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### The Effects of Aggression on College Adjustment when Accounting for Impulsivity

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## ABSTRACT

Aggression and college adjustment has been examined in previous literature many times. Aggression and impulsivity have also been examined in literature numerous times due to being interrelated constructs. However, most research has not examined impulsivity on college adjustment, and no research has looked at aggression on college adjustment accounting for impulsivity. The aim of this study was to further develop the understanding of the relationship between aggression and impulsivity, as well as examine how these two constructs affect social, emotional, and academic adjustment to college. Specifically, this study sought to examine the relationship between aggression and college adjustment accounting for impulsivity. The Buss Perry Aggression Questionnaire (BPAQ), the Urgency Premeditation Perseverance and Sensation Seeking Scale (UPPS), the UCLA Loneliness Scale, and the College Adjustment Test were administered online to 193 undergraduate students. These students were also asked to report their current GPA. Results showed that hostility and anger negatively correlated with social and emotional adjustment and that physical aggression was the only variable with a relationship to GPA. Urgency and lack of perseverance negatively correlated with both emotional and social adjustment variables. Even when accounting for impulsivity, physical aggression negatively correlates with GPA and hostility still negatively correlates with emotional and social adjustment variables. These findings are important because it helps to further separate aggression and impulsivity as constructs, and shows that aggression and impulsivity each have unique relationships with college adjustment.

The Effects of Aggression on College Adjustment when Accounting for Impulsivity

A Thesis

Presented to

The Faculty of the Graduate School

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Clinical Psychology

By

Christian Wright

May 2018

This thesis, directed and approved by the candidate's committee, has been accepted by the Graduate Council of Abilene Christian University in partial fulfillment of the requirements for the degree

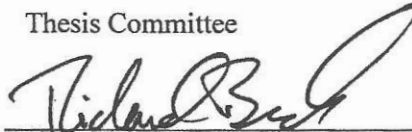
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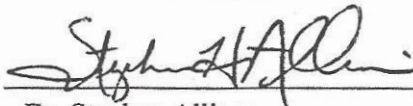
  
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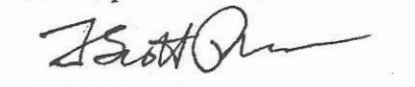
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## CHAPTER I

### LITERATURE REVIEW

#### **Impulsivity**

Impulsivity is a multidimensional behavioral construct. Impulsivity is defined by the tendency to act spontaneously and without deliberation (Carver, 2005). Five factors of impulsivity have been identified: negative urgency, lack of perseverance, lack of premeditation, sensation seeking, and positive urgency (Hahn, Simons, & Hahn, 2016). Negative urgency is the propensity to take rash action in response to intense negative emotion (Chester & Lynam, 2017). Lack of perseverance is the inability to stay with a task through to completion (Hahn et al., 2016). Lack of premeditation is the inability to plan or evaluate consequences (Hahn et al., 2016). Sensation seeking is the inclination to pursue stimulation and excitement (Hahn et al., 2016). Positive urgency is the propensity to take rash action in response to intense positive emotion (Taherifard, Abolghasemi, & Hajiloo, 2015).

Impulsivity and its five facets have been researched mainly in relation to physical aggression (Harris & Reiter-Palmon, 2015), certain psychopathologies such as borderline personality disorder and anti-social personality disorder (Hahn et al., 2016), and alcohol and drug use and abuse (Adams, Milich, Lynam, & Charnigo, 2013). Research shows that the five factors of impulsivity interact with pathology in different ways depending on the variables. For example, negative urgency correlates with both borderline and anti-social personality disorder, but positive urgency is uniquely associated with anti-social



personality disorder (Hahn et al., 2016). In alcohol studies, low premeditation has been shown to be a strong predictor of early alcohol use and abuse. Sensation seeking has predicated early alcohol use and frequency, but not problems in adolescence and emerging adulthood (Adams et al., 2013).

### **Aggression**

Aggression can be narrowly defined as a goal-directed motor behavior that includes a deliberate attempt to harm or injure another person or object (Garcia-Forero, Gallardo-Pujol, Maydeu-Olivares, & Andres-Pueyo, 2009). However, aggression is more generally described as a larger, more multifaceted construct. Aggression, for the purposes of this study, can be broken down into five facets: anger, hostility, verbal, physical, and indirect/relational aggression (Archer & Webb, 2006; Buss & Perry, 1992). Anger and hostility target more internal forms of aggression, such as angry thoughts and feelings, or hostile intentions towards others. By contrast, verbal, physical, and indirect aggression are external and are done to someone or something (Yan, Qui, Lin, Qiao, Yang, & Sun, 2012). Indirect aggression, or relational aggression, includes behaviors such as spreading rumors or excluding someone from social events (Grimaldi, Napper, & LaBrie, 2014). Physical aggression can also be grouped into two categories. These are intimate partner aggression and general aggression (Derefinko, DeWall, Metze, & Walsh, 2011). Intimate partner aggression would be aggression towards family members or close friends; whereas general aggression would involve fights with strangers, or actual crime (Derefinko et al., 2011).

### **Impulsivity and Aggression**

Impulsivity has been researched primarily in relation to physical aggression (Garcia-Forero et al., 2009). People who score high on impulsivity also tend to score high on physical aggression and anger scales (Duran-Bonavila, Morales-Vives, Cosi, & Vigil-Colet, 2017). Specifically, people who are impulsive are less likely to be able to control emotions, such as anger, and have more trouble foreseeing the consequences of their actions. Because of this, people high in impulsivity tend to be more likely to react physically when they feel attacked or upset (Duran-Bonavila et al., 2017). On a general level, impulsiveness significantly correlates to all four sub-scales on the Buss Perry Aggression Questionnaire (Archer & Webb, 2006). These four sub-scales include physical and verbal aggression, hostility, and anger. As discussed above, impulsivity is increasingly understood to be a multidimensional construct (Hahn et al., 2016), like aggression. As research is progressing, researchers are investigating how the multiple facets of impulsivity might be related to different types of aggressive behavior.

One relationship identified by research is between negative urgency and anger (Grimaldi et al., 2014). Negative urgency is the tendency to take rash action when confronted with negative emotions. Two emotions that research identified as problematic for people with high negative urgency are anger and loneliness (Grimaldi et al., 2014). People high in negative urgency might experience some feelings of anger as the result of a problematic interaction, and the strong, negative emotion of anger or frustration tends to lead to impulsive decisions, such as binge-drinking (Grimaldi et al., 2014). Alcohol would be used in this case as an impulsive means to reduce the negative feelings, such as

anger, that the person has trouble coping with (Grimaldi et al., 2014; Smith & Cyders, 2015).

