The Impact of Self-Esteem and Ego Threat on Inhibition and Memory

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ABSTRACT

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The present study sought to assess the impact of self-esteem and ego threat on inhibition and, by extension, long-term memory. Two samples of undergraduate college students were placed into either an ego threat or control condition. We attempted to alter their state self-esteem level and then administered a Rejection Stroop task in order to assess their ability to inhibit non-target information. We looked at the interaction effect of trait self-esteem, ego threat and word valence (rejecting or accepting words) on the sample's attentional and memory processes. No significant effects were found.

Keywords: self-esteem, ego threat, inhibition, attention, memory

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Introduction

The basis by which information is encoded into long term memory depends on many processes. First the information must be assessed as relevant enough to enter selective attention. The ability to attend to a target depends on the ability to inhibit distracting stimuli. Thus, inhibition plays a large role in selective attention. Through the filter of selective attention, information is stored in working memory. Then, if the information is useful or important, it is encoded into long term memory. In the current study, we manipulated the level of ego threat perceived by the participant. In doing so, we sought to alter the level of self-relevance of the stimuli. We expected that this in turn would affect which information was selectively attended to. We did this by using accepting, rejecting, or neutral words in a Rejection Stroop task. We predicted that the interaction between self-esteem level and valence of word would modulate the level of threat. In this way, the current study sought to investigate the impact of self-esteem and ego threat on inhibition and selective attention by looking at resulting long term memory recall.

Selective Attention and Working Memory

Working memory can be conceptualized as a temporary storage area where information is kept while it is manipulated for tasks such as learning, comprehension and reasoning (Baddeley 1992). While working memory and long term memory were once thought of as quite separate, the current multi-component working memory model demonstrates that information must first be held in working memory in order to eventually be encoded into long term memory (Baddeley, 2000). Thus, working memory impacts long term memory.

Just as working memory has a direct role in establishing what enters long term memory, attentional control dictates what information enters working memory. Selective attention is the ability to attend to a target stimulus when distractors are present. This ability to use attentional control to avoid distraction governs working memory capacity. Dichotic listening tasks have been used to show that as working memory capacity increases, so does selective attention (Colflesh & Conway, 2007). Poor ability to selectively attend to the relevant stimulus increases the number of stimuli entering working memory. The greater the number of stimuli in working memory, the greater the competition. This effect of competition on what is recalled is termed interference (Anderson & Neely, 1996). When proactive interference is present, differences in attentional control ability predict differences in the ability to recall (Engle, 2002).

Inhibition

The ability to block out distractors dictates the effectiveness of selective attention. When pertaining to memory, the ability to prevent distracting stimuli from interfering with target information is termed inhibition (McDowd, 1997). Distractors could be things such as noise coming from a television in the next room, construction happening down the street, or a fly buzzing around your head. Depending on how well people are able to inhibit these distractors, they either reduce their working memory or expand it up to capacity. Therefore, as a component of selective attention, inhibition directly impacts working memory, and in doing so, indirectly impacts long term memory.

Poor inhibition stems from individual differences in attentional resources (Engle, Conway, Tuholski & Shisler, 1995), suggesting that inhibition is a controlled resource. A number of studies have found that failure to inhibit distractors is associated with a number of selective attention and memory deficits. For example, those who are less able to inhibit

irrelevant information exhibit poor reading comprehension due to working memory interference. (Borella, Carretti & Pelegrina, 2010). Inhibition failure also leads to delayed reaction time in stop sign and flanker tasks (Verbruggen, Liefooghe & Vandierendonck, 2004). Decline in working memory abilities in older adults is also a result of inhibition failure (Chiappe, Siegel & Hasher, 2000).

However, studies of older adults have also shown that when distractors are congruent with target information, failure to inhibit these distractors can be beneficial, speeding up response times, increasing reading comprehension, and providing better memory for target information (Weeks & Hasher, 2014). This is due to the fact that congruent distractors can provide contextual information which can assist recall of target information. Thus, if older adults are less able to inhibit these distractors, congruent distractors can be beneficial. Because older adults experience difficulty with inhibitory abilities, the majority of inhibition research focuses on older adults. However, it is possible that factors such as self-esteem and ego threat have a substantial impact on inhibitory abilities in people of all ages. Thus, we look to explore the implications of self-esteem and ego-threat on inhibition and selective attention in younger adults.

Self Esteem

Self-esteem is defined as how much individuals value themselves (Baumeister, Campbell, Krueger & Vohs, 2003). Research has found that self-esteem level has a distinct relationship with memory and attentional processes. Higher overall self-esteem predicts better memory for experiences, while lower overall self-esteem predicts poorer memory for experiences (Christensen, Wood & Barrett, 2003). In some cases, self-esteem impacts which information is most relevant and thus determines what an individual is most likely to attend to (Tafarodi,

Marshall & Milne, 2003). In respect to judgments of the self and others, people with low self-esteem are more likely to blame themselves for failure and make negative associations with their abilities. In opposition, people with high self-esteem are more likely to defray negative outcomes by attributing them to external factors and concentrating on traits they deem strengths (Dandeneau & Baldwin, 2004). These judgments can then dictate which information an individual deems most relevant and directs selective attention towards. This effect of self-esteem on the information an individual selectively attends to can be expected to impact the information that enters working memory and, by extension, long term memory.

