Narcissism:
Exploring Narcissism,
Age, Fragility of Self-esteem,
and Verbal Aggression
in Irish University Students

Erica Barry

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Supervisor: Margaret Walsh
Head of Department: Dr. S. Eccles

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Department of Psychology
Dublin Business School
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# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>1</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>2</td>
</tr>
<tr>
<td>Abstract</td>
<td>3</td>
</tr>
<tr>
<td>Introduction</td>
<td>4 - 13</td>
</tr>
<tr>
<td>Method</td>
<td>14 - 20</td>
</tr>
<tr>
<td>Participants</td>
<td>14</td>
</tr>
<tr>
<td>Design</td>
<td>14 - 16</td>
</tr>
<tr>
<td>Material/Apparatus</td>
<td>17 - 20</td>
</tr>
<tr>
<td>Procedure</td>
<td>20</td>
</tr>
<tr>
<td>Results</td>
<td>21 - 26</td>
</tr>
<tr>
<td>Discussion</td>
<td>27 - 31</td>
</tr>
<tr>
<td>References</td>
<td>32 - 34</td>
</tr>
<tr>
<td>Appendices</td>
<td>35</td>
</tr>
</tbody>
</table>
Abstract

The study aimed to explore the relationship between Age, Narcissism, Verbal Aggression, and the Fragility of Self-Esteem in Irish university students. Studies suggest that narcissism is a growing social issue and is related to aggression. A mixed quasi-experimental design was used to create mild frustration in the experimental group based on a difficult timed task. Questionnaires were used as standardised measure of the variables and a exploratory qualitative measure was used. The analysis found that narcissism was a significant predictor of verbal Aggression. The self-esteem of the participants was significantly altered by the task but not in the manner assumed. The findings support the current research on this subject and the population sample could explain the more inconsistent results.
Introduction

Currently there are debates over the narcissistic state of Western society and in particular, the difference in narcissism between generations (Barry, Kerig, Stellwagen, & Barry, 2011; Campbell & Twenge, 2013; Dingfelder, 2011; Koliscak, 2012; Twenge, Campbell, & Freeman, 2012). Narcissism can be defined as mental activity that attempts ‘structural cohesiveness, temporal stability, positive affective colouring of the self-representation’ (Stolorow & Harrison, 1975). Structural cohesiveness refers to what is considered mental stability and temporal stability refers to the continuation of a positive self-image over time (Erikson, 1946 as cited by Stolorow & Harrison, 1975). Positive affective colouring of self-representation can be considered self-esteem. Narcissism is often characterised by a cognitive-affective preoccupation or excessive admiration with the self as well as volatile actions and aggression (Westen, 1990; Kohut, 1972). It has become an important area of study due to its links with increased aggressive behaviour, decreased altruistic behaviour, and the instability of self-esteem (Kohut, 1971; Stolorow & Harrison, 1975; Barry, Kerig, Stellwagen, & Barry, 2011; Campbell & Twenge, 2013; Twenge, Campbell, & Freeman, 2012).

Many studies in the United States suggest that narcissism in the younger generation or the ‘Millennials’ (born 1983 to 2003) is increasing due to increased social media and the current individualism of the Western sociocultural environment (Campbell & Twenge, 2013; Dingfelder, 2011; Koliscak, 2012; Twenge, Campbell, & Freeman, 2012). This suggests narcissistic traits will become more common as well as the maladaptive behaviours that come with it (Barry et al., 2011). This study aims to explore whether narcissistic growth in the Millennial generation is culturally isolated or worldwide in addition to adding to the growing body of research on the relationship between narcissism, self-esteem, and aggression.
Narcissism and Age

Current trends in psychology have focused solely on American University students ages 18-25. Research suggests that the worldwide web and internet trends are causing an increase in levels of narcissism in the Millennial generation (Twenge & Foster, 2010). Previous research had theorised that the Millennials would be more community minded and altruistic due to the growing global connections (Winograd and Hais, 2009 as cited by Twenge, Campbell, and Freeman, 2012). To the contrary Twenge, Campbell, and Freeman (2012) hypothesised the Millennial generation would be the most narcissistic generation yet, due to reinforcing factors like social media and changes in parenting styles from community based to more individualistic. The study illustrated generational differences in levels of narcissism and community cohesiveness from 1966 to 2009 using the Monitoring the Future (MtF) program which measured the intrinsic and extrinsic values of high school seniors and college freshmen nationwide in the United States (N = 8.7 million). Twenge, Campbell, and Freeman (2012) used questionnaires on life goals (Mtf), self-esteem (Rosenberg, 1965), narcissism (Narcissistic Personality Inventory 40) (Raskin & Terry, 1988), and aspiration (Aspiration Index) (Grouzet et al., 2005). Trends in extrinsic motivators, intrinsic motivators, and concern for others in relation to narcissism, self-esteem, and aspirations were found (Twenge, Campbell, & Freeman, 2012). There was shown to be an increase in extrinsic motivators such as fame and recognition and a decrease in intrinsic motivators such as self-assurance and concern for others. This suggests that members of this younger generation have become more self-oriented and less empathic as seen with many modern trends like the ‘selfie’ (a selfie is self-photo which is then shared with others on the internet) and a variety of celebrity influences. This is consistent with the hypothesis that narcissism is a growing concern for the Millennials and is attributed to the rise of social media and web culture. In addition, there was a decrease in community efforts such as job helping but an increase in
volunteering, although this was attributed to more mandatory requirements from schools as oppose to altruistic motivations.

There was also a decrease in civic engagements with a reduced feeling of trust and community (Twenge, Campbell, & Freeman, 2012). This study suggests that narcissism is a growing concern and that with high levels of narcissism there will be less civic responsibility and more selfish behaviour. The sample size and longitudinal nature of this study gives a valid measure of trends over this period. However there are serious limitations to the study that can be address with further research. Donnellan (2011 as cited by Dingfelder, 2011) suggests that using a convenience sample of college and high school students may confound the results and doesn’t account for the changes in the college student sample such as a growing international population or changing socio-economic status. Therefore how can the results be representative of the whole generation? In addition, all the samples consisted of American students and therefore should not be generalised to a worldwide generation. There appears to be a gap in the literature of this subject. If the internet and Western culture is a contributor then the trend should continue overseas to the rest of the ‘Western world’. Some researchers have also suggested that there is no change in the level of narcissism between generations and that the results that indicate change are a result of an age bias by the older generation onto the younger generation (Barry et al., 2011). Examining this subject from the perspective of a ‘Millennial’ should account for this bias. This study aims to explore the relationship between age (generational), narcissism, the instability of self-esteem, and verbal aggression in students of an Irish university (both international and native). By examining the students’ age and level of narcissism the current study will be able to show if the narcissism trend is present in Ireland and therefore indicate if this trend is a culturally isolated event or is widespread throughout Western society.
Narcissism and Fragility of Self-esteem

