 1 to 10 weeks. For example, the gratitude listing interventions, that is, creating a list of things that one is grateful for that day or week, varied by how much and how often the participants wrote about what they were grateful for on those lists. Most were daily writings, while others were weekly. Some listing interventions had no limits on how much they were allowed to write, while some were limited to 3 to 5 items. The review found that six of the nineteen studies had participants do daily gratitude listings and had statistically significant results. These studies indicated improvement for those who participated in the daily gratitude listing tasks. The authors of the review indicated that 9 of 10 studies that used daily or 3 to 5 days a week gratitude lists showed significant results. This review also found that 11 of the 16 studies with control conditions had statistically significant results in that those not in the control conditions had improved outcomes.

Kloos et al. (2022) conducted a study using a gratitude application (app) for six weeks. The participants either started immediately or waited six weeks to use the app and were told to use it for 10 to 15 minutes daily. The control group did nothing for those six weeks. Results showed improved mental health in the gratitude app participants, and this improvement remained at a six-week follow-up. Also, Kloos et al. found that even participants with "mild and moderate distress" benefitted from this gratitude intervention.

Another study compared how effective gratitude and expressive writing interventions were on individuals' physical and mental health as they navigated the Covid-19 pandemic (Fekete & Deichert, 2022). The authors hypothesized that compared to controls, those in the interventions would have a more positive affect and more gratitude. They also hypothesized that there would be lower depression, anxiety, and stress in those who were in the writing groups. Further, the gratitude group would have health benefits and higher gratitude than those in the expressive group. Results showed that the gratitude

intervention did tend to lead to lower stress and negative mood as well as higher gratitude, all of which were maintained in the gratitude group during the study. In a related study, Geier and Morris (2022) hypothesized that during the pandemic, college students who participated in a 10-week gratitude journaling intervention would have higher well-being than those who did not participate in the intervention. Each group completed a mental well-being measure before and after the study. The intervention group engaged in a weekly gratitude journal, during which they wrote up to five things for which they were grateful that week. The control group did nothing for those 10 weeks. Results revealed that the intervention improved the mental well-being of the participants compared to the control group.

As can be seen there are many studies that show gratitude has some health benefits, but are there any studies that link gratitude with burnout? Gabana et al. (2019) conducted a study on gratitude with college athletes by having the athletes participate in a 90-minute gratitude workshop. They also administered questionnaires at three different time points throughout the study: one week before the workshop, immediately after, and one month later. During the 90-minute workshop, the athletes learned about gratitude and then applied their new knowledge by participating in a writing activity. This activity involved them writing down things for which they were grateful and why they were grateful for those things. The participants then shared their lists and discussed them in small groups. In this study, the researchers looked at several aspects of gratitude, including the athletes' level of gratitude and burnout. Results showed that levels of sports-related burnout decreased at the one-month follow-up point compared to their burnout scores after initially completing the intervention. There was also an increase in gratitude from the initial questionnaire given a week before the workshop to the one given a month after. Given the results of Gabana et al., it is possible that using a similar, more extended intervention with first-year students may be beneficial for mitigating burnout in other students, specifically first-year students.

The previous work of Boggiss et al. (2020) showed gratitude interventions can have health benefits, Kloos et al. (2022) showed using a gratitude application can help improve mental health, and Fekete and Deichert (2022) showed expressive writing increased gratitude, lowered stress, and decreased negative emotions. Moreover, studies like Geier and Morris (2022) showed gratitude journaling improved

mental well-being and Gabana et al. (2019) showed athletic burnout was lower after a gratitude workshop and listing intervention. All these provide a solid foundation and launching point for working toward filling the gaps in the literature surrounding first-year students and burnout.

Current Study

In the current study, first-year students engaged in a gratitude intervention, specifically gratitude list-making, to understand whether it helped to mitigate burnout. It was hypothesized that first-year students who participated in the gratitude list-making intervention would have lower feelings of burnout compared to those who did not participate in the gratitude list-making intervention. It was also hypothesized that levels of gratitude would be higher in those who participated in the gratitude list-making intervention when compared to those who did not participate in the intervention.

