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Analyzing the Use of Expressive Writing Among College Students

Grace Ann Wilbanks

University of Mississippi. Sally McDonnell Barksdale Honors College

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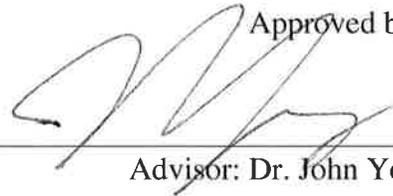
ANALYZING THE USE OF EXPRESSIVE WRITING AMONG COLLEGE
STUDENTS

by
Grace Ann Wilbanks

A thesis submitted to the faculty of The University of Mississippi in partial fulfillment of
the requirements of the Sally McDonnell Barksdale Honors College.

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Approved by



Advisor: Dr. John Young



Reader: Dr. Matthew Reysen



Reader: Dr. Rebekah Smith

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This thesis would not be possible without God, who is always with me, nor without my family for their encouragement and support along the way. It is to them whom I dedicate my thesis.

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ABSTRACT

GRACE ANN WILBANKS: Analyzing the Use of Expressive Writing Among College Students

(Under the direction of Dr. John Young)

This is among the first studies to investigate the naturalistic use of expressive writing in college students. To do so, 255 undergraduate students from the University of Mississippi anonymously completed an online survey. Participants first answered basic demographic questions followed by questions assessing their sadness or depression, happiness, and overall adjustment in college. Next, participants responded to questions concerning expressive writing and ways in which they handled demands of college. Finally, respondents then completed a well-researched, standardized measure of depression, anxiety, and stress. Independent-samples *t* tests revealed that students who engaged in expressive writing demonstrated lower mean levels of sadness or depression on a single-item assessment in the college adjustment questions (but not on the standardized measure). Results also show that among those who endorsed a history of expressive writing, women were significantly more represented than men. No other significant differences were found, but future research may still benefit from including attention to base rates of expressive writing and gender differences in this behavior among college students.

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Introduction

Expressive therapy is defined as, “the use of art, music, dance/movement, drama, poetry/creative writing, play, and sandtray within the context of psychotherapy, counseling, rehabilitation, or health care” (Malchiodi, 2005, p2). Expressive therapy may appear in various forms, but a common approach is that of expressive writing, which has been defined as “personal and emotional writing without regard to form or other writing conventions, like spelling, punctuation, and verb agreement” (Evans, 2012, p1).

Expressive writing pays less attention to people, objects, or events of a memory and focuses more on one’s feelings (Evans, 2012). Marcus (2017) also explains expressive writing with regard to adversity as writing that is focused on emotional details rather than the facts or narrative of a traumatic event. One of the most well known researchers of expressive writing (James W. Pennebaker) indicated that this technique could often be useful because people strive to understand major upheavals in life (Pennebaker & Beall, 1986). In principle, these obstacles can be clarified through personal writing, particularly in terms of issues that are not easily discussed. It has been suggested many times in the intervening three decades that expressive writing can be used as a therapeutic form of disclosure.

Among the earliest studies to examine this directly was Pennebaker and Beall’s (1986) work on the relationship between writing and physical wellness among students. The researchers aimed to learn if stress associated with inhibition could be reduced in both the short- and long- terms by writing about a traumatic event (Pennebaker & Beall, 1986). In addition to this, they sought to evaluate which features of coping with a trauma

from the past were able to reduce stress the most. Forty-six psychology students were advised to write for 15 minutes daily over four consecutive days. Students were randomly assigned to one of four groups. “Trauma-emotion” participants (n = 12) were told to write about only their feelings in relation to one or multiple traumatic experiences in their lives and were specifically instructed not to mention what factually happened. Alternatively, those within the “trauma-fact” group (n = 11) were advised to write solely about the facts of the upsetting event itself and asked not to report any feelings at all. Lastly, participants assigned to the “trauma-combination” condition (n = 11) wrote about both their feelings and facts associated with the event. The control group (n = 12) was told to write about a trivial topic, such as describing their living room, in the same setting and amount of time as the experimental group.

The results of the study indicated participants in the trauma conditions all reported more negative feelings after completing the writing tasks, whereas the control participants felt more positive. Although this pattern of immediate results did not appear promising, the authors also recorded the frequency of student health center visits over the next six months. According to a frequency count, participants in all conditions experienced an overall increase in health center visits for illness, except those that wrote about both facts and emotions (trauma-combination). Results also indicated that individuals in the trauma-combination and trauma-emotion groups reported significant reductions in health problems in comparison to those in the trauma-fact and control groups. Largely, the authors concluded that the pattern of observed reactions to writing about negative events (i.e., feeling emotionally worse in the short-term but being physically healthier in the longer-term) was potentially reflective of a general model.

Subsequent to this initial, seminal study, Pennebaker developed said general model for research in expressive writing, which he termed the basic writing paradigm (Pennebaker, 1997). In this paper, Pennebaker (1997) indicated that subjective well-being, physical health, and certain adaptive behaviors are impacted when a person confronts an extremely personal problem. He posited this could be the case without any type of feedback. The paradigm Pennebaker outlined involves randomly assigning participants to either a control group or one or more experimental groups, then asking all participants to write for 15-30 minutes daily on 3-5 consecutive days. Similar to the original study cited above, participants in the control group are assigned trivial, superficial topics while the experimental group is instructed to explore their deepest thoughts and feelings towards a highly important, emotional matter that has affected them.