Current personality theorists (Kernis, 2005; Kohut, 1971; Zeigler-Hill, 2006; Virgil, Erin, & Brendon, n.d; Heatherton & Wyland, 2003) characterise narcissism as directly related to high unstable or fragile self-esteem. Unstable self-esteem means the subject has a self-concept that is unrealistic and easily destabilised. In a study by Zeigler-Hill, Myers, and Clark (2010) narcissism and self-esteem reactivity was examined in relation to negative achievement events. The Narcissistic Personality Inventory (NPI) (Raskin & Hall, 1979) was used to measure narcissism while a state measure of self-esteem was used daily to measure the reaction to negative academic events. The study found that participants with higher narcissism scores had lower self-esteem as a reaction to negative events than participants with lower narcissism scores (Zeigler-Hill, Myers, and Clark, 2010). This study formed the basis of methodology for the current study. This study will include NPI-16 (Ames, Rose, and Anderson, 2006) element to measure narcissism and the Current Thoughts Scale (Heatherton & Polivy, 1991) to measure the state self-esteem of participants in addition to other measures of aggression.

Similarly, Zeigler-Hill, Clark and Beckman (2011) examined the associations between self-esteem and interpersonal style and a potential moderator of fragility. In this study fragile self-esteem referred to feelings of self-deception, feelings that require consistent validation, and feelings that are vulnerable to challenges (Zeigler-Hill, 2006 as cited by Zeigler-Hill, Clark and Beckman, 2011). The research hypothesised that individuals with fragile high self-esteem would have different interpersonal goals in social situations and therefore have different interpersonal styles (Zeigler-Hill, Clark, and Beckman, 2011). The research examined fragile self-esteem by looking at a different factor in three different studies. The first study in the paper which investigated unstable self-esteem produced results which suggested that more fragile self-esteem is consistent with higher levels of anger and
hostility. In the second study which focused on implicit self-esteem, males with discrepant high self-esteem were more dominant/assured while those with congruent high self-esteem, who were more gregarious (Zeigler-Hill, Clark, and Beckman, 2011). The third study found the students’ implicit self-esteem and the students’ contingency to external factors were consistent with higher levels of aggression. In addition, there were significant gender differences, suggesting fragile men with high self-esteem were more aggressive than women of the same level of self-esteem fragility.

This study shows the connection between the fragility of self-esteem and aggression. It outlined many of the factors of hostility and explicit versus implicit self-esteem are consistent with narcissistic personality factors. These studies show that there is a connection between these personality factors that warrant further investigation. In this study fragility of self-esteem will be examined via a state self-esteem measure. The study was designed to test the participants’ self-esteem stability by causing frustration in a key self-concept-in this case intelligence. The student sample was chosen not only for comparison between culture and age. Since students typically are very concerned with intelligence (as one could assume from the attendance of university) causing frustration by means of an impossible academic task should reliably show the stability of the participants’ self-esteem.

In Kernis, Lakey, and Heppner’s study (2008) they examine four components of the self, level of esteem (high or low), stability (fragile or stable), contingency (internal or external), and implicit self-esteem (self-esteem based on internal thoughts) and compared these traits with verbal defensiveness. Verbal defensiveness was defined as outbursts of anger, aggression, and hostility under threat (Kernis, Lakey, and Heppner, 2008). It was predicted that among individuals with high self-esteem the participants with the highest fragility score would produce the most verbal defensiveness and that participants with low self-esteem would be less affected by the fragility score. Fragility of self-esteem was based
on Rosenburg’s (1986) ‘barometric’ or short term fluctuations of self-esteem in an immediate contextual basis of self-worth i.e. how participants feel “at this moment” (Kernis, 2005; Kernis, Granneman et al., 1989 as cited by Kernis, Lakey, and Heppner, 2008). The study took place in three stages, first measuring different levels of self-esteem, second measuring the stability of self-esteem, and lastly measuring the amount of verbal defensiveness. The study found verbal defensiveness was higher when the self-esteem of the participant was unstable. Further examination found that the more unstable participants also scored higher on the well validated Novaco Anger Inventory (Novaco, 1975 as cited by Kernis, Lakey, and Heppner, 2008). The contingency or matching internal feelings about the self with external criteria was found to be predictive of verbal defensiveness and the fragility of the participants’ self-esteem (Deci and Ryan, 1995, as cited by Kernis, Lakey, and Heppner, 2008). In addition, those participants with low self-esteem scored lower on the verbal defensiveness measure even when they showed high instability.

As well as justifying further research on self-esteem in relation to aggression, Kernis, Lakey, and Heppner (2008) showed the importance of a naturalistic setting for measuring fragile self-esteem. This influence is shown in the use of the Current Thought Scale (CTS) (Heatherton & Polivy, 1991) in the current study instead of the Rosenberg Self-Esteem Questionnaire (Rosenberg, 1965). In this study the CTS was used instead of Rosenburg’s measure as it was a more valid measure of state self-esteem or the self-esteem at that moment. In this study, two versions of the CTS were used at different stages of the experiment to measure the self-esteem of participants at that time. If there was a large discrepancy between a participant’s CTS scores then that participant could be considered to have fragile or unstable self-esteem. The difference between CTS scores was taken to be the measure of fragility of self-esteem based on this research. Particular attention was focused on verbal aggression as this form of expression was shown to be linked to fragility of self-
esteem. The link to anger was also examined through the Anger Expression Scale (Spielberger, 1985) to investigate if the discussed traits would affect how anger would be expressed. Verbal defensiveness and anger are closely related to aggression and studies have shown that narcissism and the fragility of self-esteem could affect the expression and the intensity of aggression.