CHAPTER 2

METHOD

Participants

A total of 84 first-year students from Georgia Southern University participated in this study for a small amount of credit that helped satisfy a research participation module in their Introduction to Psychology course. In addition, all participants had a chance to enter a raffle to win 1 of 8 Amazon e-gift cards. Excluded from the study were a total of nine participants due to not completing the full questionnaire or for incorrect answers on the catcher questions embedded throughout the questionnaire. Out of the 75 (41 in the control group and 34 in the intervention group) included in the final sample, the average age was 19.28 years old ($SD = 3.16$). Out of the final sample 61 (81.3%) identified their biological sex as female and 14 (18.7%) as male. As for gender identity, 47 (63.8%) identified as female, 12 (15.9%) as male, 1 (1.3%) identified as other identities such as nonbinary, and 15 (20.0%) chose not to answer. Out of the total number of participants, 1 (1.3%) identified themselves as American Indian or Alaska Native; 3 (4.0%) as Asian; 21 (28.0 %) as Black or African American; 6 (8.0%) as Hispanic, Latino, or Spanish origin; and 52 (69.3%) as White.[1] The average number of credit hours in which the participants were enrolled while participating in this study was 14.42 ($SD = 3.25$). College majors varied among the participants, but some of the most common majors were Nursing, Psychology, Education, Biology, and Exercise Science (See Table 1 for full list of majors reported by participants).

Measures

For this study, participants completed several scales designed to measure how grateful they were and to assess their level of burnout. The combination of scales allowed for an assessment of the relationship between gratitude and feelings of burnout as a function of a gratitude list-making intervention. Participants were also asked a series of demographic questions.

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[1] These percentages are higher than 100% as participants could select more than one option.

Gratitude Questionnaire

The *Gratitude Questionnaire* (*GQ-6*, McCullough et al., 2002) is a 6-item questionnaire designed to evaluate a person's attitude towards gratitude. This questionnaire is scored on a 1 (*strongly disagree*) to 7 (*strongly agree*) Likert-type rating scale, with higher scores indicating a more grateful disposition. Questions from this questionnaire included items such as, "If I had to list everything that I felt grateful for, it would be a very long list." Prior work revealed that his scale has good internal consistency with Cronbach's alpha levels between .76 to .87 (McCullough et al., 2002; McCullough et al., 2004). For this study the Cronbach's alpha level was .76. This scale also has good construct validity with other scales such as the *Satisfaction with Life Scale* ($r = .33; .31$), *Positive Affect scale* ($r = .37; .33$), *Negative Affect scale* ($r = -.25; -.21$), and the *Flourishing Scale* ($r = .52; .45$; Sumi, 2017).

Gratitude Adjective Checklist

The *Gratitude Adjective Checklist* (*GAC;* McCullough et al., 2002) is a 3-item checklist consisting of three words (grateful, thankful, appreciative). The checklist asks a person to think about how they have felt over the past few weeks and is rated on a Likert scale of 1 (*Not at All*) to 5 (*Extremely*). Higher scores indicate a more grateful disposition over the set time frame. This scale has good internal consistency with a Cronbach's alpha level of .87 (McCullough et al., 2002). For this study, the Cronbach's alpha level was .88.

Gratitude Resentment and Appreciation Scale

The *Gratitude Resentment and Appreciation Scale* (*GRAT*; Watkins et al., 2003) – Short Form is a 16-item scale that measures a person's dispositional gratitude. There are three factors across the 16 scale items, *Lack of a Sense of Deprivation* (*LOSD*), *Simple Appreciation* (*SA*), and *Appreciation for Others* (*AO*). This Likert scale ranges from 1 (*I strongly disagree with the statement*) to 9 (*I strongly agree with the statement*). An example statement from this questionnaire is, "There never seems to be enough to go around and I never seem to get my share" (reverse-coded). Higher scores indicate a more grateful disposition. This scale and its subscales have good internal consistency with Cronbach's alpha levels ranging from .80 for the *LODS* subscale, .87 for *SA* subscale, .76 for *AO* subscale, and .92 for total scale.

(Diessner & Lewis, 2007). Similar Cronbach's alpha levels were found in this study, .75 for the *LODS* subscale, .76 for *SA* subscale, .76 for *AO* subscale, and .81 for total scale.

Single Item Burnout Question

The *Single Item Burnout Question* (*SIB*) is a one question inventory, created specifically for this study, designed to quickly capture how burned out a person feels that day. It is rated using a Likert-type rating scale of 1 (*Not at All*) to 5 (*Extremely*). The question prompt states, "Using the following scale, rate how burned out you feel today." A higher score indicates a higher feeling of being burned out.

