

THE EFFECT OF SHAME AND GUILT ON STUDENTS WRITING HABITS

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ABSTRACT

Individuals strive to assuage negative emotions through a myriad of mechanisms, some of which are adaptive while others are not. In the current study, we focus on shame and guilt. Previous research suggests that shame is more associated with defensiveness and the tendency to project negative feelings outward. However, guilt can be an adaptive emotion and is associated with the tendency to take responsibility. The current study explores how such negative emotionality can affect students' perceived and actual work habits by utilizing Google Docs, which keeps a time-stamped record of workers' activity that is accurate to the millisecond. Participants ($n = 178$) were asked to write an essay into Google Docs. Participants also completed self-reported procrastination scales and the Test of Self-Conscious Affect (TOSCA). Therefore, we can compare participants' self-reported levels of shame and guilt with both their self-reported procrastination and their actual work activity (measured by utilizing the time-stamped data). While both shame-proneness and guilt-proneness are significant predictors of self-reported procrastination, neither predict observed procrastination. Despite this, self-reported procrastination is associated with observed procrastination. Ultimately, this data can be used to better understand students' perceived and actual work habits and motivations from a psychological perspective and can assist in informing others regarding how to best engage with students concerning their writing activity and habits.

KEYWORDS: *Motivation; Writing; Shame; Guilt; Habits; Procrastination*



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INTRODUCTION

Previous research suggests that shame is associated with defensiveness and the projection of negative feelings; in students, this may lead to maladaptive work patterns (Martinckova & Enright, 2018). In other cases, shame is associated with lying and violence (Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010). In contrast, guilt can be an adaptive emotion associated with responsibility and atonement (Stuewig et al., 2010; Tangney, 2002). In students, guilt may then promote responsible behavior towards schoolwork. The differences between shame and guilt have proven to be important in a variety of cases, with these differences becoming important in a variety of contexts that encompass severe mental disorders, our perception of everyday activities, and the variety of topics in-between (Bannister, Colvonen, Angkaw, & Norman, 2019; Parker & Thomas, 2009; Tangney, Stuewig, & Martinez, 2014). While the overarching differences between shame and guilt are plain, there is a significant gap in the psychological literature concerning how these differences relate to academic motivation. Further, there is little psychological literature regarding negative emotionality and writing specifically, and the existing research on emotionality and procrastination is primarily centered around anxiety and/or depression. This is a significant gap to fill as writing is one of the few academic endeavors that continue beyond schooling, making writing an activity that often continues for the rest of the individual's life, albeit in varying capacities. The current study seeks to remedy this and to better understand how these differences relate to students' writing patterns and self-perception in order to provide insight into a task that will likely follow individuals throughout their lives. Of course, this does not mean that emotionality and academic motivation are completely unexplored topics; non-psychological literature explains the importance of such emotionality in writing utilizing qualitative methodology (Ballenger & Myers, 2019). The purpose of the current study is to provide a quantitative foundation for those who seek to research students' shame and guilt using a novel methodology, as multiple fields of study understand the large role that emotionality plays in the lives of students (Hastings, Northman, & Tangney, 2000; Ballenger & Myers, 2019).

Many factors can contribute to an individual's decision to procrastinate. For example, conscientiousness and the simple desire to avoid tasks that the individual finds unpleasant (Fee & Tangney, 2012). However, there are also affective factors that impact motivation, such as shame and self-esteem. Additionally, low self-esteem is associated with an individual's likeliness to procrastinate (Fee & Tangney, 2012). However, this could also be a result of anxiety. Self-esteem can act as a buffer to anxiety in response to a threat (Greenberg, et al., 1992). For example, if an academic assignment is considered a potential threat to an individual's self-image, then low self-esteem may prevent them from protecting against anxiety.

Potentially, this could create a positive feedback cycle due to the link between self-esteem and shame, if a decrease in one will lead to an increase in the other. When their negatively impacted work is evaluated, this evaluation may negatively impact their affect, which in turn reduces their ability to buffer against future affective threats. Therefore, with this research, we would expect to find significant differences between the unique relationships that shame-proneness and guilt-proneness have with procrastination. Shame-proneness would be expected to be positively associated with self-reported procrastination since shame causes a negative impact on global self-evaluation (Fee & Tangney, 2012; Martinckova & Enright, 2018; Strelan, 2007). As a result of the comprehensiveness of this judgment, and the relative strength of shame as an emotion, shame-proneness may cause individuals to self-report differently than their less shame-prone peers, even in the absence of any other discrepancy in behavior.