Given that self-esteem modulates selective attention, we look to Sociometer Theory, which evaluates people's perception of others, to understand the link between the two. Sociometer Theory asserts that self-esteem is part of a mechanism which monitors the environment to assess relational value. Operating under Sociometer Theory, people with low trait self-esteem are more likely to perceive others as rejecting, while people with high trait self-esteem are more likely to perceive others as accepting (Leary et al, 1995). Thus, people with low trait self-esteem have a more difficult time inhibiting rejecting information, as they deem it more relevant than do people with high trait self-esteem. A study by Dandeneau and Baldwin (2004) used a Rejection Stroop task to demonstrate this premise. The Rejection Stroop requires individuals to indicate the color of the font by key press while attempting to inhibit the identity of words that are either rejecting, neutral or accepting. Their study found that people with low self-esteem exhibited higher interference on rejection words than on acceptance words, while high self-esteem people showed no such difference (Dandeneau & Baldwin, 2004). Our study will use this same Rejection Stroop task, but we will look to extend these findings to assess the inhibitory processes of people under ego threat.

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Ego Threat

Ego threat is defined as experimental manipulation intended to create emotional distress and interpersonal anxiety (Heatherton, Herman & Polivy, 1991). While individuals differ in their overall levels of trait self-esteem, a construct which stays fairly static over time (Kuster & Orth 2013), it is possible to manipulate levels of *state* self-esteem, which fluctuates depending on interactions and environment, by eliciting comparison ego threat. The effects of ego threat vary based on level of self-esteem. For people with high trait self-esteem, being put under ego-threat causes them to make downward comparisons, judging themselves to have more positive attributes than other people. This in turn causes their state self-esteem to go up. Conversely, when put under ego threat, people with low trait self-esteem make upward comparisons, seeing more positive attributes in other people or more negative attributes in themselves. This causes their state self-esteem to go down (Vohs & Heatherton, 2004). After ego threat, high self-esteem individuals become more independent and are rated as less likeable by their peers, while low self-esteem individuals become more interdependent and are rated as more likeable by their peers (Vohs & Heatherton, 2001). Thus, self-esteem modulates the impact of ego-threat.

Our study will place individuals of both high and low self-esteem under ego threat. Our prediction is that this ego threat will modulate changes in their state self-esteem. This in turn would alter their inhibitory process. If their level of inhibition failure increases, this would result in a decrease in selective attention, allowing more total words to enter their working memory. A larger number of words in working memory will lead to greater interference. An individual will deem words as more or less relevant depending on the individual's trait self-esteem level, whether the individual is under threat, and the valence of the word (i.e., rejecting or accepting). Words that an individual deems self-relevant will pass through working memory to long term

memory. To assess this, our outcome variable will be a surprise free recall of the Rejection Stroop Task words. During the free recall, individuals are asked to write down as many words as they can recall from the words presented during the Rejection Stroop Task. This will allow us to observe which words entered the working memory, were deemed self-relevant, and then stored in long term memory.

Hypotheses

Using the Rejection Stroop, we sought to assess how inhibition failures impact long-term memory. Participants were asked to inhibit reading the word on the screen, and were directed to focus only on the color of the word. By later analyzing the number of correct hits on the free recall task, we assessed the impact of inhibition, selective attention, working memory, self-esteem, and ego threat on long term memory.

We predicted that the distinction between the two self-esteem groups would be highlighted by the difference in the number of rejecting and accepting words recalled. We predicted those with low trait self-esteem would experience greater inhibition failure, resulting in poorer selective attention and decreased working memory capacity. We expected a larger number of words to enter their working memory, creating greater competition for what was encoded in the long term memory and therefore interference with what could be recalled. We predicted that individuals with high trait self-esteem would more successfully inhibit the words, resulting in better selective attention than those with low trait self-esteem. Consequently, we expected fewer words would enter working memory, and there would be less competition and therefore less interference. Because we expected the high trait self-esteem group to experience less interference, we predicted that the number of accepting words they recall would not significantly differ from the number of rejecting words they recall. However, we expected that because the low trait self-esteem group would experience greater interference, words deemed more self-relevant would be more salient and thus recalled at a higher rate. We expected that the

low trait self-esteem group, deeming rejecting words more self-relevant, would recall a higher number of rejecting words than accepting words.

We predicted a significant difference in the number of intrusions between the high trait and low trait self-esteem groups. Intrusions are errors in memory that occur when an individual mistakenly believes he recalls information because he associates the information with different information that he was actually exposed to. Because we expected the low trait self-esteem group, having poorer inhibition abilities, would allow a greater number of words into their working memory, we predicted they would have increased interference. We expected that this increased interference would lead to a larger number of associations with words that were not words on the Rejection Stroop Task list. Thus, we predicted that the participants in the low trait self-esteem group would mistakenly report a greater number of intrusions relative to the high trait self-esteem group.

Half of the individuals in each of the low trait and high trait self-esteem groups were placed in an ego threat manipulation. We predicted that the high self-esteem group would not show a significant difference in total words recalled or valence of words recalled between the ego-threat and control conditions. This prediction was based on the expectation that when individuals with high trait self-esteem are placed under ego threat, they focus on their positive attributes, making downward comparisons to others. We predicted that this would allow them to sustain a relatively high state self-esteem level, protecting them against the ego threat, and allowing them to maintain their inhibition abilities.

Conversely, we predicted that within the low trait self-esteem group, the ratio of rejecting words to total words recalled would be higher for the ego-threat group than for the control condition. This prediction was based on the expectation that when under ego threat, individuals

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with low trait self-esteem would make upward comparisons, blame themselves, and make negative associations with their abilities. We expected this to result in a decrease of their state self-esteem, which in turn would lead to greater inhibition failure. We predicted that with increased interference, they would recall a greater number of rejecting words because these would seem more self-relevant due to their low state self-esteem.