A recent review of expressive writing research indicated that over 400 studies have been conducted, which have focused on numerous different outcomes with diverse groups of participants in variable contexts (Niles, Haltom, Mulvenna, Lieberman, Stanton, 2014). As cited in Wong and Rochlen (2009), studies have shown that expressive writing benefits include briefer stays in the hospital post-surgical operations (Solano, Donati, Pecci, Persichetti, & Colaci, 2003), a decrease in depressive symptoms (Lepore, 1997), enhanced psychological well-being (King, 2001), positive effects on romantic relationships (Slatcher & Pennebaker, 2006), and other benefits comparable to short term therapy (Esterling, L'Abate, Murray, & Pennebaker 1999). Background research will be expanded below and separated by discussion of physical, mental, and social impacts of expressive writing. The overall summary of this discussion can be

concluded with a quote from Toepfer and Walker (2009): “silent gratitude is of little good but its expression (through writing) allows one to tap into and benefit from this otherwise dormant or private resource” (p195).

The Physical Benefits of Expressive Writing

The physical effects of expressive writing, as mentioned above in Pennebaker and other researchers’ work, can be associated with improving characteristics of both mental and physical health (Baikie & Wilhelm, 2005). This study, and many similar articles, suggests that the use of one’s brain to remember traumatic or unsettling events and disclose the emotions felt during that time can significantly impact physical components of the body. Researchers suggest that a person’s emotional state and body are extremely connected and directly influence each other in numerous bodily systems/processes, including digestion, heart rate, skin, pain sensitivity, and fatigue (all of which are particularly altered when responding to stress; Doyle & Hutton, 2013). Two major hormones, cortisol and adrenaline, are released by stress, and in situations where stress is chronic, this release becomes so frequent that it can negatively affect physiological functioning (Doyle & Hutton, 2013). As a result, processes like healing, digestion, and immune response become much less effective, and both cardiac function and blood pressure can become altered in unhealthy directions (Doyle & Hutton, 2013).

These ideas, as they relate to the study of expressive writing, were initially encapsulated in Pennebaker, Glaser, and Glaser’s (1988) study of psychoneuroimmunology (defined as the field examining the effect of an individual’s mentality on health and immune function). Using the basic writing paradigm to construct

the study, healthy undergraduates were randomly assigned to either an experimental group (n = 25) or a control group (n = 25). Researchers examined the impact of expressive writing about a traumatic experience on cellular immune function, measured at a physiological level. This was done by measuring the body's immune response to two foreign substances and recording the number of subsequent health center visits (Pennebaker et al., 1988). Results of the study suggested that writing about traumatic experiences could provide physical benefits, given that those in the experimental group exhibited biological evidence of improved immune function in comparisons to those in the control group. Three months after the study was completed, surveys expressed that although participants in the experimental condition felt the experience was "painful" immediately after, they described the study positively in retrospect. In a condition by time interaction, it was discovered that those who expressively wrote about feelings and emotions during a difficult experience also visited the health center significantly fewer times than those in the control group. Lastly, an important discovery of this study was that participants who displayed the greatest health improvements were those who wrote about subjects they had purposefully kept from others. Similar results were found in another study that drew blood samples from participants before and after they completed a writing activity once a day for three consecutive days (Booth, Petrie, and Pennebaker, 1998). Participants who wrote about emotional topics demonstrated an increase in cells used in immune functioning (lymphocytes).

Pennebaker, Colder, and Sharp (1990) conducted a study, which produced results that suggested expressive writing can decrease illness-related physician visits. First-semester college students were randomly assigned to an experimental condition (n = 83),

where they wrote about their deepest thoughts and feelings about coming to college, or a control condition ($n = 47$), where they wrote about the details of their day. Participants wrote for three consecutive days during one of four waves, distinguished by monthly intervals. After completing a condition by wave by month interaction, researchers found that over the four to five months after the study, students who wrote about coming to college visited the health center for illness significantly less than those who wrote about trivial topics.

In addition, another study has provided evidence that expressive writing leads to a decrease in health center visits, while also improving scholastic achievements within college students (Pennebaker & Francis, 1996). In this research, 72 college freshmen were randomly assigned to a writing condition, with instructions closely following the basic writing paradigm previously described. However, rather than writing about a traumatic experience, the experimental group was instructed to write about their deepest thoughts and feelings toward coming to college. Results, once again, found that participants in the experimental group ($n = 35$) demonstrated a statistically significant decrease in illness-related health center visits than those in the control group ($n = 37$) during the two months following the study. In addition to this, students who were randomly assigned to the expressive writing condition demonstrated an increase in overall grade point average in comparison to students randomly assigned to the control condition (although this difference was not tested for statistical significance).

Expressive writing has also been shown to provide potential sleep-related health benefits. The first study to experimentally analyze the possible health benefits of expressive letter writing enlisted 108 college students (Mosher & Danoff-Burg, 2006). These researchers

randomly assigned students to an experimental group that wrote a letter to someone who hurt them (negatively focused; $n = 36$), another experimental group that wrote a letter to someone who helped them (positively focused; $n = 35$), or a control group that wrote to a school official about a neutral relational subject ($n = 37$). Instructions for the two experimental groups were based off Pennebaker's commonly used instructions and encouraged participants to let go and deeply express their thoughts and emotions. Results showed that the experimental groups reported significantly longer durations of sleep at a follow-up in comparison to those in the control group. In addition to this, the negatively focused letter-writing participants recorded significantly better sleep quality relative to the control group. Other findings suggest that the two experimental groups noted fewer days in which the completion of regular activities was restricted by health issues compared to the control group.

Similarly, another study has provided evidence that expressive writing improves sleep. Researchers tested female college students to determine if expressive writing decreased health-related complaints, such as sleep disturbance (Arigo & Smyth, 2012). Participants were randomly assigned to either an expressive ($n = 57$) or control ($n = 54$) condition. Once again, those in the expressive writing group showed significantly lower levels of sleep disturbance at a follow-up in relation to control participants.