*Narcissism and Aggression*

Stolorow and Harrison (1975) found that frustration and aggression is innately linked to self-concept and self-esteem. The paper reviewed the Frustration-Hypothesis, originally established by Dollard et al. (1939 as cited by Stolorow & Harrison, 1975), from the behaviourist definition of frustration as ‘a delay in reinforcement’ and applied it to self-concept and narcissism. It is suggested that due the uniquely human aspect of self-representation that frustration and aggression cannot be viewed in simply a behaviourist manner. From a psychoanalytic perspective aggression is not only due to external frustration but to injuries of self-representation (Kohut, 1972). Therefore it is suggested that hostile aggression is mainly due to ‘narcissistic injuries’ (Kohut, 1972). This suggests that because the narcissistic structure is grandiose and unrealistic it is more reactive to frustration (Stolorow & Harrison, 1975). It was theorised that hostile aggression, the action ‘motivated by a desire for a noxious outcome, pain or injury’ (Feshbach, 1964 as cited by Stolorow & Harrison, 1975) would be provoked by frustration and is mediated by a response of anger or rage (Berkowitz, 1962; Feshbach, 1964 as cited by Stolorow & Harrison, 1975). The paper found that in a narcissistic individual, the self-image or self-esteem is unrealistically high and this delusion leads to more incidents of frustration being interpreted as a threat to the self-esteem. In these cases, the narcissistic vulnerability causes the individual to act aggressively.
to attempt to restore the damaged self-concept (Stolorow & Harrison, 1975). Similarly, in a narcissistically vulnerable person who is focused on restoring self-esteem, it is unlikely to see empathetic or inhibitory behaviour towards the object of their aggression (Feshbach, 1964; Kohut, 1972; as cited by Stolorow & Harrison, 1975). Therefore, it is theorised that frustration will elicit aggression to the extent that it is perceived as a threat to self-representation and self-image (Stolorow & Harrison, 1975). The review outlined a method of evaluating operational components of self-representation. It was suggested that the Q-Sort (Stephenson, 1953 as cited by Stolorow & Harrison, 1975), a measure of self-representation was to be used as a rating system to evaluate internal versus external self-concepts. The current study uses the outline of self-concepts and frustration to create an experimental methodology. In the current study, students would be presented with an impossible academic activity and measures of self-esteem would be taken before and after the activity. Based on knowledge of a student, it is can be assumed that academic performance is a key part of their self-representation. By creating frustration via the impossible activity and testing the students’ self-esteem, aggression should be elicited. According to previous research (Kernis, Lakey, and Heppner, 2008) the aggressive response is likely to be verbal. Due to the frustrating nature of the task, hostile aggression should occur.

A review of aggression methodology by Bush and Anderson (1998) influenced the current study’s methodology as well. By defining aggression as a response that delivers a noxious stimuli to another organism and is intended by the aggressor to have this effect (Buss, 1961; Geen 1990; as cited by Bush & Anderson, 1998), aggression can be measured in a number of ways. A standardised measure, Buss and Perry’s (1992) Aggression Questionnaire, was used to measure total aggression and four subsections; physical aggression, verbal aggression, anger, and hostility. In addition, a study by Rohsenow and Bachorowski (1984 as cited by Bush & Anderson, 1998) used a difficult task and type of
feedback to elicit aggression. The study used a form that was said to evaluate the experimenters on a scale of 1 to 7 in order to measure naturally occurring verbal aggression. The verbal aggression was measured by the scores and this reflected how the participants intended to harm the experimenter by means of a bad review (Rohsenow & Bachorowski, 1984, as cited by Bush & Anderson, 1998). This method was the basis of the qualitative method in the current study. As well as the questionnaire, an evaluation form of both the experiment and the experimenter was used as an exploratory measure in an attempt to get an ecologically valid measure of verbal aggression. However, in order to be as naturalistic as possible the questions on the evaluation form were left open-ended. This allowed for a thematic qualitative analysis of the answers based on the above definition of aggression.

In conclusion, a number of aspects in relation to narcissism will be explored in this study. In the current study narcissism, aggression, self-esteem, and anger will be measured by standardised questionnaires. In addition the presence of a difficult timed activity sheet will attempt to mildly frustrate participants and instigate verbal aggression in the more narcissistic and fragile participants. An exploratory qualitative measure will be answered at the end of the experiment in order to measure naturally occurring verbal aggression. It is predicted based on previous research that; i) there will be a significant difference in narcissism scores due to age/generation, ii) there will be a significant difference in social self-esteem scores before and after the activity sheet was completed, iii) there will be a significant relationship between narcissism scores and verbal aggression scores, iv) there will be significant difference in verbal aggression between participants who received the easy activity sheet and participants who received the hard activity sheet, v) participants’ anger expression outwards scores will be significantly related to their total physical aggression and verbal aggression score, and vi) participants’ anger expression inwards will be significantly related to their total hostility scores.
Method
To examine the hypotheses in question a mixed experimental design was used. Standardised questionnaires were used to evaluate specific traits and an intervention was introduced to elicit particular responses. An open ended evaluation form was used as a qualitative method of capturing the participants’ verbal aggressive levels in an ecological manner.

Participant
Participants (Male = 18, Female = 54) were all students of Dublin Business School, both part time (N = 27) and full time (N = 45) in first year of psychology. All participants (N = 72) took part in the experiment voluntarily as part of the Social Psychology module. Participants either received a questionnaire packet with a difficult activity sheet (N = 40) or a questionnaire with an easy activity sheet (N = 32). The study was double-blind to randomise the questionnaire packet distribution. Ages (mean = 23.57, SD = 7.74) ranged from 18 to 40 with the majority being from the ‘Millennial’ generation (N = 58), under the age of 32, and participants from ‘GenerationX’ (N = 14), aged 32 and older.

Design
To examine the hypotheses in question a mixed quasi-experimental design was used. The design could not be considered truly experimental as it was not randomly sampled and it had a qualitative aspect in addition to experimental aspects. A between-groups method was used to examine frustration on aggression levels. One group would get a very difficult activity as part of the activity sheet and the other would get an easy activity. Those who received the difficult activity were considered to be the experimental group while those who received the easy questionnaire were considered to be the control group. The groups were randomly assigned with the double-blind method (neither participants nor experimenter knew which
participants would be assigned to which group). A within-groups method was used to measure the change in self-esteem. Participants answered a state self-esteem questionnaire before and after the activity was attempted. This difference in self-esteem scores was taken as a measure of the fragility of self-esteem. A qualitative method was used to attempt to measure naturally occurring verbal aggression. An open-ended evaluation form was used to measure participants’ ecological verbal aggression. In addition, anger expression questionnaire was used to further investigate the effects of narcissism on aggression and expression.

i) There will be a significant difference in Narcissism scores due to age/generation.

The age/generation of the participant (whether Millennial or GenerationX) is the independent variable and narcissism scores are the dependent variable. An independent samples t-test should show there is a significant difference in narcissism scores due to age/generation group.

ii) There is a significant difference in social self-esteem scores before and after the activity sheet was completed.

In these within-subject variables the social self-esteem 1 is the independent variable and the social self-esteem 2 is the dependent variable. A paired samples t-test should show there is a significant difference between the social self-esteem of participants from before and after the activity sheet.

iii) There will be a significant relationship between Narcissism scores and verbal aggression scores.

In this hypothesis narcissism scores is the criterion variable and verbal aggression is the predictor variable. A Pearson’s correlation should show that verbal aggression scores predict narcissism scores.
iv) There will be significant difference in verbal aggression between participants who received the easy activity sheet and participants who received the hard activity sheet.

In this hypothesis the activity sheet received is the independent variable and the verbal aggression score is the dependent variable. An independent samples t-test should show a significant difference in verbal aggression scores based on which activity sheet they received.

v) Participants’ anger expression outwards scores will be significantly related to physical aggression and verbal aggression score.