Methods

Participants: 68 college-aged students from Brandeis University and Worcester State University participated in the study, which was approved by the Universities' respective IRBs. Students received course credit for participating. Participants were randomly assigned to either an ego-threat or a control group.

Procedure

After providing consent, participants were directed to sit in a quiet room in front of a computer monitor. Because the Rejection Stroop Task is dependent on color recognition, they were given plates 1, 3, 7, 13, 17 and 21 from the Ishihara Color Vision Test to ensure that they had normal color vision (Jurgensen, 1947). We administered the Positive Affect Negative Affect Scale (see Appendix A) (Watson, Clark & Tellegan, 1988) to assess state self-esteem. The participants completed the Rosenberg Self-Esteem Scale to assess trait self-esteem (see Appendix B) (Rosenberg, 1965). A median split of this assessment was used to form the high and low self-esteem groups. The participants took the Remote Associates Test (see Appendix C) (Kihlstrom, Shames & Dorfman, 1996; Dorfman, Shames & Kihlstrom, 1996). The control group was told that it is a difficult creativity assessment and given accurate feedback about their results, while the ego-threat group was told it is an intelligence test predictive of life outcomes and given false feedback to lead them to think they scored at a much lower level than average. The participants then took the State Self Esteem Scale (see Appendix D) (Heatherton & Polivy, 1991). We again administered the Positive Affect Negative Affect Scale to assess state self-esteem in order to check if the ego threat manipulation worked. Participants were then given the Rejection Stroop

Task (see Appendix E for words used). In this task, they were asked to press a key to indicate the font color for 36 words: 12 accepting words (e.g., welcomed), 12 neutral words (e.g., chair), and 12 rejecting words (e.g., excluded) (Dandeneau & Baldwin, 2004). The words used were taken from the Rejection Stroop Task of Dandeneau & Baldwin (2004). Four buffer words were presented at the beginning and end of the Rejection Stroop Task to eliminate recency and primacy effects. Each word was presented for 2 seconds. The participants were timed on the length of time it took them to correctly respond with the color of the word. This was done to test their ability to inhibit reading the word as they tried to focus only on the color, with longer reaction times indicating more inhibition failure. After the Rejection Stroop Task, participants were asked to subtract threes for 30 seconds in order to reduce recency effects in working memory for the Rejection Stroop words. They were then given a surprise free recall test in which they were asked to write down all of the words that they remembered. Before leaving, participants were debriefed on the reasons they were given all measures.

Results

To test our predictions, we used a 2 x 2 x 2 mixed design factorial ANOVA using word valence as the dependent variable. Valence (accepting words recalled vs. rejecting words recalled) was our within subject variable. Our between subject variables were self-esteem group (high vs. low) and condition (threat vs. control).

The main effect of self-esteem on word recall was not significant (See *Figure 1*), $F(1, 64) = 1.56$, $p = .22$. The main effect of condition on word recall was also not significant (See *Figure 2*), $F(1, 64) = .37$, $p = .54$. The main effect of valence was not significant, $F(1, 64) = 2.11$, $p = .15$.

The interaction effect of condition by self-esteem group was not significant (See *Figure 3*), $F(1, 64) = .58$, $p = .45$. The interaction effect of valence by self-esteem group was not significant, $F(1, 64) = 1.41$, $p = .24$. The interaction effect of valence by condition was not significant, $F(1, 64) = .24$, $p = .63$. Finally, the three-way interaction effect of valence by self-esteem by condition was not significant, $F(1, 64) = 2.29$, $p = .14$.

While the main effect of valence was not significant, when looking at only the low self-esteem group, the main effect of valence was marginally significant, $F(1, 30) = 3.30$, $p = .08$. When looking at only the high self-esteem group, the main effect of valence was not significant, $F(1, 34) = .04$, $p = .85$.

To observe the effect of self-esteem on intrusions, we ran a univariate ANOVA using intrusions as the dependent variable (with self-esteem and condition as the independent variables). This test yielded no significant main effect of self-esteem on number of intrusions,

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$F(1, 64) = .80$, $p = .38$. There was also no main effect of condition on number of intrusions, $F(1, 64) = .00$, $p = .99$. Lastly, there was no interaction effect of self-esteem by condition on the number of intrusions, $F(1, 64) = 1.54$, $p = .22$.

Because it appeared that the Brandeis and Worcester State samples yielded very different results, we ran a t-test on our manipulation check. To calculate this, we used the PANAS test that had been administered before and after the ego threat manipulation. We subtracted the negative affect score from the positive affect score to get a difference score for each administration of the PANAS. We then subtracted the difference score from the second PANAS test from the difference score from the first PANAS test. This yielded a difference change score that indicated the degree to which each participant became less positive (or more negative) from the first administration of the PANAS to the second. There was a significant main effect for sample (See *Figure 6*), $t(65.99) = 2.11$, $p = .04$, with Brandeis students becoming less positive (or more negative) than Worcester State students.