The Mental Benefits of Expressive Writing

Additionally, evidence in support of the general writing paradigm's positive impact is not limited to health and academic success. Expressive writing has also been shown to benefit people not formally diagnosed with clinical depression in areas of

emotional difficulty, such as rumination and sadness (Gortner, Rude, & Pennebaker, 2006). Rumination is defined by Nolen-Hoeksema (1998) as “cognitions and behaviors that repetitively focus the depressed individual’s attention on his or her symptoms and the possible causes and consequences of those symptoms” (as cited in Gortner et al., 2006, p293). This research involved depression-vulnerable college students, meaning students that exhibited elevated depressive symptoms in the past but at the time of study displayed low depressive symptoms (Gortner et al., 2006). Therefore, this study examined benefits of expressive writing and its influence on reducing the recurrence of subsequent depressive symptoms after six months among people with a history of depression. Undergraduate students (n = 90) were randomly assigned to either write about a superficial topic, such as time management, or their deepest thoughts and feelings surrounding a current or previous emotional event. Both the control (n = 40) and experimental (n = 57) participants wrote for 20 minutes across three consecutive days. Unlike other studies, 50 percent of participants were selected out of both conditions and randomly assigned a 20-minute “booster session” of writing, which took place five weeks after the study (Gortner et al., 2006). In a condition by time interaction, it was discovered that participants in the expressive writing condition (n = 57) showed a significant decrease in symptoms of depression six months after the study in comparison to the control group (n = 40). Such benefits, however, were limited to students in the experimental condition that scored above the median on a measure of suppression (i.e., “individuals who actively try to suppress and inhibit dysfunctional negative thoughts in order to control their mood and prevent relapse into depression”) (Gortner et al., 2006, p292). This article provides evidence in support of expressive writing and its positive

effects on those who have experienced symptoms of depression in the past (and who may struggle with lasting sadness/subclinical depressive symptoms).

Similarly, other research has also provided evidence that expressive writing can improve depression (Sloan, Feinstein & Marx, 2009). This study examined potential effects of expressive writing on physical and psychological health changes in 68 college students. Participants were randomly assigned to either an experimental (instructed to write about thoughts and feelings towards an upsetting event) or control condition (instructed to write about a trivial topic). Results showed that in a condition by time interaction, those in the experimental group reported significantly fewer depressive symptoms than participants in the control group.

According to Gotlib and Hammen (2002), “close to 20% of individuals will experience an episode of depression at some point in their lives” (as cited in Gortner et al., 2002, p292). Krpan and colleagues (2013) extended this work through application of the basic writing paradigm to study people formally diagnosed with Major Depressive Disorder (MDD). Participants (n = 40) wrote once a day for 20 minutes over the span of three consecutive days. Participants with MDD were randomly assigned to a control condition (n = 20), in which they were instructed to write about non-emotional daily activities or an experimental condition (n = 20), in which they wrote about their deepest feelings and thoughts towards a sensitive experience. At a four week follow-up assessment, those in the experimental group exhibited a significant decrease in depression scores following the three days of writing in comparison to the control group. The conclusion of this study was that expressing feelings and thoughts through writing improved depressive symptoms in people experiencing Major Depressive Disorder.

In addition to depression, expressive writing has also been found to affect anxiety. Niles and colleagues (2014) analyzed effects of expressive writing on psychological and physical health. This study, consisting of young adult participants ($n = 116$), randomly assigned people to an experimental condition ($n = 59$) or a control condition ($n = 57$). Instructions for the experimental condition followed the basic writing paradigm, and the control condition was advised to discuss time management. Participants completed four 20-minute writing sessions within eight weeks. During a three-month follow-up, analyses of a time by group interaction showed no significant effects on anxiety. Researchers took a closer look, and results showed that among participants in the expressive writing condition ($n = 59$), those who reported high expressivity (i.e., 1 standard deviation above the mean scores on emotional expressiveness) displayed a significant reduction in anxiety ($p = .013$), whereas control participants showed no change from baseline ($p = .298$). These results suggest that expressive writing improved anxiety in participants who scored high on an emotional expressiveness scale in relation to people in the expressive writing group that scored low (1 standard deviation below the mean) or those in the control group.

Another study examined potential psychosocial benefits of writing about being emotionally connected to a specific romantic partner among male college students (Wong & Rochlen, 2009). One hundred fifty-eight college males were randomly assigned to write for 20 minutes across 3 days in either an experimental or control group. Results showed that participants in the experimental group reported a significantly larger reduction in psychological distress scores, measured by the Brief Symptom Inventory (BSI-18), in comparison to the control group approximately 4 weeks post-writing.

Other studies of more global emotional impacts of expressive writing have examined its relations to well-being as exemplified by happiness, life-satisfaction, and gratitude (Toepfer & Walker, 2009). In this study, Toepfer and Walker (2009) observed how a concept such as gratitude would affect happiness and life satisfaction by facilitating participants' expression of positive emotion during writing. Participants were randomly assigned to either an experimental group that typed or hand-wrote three letters expressing gratitude during an eight-week time frame, or to a control group that did not engage in writing at all. During completion of the study, students were informed that their letters would be sent out to the recipients, which was intended to promote more realistic writing among participants. Results showed that those in the gratitude letter-writing group (n = 44) experienced an increase in both happiness levels and happiness growth over time. A group by time interaction revealed that the experimental condition experienced a significantly greater increase in happiness than the control group (n = 40) from the time of the first writing session to the last. Largely, the findings suggest that letter writing positively influenced college students' happiness and gratitude, which commonly accounts for well-being (Toepfer & Walker, 2009). Additionally, it was noted that this increase in happiness was measurable after each letter of gratitude was written, showing a consistent, sustainable impact of the technique.