Copenhagen Burnout Inventory- Student Version

The *Copenhagen Burnout Inventory-Student Version* (*CBIS*) is a 25-item inventory that evaluates how often a person experiences burnout. Four subscales comprise this inventory: *Personal Burnout* (*PB*), *Studies related Burnout* (*SB*), *Colleagues related Burnout* (*CB*), and *Teachers related Burnout* (*TB*). This inventory is rated on a Likert scale ranging from 1 (*0% of the time*) to 5 (*100% of the time*). Questions from this inventory are stated such as "How often do you feel worn out?" This scale has good internal consistency with a Cronbach's alpha level of .96 (Campos et al., 2013). Similar Cronbach's alpha levels were found in this study, .88 for the *PB* subscale, .85 for *SB* subscale, .92 for *CB* subscale, .94 for the *TB* subscale, and .94 for total scale.

Demographic Questionnaire

Participants completed a basic demographic questionnaire to gather age, biological sex (sex assigned at birth), gender identity, race and ethnicity, college major, and the number of credit hours taken during the semester. There were also three catcher questions embedded in the survey. These questions indicated for the participant to select a certain answer. An example of one the catcher questions is, "For this prompt, select 7 - I mostly agree with the statement."

CHAPTER 3

PROCEDURE

Participants signed up for the study through the university's First Year Experience (FYE) classes
or the Department of Psychology's online research management system (SONA). If they signed up
through their FYE class, they were given a link to the consent form. Those who found the study on SONA
clicked the study link, read a description of the study, and chose to participate by clicking the link into the
study, where they found the informed consent document. After they read the consent form and agreed to
participate, the participants provided their email addresses. The purpose of collecting email addresses was
three-fold:

1. It permitted consistent tracking of participation across the study to easily link data taken from the
   different instances of measurement without requiring participants to memorize a random number
   to be recalled at each measurement instance.

2. It provided a straightforward way to communicate and distribute the links to the questionnaire for
   the control group and daily links to the gratitude list prompt and the questionnaire on the final day
   of the study.

3. It provided contact information to support the e-gift card raffle and allowed for the distribution of
   gift cards at the end of the study.

The informed consent document explained why and how participants' emails were used in the study. After
completion of the consent form, participants were randomly assigned to the gratitude list intervention or
the control group. On Monday morning of the week of the study, participants assigned to both the control
and gratitude list-making groups received an email. The control group's email contained a Qualtrics link
to their control survey. The survey contained all the previously mentioned questionnaire and demographic
questions. This email stated the participants had until Friday of the study week to complete the
questionnaire and that they only needed to complete it once. Questionnaires were collected throughout the
week whenever the participants finished them. Each participant received three follow up emails during

the week reminding them to complete the questionnaire by Friday. For the gratitude list-making group, the email contained a Qualtrics link where participants found a prompt to make a daily gratitude list. The prompt stated, "Take a few moments to write down what you are grateful for today." They did not have any constraints as to what they wrote, and they could write as much or as little as they desired. Each day of the week, participants received an email with a new link to that day's gratitude list form and a daily reminder email. They also received a reminder email each day of the study to complete their gratitude list. On the fifth, and last, day of the study, once the participants completed their last gratitude list, they completed the same questionnaire as the control group. At the end of the questionnaire, all participants had the opportunity to read the debriefing statement and received reminders about the e-gift card raffle and that they would receive 1 hour of SONA credit if they were eligible for that credit.

Analysis

SPSS (Statistical Package for the Social Sciences) software was used to run statistical analyses. Statistical test selection proceeded based on checking of statistical test assumptions (e.g., normality) first. In this study, two Multivariate Analyses of Variance (MANOVAs), bivariate correlations, and multiple linear regressions were used to examine how a gratitude intervention would increase gratitude and decrease burnout in the intervention group as compared to the control group.

CHAPTER 4

RESULTS

Gratitude and Burnout Scales: Bivariate Correlations

Table 2 shows the means and standard deviations of all scales and subscales used for this study. Table 3 shows the bivariate correlations for all scales and subscales. The table shows statistically significant relationships between the burnout and gratitude scales used in this study. All were small to medium in magnitude and negatively correlated with one another. The *GQ6* showed statistically significant relationships with all burnout scales and subscales except the *CBIS-TB*. These correlations ranged from small to medium in magnitude and were negatively correlated. Two *GRAT* subscales, *GRAT-SA* and *GRAT-AO*, had no statistically significant relationship with the burnout scales. The *GAC* showed only one statistically significant relationship with one of the burnout scales, the *SIB*. This relationship was small in size and negative. Table 3 also shows the correlation between all the gratitude scales and subscales used in this study. All scales and subscales had statistically significant correlations with one another except the *GRAT-SA* and *GRAT-LOSD*, which showed no statistically significant relationship. All the statistically significant correlations ranged from medium to large in magnitude.

