The Relationship Between Habitual Behavior and Anxiety

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Abstract

Through a quasi-experimental research design 39 participants (29-female, 10-male) were convenience sampled from a small, private, liberal arts college located in the mid-Western United States. The researcher hypothesized that those students who were more habitual as measured by the Obsessive Compulsive Inventory would report higher levels of anxiety on the Beck Anxiety Inventory after being asked to give up a hard/easy habit for the course of one week. Anxiety was measured at the beginning of the week using the Self-Questionnaire Inventory to ensure that results as found on the BAI would be accurate due to the task of breaking habit. Results supported the researcher’s hypothesis.
The Relationship Between Habitual Behavior and Anxiety

According to Jonni Kincher (1990), “there are two forces on this earth, gravity and habit” (p. 3). Habit as some may not perceive, truly defines the lifestyle of every creature on the earth. Humans in particular, survive off of habitual behavior to create order in their lives (Reis, 2000). Habit allows one to act off of a combination of learned behaviors, which are elicited in response to a small set of specific stimuli, in a variety of situations (Guthrie, 1942). Habits start and end our day, and provide a platform of daily routines from which one can operate. Habit is an extremely important part of life. Without habit one would be unable to survive (Reis, 2000). Habit exists across time and society. It has been a part of the human and animal experience since the beginning of life (Gallimore & Lopez, 2002).

However, the word habit draws to mind such negative behaviors as smoking, drinking, and nail-biting. It does not seem to be associated in modern society as a source of survival as suggested above. Therefore, a definition is needed in an attempt to allow one to understand the true meaning of habit. According to Guthrie, habit is defined as a, “prototype of similar movements, which are elicited by a specific group of stimuli in many different situations” (Guthrie, 1942, p. 38). Using this definition habit is no longer just smoking, drinking, and nail biting; it is the use of the clock to run time, and therefore our schedules. It is the way in which one approaches another person, and how it is that that same person communicates information. Using this definition it is easy to see the role of habit in each person’s life.

Understanding the definition of habit is only the beginning of understanding how it is that habits operate. In a classic research study done by Guthrie cats were placed into a puzzle box, with a door, which was opened by moving a suspended beam located in the middle of the box. The movement of the beam released the latch holding the door shut. In the first test run Guthrie
observed that upon release into the box the cats eventually, hit the beam on accident with its tail, causing the door to open. When the cats were placed into the box a second time, the cat repeated the same behavior order as the first with its tail again striking the beam last. The cat was placed into the box 34 times, and exhibited similar movement sequences in all thirty-four trials (Guthrie, 1946). This was the first example of observed habitual behavior.

Guthrie continued his trial runs with cats and found similar results in all of his research. Another researcher Horton (1939), replicated Guthrie’s Cat’s in a Puzzle Box experiment and found similar results. Clark Hull also directed habitual research similar to cats in a puzzle box. Hull tested his theories by performing multiple tests using blind dogs as subjects. In his experiment the dogs were placed in a box with a latch door. The door was always positioned in the northeastern corner. After training the dogs to the position of the door, the box was rotated ninety degrees, and again another ninety degrees. The dogs repeatedly approached the door from the northeastern position, then to the next position, and finally to the last. The dogs were tested 47 times and in each test, exhibited this same sequence. (Hull, 1934). All attempts to test Guthrie’s Cats in a Puzzle Box (Guthrie, 1942) only provide more evidence that habit plays a large role in one’s life. Other researchers used Guthrie’s experiment as a platform to test other aspects of habit, including how habits operate.

According to theorist Clark Hull (1934) there are two basic types of habitual behavior. The first is that of divergent mechanism. Divergent mechanism is defined as one stimulus eliciting many similar responses. An example of this would be a baby’s movements in response to a bottle. The baby may grasp for the bottle instantly, or the baby may stick its feet in the air in the direction of the bottle. The baby may also lift its entire body in the direction of the bottle. All the responses elicited by the baby are similar in that each is a movement in the direction of a
single stimulus. The second grouping is referred to as the convergent mechanism in which a single response is elicited from multiple stimuli. Using the example of the baby as above, several similar stimuli, such as a bottle, pacifier, or finger, will all elicit a single response, to suck on the object presented. The two groups together make up what he called the habit family. The key point in Hull’s research was that while each response may be elicited from either a single stimulus or multiple stimuli only one reaction can emerge forcing a type of competition in which the environment evokes the single response that is seen (Hull, 1934).