Social Impacts of Expressive Writing

Research has also shown that romantic relationships can be positively impacted by using the expressive writing paradigm (Lepore & Greenberg, 2002). These romantic relationships can be “an important aspect of identity and a source of intimacy, social

status, and emotional security” in young adults, specifically college students (Lepore & Greenberg, 2002, p549). Within this study, researchers examined the impact of expressive writing on a person’s adaptation to a breakup in comparison to those that did not expressively write after a breakup. According to a 1990 study by Kaczmarek and colleagues, such a breakup might cause someone to suffer feelings of rejection, loneliness, or guilt (as cited in Lepore & Greenberg, 2002). Undergraduate students (n = 145) who had experienced a breakup within the prior year were instructed to write for 20 minutes across three consecutive days. Researchers then analyzed intrusive thoughts and avoidance three and 15 weeks after the study. Subjects in the experimental group were told to write about their deepest thoughts and feelings towards the relationship. Subjects within the control group wrote about relationship topics, without expressing any feelings or emotions. Results of this study indicated a trend toward significance ($p < 0.06$), and noted that participants in the experimental group were more likely to re-enter a relationship with their ex-partner than those in the control group (Lepore & Greenberg, 2002). The authors suggested that one explanation for this potential effect was that expressive writing could have improved self-regulation and taught participants how to deal with “confusing and uncomfortable thoughts and memories” (Lepore & Greenberg, 2002, p557).

The social effects of writing in the realm of romantic relationships are evident not only in people that have experienced a breakup, but also among those in a healthy and committed relationship (Slatcher & Pennebaker, 2006). Researchers examined the social effects of writing in terms of communication in romantic relationships in a sample of 86 undergraduate students who self-identified as being in a committed, heterosexual,

romantic relationship. The authors randomly assigned participants to either an expressive writing (n = 44) or control (n = 42) condition, where students in the experimental group were asked to write about their deepest thoughts and feelings about their relationships. The study employed linguistic analysis to codify aspects of participants' instant messaging communication with their romantic partners, with a specific emphasis on tallying the use of positive, emotionally expressive terms. The findings of the article indicated that participants from the experimental condition significantly increased their use of such terms over the course of the study in comparison to controls. Additionally, it was noted that the partners of participants assigned to the experimental group (i.e., people who had not been involved with the study at all) *also* increased their use of positive, emotionally expressive terms. The authors concluded that emotionally expressive writing thus influenced the quality of communication in the romantic duo, and suggested that this change could improve stability of the relationship (Slatcher & Pennebaker, 2006).

College Students

Research conducted in the area of expressive writing has commonly enlisted college students as participants. This is perhaps an issue of convenience, but also one that engages an appropriate population to study non-costly interventions for psychological distress. For example, it has been found that college students frequently suffer from stress, loneliness, and depression, potentially in reaction to the adjustments necessary in transition to this new environment (Wei, Russell, & Zakalik, 2005). In some of the studies of expressive writing reviewed above, coming to college was cited as many participants' most difficult life event that formed the basis for experimental writing

exercises (e.g., 20.7% in Gortner et al., 2006; 19% in Pennebaker, Kiecolt-Glaser, Glaser, 1988). Wingate (2009) indicated that at least some of this stress could be attributable to difficulty adjusting to hectic or overwhelming schedules, developing time-management skills, and/or competing interests in the form of too many extracurricular activities. Given these demonstrable difficulties and the body of literature supporting the benefits of expressive writing for similar constructs, college students may particularly benefit from these interventions.

Research Question

Although previous research has demonstrated benefits of expressive writing, particularly in college student populations, it has not studied how common this activity is among college students. Additionally, controlled studies in laboratory environments have generally not explored students' motivations to engage in this behavior (and/or continue to use expressive writing after having been shown this technique as part of research). Therefore, this study seeks to learn more about 1) how common expressive writing is in a college sample; 2) motivations to engage in the behavior; 3) opinions that could contribute to decisions to *not* engage in the behavior; and 4) the relationship between expressive writing and emotional adjustment in a sample of University of Mississippi students. Due to the exploratory nature of goals 1 – 3, there were not definite predictions as to whether expressive writing would be common among students or what they might think about this activity. Given the literature reviewed, it was hypothesized that individuals who engaged in expressive writing would exhibit better health in the dimensions of measures of adjustment, depression, anxiety, and stress.

Methods

Participants and Design

Participants consisted of 255 undergraduate students (29.6% male, 70% female, and 0.4% other) from the University of Mississippi. Students were asked to partake in this study through email and did not receive any class credit or compensation for their contribution. Participants were 92.06% Caucasian, 2.38% African American, 3.17% Asian, and 2.38% other. Each participant anonymously completed an online survey through Qualtrics. This survey (detailed below) assessed students' adjustment to college, knowledge and use of expressive writing, disclosure behavior, and emotional states of depression, anxiety, and stress.

Measures

Adjustment to College. After initial questions regarding basic information (age, ethnicity, gender, and major), participants answered three questions about adjustment to college that were used in previous studies (Pennebaker, 2013; Pennebaker, Colder, & Sharp, 1990). These three questions prompted students to answer statements such as, "Overall, since coming to college, how happy have you felt?" (1- *extremely happy* to 5- *extremely unhappy*). Higher scores denoted greater difficulty with adjustment to college. For complete wording of questions and response scale see *Appendix A*.

Expressive Writing Usage. Next, participants completed survey questions assessing their thoughts on the use of expressive writing among students in general (designed for the current study). These include, for example, "How common do you think it is for people your age to journal/express themselves through writing?" (1- *a great deal* to 5- *none at all*). Participants that endorsed engaging in expressive writing also answered

additional questions concerning their motivations for writing, emotions felt after writing, sharing or re-reading one's work, and possible benefits experienced from writing.

Alternatively, participants who did not endorse expressive writing were asked about their reasons for not keeping a journal or writing, to what degree they would consider writing in a time of stress, and if they had ever been inclined to journal/expressively write. In addition, participants were questioned about other methods of expression used to manage stress. These questions were formatted in order to analyze how common the method of expressive writing is among students and better understand the reasons some practice this technique while others do not. For complete wording of statements and response scale see *Appendix A*.