Negative urgency is also connected with physical aggression. Both negative urgency and physical aggression are linked to the Five Factor Personality trait of neuroticism (Derefinko et al., 2011). People high in neuroticism are more likely to engage in aggressive behaviors, particularly in provoking situations (Derefinko et al., 2011). Neuroticism also relates to strong negative emotions. People who are neurotic also tend to be high in negative urgency (Derefinko et al., 2011). Strong negative emotions disturb those high in negative urgency and physical aggression tends to be the generated response (Derefinko et al., 2011). More specifically, negative urgency relates closely to intimate aggression (Derefinko et al., 2011). Urgency has not been connected to more general physical aggression against strangers or those not close to the individual (Derefinko et al., 2011).

Another association between aggression and impulsivity is between lack of premeditation along with physical aggression and hostility (Harris & Reiter-Palmon, 2015). As defined earlier, lack of premeditation is the inability to plan or foresee consequences. Physically aggressive and hostile individuals are more likely to consider aggressive behaviors as a solution in negative social situations. (Harris & Reiter-Palmon, 2015). Second, people who show lack of premeditation are more likely to generate hostile and aggressive responses in response to hypothetical interpersonal vignettes (Derefinko et al., 2011). Because lack of premeditation includes the inability to foresee consequences, individuals high in physical aggression and lack of premeditation are more likely to go through with the aggressive solutions that they generate (Harris & Reiter-Palmon, 2015;

Derefinko et al., 2011). More specifically, lack of premeditation is connected to general physical violence, but does not show much validity as a predictor of intimate physical aggression (Derefinko et al., 2011). Lack of premeditation is related to more general aggression (like aggressive acts towards strangers), actual criminal activity (like bank robbing), and physical aggression using a weapon (Derefinko et al., 2011). The connection is that individuals high in lack of premeditation do not fully consider the consequences and make decisions that have high initial gain but low long-term gain (Derefinko et al., 2011; Harris & Reiter-Palmon, 2015).

Sensation seeking is also correlated with physical aggression (Derefinko et al., 2011). Like lack of premeditation, sensation seeking is correlated with general aggressive behaviors, particularly violence towards strangers and crime, but not with intimate aggressive behaviors (Derefinko et al., 2011). The research is unclear as to the exact nature of this relationship, but there are theories. Two possible theories are that sensation seeking individuals find themselves in situations where aggressive behavior becomes a more likely solution. Alternatively, it is possible that aggressive behavior itself satisfies sensation seekers (Derefinko et al., 2011). Sensation seeking also predicts engagement in indirect/relational aggression (Werner & Crick, 1999). People that engage in relational aggression scored significantly higher on scales of sensation seeking (Werner & Crick, 1999). This may indicate that more relational methods of aggression, like spreading rumors and excluding people, may have some relation to impulsiveness (Werner & Crick, 1999). In fact, people who were described as relationally aggressive by peers have higher levels of impulsive behaviors, like bulimia in women and antisocial personality features in both genders (Werner & Crick, 1999).

Negative urgency is associated with indirect aggression. People who feel strong, negative emotions are more likely to engage in indirect aggression (Grimaldi et al., 2014). Emotions like anger or frustration tended to predict indirect aggression for people high in negative urgency (Grimaldi et al., 2014). Positive urgency is linked to problematic alcohol use (Smith & Cyders, 2015), however, people high in positive urgency who were targets for indirect aggression showed a substantial decrease in drinking behaviors (Grimaldi et al., 2014). Researchers theorize that this indirect aggression lowers the high, positive emotions that lead to problematic drinking in those high in positive urgency (Grimaldi et al., 2014).

In summary, this review highlights how impulsivity and aggression are not only related on a general basis, but in more specific domains also. Different facets of impulsivity and aggression relate to each other in different ways, and those unique associations need to be accounted for when examining the relationship between impulsivity and aggression.

### **Adjustment in College Populations**

Adjustment is the process of becoming used to a new situation (Werner & Crick, 1999). The current study is focused on adjustment among college students. Adjustment to college is multifaceted and consists of academic, social, and emotional aspects (Kurtz, Puher, & Cross, 2012). Research shows that inadequate adjustment in any of these three areas can affect attendance, grades, and the general health of the student (Kurtz et al., 2012). Academic adjustment is often measured using Grade Point Average (GPA) (Kurtz et al., 2012). Social adjustment is related to peer relations and involvement in campus activities (Kurtz et al., 2012). Emotional adjustment is related to subjective well-being

and coping skills (Kurtz et al., 2012). Overall, college adjustment has been mainly researched in relation to psychopathology, like Attention Deficit Hyperactive Disorder (ADHD) and alcohol related problems (Langberg, Dvorsky, Kipperman, Molitor, & Eddy, 2014).

### **Adjustment and Aggression**

Different facets of adjustment have been explored in relation to different facets of aggression (Kurtz et al., 2012; Langberg et al., 2014; Gao, Lu Shi, Smith, Kingree, & Thompson, 2016). One such relationship is between relational aggression and social and emotional adjustment (Werner & Crick, 1999). Relational aggression has mainly been researched in children, but research has shown that many college students engage in relational aggression (Werner & Crick, 1999). For both men and women, relational aggression has been related to peer rejection, and among women, relational aggression is related to poor life satisfaction (Werner & Crick, 1999). People who are rejected by peers tend to have trouble with social adjustment, and people who have poor life satisfaction tend to adjust poorly to new situations (Werner & Crick, 1999). Relational aggression has also contributed significantly to the predication of affective instability, negative relationships, and self-harm, regardless of gender (Werner & Crick, 1999). Affective instability and self-harm are signs of poor emotional adjustment, and negative relationships contribute to poor social adjustment (Werner & Crick, 1999). Overall, then, in both emotional and social domains, relational aggression has been associated with higher levels of maladjustment (Werner & Crick, 1999).

Overt aggression like physical and verbal aggression has also been examined in college adjustment research (Storch, Bagner, Geffken, & Baumeister, 2004). In college

populations, engagement in overt aggression predicts relational aggression and vice versa (Storch et al., 2004). Because the two constructs are moderately correlated, engagement in one form of aggression tends to predict the other (Storch et al., 2004). This means that those who engage in overt aggression likely engage in relational aggression, and face the same maladjustment problems it brings, like peer rejection and affective instability (Storch et al., 2004; Werner & Crick, 1999). Overt aggression also has its own relationship with adjustment. Overt aggression has predicted alcohol use in both men and women and predicted symptoms of social anxiety and loneliness in women (Storch et al., 2004). For women, overt aggression, like relational aggression, seemed to relate to adjustment problems, such as peer rejection, loneliness, and anxiety (Storch et al., 2004). This did not seem to be the case for men, who only reported alcohol problems. One possible theory is that the men in this study did have problems like peer rejection but were more likely than women to turn to alcohol as a solution (Storch et al., 2004). Regardless of gender differences, both relational/indirect and overt aggression seem to be related to adjustment variables like loneliness and peer relationships in college students (Storch et al., 2004; Werner & Crick, 1999).