As it became clear that the Brandeis and Worcester State samples reacted differently to the ego threat manipulation, we decided to separately examine the effects on each sample. The Brandeis sample (See *Figure 4*) was composed of forty undergraduate students split into high (N = 20) and low self-esteem (N = 20) categories. Twenty of the Brandeis students received the ego threat manipulation, and the remaining twenty comprised the control condition. The main effect of self-esteem on word recall was not significant, $F(1, 36) = 1.24$, $p = .27$. The main effect of condition on word recall was also not significant, $F(1, 36) = .07$, $p = .80$. The interaction effect of condition by self-esteem group was not significant, $F(1, 36) = .36$, $p = .55$. While this sample yielded no main effect of valence, $F(1, 36) = 1.61$, $p = .21$, the interaction effect of valence by self-esteem was marginally significant, $F(1, 36) = 3.45$, $p = .07$. The valence by condition

interaction effect yielded $F(1, 36) = 2.76$, $p = .11$. Finally, the three-way interaction effect of valence by self-esteem by condition was not significant, $F(1, 36) = 1.61$, $p = .21$. While none of these effects were significant, considering the small sample size, there were effects that were trending towards significance. Thus, follow-up analyses with a larger sample size from the Brandeis population may yield significant results.

Unlike the Brandeis sample, the Worcester State sample did not yield any results trending towards significance. This sample *(See Figure 5)* was composed of twenty-eight undergraduate students split into high (N = 16) and low self-esteem (N = 12) categories. Fourteen of the Worcester State students received the ego threat manipulation, and the remaining fourteen comprised the control condition. The main effect of self-esteem on word recall was not significant, $F(1, 24) = .38$, $p = .55$. The main effect of condition on word recall was also not significant, $F(1, 24) = 1.18$, $p = .29$. The interaction effect of condition by self-esteem group was not significant, $F(1, 24) = .20$, $p = .66$. The main effect of valence was not significant, $F(1, 24) = .32$, $p = .58$. While the interaction effect of valence by self-esteem was marginally significant for the Brandeis sample, the Worcester State sample did not approach a significant effect, $F(1, 24) = .25$, $p = .62$. The valence by condition interaction effect, also not significant, yielded $F(1, 24) = 2.35$, $p = .14$. Finally, the three-way interaction effect of valence by self-esteem by condition was not significant, $F(1, 24) = 1.22$, $p = .28$. While the Worcester State sample size was extremely small, there was no indication that a larger sample size from this population would yield any significant effects.

Discussion

While we predicted that the interaction of self-esteem level and ego-threat would significantly affect inhibition, and by extension impact long term memory, we found no support for these predictions. There are a number of factors that could have played into our lack of significant results. Our study was predicated on the assumption that we could use a global self-esteem measure to accurately split the participants into high and low self-esteem groups. We were also operating under the assumption that we would be able to successfully put participants under ego-threat using a Remote Associates Test manipulation. Our predictions were made based on these two factors, and the ways in which the interaction of the two would affect inhibition, attention, and memory.

We used the Rosenberg Self-Esteem Scale to assess trait self-esteem. This is a widely used and accepted measure of self-esteem. However, it is a unidimensional measure of global self-esteem. This may have impacted our results. There is a strong argument for self-esteem being a multidimensional construct. Shavelson, Hubner, and Stanton (1976) presented a multidimensional model in which general self-concept was broken down into two categories, academic self-concept and non-academic self-concept. The academic self-concept was then broken down into different (school) subjects, while the non-academic self-concept was broken into social, emotional, and physical domains.

Valerand, Pelletier, and Gagne (1991) found that while talented students have higher cognitive self-esteem than regular students, their self-esteem in other domains does not exceed that of regular students. Extending this finding to a non-academic domain, they found that

talented swimmers show higher self-esteem in the physical domain than regular swimmers. Rosenberg (1979) himself was aware of the importance of domain-specific assessment. However, as separating out the different dimensions is exceedingly more difficult, he chose to measure global self-esteem.

In his later research, Rosenberg concluded that while global self-esteem is linked with psychological well-being, the academic dimension of self-esteem is a stronger predictor of school performance, and the extent to which academic self-esteem impacts global self-esteem is dependent on the personal significance an individual places on academic achievement (Rosenberg, Schooler, Schoenbach & Rosenberg, 1995). This last finding is particularly pertinent to our study, as we were attempting to threaten the participant's unidimensional, global self-esteem using only an academic ego-threat. Thus, the extent to which our ego-threat worked depended on the degree to which the participant valued academic achievement.

This effect was shown by the before and after administration of the PANAS, as Brandeis University students experienced a significantly larger decrease in state self-esteem. As Brandeis University is known to be more academically selective than Worcester State University, Brandeis students most likely place more worth on the academic dimension of self-esteem. This illustrates why in order for our ego-threat manipulation to work properly we would have had to use a multidimensional self-esteem assessment, as threat was likely correlated with importance placed on academic achievement rather than our predicted interaction with self-esteem level.

Another factor that may have accounted for the Brandeis University students experiencing a significantly larger decrease in state self-esteem is the experimenter's gender and age. All elements of the experiment at Brandeis University were administered by a large, male, graduate student (age 30). This was in stark contrast to the experimenter at Worcester State

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University, who was a female, undergraduate student. An older male experimenter may appear to be more of an authority figure, making participants more susceptible to social evaluative threat (stress induced by concern over negative social evaluation) and cognizant of their performance on the questionnaires and testing measures. This experimenter difference may have accounted for an increased level of threat for the Brandeis University sample.

In order to accurately assess the effects of self-esteem and ego-threat on inhibition and memory, an experimental design using a multidimensional assessment of self-esteem and an ego-threat that is robust across dimensions would have to be formulated. Further analysis should incorporate reaction time as a possible mediator in the model, as inhibition, or lack thereof, should affect reaction time. Further modeling should utilize regression to account for the continuous variables in the experimental design, as measures such as self-esteem would be better served to remain a spectrum rather than just using a median split to separate participants into high and low self-esteem groups.