Single Item Burnout Question: Bivariate Correlations

Since the Single Item Burnout Question (*SIB*) was newly created for this study, correlations were conducted to examine the convergent validity of it with an established measure, the *CBIS* and its subscales. As shown in Table 3, there was a statistically significant and positive relationship between the *CBIS* and its subscales, with the magnitude of effects ranging from small to large.

Gratitude Lists: Descriptives and Bivariate Correlations

A total of 34 participants' gratitude lists were included in the study and the lists were included if the participant finished the required questionnaires on the last day and passed the attention checks embedded in the questionnaire. The lists varied in number of items ($M = 2.84$, $SD = 1.59$). Some participants only wrote down one item per day, and some wrote up to 18 items per day. A bivariate correlation was

conducted to assess the relationships between the average number of things a participant listed on their daily gratitude list and their scores on the three gratitude scales used in the study. As seen in Table 3, there were no statistically significant relationships found. Further, as shown in Table 3, a statistically significant negative relationship was found between the *CBIS* and some of its subscales and the number of items written on the gratitude list.

Multiple Linear Regressions

To explore if any gratitude interventions used in this study predicted burnout, multiple linear regression analyses were conducted. Table 4 shows one regression where *CBIS-Total* was the dependent variable while the *GRAT-Total*, *GAC*, *GQ6*, and *GRATLIST-AVG* served as predictors. There was a statistically significant linear regression, $F(4,21) = 3.24$, $R^2 = .382$, $p =. 03$. *GRATLIST-AVG*, that is the average number of items listed, was the only statistically significant predictor for this model ($\beta =-.474$, $p = .014$). There were no other statistically significant predictors for this model. Another multiple linear regression was conducted using the *SIB* as the dependent variable against the same gratitude variables mentioned above as seen in Table 5. This model was not statistically significant, $F(4,21) = 1.47$, $R^2 = .070$, $p = .247$.

Multivariate Analyses of Variance and Covariance

To test the two hypotheses, two Multivariate Analyses of Variance (MANOVAs) were used to determine if there were any differences between the control and intervention groups on the outcomes of interest. First, there were no statistically significant differences between the groups regarding burnout levels using the *CBIS* and the *SIB*, $F(5, 69) = .62$, $p = .69$, partial $\eta^2 = .043$. Second, there were no statistically significant differences between the groups regarding levels of gratitude using the *GQ6*, the *GAC*, and the *GRAT*, $F(6, 68) = .68$, $p = .67$, partial $\eta^2 = .057$. A Multivariate Analyses of Covariance (MANCOVA) was conducted to determine if there was a difference between the conditions when controlling for dispositional gratitude. There was no significant difference between the control and intervention group's scores on the *CBIS* and the *SIB* (the dependent variables) after controlling for dispositional gratitude $F(2, 71) = .076$, $p = .927$, Wilks' $\Lambda = .998$, partial $\eta^2 = .002$.

CHAPTER 5

DISCUSSION

In the current study, the gratitude list-making intervention did not seem to lead to lower burnout nor higher gratitude in individuals who engaged in the intervention relative to those who did not participate in the intervention. This finding, or lack thereof, is at odds with several previous studies showing a significant impact of gratitude interventions, such as many of those found in Boggiss et al. (2020), Kloos et al. (2022), Fekete and Deichert (2022), and especially that of Gabana et al. (2019). The previous study did not use a control group to compare data from their study, unlike the current study. Perhaps this is one reason no statistically significant results were found in the study compared to others, as previous studies did not examine between-group differences but only within-group change. Since this study had 75 participants spread across two groups, perhaps there was not enough power to detect statistically significant results. Along with these results, it was found that the *SIB* was positively related to the *CBIS*. These results support that the *SIB* is a good indicator of feelings of burnout and may be used when only needing to know about general feelings of burnout and with a single item, though further validity analyses are necessary in future research. Several gratitude scales in this study correlated with the burnout scales used. The *GQ6* had negative correlations with all *CBIS* scales and subscales except the *CBIS-TB*. The *GAC* was also found to be negatively correlated with the *SIB* only.