The current study explores how shame-proneness and guilt-proneness can affect students' perceived and actual work habits by utilizing Google Docs, which keeps a time-stamped record of students' writing activity. Participants wrote two essays using Google Docs and completed multiple questionnaire measures of self-reported procrastination, in addition to the Test of Self-Conscious Affect (TOSCA; Tangney, Wagner, & Gramzow, 1989), which measures proneness for both guilt and shame. Therefore, we can compare participants' self-reported levels of shame and guilt with both their self-reported procrastination and how they distribute their time when writing their actual course essays. We expect guilt-proneness and shame-proneness to predict procrastination, with the assumption that procrastination is a result of negative emotionality that leads to self-sabotaging behavior. This viewpoint suggests that shame-prone students prioritize the avoidance of failure over adopting strategies to increase the chances of success overall (Ferras, Freire, Valle, & Nunez, 2016). Such strategies can appear in layers, with additional strategies being used to rationalize failure in a way that does not impact the workers' sense of self-worth as harshly as it would have otherwise. Therefore, we expect shame to be significantly associated with both self-reported and observed procrastination. Guilt, however, is a more easily externalized emotion and is not as significantly associated with self-worth (Averill et al., 2002; Martinckova & Enright, 2018; Strelan, 2007). Therefore, we would not expect it to be strongly related to self-sabotaging (via procrastination) or our measures of writing habits.

In short, we hypothesize that shame-proneness will be positively associated with both self-reported and observed procrastination, based on two assumptions. First, we expect shame-prone students to also believe themselves to be procrastinators. Second, we expect students who believe themselves to be procrastinators to have different behavioral patterns than those who do not. Inversely, we

hypothesize that guilt-proneness will not be associated with self-reported procrastination. However, guilt is generally a less powerful emotion as it is focused on a specific behavior rather than a global self-evaluation. Therefore, we hypothesize that guilt-proneness will negatively predict observed procrastination with the expectation that guilt-proneness is a stronger predictor of behavior than shame, as guilt and measurement of behavior share a fundamental purpose – to assess specific behavior, while shame forces a more global self-assessment.

MATERIALS AND METHODS

Overview

Observed procrastination on writing tasks has been historically neglected by researchers because it is difficult to measure outside of the laboratory. We have attempted to address this gap by introducing a possible new solution - utilizing Google Docs. Google Docs saves a precise record of when participants were working; each time a participant changes the document it is stored as an “edit” along with a precise timestamp recording when it happened. This allowed us to collect an accurate but non-invasive measure of observed procrastination. Further, this allowed us to compare the results from our observed measures with the results from commonly used questionnaires, an important step in bettering our understanding of both types of measures.

Participants

Participants were recruited from a Social Psychology course; the students were compensated with extra credit. One hundred ninety students submitted at least partial data for the study, but only 177 participants were included in the current data. The main inclusion criteria were that participants had to submit data for at least one essay, but some were excluded based on different factors, such as participants who indicated that they had not followed instructions or whose data contained extreme outliers. Of the two essays, 154 participants participated in the first essay, 153 participated in the second, and 140 participated in both essays. The demographic breakdown can be seen here: 2.2% African American, 27% Asian, 9.6% Caucasian, 47.8% Hispanic/Latino, 1.1% Pacific Islander, 6.7% Middle Eastern, 5.6% mixed race/other. Additionally, the gender breakdown is 23% male, 76% female, 1% either declined to answer or listed “other.”

Procedure

The data was gathered over the course of a single quarter. Participants were asked to take an online survey. Informed consent was obtained from all participants before they participated. Participants were tasked with completing two essays as a requirement for the course but participating in the study required them to write these essays into the Google Docs word processor. Additionally,

students had to provide permission to retrieve the relevant data provided by Google Docs to participate. The course required the essays to fit the following parameters: The essays were to be a minimum of five pages long with at least five citations, in APA format. Both essays had identical requirements, but students were given a different choice of topics for the second essay. After the essays were completed, participants allowed researchers to extract the metadata from the document by giving edit-level permission through Google Docs. The metadata consisted of the list of timestamps that were used to create the measures and compute the results. Data on the essay submission times were collected using the timestamps from the online submission portal.

Measures

Procrastination. Procrastination was measured using self-reported and observed measures.

Observed Procrastination was measured by utilizing the timestamp measures from Google Docs and the University’s online essay submission portal. This data allowed us to compute measures of *Mean Work Time*, *Submit Time*, *Essay Start Time*, and *Essay End Time*.

Mean Work Time measured the average amount of time participants spent on each essay. This was calculated by utilizing all of the Google Docs timestamps for every edit a participant made in an essay and computing the mean to get their average work time.

Submit Time was the time that the essay was submitted through the online submission portal for the assignment.

Essay Start Time was when the first percentile of the essay was completed. The first percentile of the essay was selected as a timestamp to improve the accuracy of the measure. Using the first percentile instead of the first timestamp prevents a “false-start” as erroneous keystrokes during the creation of the document itself would not be considered a start time in the current study.