Hull gives the example that when encountering a trail in which there is a pool of water in the middle, one makes the choice to walk to either the right, or the left of the pool, as one is unable to go on both sides of the pool (Hull, 1934, p. 39. In normal circumstances, one will eventually choose the path that is shorter after having experienced both sides of the pool (Hull, 1939, p. 40). “The fact that both of the action sequences begin with the same stimulus and terminate in the same reaction constitutes them a habit family; the fact that one sequence is preferred about the other constitutes them a hierarchy,” (Hull, 1934). This concept of habit families and hierarchy allows one to better understand how habits form in each individual.

Hull continued his research on the habit family and hierarchy, adding in his later research the element of frequency. The dogs in Hull’s experiment continuously took the longer path around the box. According to Hull, however, using aversive stimuli, and re-teaching the pathway to the door, the dogs would develop a new set of habitual behaviors based on the frequency of their elicited behaviors. The more frequently the dogs choose the shorter path the more likely the dogs to act in the same manor again. For example, if one were to perform the experiment again, starting from trial two to trail 47, and introduce food at the actual site of the door, the habitual behavior would thus be avoided due to the existence of the external stimulus. The dominant
response would transverse in the habit family, causing one to choose the shorter path (Hull, 1934). The implications of Hull’s research suggest that if aversive external stimuli are introduced to one’s habit, depending on how frequent the habit was exhibited, and how frequent the aversive stimuli are presented, one’s habitual behavior will change. The frequency of the habit that is exhibited constitutes the strength of the habit. The stronger the habit, the harder and more frequent the aversive stimuli must be presented in an attempt to lessen the learned responses (Hull, 1947). The role of habit strength is supported even further when looking at those things that influences habit.

Gallimore and Lopez (2002) theorized that habit and daily routines develop out of societal desirability, and what is realistic given the surrounding situation. They believed that habits evolve and change with such developments as technology, and changes in external stimuli. In their discussions these researchers found that what people believe their habits ought to be, and what fits their cultural values, also affects what habits a person may or may not develop. “Daily routines are themselves a form of habitual behavior. It supports daily life in crucial ways; at the same time is constrains daily life and makes change difficult,” (Gallimore & Lopez, 2002, p. 3). Habit often times operates much like a double-edge sword in that because one may want to rid themselves of specific habits, as they are undesirable, they are unable to do so, due to the frequency and strength of the habit family that has formed. Logically, one may question how it is that habits are broken if the habit is frequently elicited, creating a strong habitual link.

According to Guthrie (1960), habits are broken when, “the tendency to form, in answer to a repeated disturbance, a stereotyped response which is adequate to the repeated disturbance and which expends less energy then earlier performances.” (Guthrie, 1960, p. 105). Most often, habits are broken as a result of incongruence within an individual. Out of the incongruence, a habit is
forcibly changed in an attempt to reestablish a state of equilibrium. As in Galimore and Lopez’s research (2002), if a habit is socially undesirable, and one wants to get rid of the habit, but is unable, as Hull (1947) stated, due to the strength and frequency of elicited responses, frustration is going to result (Guthrie, 1960). Guthrie proposes that, “the essential cause of every nervous breakdown in human beings is a failure to establish a routine habit response to a recurring situation,” (Guthrie, 1960, p. 106). The cognitive connection between broken habit and emotional response, or anxiety, is further discussed by Hull.

Hull theorized that while habit operates off of stimulus response mechanisms there is a cognitive mechanism that plays a role as well. As a habit’s frequency increases, and becomes strong, the mere idea of no longer being able to exhibit the habit is enough to create incongruence (Hull, 1930). In combination with Guthrie’s findings that breaking a habit increases incongruence and anxiety, Hull (1930) suggests that there are anticipatory mechanisms within the brain that cause anxiety just by considering the inability to function in a habitual manor.