The second hypothesis that those participating in the gratitude listing intervention would have higher scores on the gratitude scales was also not supported by this study. However, the three gratitude scales were correlated, which supports that the scales captured the desired aspects of gratitude. Despite the convergent validity of all gratitude scales, the number of items listed in the gratitude intervention did not correlate with higher gratitude scores, even with no limit on how much the participants could write in their lists. Nonetheless, there was a negative correlation between the number of items written on the participants' gratitude list and the *CBIS* and its subscales.

In light of these nonsignificant findings, exploratory multiple linear regression analyses were conducted to see if any measures of gratitude predicted burnout. *GRATLIST-AVG* was the only statistically significant gratitude predictor when looking at the *CBIS*. There were no statistically significant gratitude predictors when looking at the *SIB*. None of the studies reviewed previously looked at gratitude specifically as a predictor of burnout.

These largely nonsignificant findings might have occurred for a variety of reasons. First, there may have been insufficient participants to detect a difference between the intervention and control groups. The number of participants needed to meet an a priori power of .80 (according to a G*Power test) was 84 participants split evenly across two groups. Only 75 participants were obtained for this study. In total, 132 participants initially signed up for this study. Whether it be through non-response to the reminder emails sent about this study, not completing the survey on the last day of the study, or being caught by the embedded catcher questions, only 75 participants were included in the final study, thus not meeting full power for this study. The second reason could be the operational definition of burnout in this study. Yukhymenko-Lescroart's (2022) study showed that during the Covid-19 pandemic, students who focused on their work and had strong gratitude showed lower academic burnout than those who did not have those qualities. This difference between academic burnout used in previous studies versus burnout in the current study could be why there are such different findings.

Further, the long-term effects of the Covid-19 pandemic could have impacted the findings of this study. Going through the pandemic might have changed students' views on feeling burned out. Jackson and Konczosné Szombathelyi's (2022) study indicated that students who liked the online learning environment could have more burnout when moving back into the physical classroom. In contrast, those who disliked the online environment would have fewer feelings of burnout moving back into the classroom. It might be that the participants in this study prefer an in-class setting over online, so their burnout is lower now that the school is back to entirely in-person classes. Another study examined academic burnout during the pandemic with masters and doctoral students and used the same *CBIS* scale used in this current study. Andrade et al. (2023) had participants take a survey asking questions about

student burnout using the *CBIS*, demographic questions about themselves, their academics, and their university handling of the pandemic. They also asked some health questions as well. Results of this study showed students had higher levels of academic burnout when participants had intentions of dropping out of school and if they were not satisfied with how their university handled the pandemic. They also found that participants who were single reported more burnout than those who were married. This study's results differ from the current study in that participants were not asked about health-related questions nor about their marriage or dating status which could be seen as a measure of social support. Social support has been known to have a mitigating factor with burnout symptoms (Ruisoto et al., 2021).

Last, perhaps the manipulation of a gratitude listing intervention was not strong enough to capture a difference between the intervention and control groups. Regan et al. (2022) indicated in their one-week study (the same length as this current study) that for long-form gratitude interventions, like gratitude letters to people, participants seemed to benefit more from that exercise than making gratitude lists. Another possible weakness of this study could have been the length of the intervention. Lyubomirsky and Layous (2013) noted in their study that the length of the intervention seems to be related to the effectiveness of the intervention. For example, the authors discussed how doing five kind acts in one day over six weeks increases well-being instead of spreading those five nice things across the week. Another study showed that it took at least four weeks to show statistically significant changes in their participants' mood of gratitude (Bohlmeijer et al., 2022). This could be a potential explanation for why no statistically significant results were found in this study.

Limitations

There were some more limitations in this study other than the ones previously discussed. One potential limitation of this study could be how the gratitude intervention was delivered to the participants. Of the previous studies discussed in the paper, four studies gave their intervention either online or through an app. Two studies had participants physically write down their items for their gratitude intervention. Only Gabana et al. (2019) was done in person. Perhaps having someone physically writing down their list makes them more connected to what they are writing. The last limitation was time since there were only

18 weeks to collect data from first-year students in their first semester. Since the current study targeted burnout, finding a week during the semester that was far enough into the semester to see any potential burnout and not near any university-sanctioned holidays or days off (which could increase or decrease feelings of burnout, respectively) was challenging.