### **Adjustment and Impulsivity**

Negative urgency is related to both emotional and social adjustment (Chester et al., 2017; Yan et al., 2012). Individuals high in negative urgency show higher scores on social maladjustment scales (Chester et al., 2017). Social rejection magnifies impulsive behavior in individuals high in negative urgency (Chester et al., 2017). Individuals feel intense negative affect when they feel rejected from a group, and for those high in

negative urgency it can lead to impulsive behaviors, such as binge drinking or suicidal behavior (Chester et al., 2017).

Negative urgency is mostly associated with borderline personality disorder (Hahn et al., 2016). In the Personality Assessment Inventory borderline features sub-scales, three features that relate to social adjustment and emotional adjustment are negative relationships, affective instability, and self-harm (Hahn et al., 2016). Negative urgency is a strong predictor of all three of these sub-scales (Hahn et al., 2016). Self-harm and affective instability are strongly related to emotional maladjustment and negative relationships is related to social maladjustment (Chester et al., 2017).

Lack of premeditation and lack of perseverance is related to poor emotional adjustment, particularly depression (Yan et al., 2012). Students that scored high on depression scales also scored high on lack of premeditation (Yan et al., 2012). This means students who are depressed and struggling to adjust to college have trouble planning or envisioning the future (Yan et al., 2012). People who are depressed also tend to have problems with lack of perseverance (Yan et al., 2012). Even if depressed people do have a good vision of the future or a plan, they tend to be inflexible regarding changes to that plan (Yan et al., 2012). If something happens to their plan or interrupts their ability to move towards that future, they tend to give up (Yan et al., 2012). While depression is not the only component of emotional adjustment, it is a strong predictor of emotional maladjustment and social maladjustment (Werner & Crick, 1999).

### **Rationale for Current Study**

The purpose of the current study is to understand the connections between impulsivity and aggression, and how these two constructs relate to emotional, social, and



academic adjustment to college. Impulsivity and aggression are related not only on a general level, but also regarding their more specific facets, such as the relationship between urgency and physical aggression (Derefinko et al., 2011; Garcia-Forero et al., 2009). The same is true of the relationship between college adjustment and aggression (Storch et al., 2004). By contrast, little attention has been given to how impulsivity is related to college adjustment. Research has shown that impulsivity relates to aggression in affecting college adjustment, but impulsivity, as an independent variable, has not really been examined in relation to college adjustment (Garcia-Forero et al., 2009; Yan et al., 2012). Aggression and impulsivity are interrelated, but they are different constructs (Garcia-Forero et al., 2009). Consequently, it is important to see if aggression has a strong relationship with adjustment independent of impulsivity (Garcia-Forero et al., 2009). The current study has three hypotheses. The first is that anger and hostility will negatively affect all three forms of adjustment. The second hypothesis is that urgency and sensation seeking will negatively affect social and emotional adjustment. The final hypothesis is that physical aggression and anger will negatively impact social and emotional adjustment, even when accounting for impulsivity.

## CHAPTER II

### METHODS

#### **Participants**

The participants were 193 undergraduate students enrolled in an introduction to psychology class. Most of the participants were female (64.1%), and they were mainly white (61.7%) or Hispanic/Latino (20.7%). The mean age was 19.3 (SD = 2.6).

Participants were given 10% extra credit on a test of their choosing in the class.

#### **Measures**

##### **Aggression**

Four facets of aggression were measured using the Buss Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992). The BPAQ is a 29 question self-report Likert scale, with scores ranging from 1 to 5 with 1 meaning “extremely uncharacteristic of me” and 5 meaning “extremely characteristic of me. There are four sub-scales in the BPAQ: Physical Aggression, Verbal Aggression, Anger, and Hostility. Physical aggression is measured using statements such as “If I have to resort to violence to protect my rights, I will.” and “I have become so mad I have broken things.” Verbal aggression is measured using statements such as “When people annoy me, I may tell them what I think of them.” and “I often find myself disagreeing with people.” Anger is measured using statements such as “Some of my friends think I am hot headed.” and “I flare up quickly but get over it quickly.” Hostility is measured using statements such as “I am suspicious of overly friendly strangers.” and “At times I feel like I have gotten a raw deal

out of life.” The test-retest reliability of the scale ranges from 0.72 to 0.78 (Buss & Perry, 1992). Internal consistency for each scale was as follows: Physical Aggression (.85), Verbal Aggression (0.72), Anger (0.83), and Hostility (0.77). The entire BPAQ can be found in Appendix B.

### **Impulsivity**

Impulsivity was measured using the Urgency, Premeditation, Perseverance, and Sensation Seeking Scale (UPPS; Whiteside & Lynam, 2001). The UPPS is a 45 question self-report Likert scale, with scores ranging from 1 (Agree Strongly) to 4 (Disagree Strongly). The scale measures four factors of impulsivity: Negative Urgency, (Lack of) Premeditation, (Lack of) Perseverance, and Sensation Seeking. Negative urgency is measured using reversed statements such as “I have trouble controlling my impulses.” and “I have trouble resisting my cravings (for food, cigarettes, etc.).” Premeditation is measured using statements such as “I have a reserved and positive attitude toward life.” and “My thinking is usually careful and purposeful.” Perseverance is measured using statements such as “I generally like to see things through to the end.” and “Once I get going on something I hate to stop.” Sensation seeking is measured using reversed statements such as “I generally seek new and exciting experiences and sensations.” and “I’ll try anything once.” Alpha reliabilities for negative urgency, (lack of) premeditation, (lack of) perseverance, and sensation seeking were 0.89, 0.86, 0.82, 0.84 respectively (Adams et al., 2013). The entire UPPS can be found in Appendix C.

### **College Adjustment**

Social adjustment to college was measured using the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978). This is a 20-item scale designed to assess personal

feelings or loneliness and social isolation. Participants rate items as O (*I often feel this way*), S (*I sometimes feel this way*), R (*I rarely feel this way*), and N (*I never feel this way*). A couple sample statements are “I am unhappy doing so many things alone.” and “There is no one I can turn to.” The higher the score, the lonelier the individual feels. This is indicative of poor social adjustment. The scale has high internal consistency ranging from 0.89-0.94 and good test retest reliability at 0.73 (Russell et al., 1978). The entire UCLA Loneliness Scale can be found in Appendix D.