The Depression Anxiety Stress Scales 21. As the name implies, the Depression Anxiety Stress Scales, DASS-21, is a measure of depression, anxiety, and stress (Lovibond & Lovibond, 1995). A Likert-type scale requires participants to rate a sequence of 21 statements in reference to symptoms experienced in the past week (0- *not at all* to 3- *most of the time*). The three subscales each contain seven items, and the measure has been shown to be psychometrically valid (Lovibond & Lovibond, 1995). Example statements include items such as "I felt that I had nothing to look forward to." or "I found myself getting agitated." (1 - *did not apply to me at all* to 3 - *applied to me very much or most of the time*). Lower scores on this scale indicate lower levels of depression, anxiety and stress. For complete wording of statements and response scale see *Appendix B*.

Procedure

Participants received an email containing a link to the survey on Qualtrics, which was distributed through the Honors College email list. Anyone interested in participating clicked the link, which directed him/her to a description of the study and information page. All participants were informed that their responses would be completely anonymous. After completion, participants saw a message thanking them for taking this survey, and no further actions were taken. Students did not receive compensation, credit, or rewards of any kind by participating in this research.

Results

Engagement in Expressive Writing

When participants (n = 251) were asked, “Do you ever express your emotions through writing (i.e. journaling, diary entries, class assignments, online posts, etc.)?” 54.2% answered that they did and 45.8% answered that they did not. These rates were highly variable by gender, however, with 20.1% of men and 79.1% of women indicating that they engaged in expressive writing. Ethnic composition of participants who did and did not engage in expressive writing was similar, and consistent with demographic categories in the overall sample. To elaborate, the group indicating that they engaged in expressive writing was 90.3% Caucasian, 2.99% African American, 2.99% Asian, and 3.7% “other,” whereas the group reporting no history of expressive writing was 96.5% Caucasian, 0.9% African American, 3.5% Asian, and 0.9% “other.”

Frequency, Motivations, and Telling Others of Expressive Writing

Among participants that engaged in expressive writing, 12.31% said they wrote “daily” ($n = 16$), 23.08% “2-3 times a week” ($n = 30$), 18.46% “2-3 times a month” ($n = 24$), 8.46% “once a month” ($n = 11$), and 37.69% “sporadically” ($n = 49$). Motivations for engaging in this behavior were reportedly diverse, with 24.66% ($n = 90$) of people indicating that they do so because it “helps un-wind or de-stress,” 24.11% ($n = 88$) because it “helps cope with negative emotions,” 20.55% ($n = 75$) “believe it promotes physical and/or emotional well-being,” 18.36% ($n = 67$) “as an alternative to talking to people,” and 12.33% ($n = 45$) describing it as a “fun/leisure activity”. Finally, when these participants ($n = 125$) were asked if they had ever told others about the benefits of expressive writing or attempted to get someone to try it, 53.6% responded, “yes” while 46.4% selected “no.”

Adjustment to College Scales

Independent-samples t tests were conducted to compare college adjustment among the conditions (self-reported expressive writing vs. no history of expressive writing). These results pertain to the three questions derived from Pennebaker, Colder, and Sharp (1990), which assessed students’ adjustment to college within the previous week. There was a significant difference between groups on sadness or depression ($t(246) = -2.52, p = 0.01$), with individuals who self-reported as engaging in expressive writing demonstrating lower mean levels of depression ($M = 3.44$ vs. $M = 3.74$ in the group that did not endorse a history of expressive writing). There were no significant differences between groups on overall adjustment ($t(247) = 0.95, p = 0.34$) or happiness ($t(247) = 0.97, p = 0.34$).

DASS-21

Several independent-samples t tests were conducted in order to compare levels of depression, anxiety, and stress across conditions (i.e., expressive writing vs. no history of expressive writing). These analyses did not yield a significant difference for depression ($t(228) = 0.58, p = 0.57$), anxiety ($t(228) = 0.47, p = 0.64$), or stress ($t(228) = 1.57, p = 0.12$).

Table 1 Means (M) and Standard Deviations (SD) for Preceding Variables

	Sadness or Depression	Overall Adjustment	Happiness	DASS Depression	DASS Anxiety	DASS Stress
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Overall Sample (n = 250)	3.44 (0.97)	1.96 (0.84)	1.94 (0.94)	11.71 (4.78)	11.62 (4.61)	15 (5.17)
Women (n = 175)	3.52 (0.92)	1.94 (0.77)	1.93 (0.97)	11.33 (4.55)	11.41 (4.40)	14.75 (5.09)
Men (n = 74)	3.72 (0.96)	1.84 (0.79)	1.80 (0.83)	12.12 (4.73)	11.76 (4.39)	14.04 (4.66)

Note: Total for DASS was somewhat lower than college adjustment total

Analysis of Participants that Do Not Journal

Participants who do not expressively write ($n = 115$) were asked their reasoning for not engaging in this type of activity. Overall, the most selected choice by students for not keeping a journal was lack of time ($n = 66$), with the second most popular answer being “have found other methods for de-stressing more beneficial” ($n = 47$). This will be further summarized in Table 8, found below. In addition to this, those who did not

expressively write were asked to what degree they would consider writing as a way to handle difficult emotions or stress. Among participants, 38.18% selected “none at all”, 36.36% chose “a little”, 20% chose “a moderate amount”, 3.64% selected “a lot”, and 1.82% answered “a great deal.” Additionally, 38.18% of people who said they did not journal indicated that they have been inclined to in the past.