Future Research

First, future research could conduct a direct replication, but increase the number of participants in the study in order to increase the power to detect differences between the intervention group and the control group. This could be done by offering more of an incentive, like everyone would receive a gift card instead of raffling off one to the participants. Another way might be to have the study spread across several fall semesters to cover more first-year students. For future studies, it would be useful to replicate this study with a similar population but increase the length of the study. Instead of one-week, future studies could use a minimum of four weeks of a gratitude listing intervention. Further, studies could expand on this idea with a longitudinal design to examine how gratitude listing, feelings of gratitude, and burnout change throughout the entire 18 weeks of classes. To do this, future research could have participants take the questionnaire of gratitude scales and burnout scales before they are randomized to either condition, halfway through the semester, and again at the end of the semester/study. This would further this area of research in that it would be a longitudinal study with multiple data points that could show more potential change in gratitude and burnout over time. In addition, this study could be extended by incorporating either an online or in-person session at the start, talking about what gratitude is and the benefits of incorporating gratitude into one's daily life and running the study. This might impact findings by giving participants a solid understanding of what gratitude is and how it could be helpful. As for what scales to use for any future research, given the current study's use of the new Single Item Burnout (*SIB*) inventory, which related well to the established *CBIS*, future research could further examine the validity of this measure with other burnout scales and inventories.

Impact of This Study

Although this study had mostly nonsignificant results, there were some significant findings of note. Overall, it was found that most of the gratitude scales and subscales were correlated with one another. It was also found that the two burnout scales were also correlated with each other and that most of the gratitude scales and subscales and the two burnout scales were correlated with one another. So, what do these results mean for the population in this study, First-Year students? As discussed previously, First-Year students are navigating the transition from high school to college and are at an increased risk for developing burnout related to academics. Also, colleges everywhere are still recovering from having classes fully online during the pandemic. So, what can the colleges and professors do for these students? Previous studies mention that class workload and professors' behavior could play a role in their burnout. Possibly having professors space out class assignments and remember what it was like to be a student could help with their academic burnout. Social support also seems to play a role in decreasing burnout. Perhaps colleges could put together an email about making social connections and balancing classwork and their connections to reducing symptoms of student burnout.

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Table 1.

Participants' Reported College Majors

	N
Art	1
Biochemistry	3
Biology	5
Business	1
Communication Sciences and Disorders	2
Communications	1
Computer Engineering	1
Computer science	1
Criminal Justice	2
Criminology	1
Elementary Education	4
Exercise Science	10
Exercise Science-Nursing	2
Geography	1
Health and PE	1
Health Science	2
Interior Design	1
International Trade	1
Nursing	8
Per-nursing	1
Psychology	9
Psychology and Criminal Justice	1
Public Health	1
Radiologic Sciences	1
Secondary Education in History	1
Studio Arts	2
Sustainability Science	1
Theatre	2
Undeclared	5
Voice Composition	1

Table 2.

Means and Standard Deviations for Each Scale and Subscale

	Control *M (SD)*	Intervention *M (SD)*
GQ6	5.74 (0.93)	5.85 (0.72)
GRAT-LOSD	5.89 (1.48)	6.08 (1.45)
GRAT-SA	7.26 (1.12)	6.98 (1.20)
GRAT-AO	7.36 (1.29)	7.21 (1.12)
GRAT-TOTAL	6.77 (0.97)	6.70 (0.95)
GAC	11.34 (2.81)	11.71 (2.25)
SIB	4.68 (1.57)	4.47 (1.91)
CBIS-PB	3.17 (0.86)	2.92 (0.77)
CBIS-SB	3.03 (0.76)	3.01 (0.63)
CBIS-CB	2.33 (0.95)	2.36 (0.73)
CBIS-TB	2.00 (0.87)	2.01 (0.85)
CBIS-TOTAL	2.63 (0.71)	2.57 (0.59)

Note. GQ6 = Gratitude Questionnaire- Six Item From; 7-point scale, GRAT = Gratitude Resentment and Appreciation Scale; 9-point scale, GRAT-LOSD = Lack of a Sense of Deprivation; 9-point scale, GRAT-SA = Simple Appreciation; 9-point scale, GRAT-AO = Appreciation for Others; 9-point scale, GAC = Gratitude Adjective Checklist; 5-point scale, SIB = Single-Item Burnout; 5-point scale, CBIS = Copenhagen Burnout Inventory - Student Version; 5-point scale, CBIS-PB = Personal Burnout; 5-point scale, CBIS-SB = Studies Burnout; 5-point scale, CBIS-CB = Colleagues Related Burnout; 5-point scale, CBIS-TB = Teachers Related Burnout; 5-point scale.