In this hypothesis the anger expression outwards is the criterion variable and the physical aggression score and verbal aggression are the predictor variables. A Pearson’s correlation should show that physical aggression scores and verbal aggression scores will predict anger expression outwards.

vi) Participants’ anger expression inwards will be significantly related to hostility scores.

In this hypothesis the anger expression inwards is the criterion variable and the hostility score is the predictor variable. A Pearson’s correlation should show that hostility scores will predict a participants anger expression inwards.

Materials/Apparatus:

Apparatus; pen, questionnaire packet, stopwatch

Observable Measures The questionnaire packet contained the following questionnaires, an activity worksheet, and an open ended evaluation form.

Demographic questionnaire: Recorded the participants’ age, gender, nationality, name of their university and university year.
Anger Expression Scale (Spielberger, 1985); Measure of anger containing two subscales: anger-in (8 items), or the tendency to suppress anger, and anger-out (8 items), a tendency to express anger openly. This 16-item questionnaire asked participants to use a 4 point Likert scale with 1 being ‘Almost Never’ and 4 being ‘Almost Always’ to report how often the statement was true in their lives, for example ‘I pout or sulk’. Subtotals of anger expression in and anger expression out were assessed. The higher the score on anger expression in the more likely the tendency to suppress anger and the higher the score on anger expression out the more likely the tendency to express anger. Internal consistency for each subscale, anger in and anger, is reasonably high (.73 - .84 respectively). Scores on the anger in subscale were found to more strongly associate with anxiety (.25 with Becks Anxiety scale) and depression (.29 with BDI) than the anger out subscale (Pittsburgh Mind-Body Centre, n.d.).

Narcissistic Personality Inventory-16 (NPI-16) (Ames et al., 2006); Adapted from the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988) the 16-item questionnaire require participants to choose between two statements which is the most consistent with their personality for example choosing between the statements ‘I really like to be the center of attention’ and ‘It makes me uncomfortable to be the center of attention’. One of the statements is consistent with Narcissistic Personality while the other is not. Scores are formulated based on how many Narcissistic statements are chosen, if the statement chosen is consistent with narcissistic traits it received a 1 while if the statement chosen is inconsistent with narcissistic traits it received a 2. Consequently the higher the score the less consistent with narcissistic traits and therefore lower levels of narcissism while lower scores would mean higher levels of narcissism (min = 16, max = 32). The NPI-16 has notable face, internal, discriminant, and predictive validity and therefore can be used an alternative measure of narcissism when longer measures are unrealistic (Ames, Rose, and Anderson, 2005).
**Aggression Questionnaire** (Bus & Perry, 1992); Measure of aggression expression containing four sub-factors; physical aggression, verbal aggression, anger, and hostility. This 29-item questionnaire uses a 5 point Likert scale with 1 being ‘extremely uncharacteristic of me’ and 5 being ‘extremely characteristic of me’ to report how consistent the statement is with the participant’s character. Totals for the four sub-factors physical aggression, verbal aggression, anger, and hostility were found as well as the total aggression score. Two items were reverse scored for analysis. The higher the score the more consistent that factor or total aggression is with the participants’ character. The internal reliability of this measure ranges from .72 to .89 and the construct validity of the measure is supported by associations with other self-report measures of personality traits (Pittsburgh Mind-Body Center, n.d.).

**Activity Sheet**; Participants were given five minutes to complete the five question activity sheet. One questionnaire was very difficult and was designed to be unanswerable within the time constraints to provoke mild frustration to test the fragility of the participant’s self-esteem (Appendix 8.). The other easy activity sheet was much simpler and was used as a control for self-esteem change (Appendix 9.).

**Current Thoughts Scale** (Heatherton & Polivy, 1991); A measure of state self-esteem. This 20-item questionnaire used a 5 point Likert scale to determine how the presented statement, for example ‘I feel confident about my abilities. ‘, was related to their current state with 1 being ‘not at all’ and 5 being ‘extremely’. This measure was used before and after the activity sheet. The second copy of this questionnaire was reworded and reordered. This was reflected and accounted the data analysis. Eleven of the items were reverse scored for analysis. This measure is divided into three subscales; performance self-esteem, social self-esteem, and appearance self-esteem. The difference between the participant’s self-esteem state before and after they attempted the activity sheet was calculated for all the subsections. The change in the participant’s self-esteem was used to extrapolate the fragility of their self-esteem based on
how much the scores differed from before and after the activity. This measure has acceptable 
internal consistency levels (alpha = .92) and is regarded as a valid measure of self-esteem 
measure is widely used in laboratory settings as it is sensitive to experimental manipulations.

*Experiment Evaluation Form:* At the end of the experiment participants were asked to 
evaluate the experiment procedure, presentation, presenter, and give any criticisms they had 
of the whole process. This form was used to get an ecologically valid measure of verbal 
aggression based on Rohsenow and Bachorowski’s (1984 as cited by Bush & Anderson, 
1998) study on measuring verbal aggression based on feedback sheets. By leaving open ended questions, aggression could be more organic and qualitative. Verbal aggression was 
defined as any noxious used with the intention of causing harm or a destructive outcome 
(Buss, 1961; Geen, 1990 as cited by Bushman and Anderson, 1998). In this exploratory 
measure, incidents of aggression were quantified based on a thematic analysis. A qualitative 
thematic analysis was used based on the above definition of verbal aggression. Higher scores 
would be related to higher incidents of verbal aggression and lower scores would be related 
to lower incidents of verbal aggression. The reliability and validity of this measure are 
uncertain due to the novel exploratory nature of the measure.

**Procedure**

Once ethically approved by the Dublin Business School Ethics board, two first year 
psychology classes were sought out (one part time and one full time). After fully briefing the 
lecturer and getting the necessary permission the class was approached and asked to 
participate on a voluntary basis. Deception was used at the beginning of the experiment and 
each class was told the experiment was focused on expectation and performance. The 
deception method was used to avoid socially desirable responses to the aggression, anger, and
The questionnaire packets were handed out to those students who consented and the participants were asked in the questionnaire packet to stop and inform the experimenter when they reached the activity sheet. Once all participants had reached the activity sheet they were informed of the five minute time limit for the activity. The instructions were as followed ‘please complete the activities on the following sheet to the best of your ability. There is a five minute time limit to this exercise. If completed early please continue with the rest of the questionnaire packet. If incomplete by the end of the time limit please stop the activity and continue with the rest of the questionnaire. When finished please raise your hand.’ The participants then attempted the activity packet for five minutes and when the time limit elapsed, were instructed to stop and proceed with the rest of the packet. Once all packets were completed then collected by the experimenter the class was then fully debriefed on the subject topic being studied and the nature of the experiment. Contact information for helplines were given to all participants in case any anxiety or distress was still experienced after the debriefing.
Results

Table 1 shows the mean, standard deviations, minimum and maximum scores of the participants. In Anger Expression, Aggression measures, and Current Thought Scale measures higher scores mean higher characteristics of that trait (i.e. higher anger expression score inwards would indicate a higher tendency to express anger inwards). Narcissism scores are negatively scores with narcissism traits (i.e. the higher the narcissism score the lower the narcissistic characteristics). As seen in Table 1, there were very low narcissistic characteristics in this sample. All other variables have positive scoring.