Emotional adjustment was measured using the College Adjustment Test (Pennebaker, Colder, & Sharp, 1990). This is a 19 item Likert scale that seeks to measure students’ emotional adjustment to freshman year of college. The scale requires participants to select an answer from 1 (*not at all*) to 7 (*a great deal*). The scale has three sub-scales: Positive Affect, Negative Affect, and Home Sickness. Positive affect asks questions such as “Liked your classes.” and “Felt optimistic about your future at college.” Negative affect asks questions such as “Worried about how you will perform academically at college.” and “Felt angry.” Homesickness asks questions such as “Missed friends from high school.” and “Missed parents and other family members.” It also provides a score for overall adjustment to college using the three sub-scales. For the purposes of this study, positive and negative affect were used to make up emotional adjustment. High scores in positive affect and lower scores in negative affect indicate positive emotional adjustment. Internal consistency for the positive affect and negative affect was .72 and .82 for this study respectively. The entire CAT can be found in Appendix E. Academic adjustment to college was measured using current student GPA.

### **Procedure**

Participants were given an online survey containing demographic information, the BPAQ, the UPPS, the UCLA Loneliness Scale, the CAT, and were asked to report their current overall GPA.

## CHAPTER III

### RESULTS

#### **The Relationship Between Aggression and Adjustment Measures**

The first goal of the study was to examine the relationship between the four facets of aggression and social, emotional, and academic adjustment. It was predicated that anger and hostility would be positively correlated with loneliness and negative affect, and negatively correlated with positive affect and with GPA. To test this, correlations were run between the BPAQ and the adjustment measures. These correlations can be found in Table 1. As seen in Table 1, anger and hostility were positively correlated with loneliness and negative affect, and negatively correlated with positive affect, a pattern of results consistent with the predictions of the study. Contrary to predictions, GPA did not correlate with anger or hostility. It is also interesting to note that the only variable related to GPA was physical aggression.

Table 1

*Correlations between BPAQ and Adjustment Measures*

Aggression	Adjustment Variables			
	GPA	Loneliness	PA	NA
Physical	-.27**	.09	-.28**	.14
Verbal	-.08	.15	-.11	.16*
Anger	-.09	.26**	-.23**	.28**
Hostility	-.15	.48**	-.30**	.52**

\*p < .05 \*\*p < .01

### The Relationship Between Impulsivity and Adjustment Measures

The second goal of the study was to examine the relationships between the four facets of impulsivity and the adjustment measures. It was predicated that urgency and sensation seeking would be negatively correlated with positive affect, and positively correlated with loneliness and negative affect. To test this hypothesis, correlations were run between the UPPS and the four adjustment measures. These correlations can be found in Table 2. As seen in Table 2, urgency was positively correlated with negative affect and loneliness, and negatively correlated with positive affect. This is in line with the predictions of this study. Contrary to this study's predictions, sensation seeking had no effect on negative affect, was negatively correlated with loneliness, and positively correlated with positive affect. It is interesting to note, even though it was not included in this study's predictions, that lack of perseverance was positively correlated with loneliness and negatively correlated with positive affect.

Table 2

*Correlations between UPPS and Adjustment Measures*

Impulsivity	Adjustment Variables			
	GPA	Loneliness	PA	NA
(lack of) Premeditation	-.09	-.04	-.10	-.09
Urgency	.00	.29**	-.23**	.35**
Sensation Seeking	-.07	-.19*	.28**	-.03
(lack of) Perseverance	-.04	.25**	-.37**	.02

\* $p < .05$  \*\* $p < .01$

### The Relationship Between Impulsivity and Aggression

A third goal of the study was to replicate and help clarify previous data on the relationship between impulsivity and aggression. According to previous research, urgency should be positively correlated to physical aggression and anger. Sensation seeking should be positively correlated with physical aggression. Lack of premeditation should be positively correlated with physical aggression and hostility. To test these relationships, correlations were run between the UPPS and the BPAQ. These correlations can be found in Table 3. As can be seen in Table 3, urgency is positively correlated with all four facets of aggression, which is in line with previous research. Sensation seeking is not correlated with any aggression variables as opposed to previous research. Lack of premeditation is positively correlated with physical aggression and anger, as opposed to hostility, which was indicated in previous research.

Table 3

*Correlations between UPPS and BPAQ*

Impulsivity	Aggression Variables			
	Physical	Verbal	Anger	Hostility
(lack of) Premeditation	.18*	.08	.19*	-.03
Urgency	.37**	.33**	.51**	.46**
Sensation Seeking	.05	.05	.03	-.04
(lack of) Perseverance	.08	-.02	.13	.15

\*p < .05 \*\*p < .01



### **The Relationship Between Aggression and Adjustment Measures when Accounting for Impulsivity**

The last goal of the study was to examine the relationship between aggression and the adjustment measures when accounting for impulsivity. It was predicated that physical aggression and anger would be positively correlated with loneliness and negative affect, and negatively correlated with positive affect, even when controlling for impulsivity.

To test this hypothesis, partial correlations were run between the BPAQ and adjustment measures while controlling for the UPPS scores. These correlations can be found in Table 4. As seen in Table 4, physical aggression was still negatively correlated with positive affect when controlling for impulsivity, and physical aggression still negatively correlated with GPA. Hostility also had significant correlations with the adjustment variables of loneliness and positive affect. Contrary to predictions, physical aggression had no impact on loneliness or negative affect when controlling for impulsivity, and anger no longer correlated with any of the adjustment variables.

Table 4

*Partial correlations between BPAQ and Adjustment Measures accounting for Impulsivity*

Aggression	Adjustment Variables			
	GPA	Loneliness	PA	NA
Physical	-.27**	-.02	-.23**	.04
Verbal	-.11	.09	-.08	.05
Anger	-.12	.13	-.16	.13
Hostility	.08	.31**	-.21**	.37**

\*p < .05 \*\*p < .01

## CHAPTER IV

### DISCUSSION

#### **Overview of Goals and Findings**

Researchers have been examining the relationship between aggression and impulsivity, and aggression and college adjustment for a few decades. In general, it has been observed that impulsivity as a broad concept relates to many facets of aggression (Archer & Webb, 2006). It has also been observed that physical aggression effects social and emotional adjustment in college populations (Storch et al., 2004). However, research on the relationship between impulsivity and college adjustment is scarce and is just recently starting to be examined. This relationship is important to investigate because of the large body of research suggesting an intimate relationship between aggression and impulsivity. If aggression is related to adjustment in college, then impulsivity should have some impact on adjustment as well. Consequently, it was the goal of the current study to examine impulsivity and college adjustment, and examine aggression and college adjustment when accounting for impulsivity. Doing so should help expand the growing body of literature on impulsivity and college adjustment, as well as help clarify the relationship between aggression and college adjustment.