Logically then, the researcher hypothesized that those participants found to be more habitual by nature, meaning that they exhibit strong, frequent habitual behavior regularly, as measured on the Obsessive Compulsive Inventory (Foa, Kozak, Salkovskis, Coles, & Amir, 1998), would be more likely to score higher on the Beck Anxiety Inventory Scale after being asked to give up a habit for the course of five days. Those students found to be less habitual, meaning that they would have less frequent and strong habitual behavior, as measured on the Obsessive Compulsive Inventory, will be more likely to score lower on the Beck Anxiety Inventory Scale after being asked to give up a habit for the course of five days. Further, the researcher hypothesized that due to anticipatory mechanisms as found by Hull, the group of
students asked to give up the “hard” habit as self rated on a likert scale would report higher anxiety levels on the Beck Anxiety Inventory Scale then those students asked to give up the “easy” habit. Those students asked to give up the “easy” habit as self-rated on a likert scale will report lower anxiety levels on the Beck Anxiety Inventory Scale then those students asked to give up the “hard” habit.

Method

Participants

Thirty-nine participants (29 females and 10 males), mostly Caucasian (38 Caucasian, 1 Other), of freshman to special student status (12 Freshman, 14 Sophomore, 9 Junior, 3 Senior, 1 Special), were sampled through convenience at a small liberal arts college, located in the Mid-Western United States. The participants were randomly assigned according to packet number into one of two groups; the “easy” group (21), or the “hard” group (18). There were 13 females and 5 males in the “hard” group. The easy group consisted of 16 females and 5 males. The variables under study were participants’ natural habitual behavior level and anxiety level at the end of five days after having to give up either an “easy” or a “hard” habit. Due to a non-representative sample, results are not generalizable to the general public.

Instruments

The variables of focus were measured using multiple instruments. The first variable, habitual level, was measured using the Obsessive Compulsive Inventory (Foa, Kozak, Salkovskis, Coles, & Amir, 1998), a pen and pencil survey, which takes approximately 10 minutes. The survey requires the participant to rate 15 items according to frequency and distress as related to daily habits, on a likert scale ranging from 0-4. The OCI is scored by adding up each response to create totals for each of the two columns. Totals can range from a score of 0-60. A
score of 40 or above in the distress column indicates a likely diagnosis of OCD. The totals are then divided by the number of items on the survey, to create a subscore between 0 and 4. A higher score indicates greater obsessive–compulsiveness. The OCI has an internal reliability of .86 to .95, and evidence of validity through correlations with other measures for OCD.

The second variable of Anxiety was measured using the Beck Anxiety Inventory Scale. The Beck Anxiety Inventory Scale is a pen/pencil test, which requires participants to rate how they have felt over the past week on a likert scale ranging from 0, not at all, to 3, severely I could hardly stand it. The survey takes approximately 5 min. The BAI is scored by adding up all the items to create a single total. Validity and reliability are unavailable for the Beck Anxiety Scale.

In an attempt to determine that the effect of stress was not attributed to normally high-anxiety individuals the participants were also given a Self-Evaluation Questionnaire (Mind Garden, 1977) which instructed participants to evaluate first how they felt at the moment they were taking the test (items 1-20), and then on their overall feelings (items 21-40). The Self-Evaluation Questionnaire is a pen/pencil survey consisting of 40 items, with one item, number 21 being emitted. The survey takes approximately 10 minutes to complete. The participants are asked to rate their feelings on a likert scale, using forced choice, consisting of scores ranging from 1, almost never, to 4, almost always. The Self-Evaluation Questionnaire is scored by adding up items 1-20, being sure to invert scores for items 1, 2, 5, 8, 10, 11, 15, 16, 19, and 20 to create a single score; and then adding up items 21-40, inverting scores for items 21, 22, 25, 26, 29, 32, 33, 35, and 38 to create another score. The first score stands for S-anxiety, and the latter for T-anxiety. Each participant receives two scores. The STAI has a test-retest reliability of .73 to .86, as well as an Alpha reliability of .92, and a strong internal reliability. The STAI also has a
construct validity of .65, a concurrent validity ranging from .59-.75, and correlation with other similar tests provide evidence of convergent and divergent validity.