While the complexity of interactions between self-esteem and ego-threat make these constructs difficult to use when building a statistical model, it remains important to attempt to assess their role in attentional and memory processes. Daily life provides conditions under which state self-esteem fluctuates and can be threatened by numerous random and unpredictable events. Understanding how these factors affect cognition would allow individuals the awareness of how their performance is impacted and the chance to modify or strengthen their attentional and other cognitive abilities.

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Figure 1. Valence of words recalled in the Rejection Stroop Task by Self-esteem group.
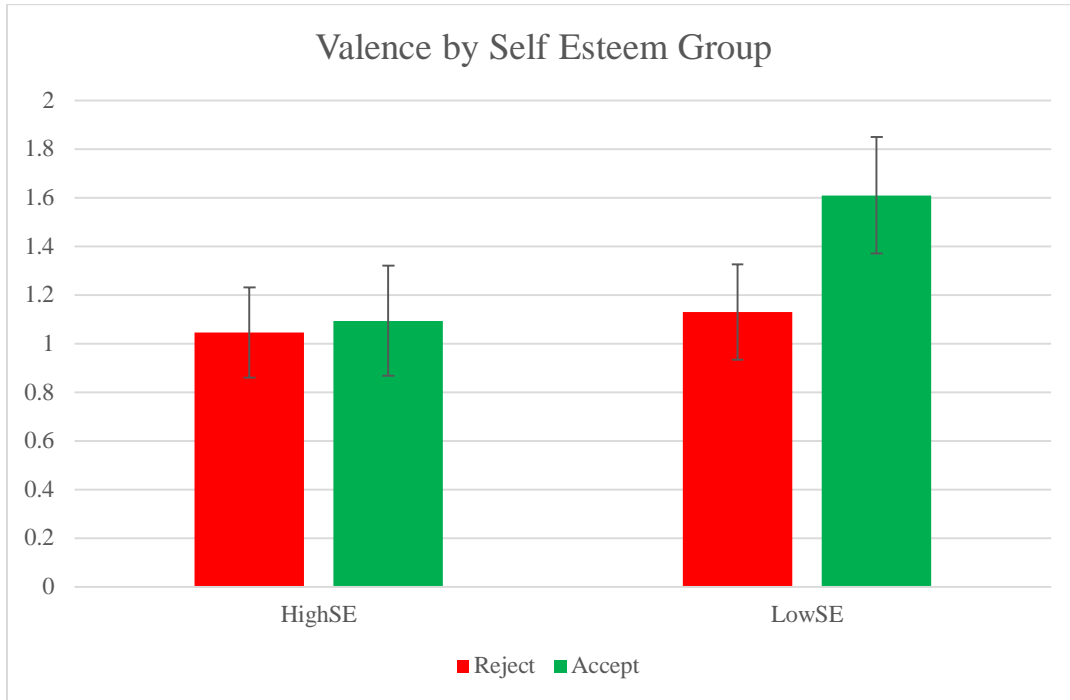
Figure 2. Valence of words recalled in the Rejection Stroop Task by Condition.
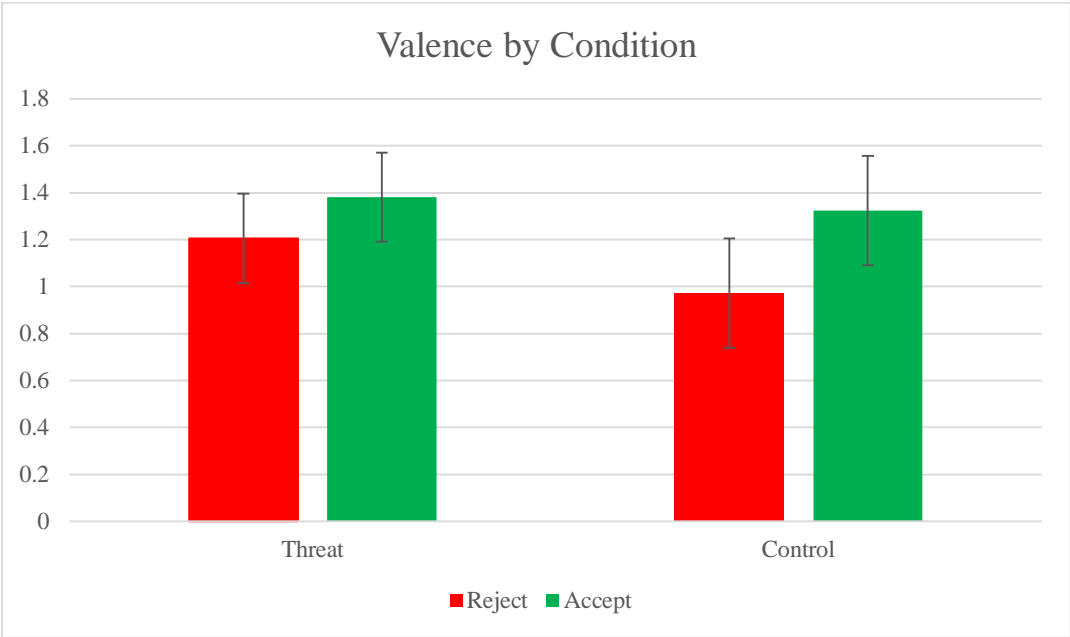
Figure 3. Number of words of each type of Valence recalled in the Rejection Stroop Task by Self-esteem group, and Condition.
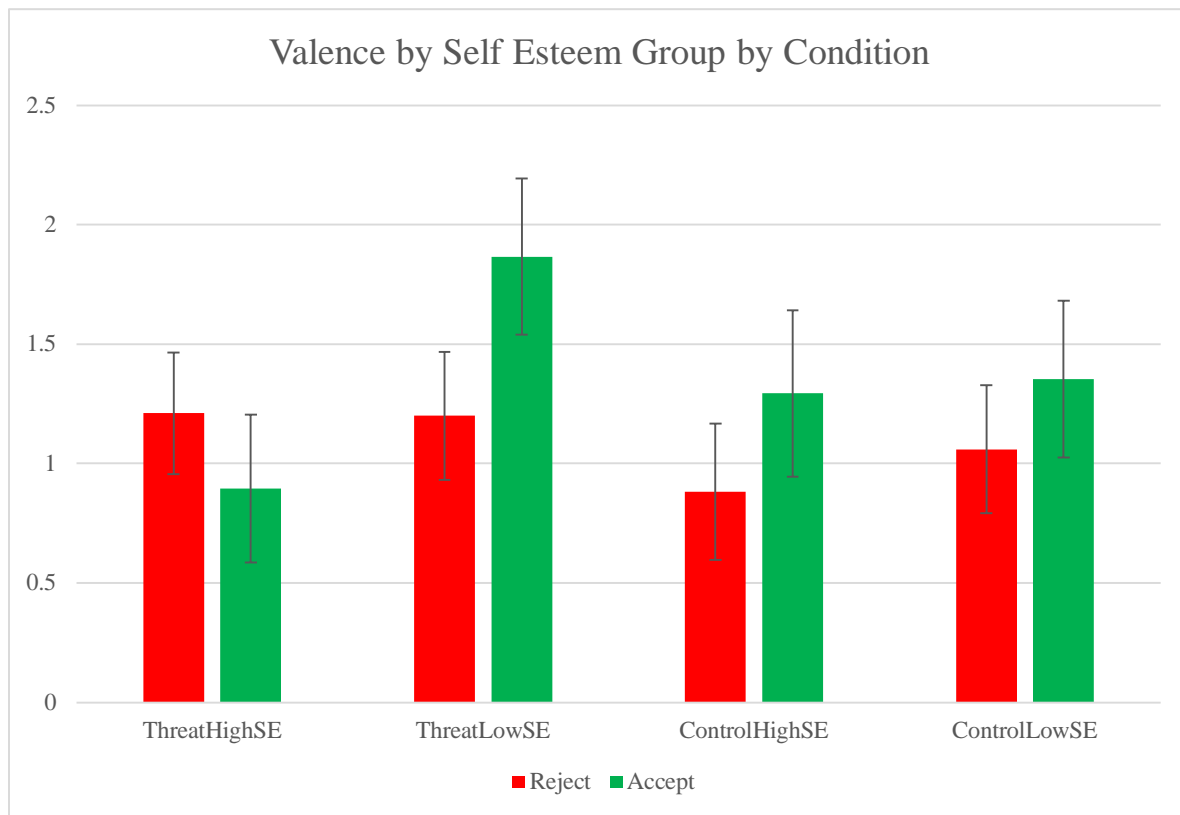
Figure 4. Valence of words recalled in the Rejection Stroop Task by Self-esteem group, and