Essay End Time was when the 99th percentile of the essay was completed. The 99th percentile of the essay was selected as a timestamp to improve the accuracy of the measure. Using the 99th percentile instead of the last edit prevents a “false finish” caused by accidental adjustments made to the essay after it has been completed, such as when students accidentally press a key when sending the metadata to researchers.

Self-Reported Procrastination was measured using a selection of self-reported trait-procrastination measures, including the General Procrastination Scale ($\alpha = .86$), the Irrational Procrastination Scale ($\alpha = .85$), and the Pure Procrastination Scale ($\alpha = .92$). The

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Table 1. Correlation Matrix of All Study Variables. Note * = $p < 0.05$, ** = $p < 0.001$

#	MEASURE	1	2	3	4	5	6	7	8	9	10	11
1	Composite Procrastination	–										
2	Shame	.327**	–									
3	Guilt	.005	.428**	–								
4	Work Time - Essay One	.418**	.154	.147	–							
5	Work Time - Essay Two	.335**	-.048	.005	.540**	–						
6	Start Time - Essay One	.226**	-.004	.077	.662**	.429**	–					
7	End Time - Essay One	.400**	.042	.204*	.703**	.526**	.337**	–				
8	Start Time - Essay Two	.240**	.068	.105	.448**	.642**	.574**	.331**	–			
9	End Time - Essay Two	.237**	-.137	-.074	.275**	.793**	.185*	.533**	.354**	–		
10	Submit Time - Essay One	.169*	.072	.144	.627**	.544**	.280**	.927**	.294**	.547**	–	
11	Submit Time - Essay Two	.221**	.053	.066	.219**	.420**	.007	.556**	.003	.695**	.465**	–

General Procrastination Scale (Lay, 1986) consists of several statements, such as “I generally delay before starting on work I have to do,” and each statement must be rated on a 1-5 Likert scale. In this case, a rating of 1 would suggest that the statement is extremely uncharacteristic of the participant while a rating of 5 suggests that the statement is extremely characteristic of the participant. The Irrational Procrastination Scale (Steel, 2010) also consists of several statements, such as “I delay tasks beyond what is reasonable,” and is also rated on a 1-5 Likert scale. In this measure, participants are rating how often the statement is true of them. A rating of 1 suggests the statement is rarely or never true of the participant. The Pure Procrastination Scale (Steel, 2010) is also provided on a 1-5 Likert scale and features statements such as “I delay making decisions until it is too late,” with a response of 1 suggesting the statement rarely true of the participant and a response of 5 indicating the statement is very often true of the participant. All self-report procrastination measures have strong internal reliability. The scores of these self-reported measures were standardized and then averaged to compute a measure of *Composite Procrastination*.

Shame and Guilt. This was measured with the Test of Self-Conscious Affect (TOSCA), a survey that measures proneness to guilt, shame, and blame. It does so by providing the participants with plausible scenarios and responses to those scenarios that indicate

shame, guilt, or blame. The participant then rates the likeliness that they would respond similarly to each response on a Likert scale (Tangney et al., 1989). Both shame ($\alpha = .83$) and guilt ($\alpha = .76$) subscales have an acceptable internal consistency. Blame was left out of the present study. As an example, one scenario stated “You are taking care of your friend’s dog while they are on vacation. The dog runs away.” Example responses included: “You would think, ‘I am irresponsible and incompetent.’” “You would think your friend must not take very good care of her dog or it wouldn’t have run away,” and “You would vow to be more careful next time.” Each response was rated using a 1 to 5 score from the participant, with a score of 1 suggesting the participant is very *unlikely* to respond in that manner and a score of 5 suggests that the participant is very *likely* to respond in that manner.

RESULTS

Table one is a correlation matrix showing the relationship between the variables utilized in the present study. The matrix suggests that the observed measures of procrastination were all correlated with each other, except for the submission time of essay two, as that measure did not correlate with the start times of either essay. Additionally, composite procrastination correlated with every measure except for the TOSCA’s guilt-proneness subscale. Self-re-