In an attempt to measure how the participant felt while breaking the habit a pamphlet was created. An informational head letter informed the participants on the order of events that was to follow throughout the course of the following week. Each participant was asked to rate how easy or hard the list of nine habits would be to break given a likert scale from 1, very easy to 5, difficult to break. The next page then identified the participant into either the easy or hard group. The participant was then asked to rate their feelings regarding the change in routine on a likert scale 1, not at all, to 8 beyond severe on six items that were repeated for each of the five days.

A demographic survey, which asked participant’s age, grade level, and ethnicity, was also given using forced choice. The survey took approximately 1 minute.

Procedure

The researcher initiated participation in the study through an informed consent that was emailed to each of the potential participants. Each participant was informed concerning the nature of the study, along with the procedural information regarding the right of the participant to withdraw at any time, and also an ensured anonymity. Prior to the specified date of the research the participants were randomly assigned into either the easy or hard group. The Informed Consent, the Demographic Survey, the Obsessive Compulsive Inventory (Foa, Kozak, Salkovskis, Coles, & Amir, 1998), the Self-Questionnaire (Mind Garden, 1977), and the pamphlet were grouped together in packet form by number and placed under each desk. As participants arrived they were given an informed consent form (Appendix A). The participants were asked to read through it, and sign it if they agreed to participate. Each participant was informed that they would be allowed to withdraw at any time, and that all information would
remain anonymous. Those participants who signed the informed consent, 47, were allowed to proceed. The participants were then instructed to complete the demographic survey (Appendix B), the OCI survey (Appendix C), and the Self-Questionnaire Survey (Appendix E). After completion of the surveys the participants were informed that their participation was not yet ended. They were then instructed to read through the packet and rate 9 habits on a likert scale as either easy or hard to break. The next page asked participants to choose that habit that would be easiest to break, and the habit that would be hardest to break. After all participants finished filling out the pamphlet they were then instructed to turn the page and read the short dissertation that informed them of what habit, either the easy or the hard, they would need to give up for the course of the next five days. The participants were then instructed to rate six items on a likert scale daily, in regard to how they felt about breaking the habit. A time was then set up for the participants to meet again with the researcher to turn in the packets, and take the Beck Anxiety Inventory (Appendix D). During the course of the week the researcher sent reminder notices via their school mailboxes, of the designated time to come back and complete the study. At the specified time the researcher returned to administer the last survey. Only 20 of the 47 participants showed up. The researcher then traced back to find those participants who had not completed the study, and both emailed, and mailed a copy of the survey to them with instructions. Instructions stated to complete the survey, putting the number that was on the top right hand corner of their packets on the survey, and turn in both the survey and packet to the researcher’s mailbox. After a few days had passed the researcher then again traced back to find those participants who still had not completed the study and sent out a last reminder, along with another copy of the survey. Finally, after all data was collected, the 39 participants who completed all requirements of the study were mailed a debriefing statement (Appendix F).
describing the hypothesis, objective, and purpose of the study. The participants were then thanked for their participation and each received an extra credit point in a designated psychology class.

Results

The researcher’s hypothesis that a relationship between the variables of habit and anxiety exists was supported. Those participants in the hard habit group scored higher (negative number) on the BAI and the Packet then those participants in the easy habit group. Those students who were in the easy habit group scored lower on the BAI and the Packet (positive numbers) then the participants in the hard habit group. The hypotheses that involved participants being more habitual then one another however, was not supported as there was no significant differences between means in the two habit groups.

Descriptive statistics were first run to look at the similarities and differences within and between the two groups of participants on the six different scales of measurement. On the Obsessive Compulsive Inventory Frequency Score the mean (M=26.10), and standard deviation (sd 11.8) showed no outliers. On the Obsessive Compulsive Inventory Distress mean (M=16.1) and standard deviation (sd 12.05) again showed no outliers. On the Self Evaluation Questionnaire the mean and standard deviation scores for both the S-anxiety (M=42.25, sd=10.07) and T-anxiety (M=43.5, sd 9.05) again showed no outliers. The Beck Anxiety Inventory showed no significant outliers (M=13.3, sd 12.12) as well as the packets (M=10.51, sd 23).