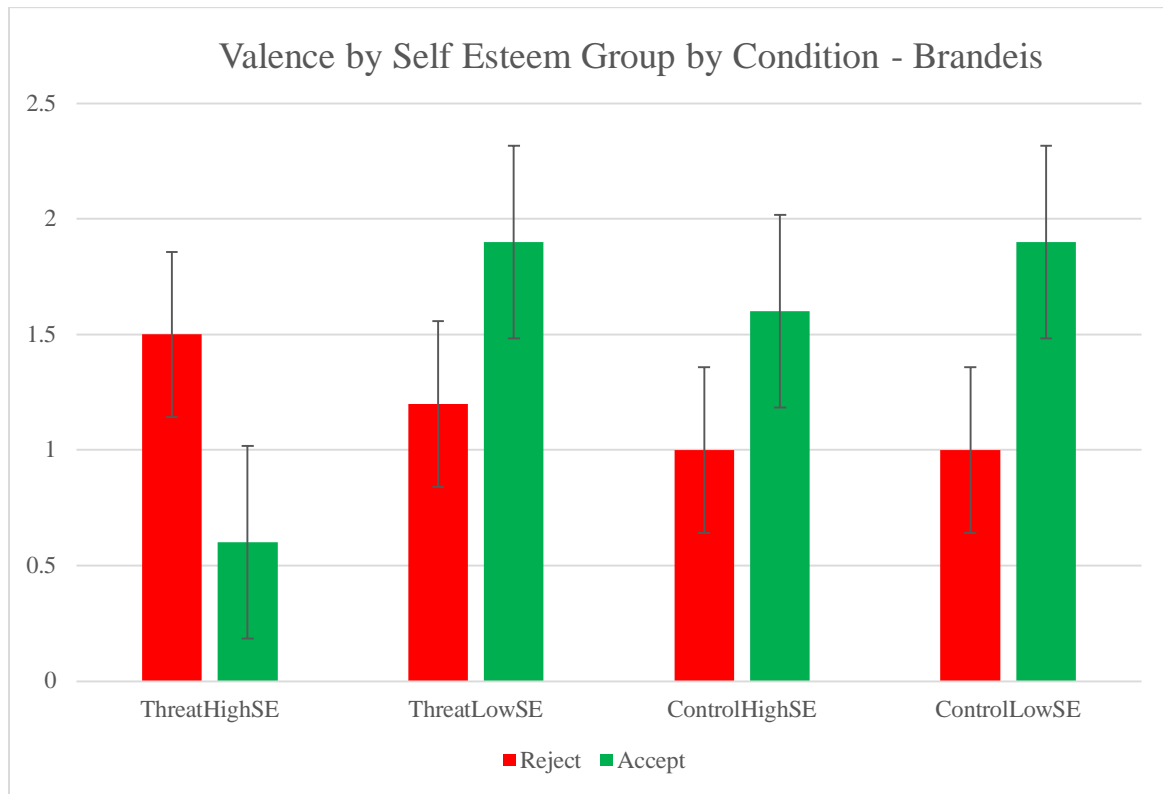Condition in the Brandeis University sample.