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<td>Performance Self-Esteem</td>
<td>.56</td>
<td>2.66</td>
<td>-7</td>
<td>8</td>
</tr>
<tr>
<td>Social Self-Esteem</td>
<td>-2.42</td>
<td>3.73</td>
<td>-10</td>
<td>7</td>
</tr>
<tr>
<td>Appearance Self-Esteem</td>
<td>-.36</td>
<td>2.41</td>
<td>-7</td>
<td>4</td>
</tr>
</tbody>
</table>

*For all variables N=72 (Females = 54, Males = 18), the nationalities of participants are separated into three groups: Irish (N=59), Other European nationality (N=7), and Non-European nationality (N=6). T1-T2 indicates the difference between the repeated measure of Current Thoughts Scale before and after the activity was attempted.*
There will be a significant difference in Narcissism scores due to age/generation. Participants aged 32 or older (N = 14) (mean = 29.14, SD = 2.45) were found to have slightly lower Narcissism scores than participants younger than age 32 (N = 58) (mean = 29.16, SD = 2.33). The 95% confidence limits show that the population mean difference lies somewhere between -1.52 and 1.50. An independent samples t-test found that there was no significant difference in Narcissism scores between these generations (t (70)= -0.018, p = .986) and therefore this hypothesis is rejected.

*Participants ages 32 or older are considered to be GenerationX while those younger than 32 are considered to be Millennials*

There will be a significant difference in social self-esteem scores before and after the activity sheet was completed. The current thoughts scale was divided into subsections reflecting the different types of self-esteem measured; self-esteem, social self-esteem, and appearance self-esteem. However, only the social self-esteem score had significantly different scores before and after the activity sheet (see Table 1). Therefore, only social self-esteem was examined in paired t-test to see if there was a significant difference in scores. The mean score for social self-esteem 1 was 20.88 (SD = 3.42), however the self-esteem 2 scores had a mean of 23.29 (SD = 5.62) which was considerably higher. The mean difference in social self-esteem score was -2.42 indicating an increase in social self-esteem. The 95% confidence limits show that the population mean difference of the variables lies between -3.29 and -1.54. A paired samples t-test found that there was a significant difference between the scores of social self-esteem 1 and the scores of social self-esteem 2 (t(71) = -5.50, p < .001). Therefore this hypothesis cannot be rejected.
Further investigation found when comparing the participants by the activity sheet, both participants who received the difficult activity \( t (39) = -3.55, p = .001 \) and an easy activity \( t (31) = -4.01, p < .001 \) had a difference in social self-esteem. The social self-esteem mean for participants who received the hard activity sheet is \(-2.18 (SD = 3.88)\) and the mean for the participants who received the easy activity sheet is \(-2.72 (SD = -3.58)\). The 95% confident limits show that the population mean difference of the variables lies between \(-2.32 \) and \(1.23\). An independent samples t-test found that there was no significant difference between participants who had received the hard activity and participants who received the easy activity on social self-esteem \( t(70) = -.61, p = .542 \). Therefore it can be assumed that the activity sheet received had no significant impact on the participants’ social self-esteem.

iii) There will be a significant relationship between Narcissism scores and verbal aggression scores.

Two measures of verbal aggression were used:

a) The Buss and Perry (1992) verbal aggression measure, which is featured as a subscale of the Buss and Perry Aggression Questionnaire (1992) was used in a correlation with narcissism score. The mean score for the Buss and Perry measure of verbal aggression was \(13.07 (SD = 3.77)\) and the mean score for narcissism was \(29.15 (SD = 2.34)\). A Pearson correlation coefficient found that there was a strong negative significant relationship between verbal aggression score and narcissism scores \( r (70) = -.51, p < .01 \). Therefore as narcissism scores increased, verbal aggression scores decreased. The \(R^2\) value \(R^2 = 0.25\) can explain 25% of the variance of between variables. The Due to the nature of scoring on the narcissism measure (see above section) higher
narcissism scores on the measure are associated with lower narcissistic characteristics while lower narcissism scores are associated with higher narcissistic characteristics. Therefore high levels of verbal aggression are significantly related to higher narcissistic characteristics. Therefore the hypothesis cannot be rejected. Further analysis found the only other subsection of the Bus and Perry aggression questionnaire that correlated significantly with narcissism scores was physical aggression (mean = 16.82, SD = 5.30) (r (70) = -.26, p = .025) suggesting that outwards expression of aggression significantly related to narcissism.

b) An additional exploratory measure of ecological verbal aggression was used based on Rohsenow and Bachorowski’s (1984 as cited by Bush & Anderson, 1998) study of naturally occurring verbal aggression. This qualitative measure was used to explore a more ecologically valid approach to measuring verbal aggression by using open-ended questions to capture naturally occurring qualitative data. A thematic analysis based on the definition of verbal aggression as a noxious stimuli directed and intended to harm another organism (Buss, 1961; Geen 1990; as cited by Bush & Anderson, 1998) was used to quantify the qualitative data. However, as seen in Table 2 low levels of verbal aggression were found. This is consistent with the low levels of narcissism of the participants. Unfortunately, there was no significant relationship (r (69) = 0.03, p = .82) between narcissism (mean = 29.15, SD = 2.34) and the qualitative measure (mean = 0.23, SD = 0.66). Further research and testing is needed to assess the reliability and validity and a more the methodology used in this experiment may not have been strong enough to produce the desired aggression.
Table 2  *Frequency Table of Qualitative Verbal Aggression Measure*

<table>
<thead>
<tr>
<th>Verbal Aggression Score</th>
<th>Frequency</th>
<th>Valid Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>62</td>
<td>87</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

*Total N=71, Missing=1,*

iv) There will be significant difference in verbal aggression between participants who received the easy activity sheet and participants who received the hard activity sheet.

The Bus and Perry (1992) verbal aggression score for participants who received the easy activity sheet (mean = 12.84, SD = 3.85) was slightly lower than the verbal aggression score for participants who received the hard activity sheet (mean = 13.25, SD = 3.75). The 95% confidence limits show that the population mean difference lies somewhere between -2.20 and 1.39. An independent samples t-test found that there was no significant difference in Bus and Perry’s verbal aggression scores between participants who received the easy activity sheet and participants who received the hard activity sheet (t(70)= -.45, p = .653). Therefore the hypothesis can be rejected.

v) Participants’ anger expression outwards scores will be significantly related to their total physical aggression and verbal aggression score.