Other Frequencies Discovered

The following section briefly describes general differences found within various survey questions. More detailed analyses can be found in the tables below. Presented in Table 2, participants who engaged in expressive writing (n = 175) indicated that they most commonly used “pen and paper” to do so. Among those that expressively write, 83.08% of people reported knowing someone who also writes, and of that amount, 85.85% of participants know a friend who journals (Table 3). Fewer people reportedly began journaling as a result of a specific event than those who began for other reasons. Students reporting a history of expressive writing most commonly selected “somewhat likely” to feel an elevation of stress or emotion after writing about a negative event (Table 4), although a majority also indicated that emotional elevation subsequent to writing was generally positive (Table 4). When asked how often participants share writings with others, 63.78% said never (Table 5). Among those who did share their writings, however, 84.09% indicated that they never share their work anonymously and 47.73% answered that they sometimes feel better after sharing their writing. In addition to this, over 50% of participants were confident that their writing was completely private unless they chose to share it (Table 4). When asked about re-reading previous work and comparing it to current writings, over 50% of participants said they sometimes did this,

and 79.65% of those said that this helps them see their growth over time (Table 5). As seen in Table 6, 76% of people said that they got a “sense of release” out of journaling, although other motivations were also commonly cited. Finally, 67.51% of the entire sample indicated that talking to friends was a frequent method of dealing with stress (Table 7).

Table 2 Percentages and Frequencies of Methods Used to Expressively Write/Journal

(Total n = 175)

Method	%	n
Pen & Paper	61.1%	107
Cell Phone	14.9%	26
Laptop	20.6%	36
Other	3.4%	6

Table 3 Percentages and Frequencies of Reasons for Getting Started

Question:		%	n
Know anyone that journals (Total n = 130)	Yes	83.1%	108
	No	16.9%	22
If so, who (Total n = 106)	Relative	12.3%	13
	Friend	85.8%	91
	Other	1.9%	2
Specific event to begin EW (Total n = 128)	Yes	43.8%	56
	No	56.3%	72
Began as result of stressful/neg. event (Total n = 128)	Yes	45.3%	58
	No	54.7%	70

Table 4 Percentages and Frequencies of Emotions/Feelings

Question:		%	n
Likelihood of feeling elevation of stress or emotion (Total n = 128)	Extremely likely	13.3%	17
	Somewhat likely	36.7%	47
	Neither	18.0%	23
	Somewhat unlikely	26.6%	34
	Extremely unlikely	5.5%	7
Elevation of emotions in general (Total n = 128)	Yes	66.4%	85
	No	33.6%	43
If so, usually pos. or neg. emotions (Total n = 84)	Positive	86.9%	73
	Negative	13.1%	11

Table 5 Percentages and Frequencies of Sharing Writing

Question:		%	n
How often you share writings (Total n = 127)	Always	0.0%	0
	Most of the time	3.2%	4
	Half the time	7.1%	9
	Sometimes	26.0%	33
	Never	63.8%	81
How often is sharing anonymous (Total n = 44)	Always	0.0%	0
	Most of the time	4.6%	2
	Half the time	0.0%	0
	Sometimes	11.4%	5
	Never	84.1%	37
How often do you feel better after sharing (Total n = 44)	Always	15.9%	7
	Most of the time	18.2%	8
	Half the time	13.6%	6
	Sometimes	47.7%	21
	Never	4.6%	2
How confident you are	A great deal	51.2%	64

that writing is private (Total n = 125)	A lot	29.6%	37
	A moderate amount	12.0%	15
	A little	5.6%	7
	None at all	1.6%	2

Table 6 Percentages and Frequencies for Re-Reading

Question:		%	n
How often do you re-read previous work (Total n = 125)	Always	9.6%	12
	Most of the time	12.8%	16
	Half the time	14.4%	18
	Sometimes	52.8%	66
	Never	10.4%	13
Benefits of re-reading previous work (Total n = 113)	See growth	79.7%	90
	Det. what changes need to be made	37.2%	42
	Det. whether or not it is truly beneficial	10.6%	12
	Provides a means of reflection	77.0%	87
	Other	0.9%	1
Do you look for/keep track of changes (Total n = 112)	Yes	42.0%	47
	No	58.0%	65

Table 7 Percentages and Frequencies of Benefits of Journaling (Total n = 125)

What do you get out of journaling?	%	n
Sense of release	76.0%	95
Comfort	48.8%	61
Clarity	74.4%	93
Increase in positive mood/thoughts/demeanor	56.0%	70
Feel better overall	51.2%	64
Sleep better	23.2%	29
Feel less	56.0%	70

depressed/overwhelmed		
Other	4.8%	6

Table 8 Percentages and Frequencies of Other Methods of Expression or Ways of Handling Stress (Total n = 237)

Other ways you express emotions/thoughts or deal with stress	%	n
Talk to family	55.3%	131
Talk to friends	67.5%	160
Draw/sketch	11.8%	28
Listen to music/Create music	53.6%	127
Use alcohol or other substances	22.4%	53
Escape through Netflix or other activities	54.4%	129
Other	10.1%	24

Table 9 Percentages and Frequencies of Reasons Why Not (Total n = 110)

What is your reason for not keeping a journal/writing to express yourself?	%	n
Lack of time	60.0%	66
Lack of privacy	15.5%	17
Doesn't seem to be useful	36.4%	40
Appears pointless	30.0%	33
Found other methods for de-stressing more beneficial	42.7%	47
Other	1.0%	1

Discussion

This is among the first studies to analyze base rates of natural engagement of expressive writing among college students. Additionally, opinions toward these behaviors were examined, including reasons for not engaging in expressive writing given by people with no history of such. Results indicated that more than half of students reported practicing the act of expressive writing, which made this a common practice (and a somewhat unexpected result). Among this group of people, results show that 35.4 % indicated that they engage in this type of therapy with some regularity, such as 2-3 times a week or more. In addition, another surprising result was that more than half of students who write indicated that they told others about the benefits of expressive writing or attempted to get someone else to try this activity. Collectively, these results suggest that more college students freely engage in this act than might have otherwise been predicted. Knowing the frequency at which this behavior occurs is important, because researchers need to have this information in order to determine causes of why more students do or do not implement these techniques at their own discretion. This information could be relevant to a host of societal factors, given that college students form an important part of the future economy. Experiencing stress, vulnerability, and depression during the time when they are supposed to be molded and prepared for future professional careers (Wei, Russell, & Zakalik, 2005), however, is potentially problematic. Thus, learning more about the typical implementation of expressive writing as an accessible, low-cost way of promoting adjustment (and related learning/professional skill development) could be an important area of research in the future. Applied throughout an individual's lifetime,

these techniques could also be beneficial to promoting longer-term adjustment if studied and refined in diverse groups of people.