Figure 5. Valence of words recalled in the Rejection Stroop Task by Self-esteem group, and

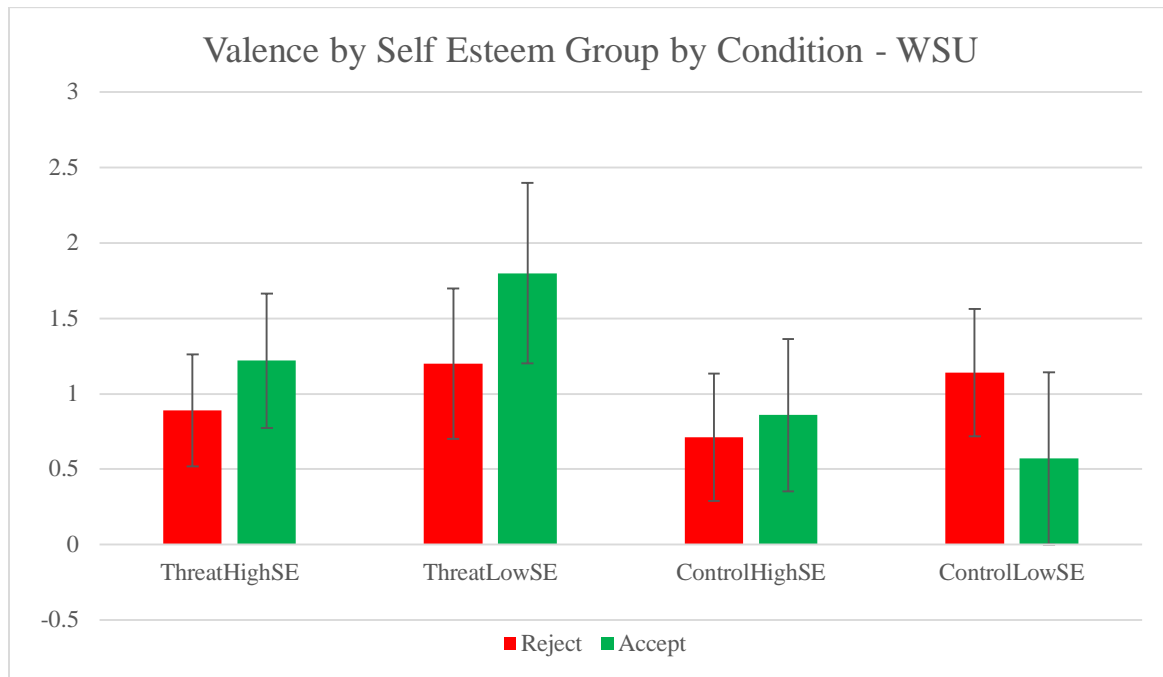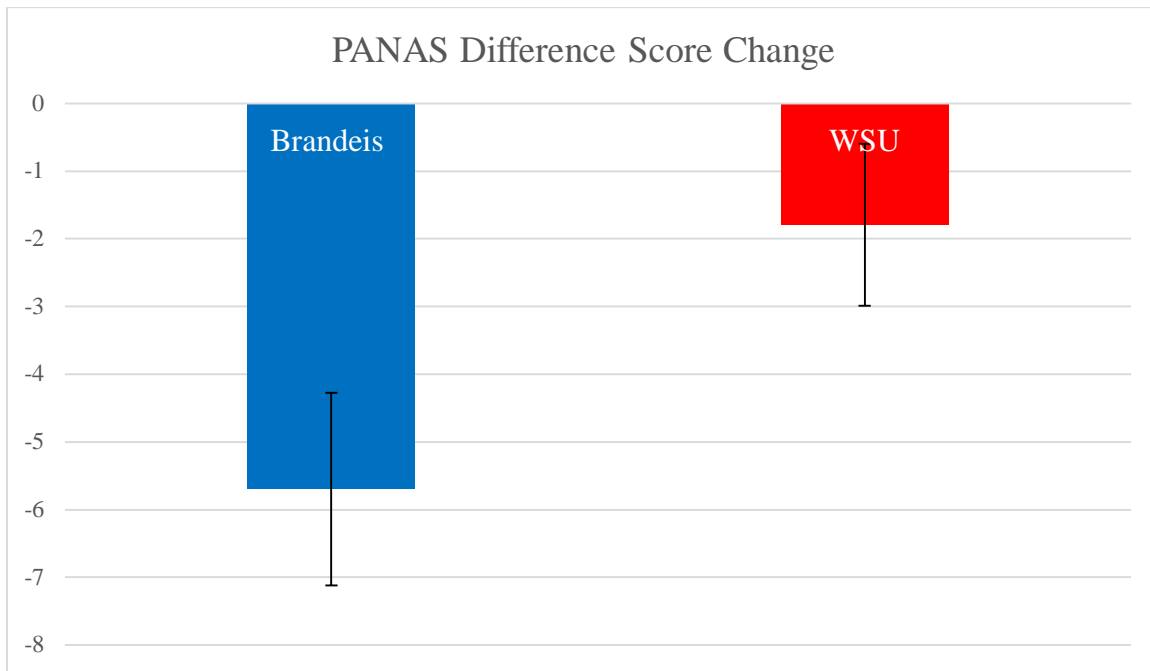Condition in the Worcester State University sample.