The mean score for anger expression outward was 16.10 (SD = 3.54). The mean for the total physical aggression was 16.82 (SD = 5.30) and verbal aggression mean score was 13.07 (SD = 3.77). A Pearson correlation coefficient found that there was weak significant relationship between anger expression outwards and physical aggression score (r (70) = 0.23, p = .049). Therefore A Pearson correlation coefficient also found that there was a more moderate positive significant relationship between anger expression
outward and verbal aggression (r (70) = 0.39, p = .001). Therefore both physical aggression and verbal aggression are significantly related anger expression outwards and the hypothesis cannot be rejected.

vi) Participants’ anger expression inwards will be significantly related to their total hostility scores.

The mean score for anger expression inward was 19.90 (SD = 5.74) and the mean for total hostility scores was 15.14 (SD = 3.47). A Pearson correlation coefficient found that there was moderate positive significant relationship between anger expression inwards and total hostility scores (r (70) = 0.44, p < .01). Therefore as anger expression inwards increases hostility scores increase at a relatively similar rate. The $R^2$ value ($R^2 = 0.19$) can explain 19% of the variance of between variables. Therefore the hypothesis cannot be rejected.
Discussion

The study was conducted to explore the relationship between narcissism, age, the fragility of self-esteem, and verbal aggression in students in an Irish university, Dublin Business School. Narcissism is theorised to be an underlying cause of aggression due to the unstable self-representation which, at times, is threatened or injured by reality (Kohut, 1972; Stolorow & Harrison, 1975). Narcissism levels of the Millennial generation is lively debated in modern literature and is theorised to be causing a more ego-centric and volatile generation to emerge (Campbell & Twenge, 2013; Dingfelder, 2011; Koliscak, 2012; Twenge, Campbell, & Freeman, 2012). There have been studies and research on narcissism in the United States however it is unclear whether the proposed narcissism growth is culturally isolated or worldwide. If narcissism is the unstable mental structure that produces aggression, this mental instability can be used to understand distorted perceptions, predict aggressive acts, and form treatments to change cognition.

The study found that narcissism was significantly related to verbal aggression. Similarly, results suggest that anger expression, whether inwards or outwards, is significantly related to the type of aggression expressed. While these results are consistent with the hypotheses there were some inconclusive results as well. There was no significant difference between the experimental and control group on verbal aggression. This is contrary to the hypothesis suggesting there would be a significant difference between groups. This suggests that the frustration method was not strong enough. There were no significant differences between age/generation either suggesting that there was not an evenly distributed sample or there is no generational differences. This goes against the hypothesis that the Millennial generation will have higher levels of narcissism than the GenerationX’ers. The results also found an increase in social self-esteem which was contrary to the predicted outcome which
would have predicted a decrease in self-esteem. In addition, the qualitative measure captured little to no verbal aggression suggesting which was contrary to the proposed hypothesis.

The first hypothesis, that there would be a significant difference in narcissism scores due to age or generation, was not supported by the findings. However, the inconclusive results may have been due to the distribution of participants. The majority of participants were under the age of 32 and only approximately 10% of participants were aged 32 or older. The second hypothesis suggested that the participants’ social self-esteem score would be significantly different before and after the activity sheet was attempted. While there was a significant difference the social self-esteem scores were shown to significantly increase after the activity. This is inconsistent with the previous research which would suggest that state self-esteem would decrease with a frustration task (Zeigler-Hill, Myers, & Clark, 2010). The method that the participants took the activity could account for this unprecedented outcome. The participants took part in the experiment as part of class, either full time or part time. A possible explanation for the results would be that the participants, while frustrated, observed other participants becoming frustrated as well which led to the preservation and increase of social self-esteem. While this study attempted to control and instigate further frustration by the presence of participants with an easy activity sheet it appears there was not enough frustration present to destabilise participants significantly. Similarly, the participants took part in the experiment on a voluntary basis which could account for the apparent immunity to frustration. The third hypothesis was supported by the research findings which found that verbal aggression was strongly negatively correlated with narcissism scores. As a consequence, it can be inferred that narcissistic characteristics are strongly related to verbal aggression. While the qualitative method proved to be inconclusive, it served as an evaluation of the methodology and the frustration created during the experiment. This is in agreement with previous research (Stolorow & Harrison, 1975) which suggests that narcissism is a
contributing factor to verbally aggressive outbursts. The fourth hypothesis proposed that the verbal aggression scores would be different for the experimental (hard activity) and control group (easy activity). However, there was no significant differences found between the groups. This is inconsistent with previous research which would suggest that higher frustration would lead to higher aggression scores (Stolorow & Harrison, 1975). From these results it can be suggested that there was not enough frustration caused by the hard activity in order to produce a significant difference between groups. The fifth and sixth hypotheses were supported by the results. Previous research (Stolorow & Harrison, 1975) proposed that the anger expression of a participant would be consistent with certain types of aggression. The results found that anger expression out was significantly related to both verbal aggression and physical aggression. Similarly, anger expression in was significantly related to hostility aggression. This supports the validity of the measures used and suggests that anger expression significantly affects which form aggression will take.

**Strengths & Limitations**

The current study had structurally sound premise but was limited by confounding factors and the sample used. The study used standardised measures to identify levels of anger, state self-esteem, narcissism, and aggression. In addition, an exploratory qualitative method based on previous research (Rohsenow & Bachorowski, 1984, as cited by Bush & Anderson, 1998) was used to attempt to measure naturally occurring verbal aggression, which could be more ecologically valid. However, both the sample and the method of delivering frustration limited the frustration effects and therefore the verbal aggression produced. The sample was made up of 72 psychology students. These students all had relatively low levels of narcissism and therefore could be considered more stable than a sample with high narcissism levels. There was also an unequal distribution of males and females and an unequal age distribution which could have confounded results. The method of frustration could have also limited the results.
The activity sheet was given in a class setting which was designed to further destabilise the participants but may have had the opposite effect. By engaging all participants in a task at the same time the participants may have been more likely to empathise and recognise other participants who were frustrated around them therefore reducing anxiety and externalising rather than internalised the frustration. The task itself could have been longer to cause more frustration and the disposition of the experimenter could have been negative rather than positive to further frustrate the participants (Stolorow & Harrison, 1975). This may have led to higher frustration levels and more reported aggression on the qualitative measure. This study, while ethically sound, may have been too short and too nice to the participants to produce enough frustration to elicit aggression.