Other findings pointed to a relationship between gender and expressive writing such that women reported engaging in expressive writing more than men. Although the reasons for this discrepancy were not apparent in the current study, previous research indicates that men may experience more difficulty and less comfort expressing vulnerable feelings such as sadness and loneliness (Wong & Rochlen, 2009). Additional research directed toward understanding other gender differences in orientation to and/or enactment of expressive writing could expound more on the nature of these differences. Similarly, studies of expressive writing as a means to promote greater fluidity/capability of emotional expression in men may also be of interest.

In comparing students who indicated that they engaged in expressive writing vs those who did not, significant differences were found on a single-item depression question (used in previous expressive writing studies). However, these results were not consistent with a similar comparison using a longer, more psychometrically valid scale of depression (DASS-21), where no significant differences were found. Being that the latter test is well researched and is an established method of measuring depression, the overall conclusion from these results is that there is likely not a true difference between these self-selected groups on depressive symptoms.

When looking at students' motivations for engaging in expressive writing, most selected that it helped them "un-wind or de-stress". This is consistent with previous studies that suggest expressive writing impacts anxiety and distress (Niles et al., 2014; Rochlen & Wong, 2009) and has been found to provide short-term benefits similar to

time-limited therapy (Esterling et al., 1999). Therefore, this qualitative response data is in sync with existing findings and theory related to expressive writing, and could facilitate further, more quantitative, study.

Among the people who reported a history of expressive writing, the most endorsed category of frequency for doing so was “sporadically” (37.7%). There is previous evidence that college students’ schedules are often perceived as overwhelming (Wingate, 2009), which could contribute to this finding. Additionally, this is also consistent with findings from respondents without a history of expressive writing that indicated lack of time as the most common reason for not journaling (60.0%). Taken together, these results suggest that future examinations of methods to disseminate expressive writing may benefit from actively addressing concerns about the amount of time required as a part of their initial descriptions of the technique. Managing these concerns and providing a plan for beneficial engagement in a short period of time may engender greater engagement from future study participants.

Finally, the majority of students reporting a history of expressive writing reported that they never share their writing with others (63.8%). A smaller percentage of these students, however, reported “a great deal” of certainty that their writing would remain completely confidential unless they chose to share it (51.2%). The gap between these percentages suggests the potential that some students did not want others seeing their writings, but were worried that this might occur regardless of their preferences. Taken to an extreme degree, this concern might contribute to students limiting their emotional expression in the course of writing (i.e., to hide or purposefully leave out certain thoughts) or avoiding the activity altogether. Adding questions about privacy to future

studies could thus be beneficial to understand any potential relationship between concerns that someone's innermost thoughts could be overseen without consent and their propensity to record those thoughts in written form.

Limitations and Future Directions

It is difficult to generalize the results of this study due to the nature of the sample (honors students participating with limited incentive beyond contributing to another honors student's thesis project). Certain characteristics of this group could have made it such that they engaged in expressive writing more than other students on campus. Future studies in this area could expand on these results by employing similar methods in more diverse groups (for example, college students recruited campus-wide at universities in different geographic areas). Similarly, recruiting students from the same cohort shortly after they arrived on campus (e.g., college freshman) could be useful to homogenize experiences and learn more about the naturalistic base rate of these behaviors. In addition, future studies could include more measures or questionnaires ranging in different areas. For instance, it would be useful to measure students' current relationship status, levels of happiness or well-being, and recent illness-related visits to a health center. These additional measures would provide a better and more conclusive understanding of the students overall, which might lead to new discoveries in relation to expressive writing.

Personal Reflection

As I reflect on my time in the Sally McDonnell Barksdale Honors College, it is rewarding to recount the many practical, academic, and personal lessons that I have learned. Many of these lessons were obtained through deeply thought provoking class

discussions but more specifically through the experience of working on my Honors' thesis. Practically speaking, I have learned the process and protocol of conducting research, including how to create and distribute my very own survey. Professionally, I gained a deeper degree of sensitivity for our university's diverse student population and how to thoughtfully address questions that are specifically related to gender.

Furthermore, this process has expanded my own personal beliefs about myself. Simply, I have had to think outside of the box big time by expanding my comfort zone in regards to the way I think, question, process and ultimately what I put down on paper. It has not been easy, but it has been rewarding to complete these tasks I did not think were possible, including formulating my own study and running analytical tests. By requiring me to stand up in front of distinguished faculty members and family to defend my work, I have discovered in myself a deeper level of confidence. Another added bonus in this journey has been the lessons of discipline and time management. I have never before been faced with the daunting challenge of a thesis, but I am proud to say that with the guidance and support from the Honors College and Dr. John Young, I was able to overcome my self-doubts and complete the task. Through this process, I have grown and I have changed.

Finally, I learned not to be afraid or ashamed to ask for help when it is needed with the realization that we are all lifelong students. I am confident I will take these lessons with me into the next chapter of my life, attending UMMC's Accelerated BSN program in Oxford. I believe I will be a better nurse and a better advocate for my patients as well as a stronger person all the way around because of this experience.

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Appendices

APPENDIX A

This measure was designed to determine use of expressive writing among college students. The three overall college adjustment questions were derived from Pennebaker, Colder, and Sharp's (1990) "Coming-to-College Study".