To examine the relationships between aggression, impulsivity, and college adjustment, the study had 193 undergraduate participants complete the BPAQ, the UPPS, the CAT, the UCLA Loneliness scale, and report their GPA. The study had three predictions. The first is that anger and hostility will negatively affect all three forms of

adjustment. The second is that urgency and sensation seeking will negatively affect social and emotional adjustment. The last prediction is that physical aggression and anger will negatively impact social and emotional adjustment, even when accounting for impulsivity.

Overall, about half of these predictions were supported. Specifically, anger and hostility were positively correlated with negative affect and loneliness, and negatively correlated with positive affect. Urgency was positively correlated with negative affect and loneliness, and negatively correlated with positive affect. Finally, physical aggression is still negatively correlated with positive affect even when accounting for impulsivity. These results were in line with the study's predictions. However, some predictions were not supported. Specifically anger and hostility had no effect on GPA. Sensation seeking had no effect on negative affect, was negatively correlated with loneliness, and positively correlated with positive affect. Lastly, physical aggression had no impact on loneliness or negative affect, and anger no longer correlated with any of the adjustment variables when accounting for impulsivity.

### **Discussion of Findings**

The findings for the first hypothesis emphasize the relationship between anger and hostility and social and emotional adjustment. According to these findings, the angrier and more hostile a person is, the more lonely and negative they feel, as well as experiencing less positive affect. This relationship makes sense and is supported by previous research. Angry people tend to explode quickly, react to situations aggressively, and have trouble controlling their temper (Buss & Perry, 1992). In previous research (Archer & Webb, 2006), anger is the best predictor for direct, act-based aggression,

meaning people that score high in anger are more likely to attack someone. So, it makes sense that angry individuals are less likely to form relationships in college, leading to higher loneliness scores. People that are lonely are probably less likely to experience positive emotions, and more likely to experience negative emotions. Also, because angry individuals tend to have poorer emotional regulation skills, it makes sense that they would experience less positive emotion and more negative emotion (Buss & Perry, 1992). There is also a term in rumination research known as angry rumination (Peters, Smart, Eisenlohr-Moul, Geiger, Smith, & Baer, 2015). Angry rumination consists of thoughts over anger-inducing events that prolong the angry mood state. This leads to higher, more prolonged negative emotion. Angry rumination could provide a possible explanation as to why angry individuals experience more negative emotions and less positive emotions.

Hostility tends to include feelings of ill-will towards others, jealousy, and paranoia (Buss & Perry, 1992). Unlike anger, which is typically in reaction to something or situation-specific, hostility is a more long-term attributional style (Archer & Webb, 2006). Hostility was more strongly correlated with loneliness, positive affect, and negative affect than anger. Concerning jealousy and paranoia, it makes sense that individuals who are hostile would be lonelier. If these individuals think the world or people are after them, and are jealous of others, they are going to have trouble trusting others enough to form friendships. For negative and positive affect, angry rumination can provide an explanation again. In rumination research, angry rumination predicts physical and verbal aggression and hostility when controlling for depression, anxiety, and impulsivity (Garcia-Sancho, Salguero, & Fernandez-Berrocal, 2016). Hostile individuals

also seem to engage in angry rumination, which is going to prolong negative affect and lower positive affect.

Part of the first hypothesis that was not supported is that anger and hostility would affect GPA. This was not the case. The only variable in the BPAQ that effected GPA was physical aggression. This finding was unexpected. It seems to indicate that actual physical aggression, as opposed to being angry or having a hostile disposition, is what effects a student's grades. It could be that people who go out and commit physical acts of aggression are not spending time studying or preparing for classes. An individual could be angry or hostile, but still spend time preparing for classes so long as they are not going out and being physically aggressive. This is all conjecture though. One study, which found that physical aggression uniquely predicts GPA in adolescents, put forth the idea that there could be a relationship between physical aggression and poor study habits, suspensions and detentions, and negative teacher expectations (Loveland, Lounsbury, Welsh, & Buboltz, 2007). This was with a high school population rather than with a college population, so suspensions and detentions might not be relevant. However, negative teacher expectations due to disruption and poor study habits could apply to a college population.

The findings for the second hypothesis highlight the importance of urgency in positive and negative affect, and loneliness. Urgency is the propensity to take rash action in response to either extreme positive emotion or extreme negative emotion. According to these results, the more urgent a person is to act in response to emotion, the lonelier they feel, the more negative affect they experience, and the less positive affect they experience. This relationship makes sense based on previous research that highlights the

relationship between urgency and negative relationships as well as affective instability (Chester et al., 2017, Hahn et al., 2016). This means people high in urgency are likely to have negative relationships, which could lead to loneliness and negative affect, and affective instability, which is related to the ability to control emotions. If people high in urgency cannot control their emotions, they are likely to engage in rash behavior, which could lead to even more negative affect.

Sensation seeking was related to emotional and social adjustment, just not in the way this study predicted. Sensation seeking had a negative correlation with loneliness, and a positive correlation with positive affect. Sensation seeking is the inclination to pursue stimulation and excitement. What these results suggest is that those that are high in sensation seeking tend to experience less loneliness and more positive affect in college populations. This is conjecture, but a simple explanation for this finding could be that sensation seekers are more likely to take risks and go out with social groups or try and find peer groups to be a part of than people who do not score high in sensation seeking. In previous research, sensation seeking has been associated with alcohol and drug use, which may provide more opportunities for peer encounters and activities (Adams et al., 2013). Loneliness also has a relationship with depression, so the less lonely a person is, the less likely they are to be depressed and more likely to experience positive affect (Werner & Crick, 1999). While these findings were not predicted, previous research does seem to have some support for the idea that sensation seeking may increase positive affect and decrease loneliness.

One result to discuss with impulsivity, although it was not included in this study's predictions, is lack of perseverance. Lack of perseverance is the inability to stay with a

task through to completion. Lack of perseverance had a positive correlation with loneliness and a negative correlation with positive affect. While this was not predicted, the findings are supported by previous research. Specifically, lack of perseverance is correlated with depression, and two components of depression are loneliness and a lack of positive emotions (Werner & Crick, 1999, Yan et al., 2012). People high in lack of perseverance have trouble staying on task and pursuing goals to completion, which would in turn provide little reason to experience positive affect if an individual never completes a task (Werner & Crick, 1999, Yan et al., 2012).