Table 3

Correlations Between Gratitude Scales, Burnout Scales, and Average Items on Participants Gratitude Lists

	1	2	3	4	5	6	7	8	9	10	11	12
1. GQ6	-											
2.GRAT-LOSD	.64**	-										
3. GRAT-SA	.43**	.15	-									
4. GRAT-AO	.59**	.37**	.49**	-								
5.GRAT-TOTAL	.75**	.77**	.71**	.75**	-							
6.GAC	.47**	.45**	.49**	.40**	.59**	-						
7.SIB	-.26*	-.37**	-.05	-.21	-.30**	-.26*	-					
8. CBIS-PB	-.30**	-.48**	.15	-.10	-.24*	-.17	.47**	-				
9. CBIS-SB	-.33**	-.32**	.10	-.10	-.17	-.19	.59**	.66**	-			
10. CBIS-CB	-.43**	-.41**	.02	-.20	-.29*	-.18	.39**	.50**	.53**	-		
11. CBIS-TB	-.26	-.25*	.16	-.04	-.09	-.16	.25*	.41**	.53**	.64**	-	
12. CBIS-TOTAL	-.39**	-.45**	.13	-.14	-.26*	-.21	.51**	.79**	.82**	.83**	.80**	-
13. GRATLIST-AVG	.06	.29	-.21	.16	.11	.02	-.06	-.24	-.43*	-.38*	-.48**	-.48**

Note. GRATLIST-AVG= average number of gratitude items listed

*p < .05, ** p < .01

Table 4

Regression results with CBIS-Total as criterion and measures of gratitude as predictors

	b	SE	β	t	p
GQ6	-.43	.24	-.58	-1.81	.085
GRAT-Total	.04	.20	.06	0.18	.856
GAC	.02	.05	.08	.41	.686
GRATLIST-AVG	-.20	.08	-.47	-2.29	.014*

Note. $p < .05$

Table 5

Regression results with SIB as criterion and measures of gratitude as predictors

	b	SE	β	t	p
GQ6	-.43	.94	-.16	-0.45	.656
GRAT-Total	-.30	.77	-.14	-0.39	.701
GAC	-.21	.19	-.25	-1.10	.282
GRATLIST-AVG	-.09	.29	-.06	-0.29	.774

APPENDIX A

THE GRATITUDE ADJECTIVE CHECKLIST (GAC)

Instructions: Think about how you have felt during the past few weeks. Using a

scale from 1 (not at all), 2 (a little), 3 (moderately), 4 (quite a bit), to 5 (extremely), please

choose a number to indicate your level of feeling the following:

_____ 1. Grateful

_____ 2. Thankful

_____ 3. Appreciative

APPENDIX B

GRATITUDE RESENTMENT AND APPRECIATION SCALE (GRAT) – SHORT FORM

Instructions: Please provide your honest feelings and beliefs about the following statements which relate to you. There are no right or wrong answers to these statements. We would like to know how much you feel these statements are true or not true of you. Please try to indicate your true feelings and beliefs, as opposed to what you would like to believe. Respond to the following statements by circling the number that best represents your real feelings. Please use the scale provided below, and please choose one number for each statement (i.e. don't circle the space between two numbers) and record your choice in the blank preceding each statement.

1 I strongly disagree   2   3 (I disagree somewhat)   4   5 (I feel neutral about the statement) 6   7 (I mostly agree with the statement)   8   9 (I strongly agree with the statement)

_____ 1. I couldn't have gotten where I am today without the help of many people.

_____ 2. Life has been good to me.

_____ 3. There never seems to be enough to go around and I never seem to get my share.

_____ 4. Oftentimes I have been overwhelmed at the beauty of nature.

_____ 5. Although I think it's important to feel good about your accomplishments, I think that it's also important to remember how others have contributed to my accomplishments.

_____ 6. I really don't think that I've gotten all the good things that I deserve in life.

_____ 7. Every Fall I really enjoy watching the leaves change colors.

_____ 8. Although I'm basically in control of my life, I can't help but think about all those who have supported me and helped me along the way.