Future Research

This study provides groundwork for future research on narcissism, fragility of self-esteem, and aggression outside of the United States. Identifying trends in mental structures such as narcissism can help predict future outbursts of aggression and test the mental stability of participants. Previous research has supported studies on narcissism as a structure which leads to fragile self-esteem which can be expressed as aggression if under threat. Future research into the prevalence of narcissism in the younger generation and as an effect of culture should be further investigated. The measure of verbal aggression while standardised and reliable should be reconsidered and more tests on measures of ecologically valid verbal aggression must be retested. A larger sample with a more even distribution could give more valid results than the current study. In addition, future studies on frustration and aggression must be willing to push the boundaries and have a longer frustration period coupled with negative feedback in order to produce more expression of aggression in participants. Studies should be conducted with groups and with individuals to see if social context and the presence of others affects frustration levels and aggression expression. Further studies could try to incorporate
Stolorow and Harrison’s (1975) proposed Q-sort method to examine self-concept in addition to the standardised questionnaire measures. An experiment that implements all these methods would give a more ecological picture of how aggression naturally occurs.

In conclusion this study continued the progressive study of narcissism in relation to fragility of self-esteem, frustration and aggression. It included relevant social issues and limitations of past studies such as cultural isolation and sought to provide a primary study to fill the gap in literature at this time. The study used standardised as well as exploratory methods to investigate the relationship between these variables using a mixed experimental design. Most of the results were consistent with previous studies and inconsistent results can be explained by the sample used and the gentle methodology. Further studies could look at European samples to try to establish if the narcissistic trend extends outside the United States and use robust methods of frustration to measure aggression and fragility. Overall this study attempted to examine a socially relevant issue and begin a cross cultural study on this subject. However, since this study was exploratory the methods should be retested and re-examined due to its limited nature.
References


Kernis, M. H. (2001). Substitute needs and the distinction between fragile and secure self-esteem. *Department of Psychology, University of Georgia*


Appendices

Appendix 1: Information Form

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**Information Sheet for study on Expectations and Performance**

You are invited to participate in a research study that will form the basis for an undergraduate thesis. Please read the following information before deciding whether or not to participate.

**What are the objectives of the study?** The nature of this study requires participants to be naive to the exact research question, as information about the research may influence your behaviour and responses. For this reason we can only inform you that we are conducting research on the individual's expectations, and their performance on an activity task. A complete debriefing will be offered after participation, where any questions will be answered.

**Who is eligible to participate?** Participants must be aged 18 or older. The research requires the participants to be native English speakers due to the nature of the experiment.

**What does participation involve?** Firstly, there will be two questionnaires about expectation and the all participants will be asked to complete a brief activity form. After the activity form, there will be another questionnaire about their expectations and an evaluation form for the experiment. Participants will then asked to stay for a short debriefing.

**Right to withdraw** Participants have the right to withdraw from the research at any time for whatever reason.

**Are there any risks involved in participation?** There are no risks associated with participation. Any inconvenience involved in taking part will be limited.

**Confidentiality** All individual information collected as part of the study, including any results of the questionnaires or activities, will be used solely for experimental purposes. They will be stored safely and will not be publicly displayed or published without prior consent.

**Contact Details**

If you have any further questions about the research you can contact:

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Researcher: Erica Barry
Supervisor: Margaret Walsh
Appendix 2: Consent Form

DBS UNDERGRADUATE THESIS

Consent Form
A Study of Expectations and Performance

I have read and understood the attached Information Leaflet regarding this study. I have had the opportunity to ask questions and discuss the study with the researcher and I have received satisfactory answers to all my questions

I understand that I am free to withdraw from the study at any time without giving a reason and without this affecting my training

I agree to take part in the study

Please sign or tick the following with today’s date

Participant’s Signature: ____________________________ Date: __________

Participant’s Name in print: ____________________________

Appendix 3: Demographic Questionnaire
Please complete the following form.

Age:

Gender:

Nationality:

Highest level of education:

(if university)
University year:

Appendix 4: Narcissistic Personality Inventory 16-items (NPI-16) (Ames, Rose, & Anderson, 2005)
Read each pair of statements below and place an “X” by the one that comes closest to describing your feelings and beliefs about yourself. You may feel that neither statement describes you well, but pick the one that comes closest. Please complete all pairs.

1. __ I really like to be the center of attention
   __
   __ It makes me uncomfortable to be the center of attention
   __

2. __ I am no better or no worse than most people
   __
   __ I think I am a special person
   __

3. __ Everybody likes to hear my stories
   __
   __ Sometimes I tell good stories
   __

4. __ I usually get the respect that I deserve
   __
   __ I insist upon getting the respect that is due me
   __

5. __ I don't mind following orders
   __
   __ I like having authority over people
   __

6. __ I am going to be a great person
   __
   __ I hope I am going to be successful
   __
7. __ People sometimes believe what I tell them  
   __ I can make anybody believe anything I want them to  

8. __ I expect a great deal from other people  
   __ I like to do things for other people  

9. __ I like to be the center of attention  
   __ I prefer to blend in with the crowd  

10. __ I am much like everybody else  
    __ I am an extraordinary person  

11. __ I always know what I am doing  
    __ Sometimes I am not sure of what I am doing  

12. __ I don't like it when I find myself manipulating people  
    __ I find it easy to manipulate people  

13. __ Being an authority doesn't mean that much to me  
    __ People always seem to recognize my authority
I know that I am good because everybody keeps telling me so.

When people compliment me I sometimes get embarrassed.

I try not to be a show off.

I am apt to show off if I get the chance.

I am more capable than other people.

There is a lot that I can learn from other people.
Appendix 5: Current Thoughts Scale (1st measure) (Heatherton & Polivy, 1991)

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 this 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.

Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

1 = not at all, 2 = a little bit, 3 = somewhat, 4 = very much, 5 = extremely

1. ___ I feel confident about my abilities.

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

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

4. ___ I feel frustrated or rattled about my performance.

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

6. ___ I feel that others respect and admire me.

7. ___ I am dissatisfied with my weight.

8. ___ I feel self-conscious.

9. ___ I feel as smart as others.

10. ___ I feel displeased with myself.

11. ___ I feel good about myself.

12. ___ I am pleased with my appearance right now.

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

14. ___ I feel confident that I understand things.

15. ___ I feel inferior to others at this moment.
16. ____ I feel unattractive.

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

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

19. ____ I feel like I’m not doing well.

20. ____ I am worried about looking foolish.
Appendix 6: Aggression Questionnaire (Buss & Perry, 1992)

Using the 5 point scale shown below, indicate how uncharacteristic or characteristic each of the following statements is in describing you. Place your rating in the box to the right of the statement.