Mean scores and standard deviations for the hard group on the OCIF (M=26.94, sd 8.86), OCID (M=15.11, sd 11.21), Self-Evaluation Questionnaire S-anxiety (M=42.38, sd 10.34), Self-Evaluation Questionnaire T-anxiety (M=43.11, sd 9.05), Beck Anxiety Inventory (M=17.05, sd 12.5), and the Packet (M=-3.9, sd 18.61) showed minimal differences as compared to
the easy group. The easy group had mean scores and standard deviations on the OCIF (M= 25.38, sd 14.05), the OCID (M=16.9, sd 12.94), the Self-Evaluation Questionnaire S-anxiety (M= 42.14, sd 10.09), the Self-Evaluation Questionnaire T-anxiety (M= 43.9, sd 9.2), the Beck Anxiety Inventory (M=10.14, sd 11.10), and the Packet (M= 22.9, sd 19.02). The differences of some interest are found in the mean scores of the hard and easy group on the Beck Anxiety Inventory and the Packet.

A t-test was run in an attempt to find any significance in the differences of means and standard deviations as found on the BAI and the Packet. The BAI showed mean and standard deviation scores, as split between the hard ( M= 17.05, sd 12.5), and easy (M= 10.14, sd 11.1) groups, showed no significance. The packet showed similar results on mean and standard deviation differences between the hard (M= -3.9, sd 18.61), and easy (M= 22.9, sd 19.02) groups. The t-test revealed no significance in the difference of scores.

An addition two tailed t-test for equality of means was also run. The Beck Anxiety Inventory showed no significance (t- 1.82, df- 37, md- 6.91) as did the Packet (t—4.4, df-37, md-26.8).

Levene’s Test for Equality of Variances showed no significance for the BAI (F= .422, s .520) or the Packet (F= .012, s .915).

Using the Pearson r Correlation, several correlations were run in an attempt to find out if there was indeed a relationship between the two variables. Split, based upon the hard and easy group, all six measurements were correlated with each other. For the hard group there was significance (.002) found in correlations between the OCID and the OCIF using a p>.01 level. Significance was also found in correlation between the Self-Evaluation Questionnaire T-anxiety and the OCID (.009) at the p>.01 level. Interestingly, significance was also found in correlation
between the Packet and the OCID (.02) at the p > .05 level. Significance here suggests the reliability between all testing measurements for those participants found in the hard group. For the easy group significance was found only in correlations between the OCIF and the OCID (.000) at the p > .01 level.

Using the Pearson r Correlation method further correlations were estimated between the six measurements and the Self-Questionnaire S-anxiety, and Self-Questionnaire T-anxiety. In the hard group significance was found between the OCID and the Self-Questionnaire T-anxiety at the p > .01 level. Significance was also found between the Self-Questionnaire S-anxiety and the Self-Questionnaire T-anxiety at the p > .01 level suggesting that scores correlated with themselves. In the easy group significance was reported between the SELFS and SELFT (.00) at the p > .01 level, as well as between the Beck and the SELFT (.04) at the p > .05 level.

Correlations using the Pearson r were found between the six measurements and the Beck Anxiety Inventory and the Packet. In the hard group, significance was reported between the OCIF and the Packet (.008) at the p > .01 level, as well as between the OCID and the Packet (.02) at the p > .05 level. This suggests the validity of the self-made packet against the other tools of measurement. In the easy group however, significance was only found between the BAI and the Packet (.029) at the p > .05 level. Correlations not split between groups comparing the six measurement tools with the six measurement tools showed significance between the Packet and the BAI (.001) at the p > .01 level.

Discussion

Results do support the researcher’s hypotheses; however one must discuss the results further to assess the generalizability of the research. In looking at the groups it is accurate to note that the two groups were very similar in habit level as measured on the OCI, and also similar in
general anxiety levels as measured on the Self-Evaluation Questionnaire. However, the statistics show that significant results were more predominant in the hard group then in the easy. This possibly occurred due to the mere fact that a frustrated individual is more likely to report results then an individual not experiencing frustration, that is the hard group cared more about the task at hand then those in the easy group. Had the easy group experienced a higher level of stress the likelihood of their responses to be stronger would most certainly be higher causing more reported significance in the easy group.