_____ 9. I think that it's important to "Stop and smell the roses."

_____ 10. More bad things have happened to me in my life than I deserve.

_____ 11. Because of what I've gone through in my life, I really feel like the world owes me something.

_____ 12. I think that it's important to pause often to "count my blessings."

_____ 13. I think it's important to enjoy the simple things in life.

_____ 14. I feel deeply appreciative for the things others have done for me in my life.

_____ 15. For some reason I don't seem to get the advantages that others get.

_____ 16. I think it's important to appreciate each day that you are alive.

Scoring: The following items should be reverse scored: 3, 6, 10, 11, 15.37 The following items form the Lack of a Sense of Deprivation (LOSD) factor: 2, 3, 6, 10, 11, 15. The following items form the Simple Appreciation (SA) factor: 4, 7, 9, 12, 13, 16. The following items form the Appreciation for Others (AO) factor: 1, 5, 8, 14. Total is from all items.

APPENDIX C

THE GRATITUDE QUESTIONNAIRE- SIX ITEM FORM (GQ-6)

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it. 1 = strongly disagree 2 = disagree 3 = slightly disagree 4 = neutral 5 = slightly agree 6 = agree 7 = strongly agree

_____1. I have so much in life to be thankful for.

_____2. If I had to list everything that I felt grateful for, it would be a very long list.

_____3. When I look at the world, I don't see much to be grateful for. *

_____4. I am grateful to a wide variety of people.

_____5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.

_____6. Long amounts of time can go by before I feel grateful to something or someone. *

*Items 3 and 6 are reverse scored.

APPENDIX D

SINGLE ITEM BURNOUT QUESTION (*SIB*)

Using the following scale, rate how burned out you feel today.

1 (Not at all)   2 (A little)   3 (Moderately)   4 (Quite a bit)   5 (Extremely)

APPENDIX E

COPENHAGEN BURNOUT INVENTORY- STUDENT VERSION (CBIS)

Never	Rarely	Sometimes	Frequently
Always			
1	2	3	4
5			
0% of times	25% of times	50% of times	75% of times
100% of times			

Personal Burnout
1. How often do you feel tired?
2. How often are you physically exhausted?
3. How often are you emotionally exhausted?
4. How often do you think: "I can't take it anymore"?
5. How often do you feel worn out?
6. How often do you feel weak and susceptible to illness?
Studies related Burnout
7. Do you feel worn out at the end of the working day?
8. Are you exhausted in the morning at the thought of another day at work?
9. Do you feel that every working hour is tiring for you?
*10. Do you have enough energy for family and friends during leisure time?
11. Is your studies emotionally exhausting?
12. Does your studies frustrate you?
13. Do you feel burn out because of your studies?
Colleagues related Burnout
14. Do you find it hard to work with colleagues?
15. Does it drain your energy to work with colleagues?
16. Do you find it frustrating to work with colleagues?
17. Do you feel that you give more than you get back when you work with colleagues?
18. Are you tired of working with colleagues?
19. Do you sometimes wonder how long you will be able to continue working with colleagues?
** Teachers related Burnout
20. Do you find it hard to work with teachers?
21. Does it drain your energy to work with teachers?
22. Do you find it frustrating to work with teachers?
23. Do you feel that you give more than you get back when you work with teachers?
24. Are you tired of working with teachers?
25. Do you sometimes wonder how long you will be able to continue working with teachers?

APPENDIX F

DEMOGRAPHIC QUESTIONS

1. What is your age (in years) *if you prefer not to answer please leave blank* _____

2. What is your biological sex (sex assigned at birth)?

____Male

____Female

____Prefer not to answer

3. In terms of gender, I identify as (*if you prefer not to answer, please leave blank*):_____

4. Which categories describe you? *Select all that apply to you.*

_____ American Indian or Alaska Native - For example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community

____ Asian - For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese

____ Black or African American - For example, Jamaican, Haitian, Nigerian, Ethiopian, Somalian

____ Hispanic, Latino, or Spanish Origin - For example, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Columbian

_____ Middle Eastern or North African - For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian

____ Native Hawaiian or Other Pacific Islander - For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese

____ White - For example, German, Irish, English, Italian, Polish, French

____ Some other race/ethnicity, or origin, please specify:

_____

____ Prefer not to answer

5. What is your college major? *If you do not have a major yet, please write non-declared.*

_____

How many credit hours are you taking this semester? _____