A goal of the current study was to expand on the relationship between aggression and impulsivity. In the current study, urgency was correlated with all four BPAQ variables, and lack of premeditation was correlated with physical aggression and anger. In previous literature, urgency has mainly been correlated with physical aggression and anger (Archer & Webb, 2006, Derefinko et al., 2011, Grimaldi et al., 2014). One study found a correlation between urgency and the variable indirect aggression, which may have some overlap with verbal aggression (Grimaldi et al., 2014). There are differences though. Indirect aggression is more rumor spreading and gossip, while verbal aggression in the BPAQ is directly confronting someone verbally, often in response to an angering situation. It does make sense that if urgency is correlated with physical aggression, then it would also correlate with verbal aggression, since verbal and physical aggression are highly correlated themselves (Buss & Perry, 1992). Hostility also has been correlated with urgency in previous research. People high in negative urgency were more likely to have a hostile attributional bias towards others, even when accounting for other BPAQ variables (Gagnon, McDuff, Daelman, & Fournier, 2014). What all this research and the

findings of this study suggest is that urgency is an important variable to look at when examining aggressiveness in individuals.

The second part of these findings was that lack of premeditation is correlated with physical aggression and anger. In previous research, lack of premeditation has been correlated with physical aggression and hostility, rather than anger (Harris & Reiter-Palmon, 2015). It is not surprising to see that physical aggression and lack of premeditation are correlated, given that individuals high in lack of premeditation have trouble foreseeing consequences of their actions and weighing pros and cons of their actions (Harris & Reiter-Palmon, 2015). However, the measures used in the Harris and Reiter-Palmon (2015) study included items that looked at hostility, anger, and irritability. The BPAQ attempts to separate anger and hostility, with anger being more state- and situation-specific and hostility being more character- and trait-related (Buss & Perry, 1992). Looking at anger and hostility in this manner, it makes sense that lack of premeditation would correlate more with anger than with hostility. An angry person reacts, which would be typical of someone who does not consider the consequences or weigh their options.

The findings of the third hypothesis highlight the relationship between physical aggression and its negative effects on GPA and positive affect accounting for UPPS impulsivity variables. Hostility still had positive correlations with loneliness and negative affect, and a negative correlation with positive affect accounting for impulsivity. The correlations for physical aggression and hostility are not as strong as they were when impulsivity was not accounted for, but interestingly, anger no longer had significant correlations with any of the adjustment variables.



As this study predicted, physical aggression is still correlated with measures of social and emotional adjustment even when accounting for impulsivity. Previous research has stated that aggression and impulsiveness are rather tangled concepts (Garcia-Sancho et al., 2016), so it was interesting that physical aggression still negatively impacts GPA and positive affect when accounting for impulsivity. In a previous study, it was found that physical aggression negatively correlates with GPA even when accounting for other aggression variables, stating that physical aggression can uniquely predict GPA in adolescents (Loveland et al., 2007). While this study was not done on adolescents, it does expand on this physical aggression finding. Not only does physical aggression correlate with GPA accounting for other aggression variables, it also correlates with GPA accounting for impulsivity variables. As stated earlier, possible explanations are poor study habits, skipping classes, or negative teacher expectations, but this would need to be researched further to fully understand the relationship. Physical aggression also still negatively correlated with positive affect when accounting for impulsivity. This could suggest that the lack of positive affect based on physical aggression is not impulsive in nature. This is speculation, but the lack of positive affect is not inherently related to impulsivity. Earlier in the discussion, this study presented the concept of angry rumination. Angry rumination is not impulsive or short term, but rather a long, reflective process (Garcia-Sancho et al., 2016). Because angry rumination could account for depression and the lack of positive affect, it might explain why physical aggression still negatively correlates with positive affect when accounting for impulsivity.

This study predicted that anger would remain a correlate of social and emotional aggression when accounting for impulsivity. This study's findings did not support that

prediction. Anger no longer correlated with social or emotional adjustment measures in the partial correlation. In retrospect, this finding makes sense. Anger is more of a situation-specific reaction to a perceived injustice, rather than an enduring trait (Buss & Perry, 1992, Grimaldi et al., 2014). So, when impulsivity is taken out of the equation, it does make sense that anger no longer correlates with positive affect, negative affect, and loneliness.

What this study did not predict is that hostility would remain a strong correlate with social and emotional adjustment measures. In retrospect, this finding does make sense. Hostility is more of an enduring trait, rather than a state like anger, and is often considered an attributional bias in research (Archer & Webb, 2006, Gagnon et al., 2014). As mentioned in this study, hostility includes jealous and paranoid thoughts, which are not impulsive thoughts, but attributional sentiments towards others and the world (Gagnon et al., 2014). So, it is not so surprising that hostility endures when accounting for impulsivity.

### **Implications**

The findings in this study expand on the understanding of the relationship between aggression and impulsivity, the relationship between aggression and college adjustment, and the relationship between impulsivity and college adjustment. Moving forward, research should examine why physical aggression impacts GPA so strongly. If there is no understanding about what physical aggression does to affect academic adjustment negatively, this finding does not have much substance. Second, this study highlights that physical aggression and hostility might be more enduring traits, as opposed to aggressive, impulsive reactions or states. Because it has been previously

thought that impulsivity and aggression are tangled concepts (Garcia-Forero et al., 2009), it is important to further understand how hostility and physical aggression might not be as related to impulsivity as other aggressive traits such as anger or verbal aggression. Third, urgency and lack of perseverance need to be further examined in social and emotional adjustment. Urgency can be expanded into positive and negative urgency, which would help expand the understanding of the findings on urgency in this study. While it can be assumed and theorized why lack of perseverance correlated negatively with positive affect and positively with loneliness, the exact nature of the relationship is not defined based on this study.

The findings presented in the current study also have important implications for clinicians. First is that high physical aggression is detrimental to academic performance in college, and not just in adolescents (Loveland et al., 2007). Clients with high physical aggressiveness in college are probably also struggling academically for one reason or another. Second is how important urgency and lack of premeditation is in the relationship between aggression and impulsivity. If an individual lacks foresight and seems to take rash action in response to strong emotion, it is also highly possible the person is aggressive in nature. Once again, this relationship needs to be further dissected, because urgency has a positive and negative feature. Third is the effect hostility has on loneliness, positive affect, and negative affect. Of all the correlations in this study, hostility often came out with the strongest correlations. This means that clients with a hostile nature are more susceptible to loneliness, lack positive affect, and have high negative affect. Even when accounting for impulsivity variables, hostility remains a strong correlate with emotional and social adjustment measures.