The measurement tools also played a significant role in the results found. The Obsessive Compulsive Inventory was used to measure habitual levels. It’s true intent however, is to recognize those individuals with a disorder, therefore the accuracy of it’s measurement is questionable. The Beck Anxiety Inventory was used to measure anxiety, however the questions on the survey are extremely severe given the circumstances. Those participants experiencing great stress could possibly have scored as having a positive score, or low stress level, due to the type of questions on the survey. An interesting note however, is that of the Packet. The Packet, when correlated splitting the results by the hard and easy habit groups, ended up correlating well with several of the other measurement tools creating a reliable and valid assessment. Given the shortcomings presented by the other tools this proved an additional validity to the experiment. The Packet when measured without the split of the groups, however, only correlated significantly with the Beck Anxiety Inventory, which as discussed above is not necessarily the best assessment tool given the sample.

The sample, also adds to the lack of generalizable results. The small number of participants, combined with a homogeneous state of the group as a whole, clearly shows the inability of the sample to provide generalizable results. Attrition occurred as well making the
sample smaller yet. Also, the research operated off of the assumption that each participant thoroughly followed directions, attempting to quit a habit, and answering questions daily. The likelihood of this, given the sample, is not high. Also, due to the design of the study, time played a large role in the results of the study, leaving the researcher with the possibility of uncontrollable extraneous variables.

Regardless of the shortcomings, results did show a strong connection between habit and anxiety supporting previous research findings, and the researcher’s hypotheses. In future research one would be interested to look at the extent of the anxiety that is caused due to the inability to exercise one’s habitual nature. Guthrie suggested that the source of all nervous breakdowns is most likely due to having to break a habit (Guthrie, 1960, p. 106). Testing his suggestion would prove very valuable given the number of nervous breakdown’s that are reported. If a connection between nervous breakdown’s and broken habits could be made the next question would then be how does one give up a habit without having a nervous breakdown? Is there a connection between habit and personality type, which could aid in the prevention of nervous breakdowns?
References

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*The Psychological Review*, 41, 134-152.


Appendix A

Informed Consent

My name is Katrina Theiler and I’m a junior at Wisconsin Lutheran College. I am also enrolled in Experimental Psychology, and as part of the requirements I am to conduct a research study. In an attempt to further your knowledge about the nature of the study, this form has been designed to explain the purpose and procedures of the study that you are considering taking part in. This is to serve as a consent agreement for the protection of your rights as a human participant in psychological research.

The purpose of this study is to research broken habits and anxiety levels. In an attempt to measure these two variables, three surveys will be administered which will require you to answer questions about how you feel. You will be given thirty minutes to complete two of the surveys. Surveys will not ask for your name to protect your anonymity. All answers and research will be kept confidential and only group results will be reported. You may also be asked to participate further throughout the course of one week by giving up a habit. At the end of one week all participants will be asked to come back and take the third survey at which time they will be debriefed.

There are no risks involved in this research. There are however, some benefits. In partaking in the research you may learn more about yourself. If you have any questions you may contact me at 773-5435. Thank you so much for considering taking part in this research study. I greatly appreciate your time! Please sign below if you wish to become a participant in this study.

__________________________________   __________________
Signature        Date

__________________________________   __________________

Appendix B

Demographic Survey

Circle the correct answer (Please only one choice per question):

1. I am
   Male    Female

2. Ethnicity
   Caucasian  African American  Hispanic  Asian  Other _________

3. Class
   Freshman  Sophomore  Junior  Senior
Appendix C

OCI

The following statements refer to experiences that many people have in their everyday lives. Under the column labeled FREQUENCY, circle the number next to each statement that best describes how frequently you have had the experience in the past year. The numbers in this column refer to the following verbal labels:

0- Never
1- Almost never
2- Sometimes
3- Often
4- Almost always

Then in the column labeled DISTRESS, circle the number that best describes how much that experience has distressed or bothered you during the past week. The numbers in this column refer to the following verbal labels:

0- Not at all
1- A little
2- Moderately
3- A lot
4- Extremely

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>DISTRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 1 2 3 4</td>
<td>0 1 2 3 4</td>
</tr>
</tbody>
</table>

1). I have to review mentally past events, conversations, and actions to make sure that I didn’t do something wrong.