1 = extremely uncharacteristic of me, 2 = somewhat uncharacteristic of me, 3 = neither uncharacteristic nor characteristic of me, 4 = somewhat characteristic of me, 5 = extremely characteristic of me

1. Some of my friends think I am a hothead. ______
2. If I have to resort to violence to protect my rights, I will. ______
3. When people are especially nice to me, I wonder what they want. ______
4. I tell my friends openly when I disagree with them. ______
5. I have become so mad that I have broken things. ______
6. I can’t help getting into arguments when people disagree with me. ______
7. I wonder why sometimes I feel so bitter about things. ______
8. Once in a while, I can’t control the urge to strike another person. ______
9. I am an even-tempered person. ______
10. I am suspicious of overly friendly strangers. ______
11. I have threatened people I know. ______
12. I flare up quickly but get over it quickly. ______
13. Given enough provocation, I may hit another person. ______
14. When people annoy me, I may tell them what I think of them. ______
15. I am sometimes eaten up with jealousy. ______
16. I can think of no good reason for ever hitting a person. ______
17. At times I feel I have gotten a raw deal out of life. ______
18. I have trouble controlling my temper. ______
19. When frustrated, I let my irritation show. ______
20. I sometimes feel that people are laughing at me behind my back. ______
21. I often find myself disagreeing with people. ______
22. If somebody hits me, I hit back. ______
23. I sometimes feel like a powder keg ready to explode. ______
24. Other people always seem to get the breaks. ______
25. There are people who pushed me so far that we came to blows. ______
26. I know that “friends” talk about me behind my back.

27. My friends say that I’m somewhat argumentative.

28. Sometimes I fly off the handle for no good reason.

29. I get into fights a little more than the average person.
Appendix 7: Anger Expression Scale (Spielberger, 1985)

This is a questionnaire designed to measure how you express yourself. Be sure to answer all of the items and rate them from 1 to 4 in relation to how often they occur (1 = Almost Never, 2 = Sometimes, 3 = Often, 4 = Almost Always)

1. _____ I keep things in.
2. _____ I pout or sulk.
3. _____ I express my anger.
4. _____ I say nasty things.
5. _____ I withdraw from people.
6. _____ I make sarcastic remarks to others.
7. _____ I boil inside but don’t show it.
8. _____ I lose my temper.
9. _____ I tend to harbor grudges that I don’t tell anyone about.
10. _____ I am secretly quite critical of others.
11. _____ I strike out at whatever infuriates me.
12. _____ I am angrier than I am willing to admit.
13. _____ I argue with others.
14. _____ I am irritated a great deal more than people are aware of.
15. _____ If someone annoys me, I am apt to tell him or her how I feel.
16. _____ I do things like slam doors.
Appendix 8: Activity Sheet 1 (Difficult activity)

Please complete the following questions within the time given.

1. The situation:
   1. There are 5 houses in five different colors.
   2. In each house lives a person with a different nationality.
   3. These five owners drink a certain type of beverage, smoke a certain brand of cigar and keep a certain pet.
   4. No owners have the same pet, smoke the same brand of cigar or drink the same beverage.

   The question is: Who owns the fish?

   Hints
   • the Brit lives in the red house
   • the Swede keeps dogs as pets
   • the Dane drinks tea
   • the green house is on the left of the white house
   • the green house's owner drinks coffee
   • the person who smokes Pall Mall rears birds
   • the owner of the yellow house smokes Dunhill
   • the man living in the center house drinks milk
   • the Norwegian lives in the first house
   • the man who smokes blends lives next to the one who keeps cats
   • the man who keeps horses lives next to the man who smokes Dunhill
   • the owner who smokes BlueMaster drinks beer
   • the German smokes Prince
   • the Norwegian lives next to the blue house
   • the man who smokes blend has a neighbor who drinks water

2. There is a common English word that is nine letters long. Each time you remove a letter from it, it still remains an English word - from nine letters right down to a single letter. What is the original word, and what are the words that it becomes after removing one letter at a time?

3. A bear seized a human baby who had been playing in the forest. The father implores the bear to return his child. The bear replies “if you can accurately predict what I will do, I will return the child. However, if you guess wrong, I will eat it.” What should the father say to save the child?
Appendix 9: Easy activity (control)

Please complete all question in the time allowed (please show your work if applicable).

1. 110/10 =

2. Big is to bear as ______ is to rabbit.
   - A. Quick
   - B. Soft
   - C. Small
   - D. Brown

3. 1358 – 692 =

4. Polar bears live in the North Pole. The North Pole is cold all year long. Polar bears have fur coats and lots of fat to keep them warm. Polar bears also like to swim and can swim up to 100 miles at a time. Baby polar bears are called cubs.

What keeps a polar bear warm?
   - A. Scarves
   - B. Fur coats
   - C. Hats
   - D. Boots

5. Applying for Seasonal Employment occurs when a person requests to be considered for a job that is dependent on a particular season or time of year. Which situation below is the best example of Applying for Seasonal Employment?

   A. The ski instructors at Top of the Peak Ski School work from December through March.
   B. Matthew prefers jobs that allow him to work outdoors.
   C. Lucinda makes an appointment with the beach resort restaurant manager to interview for the summer waitressing position that was advertised in the newspaper.
   D. Doug's ice cream shop stays open until 11 p.m. during the summer months.

Appendix 10: Current Thoughts Scale (2nd measure) (Heatherton & Polivy, 1991)
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 this 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.

Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

1 = not at all, 2 = a little bit, 3 = somewhat, 4 = very much, 5 = extremely

1. ____ Over-all I have the ability, judgment, and resources needed to succeed.

2. ____ My success or failure is a cause of anxiety for me.

3. ____ I think my looks suit me.

4. ____ Often I feel I could have performed better than I did.

5. ____ I feel I have difficulties grasping the meaning of things I read.

6. ____ I feel others look up to me and regard me highly.

7. ____ I am unhappy with my figure.

8. ____ I do not feel confident about myself.

9. ____ I feel as intelligent as the average person.

10. ____ I feel dissatisfied with my own traits.

11. ____ I am pleased with how I am.

12. ____ Right now I like my appearance.

13. ____ I am concerned with how people perceive me.

14. ____ I am positive I can comprehend most things.

15. ____ At this time I feel less confident when compared to others.
16. ____ I feel I am not eye-catching.

17. ____ I am worried about how others perceive me.

18. ____ At the moment I feel that I am less intelligent than others.

19. ____ I feel I did poorly.

20. ____ I am concerned with being unsuccessful in front of others.

*Appendix 11*: Qualitative measure of verbal aggression

*Experiment Evaluation Form*
Date and time of participation:____________

Please take a moment to answer the following questions. Your honest answers will help us make research participation as interesting and educational as possible. For each question, simply answer in your own words.

How would you describe the experiment?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

How would you describe the experimenter?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

How was the topic explained?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Would you recommend this experiment to others? Why?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Was the topic clear and well explained?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Were the instructions well presented?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

How did you find the experiment or exercise?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
Are there any areas of improvement or criticisms you have for this study?

___________________________________________________________________________
___________________________________________________________________________
________________________________________________________