1. Are you at least 18 years old?

- Yes
 No

2. Please select your ethnicity:

- White
 Black or African American
 American Indian or Alaska Native
 Asian
 Native Hawaiian or Pacific Islander
 Other

3. What is your gender?

- Male
 Female
 Other-

4. What is your major?

(Pennebaker, Colder, and Sharp, 1990) Q.5 – 7

5. Overall, how well do you think you have adjusted to college life?

- Extremely well
 Very well
 Moderately well
 Slightly well
 Not well at all

6. Overall, since coming to college, how happy have you felt?

- Extremely happy
- Somewhat happy
- Neither happy nor unhappy
- Somewhat unhappy
- Extremely unhappy

7. Overall, since coming to college, how sad or depressed have you felt?

- Extremely
- Very
- Moderately
- Slightly
- Not at all

8. How often do you discuss your inner thoughts or emotions with other people?

- Always
- Most of the time
- About half the time
- Sometimes
- Never

9. Please provide an overview of your thoughts about expressive writing (aka the process of expressing thoughts and emotions using the written form).

10. How common do you think it is for people your age to journal/express themselves through writing?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

11. Do you ever express your emotions through writing? (i.e. journaling, diary entries, class assignments, online posts, etc).

- Yes
- No

(If “Yes” was selected): Q.12 - 31

12. How often do you journal (a.k.a express your feelings/thoughts on paper or using a device)?

- Daily
- 2-3 times a week
- 2-3 times a month
- Once a month
- Sporadically

13. Select which of these you use to journal/write. Select all that apply

- Pen & Paper
- Cell Phone
- Laptop
- Other:

14. Select any or as many of the following that describe your motivations for journaling.

- Helps cope with negative emotions
- Helps un-wind or de-stress
- Fun/leisure activity
- Serves as an alternative to talking to people about problems
- Believes it promotes physical and/or emotional well-being

15. Do you know anyone that journals?

- Yes
- No

(If “Yes” was selected): Q.16

16. If so, who?

- Relative
- Friend
- Other

17. Was there a specific event that made you begin journaling?

- Yes
- No

18. Did your journaling begin as a result of a stressful/negative event?

- Yes
- No

19. After writing about a negative event, how likely are you to feel an elevation of stress or emotion?

- Extremely likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Extremely unlikely

20. Immediately after writing, do you feel an elevation of emotions in general?

- Yes
- No

(If “Yes” was selected): Q.21

21. If so, are the emotions you feel usually positive or negative?

- Positive
- Negative

22. How often do you share your writings with others?

- Always
- Most of the time
- About half the time
- Sometimes
- Never

(If “Never” was NOT selected): Q.23 – 25

23. When you share your writing with someone else, how often is that done anonymously? (Example: Posting online in a way that does not identify you)

- Always
- Most of the time
- About half the time
- Sometimes
- Never

24. How often do you feel better after sharing your writings?

- Always
- Most of the time
- About half the time
- Sometimes
- Never

25. What kind of feedback have you received after sharing your writing?

26. How confident are you that your writing is private and no one can see your writings unless you choose to share them?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

27. How often do you go back and re-read your previous work/compare it to current journals?

- Always
- Most of the time
- About half the time
- Sometimes
- Never

(If “Never” is NOT selected): Q.28 - 29

28. In what ways do you benefit from re-reading your previous writings? Select all that apply.

- Get to see your growth over time
- Helps determine what changes you need to make
- Helps determine whether or not journaling is truly beneficial
- Provides a means of reflection that you otherwise might not have
- Other:

29. Do you look for or keep track of changes in your writing over time?

- Yes
- No

30. Have you ever told other people about how useful journaling is or tried to get someone to try it?

- Yes
- No

31. What do you get out of journaling? Select all that apply.

- Sense of release
- Comfort
- Clarity
- Increase in positive mood/thoughts/demeanor
- Feel better overall (physical, emotional)
- Sleep better
- Feel less depressed/overwhelmed
- Other:

32. What are other ways you express your emotions/thoughts or deal with stress? Select all that apply.

- Talk to family
- Talk to friends
- Draw/Sketch
- Listen to music/Create music
- Use alcohol or other substances
- Escape through Netflix or other activities
- Other:

33. Why do you think more college students don't journal?

(If "No" was selected for Q.11): Q.32 - 38

32. What are other ways you express your emotions/thoughts or deal with stress? Select all that apply.

- Talk to family
- Talk to friends
- Draw/Sketch
- Listen to music/Create music
- Use alcohol or other substances
- Escape through Netflix or other activities
- Other:

33. Why do you think more college students don't journal?

34. What is your reason for not keeping a journal/writing to express yourself? Select all that apply.

- Lack of time
- Lack of privacy
- Doesn't seem to be useful
- Appears pointless
- Have found other methods for de-stressing more beneficial
- Other:

35. If you were experiencing difficult emotions or times of stress, to what degree would you consider writing as a way to cope?

- A great deal
- A lot
- A moderate amount
- A little
- None at all

36. Have you ever been inclined to journal?

- Yes
- No

APPENDIX B

Depression Anxiety Stress Scales 21 (Lovibond & Lovibond, 1995)

Instructions for participants: Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree or a good part of time
- 3 Applied to me very much or most of the time

	0	1	2	3
I found it hard to wind down	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was aware of dryness in my mouth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I couldn't seem to experience any positive feeling at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found it difficult to work up to the initiative to do things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tended to over-react to situations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	0	1	2	3
I experienced trembling (e.g. in the hands)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I felt that I was using a lot of nervous energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was worried about situations in which i might panic and make a fool of myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I had nothing to look forward to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found myself getting agitated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found it difficult to relax	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	0	1	2	3
I felt down-hearted and blue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was intolerant of anything that kept me from getting on with what I was doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I was close to panic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was unable to become enthusiastic about anything	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I wasn't worth much as a person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I was rather touchy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	0	1	2	3
I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt scared without any good reason	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I felt that life was
meaningless