2). I have saved up so many things that they get in the way.

3). I check things more often then necessary.

4). I repeatedly check doors, windows, drawers, etc.

5). I repeatedly check gas and water taps and light switches after turning them off.

6). I collect things I don’t need.

7). I get upset if objects are not arranged properly.
8). I follow a particular order in dressing, undressing, and washing myself.

9). I am obsessively concerned with cleanliness.

10). I need things to be arranged in a particular way.

11). Before going to sleep I have to do certain things in a certain way.

12). I avoid throwing things away because I am afraid I might need them later.

13). I get upset if others change the way I have arranged things.

14). I have to do things over and over again until it feels right.

15). When changes occur I feel emotionally distraught. (Depressed, anxious, sad, etc)
Appendix E

Self Questionnaire

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. DO not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th>1. I feel calm</th>
<th>2. I feel secure</th>
<th>3. I am tense</th>
<th>4. I feel strained</th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<table>
<thead>
<tr>
<th>5. I feel at ease</th>
<th>6. I feel upset</th>
<th>7. I am presently worrying over possible misfortunes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>8. I feel satisfied</th>
<th>9. I feel frightened</th>
<th>10. I feel comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>11. I feel self-confident</th>
<th>12. I feel nervous</th>
<th>13. I am jittery</th>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Number</td>
<td>Statement</td>
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<td>--------</td>
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<tr>
<td>14</td>
<td>I feel indecisive</td>
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<td>15</td>
<td>I am relaxed</td>
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<td>16</td>
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<td>17</td>
<td>I am worried</td>
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<tr>
<td>18</td>
<td>I feel confused</td>
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<tr>
<td>19</td>
<td>I feel steady</td>
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</tr>
<tr>
<td>20</td>
<td>I feel pleasant</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>I feel nervous and restless</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>I feel satisfied with myself</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>I wish I could be as happy as others seem to be</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>I feel like I am a failure</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>I feel rested</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>I am “calm, and collected”</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>I feel that difficulties are piling up so that I cannot over come them</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>I worry too much over something that really doesn’t matter.</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>I am happy</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>I have disturbing thoughts</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>I lack self-confidence</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>I feel secure</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>I make decisions easily</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>I feel inadequate</td>
<td></td>
</tr>
</tbody>
</table>
35. I am content

36. Some unimportant thought runs through my mind and bothers me.

37. I take disappointments so keenly that I can’t put them out of my mind.

38. I am a steady person

39. I get in a state of tension or turmoil as I think over my recent concerns and interests.
Appendix F

Dear Participants,

I would first like to extend my deepest gratitude to each of you for your volunteering, and sticking through the week to complete my study. I sincerely appreciate your time and effort. The purpose of this study was not to see if you could actually break your habits, it was ideally to see how you felt about breaking the habit. For example, if the habit that you gave up was your morning routine, and you were upset that you were unable to change, that was what I was measuring.

In an attempt to measure these two variables of habit and anxiety I gave you three surveys. The first survey, labeled OCI, was given in an attempt to first, see how habitual you were to begin with. This was done in an attempt to find out a starting point. Some of us are more habitual then others! The second survey, entitled Self-Questionnaire, was given to see how you normally feel so that after a week I could compare if the emotions you reported at the end of the week, on the BAI survey, were due to habit-breaking, or simply a more stressed out personality. I divided all the participants into two groups, as you know, and hypothesized that those students who were asked to give up the easier habit would report less anxiety at the end of the week then those who broke the harder habit. The results have not yet been generated, but will be emailed to you during finals week. If you have any questions about this study please contact me at 414-773-5435, or email me at Katrina_theiler@wlc.edu!

For further information on this topic please see Guthrie’s famous experiment the Cat in the Puzzle Box! Again thank you for your participation!

Sincerely,   Katrina A. Theiler