Figure 6. Difference in the PANAS score from administration one to administration two by

Sample (Brandeis N=40, WSU N=28).

Appendix A

POSITIVE AFFECT NEGATIVE AFFECT SCALE

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way right now, that is, at the present moment.

1=Very Slightly or Not at All, 2=A Little, 3= Moderately, 4= Quite a Bit, 5=Extremely.

_____ 1. Interested   _____ 11. Irritable

_____ 2. Distressed   _____ 12. Alert

_____ 3. Excited   _____ 13. Ashamed

_____ 4. Upset   _____ 14. Inspired

_____ 5. Strong   _____ 15. Nervous

_____ 6. Guilty   _____ 16. Determined

_____ 7. Scared   _____ 17. Attentive

_____ 8. Hostile   _____ 18. Jittery

_____ 9. Enthusiastic   _____ 19. Active

_____ 10. Proud   _____ 20. Afraid

Appendix B

ROSENBERG SELF-ESTEEM SCALE

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1. On the whole, I am satisfied with myself.
Strongly Agree   Agree   Disagree   Strongly Disagree

2. At times I think I am no good at all.
Strongly Agree   Agree   Disagree   Strongly Disagree

3. I feel that I have a number of good qualities.
Strongly Agree   Agree   Disagree   Strongly Disagree

4. I am able to do things as well as most other people.
Strongly Agree   Agree   Disagree   Strongly Disagree

5. I feel I do not have much to be proud of.
Strongly Agree   Agree   Disagree   Strongly Disagree

6. I certainly feel useless at times.
Strongly Agree   Agree   Disagree   Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane with others.
Strongly Agree   Agree   Disagree   Strongly Disagree

8. I wish I could have more respect for myself.
Strongly Agree   Agree   Disagree   Strongly Disagree

9. All in all, I am inclined to feel that I am a failure.
Strongly Agree   Agree   Disagree   Strongly Disagree

10. I take a positive attitude toward myself.
Strongly Agree   Agree   Disagree   Strongly Disagree

REMOTE ASSOCIATES TEST

Instructions: Look at the three words and find a fourth word that is related to all three.

Example: What word is related to these three words?

paint doll cat

The answer is "**house**": house paint, dollhouse, and house cat.

You will have 4 minutes to complete this task.

1. Cotton Bathtub Tonic_____

2. Foot Collection Out_____

3. Inch Deal Peg_____

4. Jump Kill Bliss_____

5. Magic Plush Floor_____

6. Note Dive Chair_____

7. Stalk Trainer King_____

8. Bump Throat Sum_____

9. Shopping Washer Picture_____

10.   Blank White Lines_____

11.   Stick Light Birthday_____

12.   Sore Shoulder Sweat_____

Appendix D

STATE SELF-ESTEEM SCALE

This is a questionnaire designed to measure what you are thinking at this moment. There is of course, no right answer for any statement. The best answer is what you feel is true of yourself at the moment. Be sure to answer all of the items, even if you are not certain of the best answer.

Again, answer these questions as they are true for you RIGHT NOW.

1. I feel confident about my abilities.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

2. I am worried about whether I am regarded as a success or failure.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

3. I feel satisfied with the way my body looks right now.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

4. I feel frustrated or rattled about my performance.

1	2	3	4	5

5. I feel that I am having trouble understanding things that I read.

1   2   3   4   5

Not At All A Little Bit Somewhat Very Much Extremely

6. I feel that others respect and admire me.

1   2   3   4   5

Not At All A Little Bit Somewhat Very Much Extremely

7. I am dissatisfied with my weight.

1   2   3   4   5

Not At All A Little Bit Somewhat Very Much Extremely

8. I feel self-conscious.

1   2   3   4   5

Not At All A Little Bit Somewhat Very Much Extremely

9. I feel as smart as others.

1   2   3   4   5

Not At All A Little Bit Somewhat Very Much Extremely

10. I feel displeased with myself.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

11. I feel good about myself.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

12. I am pleased with my appearance right now.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

13. I am worried about what other people think of me.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

14. I feel confident that I understand things.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

15. I feel inferior to others at this moment.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

16. I feel unattractive.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

17. I feel concerned about the impression I am making.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

18. I feel that I have less scholastic ability right now than others.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

19. I feel like I'm not doing well.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

20. I am worried about looking foolish.

1	2	3	4	5
Not At All	A Little Bit	Somewhat	Very Much	Extremely

Appendix E

WORDS BY VALENCE

<u>REJECTING</u>	<u>ACCEPTING</u>	<u>NEUTRAL</u>
UNWANTED	WANTED	KITCHEN
REJECTED	LIKED	TABLE
DISLIKED	CHERISHED	PAIN
SHUNNED	CARING	TRAGEDY
REBUFFED	SUPPORTED	DEATH
NEGLECTED	INCLUDED	POISON
EXCLUDED	LOVED	RAINBOW
AVOIDED	AFFECTION	PARADISE
ISOLATED	WARMTH	HAPPY
CONDEMNED	EMBRACED	PLEASURE
DISAPPROVED	WELCOMED	SPOON
IGNORED	ACCEPTED	CHAIR