Table 2. Summary of Multiple Regression Models

OUTCOME MEASURE	Shame	Guilt	df	Adjusted R ²	p
Composite Procrastination	$\beta = .356$	$\beta = -.143$	175	.114	<.001
	SE = .072	SE = .072			
	p < .001	p = .048			
Mean Work Time, Essay One	$\beta = .117$	$\beta = .106$	151	.109	.088
	SE = .093	SE = .095			
	p = .213	p = .264			
Mean Work Time, Essay Two	$\beta = -.069$	$\beta = .039$	150	-.010	.772
	SE = .096	SE = .094			
	p = .475	p = .681			
Submit Time, Essay One	$\beta = .012$	$\beta = .013$	175	.009	.158
	SE = .078	SE = .055			
	p = .878	p = .096			
Submit Time, Essay One	$\beta = .031$	$\beta = .053$	173	-.006	.640
	SE = .078	SE = .055			
	p = .713	p = .528			
Essay One Start Time	$\beta = -.047$	$\beta = .102$	150	-.005	.568
	SE = .095	SE = .096			
	p = .618	p = .289			
Essay One End Time	$\beta = -.058$	$\beta = .242$	150	.031	.034
	SE = .095	SE = .096			
	p = .696	p = .011			
Essay Two Start Time	$\beta = .023$	$\beta = .095$	148	-.002	.430
	SE = .096	SE = .095			
	p = .809	p = .320			
Essay Two End Time	$\beta = -.137$	$\beta = -.007$	148	.006	.245
	SE = .096	SE = .095			
	p = .154	p = .942			

ported procrastination correlates strongly with observed measures of procrastination, showing that our observed measures did not fail to measure procrastination. Additionally, shame-proneness correlates strongly with self-reported procrastination but did not correlate significantly with the observed measures of procrastination. Further, guilt-proneness and shame-proneness are highly correlated, but guilt did not correlate with either self-reported or observed measures of procrastination with one exception; guilt did correlate with the end time of the first essay.

Table two describes several linear regression models. These models suggest that both shame-proneness and guilt-proneness are significant predictors of self-reported procrastination. However, neither guilt-proneness nor shame-proneness were statistically significant predictors of any of the observed measures of procrastination, again with one exception, as guilt-proneness was a predictor of when participants completed the first essay.

The main hypotheses of this study were, first, that shame-proneness would be positively associated with both self-reported and observed

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procrastination. Second, we hypothesized that guilt-proneness would not be associated with self-reported procrastination but would negatively predict observed procrastination. To assess the first hypothesis, whether shame-proneness is a predictor of procrastination, we ran correlations and multiple regression models. Our multiple regression model revealed that shame-proneness is a predictor of self-reported procrastination, but our correlation matrix did not provide evidence that shame-proneness was associated with observed procrastination. In testing our hypotheses concerning guilt, our data failed to provide evidence for either prediction as the correlation matrix did not identify guilt-proneness as a meaningful correlate of observed procrastination; however, our multiple regression model did identify guilt-proneness as a negative predictor of self-reported procrastination. Since the main question this paper is trying to address is the predictive power of shame and guilt on procrastination and writing habits, these results make it clear that there are separate groupings of variables predicting self-reported procrastination and observed procrastination, despite the associations between self-reported procrastination and our measures of observed procrastination.

DISCUSSION

As shown from the results, both shame-proneness and guilt-proneness were associated with self-reported procrastination. However, they were not associated with observed procrastination, with one small exception. This means that a person's tendencies towards guilt and shame are not associated strongly with their behavior, but they are associated strongly with how people evaluate that behavior. Importantly, this is not because our Google Docs measure fails to measure procrastination: it does, and this is evident from the significant relationship between self-reported procrastination and all of the measures we computed using the Google Docs metadata. Ultimately, it would seem as if there was a missing variable between shame and observed procrastination that could be uncovered to better understand the connections between self-image and actual working behaviors in students. In other words, shame-proneness predicts whether students believe themselves to procrastinate but does not predict observed behaviors of procrastination. However, self-reported procrastination predicts observed procrastination. Therefore, there may be an unknown variable that would predict both self-reported procrastination and observed procrastination that is also associated with shame-proneness - perhaps some other aspect of negative emotionality, or a working behavior that is only tangentially related to emotionality. One potential direction for further study is self-esteem, as existing literature has linked low self-esteem and high levels of shame, although linking this variable group to procrastination and writing habits represents another gap in the psychological literature (Velotti, Garofalo, Bottazzi, & Caretti, 2017).

The current study, like all others, has a few limitations. One limitation is the unknown impact on the surveys, as they could have been completed at any time during the length of the course. Therefore, some of the survey responses may have been influenced by the students' observations of their work or how they felt while doing the work, while responses completed earlier in the course might better show how they feel generally. Another limitation is the inability to determine the causality of the results as we did not manipulate participants' emotionality, although such manipulation may prove to be fruitful in future studies.

There are several clear implications that we can draw from this data. Google Docs can serve as an appropriate tool for researchers observing students' writing habits in an easy and non-intrusive way, an immense benefit for researchers as collecting similar observational data is historically difficult and disruptive. The current study also provides evidence that shame-proneness and guilt-proneness influence how students evaluate themselves but not how they behave. This means that counselors who are working with students who feel ashamed or guilty of procrastinating perhaps should focus on helping the student come to terms with their behavior and determine whether their feelings are accurate, instead of prematurely prescribing tricks to "fix" their behavior. Ultimately, this is another avenue to be explored in future research, as the current study provides the foundation but cannot specifically draw that conclusion.

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