This study also has important implications for educators. Physical aggression was the only variable to effect GPA in this study, so physical aggression is an important variable for academics to look for in students. It is also important for educators to note how many variables correlated with loneliness, positive affect, and negative affect. It has already been stated that poor emotional adjustment and poor social adjustment effects not only academic performance, but also whether students stay in college or drop out (Kurtz et al., 2012). This means variables such as urgency, physical aggression, anger, lack of perseverance, and hostility are important for educators to consider in students, because they all had some negative correlation with college adjustment variables. It is also important to consider is the role of sensation seeking. In the findings for this study, sensation seeking had a positive relationship with positive affect, and a negative relationship with loneliness. While the exact nature of this relationship needs further research, a certain level of sensation seeking might help students adjust emotionally and socially to college.

### **Limitations and Future Directions**

This study has important limitations. The sample was not very diverse with most participants being white or Hispanic/Latino. Colleges tend to have diverse populations that typically include Blacks/African Americans, Asians, and Native Americans, and none of these were well represented in in this study. If this study was done at a college with more Asian or Native American representation, results might differ. Another limitation is that this study's design was correlational. An improvement to this study would be a longitudinal design, following the same students from freshman year to senior year. There are also variables that could be included in future research to improve on the

understanding of these results. First would be distinguishing between positive and negative urgency. There is already a version of the UPPS designed to do this. Second would be to improve on the aggression measurements. Previous research has found that indirect aggression correlates specifically with negative urgency (Grimaldi et al., 2014). Indirect aggression is not a variable examined by the BPAQ, so including indirect aggression measures could improve this study. Third, depression also has its relationships with aggression, impulsivity, social adjustment, and emotional adjustment (Yan et al., 2012). This relationship was not examined in this study but could help further understanding of adjustment in college. Depression measures are easy to obtain and could be included in future designs.

### **Conclusion**

The goal of this study was to expand the current knowledge of the relationship between aggression and impulsivity, as well as how those two constructs effect academic, social, and emotional adjustment in a college setting. This study found that both aggression and impulsivity effect social and emotional adjustment, and that physical aggression seems to be a unique predictor of GPA, even when accounting for impulsivity variables. This study also found that both hostility and urgency seem to have strong correlations with both social and emotional adjustment in college. These findings should help researchers understand the relationship between aggression and impulsivity, and provide many opportunities to further examine the relationship between the two constructs in depth, as well as providing variables such as hostility and physical aggression that have strong effects on loneliness, positive affect, and GPA. This study provides clinicians and educators with variables to consider with students performing and

adjusting poorly to college. Urgency, hostility, anger, lack of perseverance, and sensation seeking could be important variables for clinicians and educators to examine in their students and clients who are adjusting poorly to college.

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## APPENDIX A

### IRB Approval Letter

**ABILENE CHRISTIAN UNIVERSITY**  
*Educating Students for Christian Service and Leadership Throughout the World*  
Office of Research and Sponsored Programs  
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103  
325-674-2885



March 21, 2018

Christian Wright

Department of Psychology

842 Sayles Blvd.

Abilene, TX 79605

Dear Christian,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled  
The Effects of Impulsivity on College Adjustment When Accounting for Aggression

was approved by expedited review (Category 7 ) on 3/21/2018 (IRB # 17-116 ). Upon  
completion of this study, please submit the Inactivation Request Form within 30 days of study completion.

If you wish to make any changes to this study, including but not limited to changes in study personnel,  
number of participants recruited, changes to the consent form or process, and/or changes in overall  
methodology, please complete the Study Amendment Request Form.

If any problems develop with the study, including any unanticipated events that may change the risk profile  
of your study or if there were any unapproved changes in your protocol, please inform the Office of Research  
and Sponsored Programs and the IRB promptly using the Unanticipated Events/Noncompliance Form.

I wish you well with your work.

Sincerely,

*Megan Roth*

Megan Roth, Ph.D.  
Director of Research and Sponsored Programs

## APPENDIX B

### Buss Perry Aggression Questionnaire

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                             | A  |
| 2. If I have to resort to violence to protect my rights, I will.       | PA |
| 3. When people are especially nice to me, I wonder what they want.     | H  |
| 4. I tell my friends openly when I disagree with them.                 | VA |
| 5. I have become so mad that I have broken things.                     | PA |
| 6. I can't help getting into arguments when people disagree with me.   | VA |
| 7. I wonder why sometimes I feel so bitter about things.               | H  |
| 8. Once in a while, I can't control the urge to strike another person. | PA |
| 9. *I am an even-tempered person.                                      | A  |
| 10. I am suspicious of overly friendly strangers.                      | H  |
| 11. I have threatened people I know.                                   | PA |
| 12. I flare up quickly but get over it quickly.                        | A  |

- |   |    |
|---|----|
| 13. Given enough provocation, I may hit another person.             | PA |
| 14. When people annoy me, I may tell them what I think of them.     | VA |
| 15. I am sometimes eaten up with jealousy.                          | H  |
| 16. *I can think of no good reason for ever hitting a person.       | PA |
| 17. At times I feel I have gotten a raw deal out of life.           | H  |
| 18. I have trouble controlling my temper.                           | A  |
| 19. When frustrated, I let my irritation show.                      | A  |
| 20. I sometimes feel that people are laughing at me behind my back. | H  |
| 21. I often find myself disagreeing with people.                    | VA |
| 22. If somebody hits me, I hit back.                                | PA |
| 23. I sometimes feel like a powder keg ready to explode.            | A  |
| 24. Other people always seem to get the breaks.                     | H  |
| 25. There are people who pushed me so far that we came to blows.    | PA |
| 26. I know that “friends” talk about me behind my back.             | H  |
| 27. My friends say that I’m somewhat argumentative.                 | VA |
| 28. Sometimes I fly off the handle for no good reason.              | A  |
| 29. I get into fights a little more than the average person.        | PA |

### **Scoring Instructions**

The two questions with the asterisk are reverse scored.

The Aggression scale consists of 4 factors, Physical Aggression (PA), Verbal Aggression (VA), Anger (A), and Hostility (H). The total score for Aggression is the sum of the factor scores.

## APPENDIX C

### UPPS

Below are several statements that describe ways in which people act and think.

For each statement, please indicate how much you agree or disagree with the statement. If you **Agree Strongly** circle **1**, if you **Agree Somewhat** circle **2**, if you **Disagree somewhat** circle **3**, and if you **Disagree Strongly** circle **4**. Be sure to indicate your agreement or disagreement for every statement below. Also, there are a few more questions on the next page

1. I have a reserved and cautious attitude toward life.
2. I have trouble controlling my impulses.
3. I generally seek new and exciting experiences and sensations.
4. I generally like to see things through to the end.
5. My thinking is usually careful and purposeful.
6. I have trouble resisting my cravings (for food, cigarettes, etc.).
7. I'll try anything once.
8. I tend to give up easily.
9. I am not one of those people who blurt out things without thinking.
10. I often get involved in things I later wish I could get out of.
11. I like sports and games in which you have to choose your next move very quickly.
12. Unfinished tasks really bother me.

13. I like to stop and think things over before I do them.
14. When I feel bad, I will often do things I later regret in order to make myself feel better now.
15. I would enjoy water skiing.
16. Once I get going on something I hate to stop.
17. I don't like to start a project until I know exactly how to proceed.
18. Sometimes when I feel bad, I can't seem to stop what I am doing even though it is making me feel worse.
19. I quite enjoy taking risks.
20. I concentrate easily.
21. I would enjoy parachute jumping.
22. I finish what I start.
23. I tend to value and follow a rational, "sensible" approach to things.
24. When I am upset I often act without thinking.
25. I welcome new and exciting experiences and sensations, even if they are a little frightening and unconventional.
26. I am able to pace myself so as to get things done on time.
27. I usually make up my mind through careful reasoning.
28. When I feel rejected, I will often say things that I later regret.
29. I would like to learn to fly an airplane.
30. I am a person who always gets the job done.
31. I am a cautious person.
32. It is hard for me to resist acting on my feelings.



- 33. I sometimes like doing things that are a bit frightening.
- 34. I almost always finish projects that I start.
- 35. Before I get into a new situation I like to find out what to expect from it.
- 36. I often make matters worse because I act without thinking when I am upset.
- 37. I would enjoy the sensation of skiing very fast down a high mountain slope.
- 38. Sometimes there are so many little things to be done that I just ignore them all.
- 39. I usually think carefully before doing anything.
- 40. Before making up my mind, I consider all the advantages and disadvantages.
- 41. In the heat of an argument, I will often say things that I later regret.
- 42. I would like to go scuba diving.
- 43. I always keep my feelings under control.
- 44. I would enjoy fast driving.
- 45. Sometimes I do impulsive things that I later regret.

### **Scoring Instructions**

This version of the UPPS Impulsive Behavior scale uses a 1 (agree strongly) to 4 (disagree strongly) response format. Because the items from different scales run in different directions, it is important to make sure that the correct items are reverse-scored. I prefer to make it so that all the scales run in the direction that higher scores indicate more impulsive behavior. Therefore, I am including the scoring key for (lack of) Premeditation, Urgency, Sensation Seeking, and (lack of) Perseverance. For each scale, I prefer to calculate the mean of the available items; this puts them on the same scale. I usually require that a participant have at least 70% of the items before calculating a score for them.

**(lack of) Premeditation (no items are reversed)**

Items 1, 5, 9, 13, 17, 23, 27, 31, 35, 39, 40

**Urgency (all items except 1 are reversed)**

Items 2(R), 6(R), 10(R), 14(R), 18(R), 24(R), 28(R), 32(R), 36(R), 41(R), 43, 45(R)

**Sensation Seeking (all items are reversed)**

Items 3(R), 7(R), 11(R), 15(R), 19(R), 21(R), 25(R), 29(R), 33(R), 37(R), 42(R), 44(R)

**(lack of) Perseverance (two items are reversed)**

Items 4, 8(R), 12, 16, 20, 22, 26, 30, 34, 38(R)

(R) indicates the item needs to be reverse scored such 1=4, 2=3, 3=2, and 4=1.

## APPENDIX D

### UCLA Loneliness Scale

Indicate how often each of the statements below is descriptive of you.

O indicates "I often feel this way"

S indicates "I sometimes feel this way"

R indicates "I rarely feel this way"

N indicates "I never feel this way"

- |  |      |
|--|------|
| 1. I am unhappy doing so many things alone.                        | OSRN |
| 2. I have nobody to talk to.                                       | OSRN |
| 3. I cannot tolerate being so alone.                               | OSRN |
| 4. I lack companionship.   | OSRN |
| 5. I feel as if nobody really understands me.                      | OSRN |
| 6. I find myself waiting for people to call or write.              | OSRN |
| 7. There is no one I can turn to.                                  | OSRN |
| 8. I am no longer close to anyone.                                 | OSRN |
| 9. My interests and ideas are not shared by those around.          | OSRN |
| 10. I feel left out.   | OSRN |
| 11. I feel completely alone.                                       | OSRN |
| 12. I am unable to reach out and communicate with those around me. | OSRN |
| 13. My social relationships are superficial.                       | OSRN |
| 14. I feel starved for company.                                    | OSRN |
| 15. No one really knows me well.                                   | OSRN |

- |   |      |
|---|------|
| 16. I feel isolated from others.            | OSRN |
| 17. I am unhappy being so withdrawn.        | OSRN |
| 18. It is difficult for me to make friends. | OSRN |
| 19. I feel shut out and excluded by others. | OSRN |
| 20. People are around me but not with me.   | OSRN |

**Scoring Instructions**

Make all Os =3, all Ss =2, all Rs =1, and all Ns =0. Keep scoring continuous.

## APPENDIX E

### College Adjustment Test

Use a 7-point scale to answer each of the following questions, where

1	2	3	4	5	6	7
not at all			somewhat			a great deal

Within the **LAST WEEK**, to what degree have you

1. Missed your friends from high school \_\_\_\_\_
2. Missed your home \_\_\_\_\_
3. Missed your parents and other family members \_\_\_\_\_
4. Worried about how you will perform academically at college \_\_\_\_\_
5. Worried about love or intimate relationships with others \_\_\_\_\_
6. Worried about the way you look \_\_\_\_\_
7. Worried about the impression you make on others \_\_\_\_\_
8. Worried about being in college in general \_\_\_\_\_
9. Liked your classes \_\_\_\_\_
10. Liked your roommate(s) \_\_\_\_\_
11. Liked being away from your parents \_\_\_\_\_
12. Liked your social life \_\_\_\_\_
13. Liked college in general \_\_\_\_\_
14. Felt angry \_\_\_\_\_
15. Felt lonely \_\_\_\_\_

16. Felt anxious or nervous

\_\_\_\_\_

17. Felt depressed

\_\_\_\_\_

18. Felt optimistic about your future at college

\_\_\_\_\_

19. Felt good about yourself

\_\_\_\_\_

### Scoring Instructions

Positive affect=  $q9+q10+q12+q13+q18+q19$

Negative affect=  $q4+q5+q6+q7+q8+q14+q15+q16+q17$

Home sickness=  $q1+q2+q3+q15+q16+(8-q11)$

Overall adjustment=  $(64-(q1+q2+q3+q4+q5+q6+q7+q8))+q9+q10+q11+q12+q13$   
 $+(32-(q14+q15+q16+q17))+q18+q19$